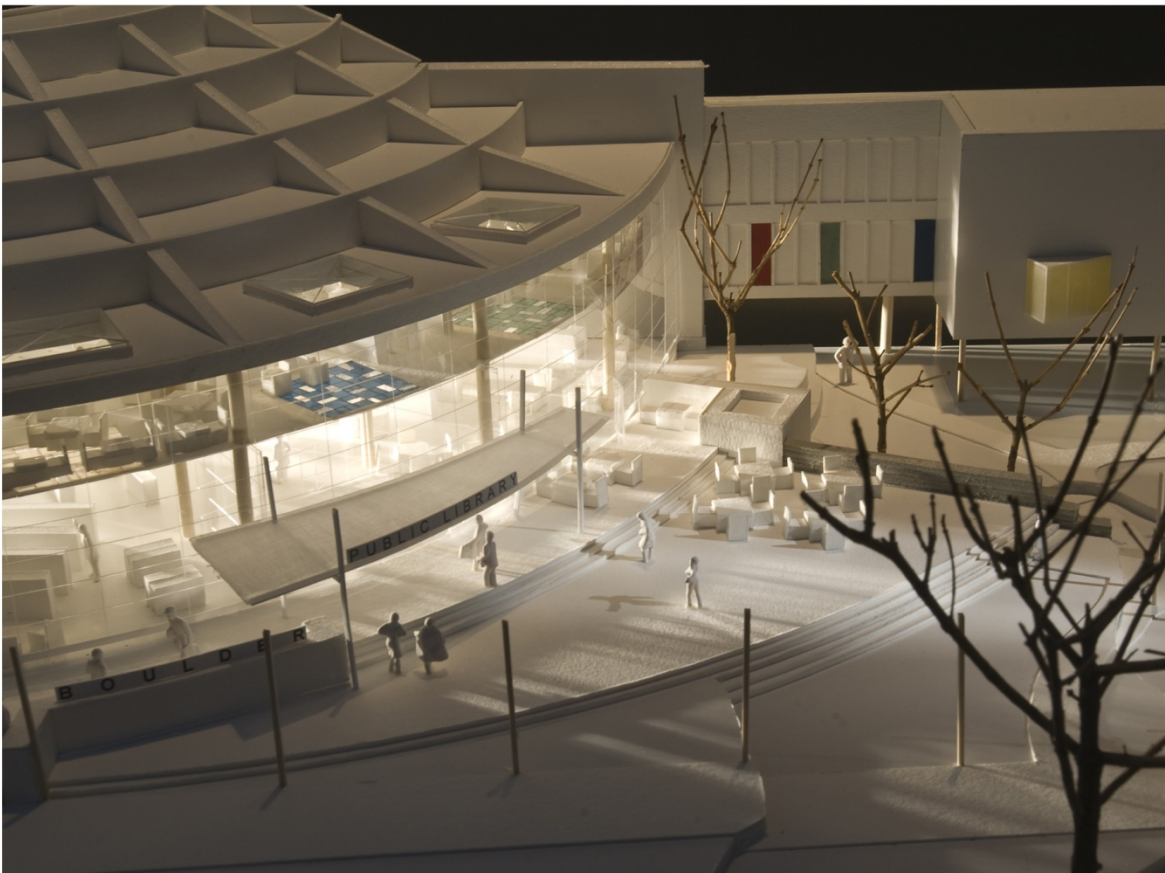


Boulder Public Library

Engaging our community through free access to
ideas, information and cultural experiences

Facilities Sustainability Study 12 March 2009

- I. Introduction
- II. Facilities Assessment
- III. Geographic Service Area Study
- IV. Library Services Needs Assessment
- V. Conceptual Space Plans



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I. Introduction

I. 1: Participants



The Commission

Steve Clason, Chair

Stephen Topping, Vice Chair

Nadia Haddad, Secretary

Annette Mitchell

Sam Fuqua

The Steering Committee

Tony Tallent, Library Arts Director

Jim Marshall, Finance/Business Manager

Lynn Reed, Information Systems Manager

Steve Austin, Branch Manager

Jennifer Miles, Access Services Manager

Bill Boyes, Facilities and Asset Manager

Mary Jane Holland, Children's and Youth
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Melinda Mattingly, Reference and
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Donna Gartenmann, Arts and Cultural
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Dennis Humphries

Ozi Friedrich

Sharon Rowlen

Beth Hager

I.2: Executive Summary

“The Boulder Public Library is central to Boulder’s cultural, intellectual, and economic life, deeply rooted in the community and responsive to its diversity. Both physically and virtually, it is an interactive connection to our past, present, and future – enabling the sharing of ideas, access to quality information, inspiration from the arts, and dialogue with others in the community or across the globe.”

- Boulder Public Library Vision Statement, 2007 Master Plan

The Boulder Public Library is in a crucial period of transition, with new leadership and a changing, thriving city to serve. At the same time, the Library works within conditions that include outdated facilities, obsolete systems, and a prolonged situation of severe fiscal constraints. The purpose of this Facilities Sustainability Study is to inform a ten-year plan for the Library’s facilities to continue to support its mission and vision.

The primary conclusions of this study relate to the **Main Library**. The Main Library represents 75% of Boulder Public Library’s square footage, collection capacity, and use. With unique architecture and a location at the civic heart of Boulder, the Main Library has the potential to offer environments and experiences that are unlike those available at any other library. However, it currently suffers from major issues relating to basic systems functionality, navigability, and acoustics. Focus groups and interviews suggest that these issues impede visitor usability and enjoyment, as well as driving users away from the Boulder Public Library. To maintain quality of service, and to capitalize on the facility’s extraordinary potential, improvements to the Main Library should be the Boulder Public Library’s most urgent priority. Recommended improvements at the Main Library include the following:

- Replace the obsolete in-slab electrical system.
- Relocate the Children’s space to resolve issues relating to acoustics, security, programmatic focus, and the navigability of the library as a whole.
- Convert the library to RFID and install a new automated sorting system to reduce operating costs and improve service.
- Improve the organizational layout of the library’s collections and resources.
- Add new areas for comfortable seating and enjoyment of the library.

- Replace high shelving with low shelving, especially in Children's spaces.
- Relocate and enhance a dedicated space for Teens, and add a space for late elementary to middle school students.
- Replace damaged and deteriorating finishes, lighting, and signage.
- Create new meeting, conference, and study spaces to satisfy community demand.
- Resolve acoustic issues at the atrium along the curved glass wall.
- Redesign inefficient, uncomfortable staff spaces to improve productivity of staff.

The suggested first phase of library improvements would consist of relocating the children's room and renovating the first floor of the 1992 and 1974 wings with new finishes, lighting, electrical systems, furnishings, and lower shelving, at an estimated cost of \$2,256,500. The estimated total cost for all recommended improvements to the Main Library is \$5,133,457. This cost does not include Radio Frequency ID tags (RFID) or the new automated materials handling (AMH) system. The Library currently has \$500,000 out of an estimated \$1,000,000 total cost to replace its current AMH and implement an RFID system. More detailed information on the costs of specific measures is provided in **Section V: Conceptual Space Plans & Cost Estimates**.

Further conclusions of the study relate, in no specific order of priority, to the three existing branch libraries, the North Boulder Branch Library, and the online services of the Boulder Public Library.

The **Branch Libraries** consist of three facilities with a total of 21,450 square feet of space. While they are in need of maintenance and refinishing, user satisfaction with the branches is generally high. In the current financial situation, improvements to the branches must be a lower priority than the urgently needed work at the Main Library.

- The **Reynolds Branch Library** is a 9,650 square foot facility on Table Mesa Drive. Its great strengths are its ambiance and its relationship with its local community. With some slight adjustments, its architecture is enduring and highly appropriate to Boulder.
- The **Meadows Branch Library** is a 7,800 square foot facility in leased commercial space positioned to serve South and Southeast Boulder. However, it is relatively close to the Reynolds Branch, and it is isolated at the rear of its shopping center site. This report recommends de-emphasizing Meadows in order to reduce its operational costs.

- The **Carnegie Branch Library** is an historic 4,000 square foot facility in Central Boulder. It is currently in use as a specialty branch for historic materials. An aggressive digitization program and a clear policy for materials acceptance and programmatic approach will be crucial to the future success of this library asset.

The **North Boulder Branch Library** has been a goal for the Library's long-term planning since 1995. Recent growth makes the development of library facilities to serve North Boulder imperative. This report identifies a possible scenario to address the geographic balance of library services in Boulder. Findings of the geographic study include the following:

- To fulfill its long-term goals, the Library must begin to establish the financial conditions necessary to support construction and operational costs for a new full-service branch library.
- If financial conditions will push the construction of a new branch beyond a ten-year timeframe, a small interim location should be established to offer hold / reserve services, popular materials, limited children's services, and a community gathering place.
- Reallocation of resources from the Meadows Branch would be an appropriate way to support new services in North Boulder.
- The Library is in a position to capitalize on its high level of online usage by offering automated hold pickups, remote book returns, and small popular-materials collections. These automated or limited-service locations should be deployed to address specific gaps in the Library's service area. However, on their own they would be insufficient to address the service gap in North Boulder.

The **Online Services** of the Boulder Public Library show extraordinarily high levels of usage. Boulder's highly educated population is prepared to utilize the library website as a 'virtual branch'. This constitutes an opportunity for the library to pioneer online services such as downloadable audiobooks and the live-streaming of library events.

I. 3: Background, Purpose, and Process of the Study

Boulder Public Library's 2007 Master Plan stated the following long-range goals for the social, environmental, and financial sustainability of the Library:

GOAL #1 -- Community Space: Provide a welcoming sense of place in which all members of the public can interact, exchange ideas, learn and build community as well as read, think, work, and reflect.

GOAL #2 – Core Services: Provide resources that inform, educate, inspire, and bring enjoyment to both individuals and the community as a whole.

GOAL #3 – Technology: Develop, implement and maintain an information technology architecture that accommodates the changing requirements of delivering library services in the 21st century.

GOAL #4 – Outreach: Engage the entire community in order to understand and meet the unique and varying informational needs.

GOAL #5 – Facilities: Protect the community's investment in facilities and implement a forward-looking service delivery model that adapts to changing needs.

GOAL #6 – Funding: Create a stable and sustainable economic model that honors the library's mission of providing the community with free and equal access to information.

The Facilities Sustainability Study was commissioned in support of these goals. Its primary purpose is to identify improvements to existing library facilities that can be achieved within current fiscally constrained conditions. A secondary focus is to study the geographic distribution of library services in Boulder and make recommendations relating to the 'quadrant' model used for planning branch services.

This study was written by the team of Humphries Poli Architects and Group3 Planners. Humphries Poli Architects is an award-winning Denver-based architecture firm with 27 public libraries either built or under construction across Colorado and Wyoming. Group3 Planners is a Colorado-based library consulting group with specialists in long-term planning, space planning, and furniture selection. The authors of the study are Dennis Humphries, principal architect; Ozi

Friedrich, architectural designer and former reference librarian; Sharon Rowlen, library space programmer and planner; and Beth Hager, strategic planner and former library manager.

The study process began with facilities walkthroughs and a close reading of the 2007 Master Plan. It then proceeded with a series of eleven focus groups, community interviews at two locations, and an online survey with 818 respondents. Interim reports were provided to the public and the Boulder Public Library Commission on 3 September and 3 December, 2008. The preliminary report was issued 14 November, 2008, and made available on the library website.

Geographic research was performed with the City of Boulder's EMaplink GIS service, and demographic information is based on a combination of the 2000 US Census and the 2008 Boulder Community Data Report.

This study consists of the following sections:

1. *Facilities Assessment*

This section details current facilities issues and potential solutions with reference to cost and effort. It includes analysis of history, use, physical conditions, code compliance, usability, and sustainability for each Boulder Public Library facility. It contains recommendations for prioritizing and phasing improvements

2. *Geographic Service Area Study*

This section uses geographic and demographic analysis to identify gaps in library service and propose a model for the geographic distribution of library facilities in Boulder. It includes brief discussion of several sites with potential for library service at varying scales.

3. *Library Services Needs Assessment*

This section addresses the current operational conditions, staffing, collection requirements, and space requirements of the Library.

4. *Conceptual Space Plans & Cost Estimates*

This section documents preliminary work toward re-envisioning the layout and arrangement of the Main Library and the Reynolds Branch.

5. *Report Data*

Distributed as a separate volume, this section contains detailed focus group results, interviews, surveys, space programs, and inventory documentation. It also contains drawings of existing conditions at each of the Boulder Library's branches.

II. Facilities Assessment

II.1: Introduction

The facilities of the Boulder Public Library are architecturally remarkable for a variety of reasons. They have tremendous long-term potential. The need for attention to the Library's facilities is urgent. While the effects of deferred maintenance are beginning to show across the facilities, the Main Library is the highest priority for the Library's limited capital budget. Additionally, there is potential for carefully chosen alterations to dramatically improve library operations and the library user's experience.

This Facilities Assessment will address the history, use, physical condition, code compliance, usability, and sustainability of each of the Boulder Public Library's facilities. The Assessment will identify issues and potential solutions. The solutions are developed more fully, with reference to cost, in **Section V: Conceptual Space Plans & Cost Estimates**. The section concludes with a discussion of the phasing and prioritization of the opportunities available to the Library.

The 2007 Master Plan states that "in a fiscally constrained environment . . . a strong central library is given priority over a system of distributed branches." The evaluation and enhancement of the Main Library is therefore the primary focus and priority of this Facilities Assessment. At 75 percent of the system's space, collection, and use, *the success of the Main Library is the determining factor in the success of library services in Boulder*. With three unique, valuable and idiosyncratic buildings stretched out across a flood-prone creek, the Main Library presents unusual challenges in terms of functional layout. However, by the same token, the Main Library offers environments and experiences that are unlike those available at any other library. The Boulder Public Library is in a position to capitalize on the uniqueness of its facility while resolving functional issues to create a satisfying and inspiring user experience.

The branch libraries each face a distinct set of circumstances. At the Carnegie Branch, the archival collections have outgrown the historic building that holds them. The Meadows Branch is in leased space on the back side of a supermarket. The George Reynolds Branch, like the Main library, represents an architectural character and ambiance that is absolutely unique to Boulder. Because of the basic quality of the building, relatively economical renovations have a potential impact well in excess of the basic capital investment.

II.2: Main Library

The Boulder Public Library's main facility is a striking ensemble of three architecturally ambitious buildings. At 93,000 square feet, it contains over 75% of the BPL collection and over 80% of the square footage. User visits also comprise 75% of the annual system total. The Main Library is effectively synonymous with the Boulder Public Library.

III.2.1 History & Use

1961 Wing

The initial wing of the Main Library was designed by acclaimed architect James Hunter FAIA in 1961 as part of a civic ensemble with the Boulder Municipal Building. Hunter was one of Boulder's most significant mid-century architects. His other works include the Municipal Building, Baseline Junior High, and Grace Lutheran Church. The Nelson House, a 1951 Usonian house at 1818 Baseline, is on the State Register of Historic Places.

At 23,899 square feet, the 1961 Wing is symmetrical around its entrance, with two walled gardens flanking the entry. The original building contained a second-story mezzanine over an open stacks area at the center of the building. An auditorium was inserted into this open two-story space as part of the 1992 addition / renovation. One of the two original skylights was removed during this renovation; the other is covered by blackout shades over the auditorium seating.

The entry contains an open-plan art gallery that serves as a vestibule or reception area for the auditorium.

The first floor also contains library technical services and the studios of Channel 8 Boulder. The upper floor contains literacy and tutoring spaces along with office spaces for the Library Innovation & Technology Division, volunteer coordination, graphics, and cultural programs.



Figure 1: 1961 wing entrance. Image property of Boulder Public Library

1974 Wing

In 1974, the library expanded across the creek to the south with a 14,680 square foot, two-story wing elevated above the floodplain on *pilotis* clad in glazed tile. It continued the architectural language of the 1961 wing, using orthogonal geometry, sandstone-clad stair towers, and precast concrete infill panels.



Figure 2: Overlooking the creek from the 1974 wing

The 1974 wing houses fiction and nonfiction stacks, a plumbing core, and a small Teen room. The bridge between the wings is currently occupied by a book sale area and a café space. The stacks fill the center of the wing, while the perimeter was designed to open to views of the creek and the creekside ecosystem.

1992 Wing

In 1990, Boulder architect J. Nold Midyette designed a major addition with an iconic stone-and-glass entry vestibule and a large, curving glass wall. Construction was completed in 1992. This wing houses staff spaces in the basement. The main floor contains a children's area at the glass wall, as well as express computers near the entry. The upper floor is a reference room that is day lit by multiple tiers of clerestory windows.

The building features several 'sustainable / green' elements that were highly ambitious for its time, such as an evaporative cooling system, passive ventilation at the entry vestibule, and an abundance of daylighting. Its south and west-facing windows include architectural light shelves to reflect daylight further into the building.

This wing has become the primary, iconic entrance to the library, although the library's address is currently given as the 1961 wing.



Figure 3: Aerial perspective of Boulder Library. 3d model by Camelot; accessed online 11/15/08 at <http://sketchup.google.com/3dwarehouse/details?mid=cbfc59aeffb6949afe2fcf42795ff31>

Site

The library features exterior spaces of great variety. The 1961 Wing features two garden pavilions, one on each side of the entry. One contains a mature Japanese garden, and the other is informally dedicated to sculpture. The underside of the bridge and the 1974 wing create sheltered outdoor spaces with lighting and benches for enjoying the creek. North of the 1974 wing, a landscape artwork features two winding paths that join as a spiral.

A bridge crosses Boulder Creek on axis with the 1992 entrance. Outside the curving glass wall, a flagstone landing and stairway are used as a children's play area. The main entrance features a grid of trees set in a pink concrete plaza. Finally, the south side of the upper floor offers terraces accessed from both the administrative offices and the reference room.

There is a surface parking lot at each side of the creek. The southern lot, which accesses the 1992 entrance, is governed by a fairly complex set of rules. It is free to library users for up to 3 hours, while those using it for other purposes are asked to voluntarily pay \$1/hr. It is patrolled to enforce a three-hour limit.

The northern lot has approximately 90 spaces which are currently allocated for city employee parking at the Municipal Building. The southern lot has approximately 140 spaces. The 230 total spaces would meet Boulder zoning requirements, but *only if the library had exclusive use of the northern lot*. Focus groups confirmed the insufficiency of current parking and significant confusion over the parking that is available.



Figure 4: Landscape artwork north of the 1974 Wing

II.2.2: Physical Condition Assessment

1961 Wing

1. Structure

The 1961 wing was built with slab-on-grade floors and a one-way concrete slab system for roofs and structural floors. There are no signs of slab movement relative to the building foundations. The insertion of the auditorium into the building's structural system appears to have been accomplished without structural complications.

2. Finishes

Virtually all finishes were replaced during the 1992 renovation. Due to a lower level of day-to-day traffic, the finishes are in better condition here than in the 1992 wing. Original terrazzo floors have been covered with carpet in the upstairs area of the building.

The exterior needs recaulking and repointing.

3. Systems

Rooftop units were replaced in the 1992 renovation, and the auditorium Air Handling Unit was replaced in 2006. The roof was replaced in 1999.

The boiler has exceeded its functional lifespan and is in need of replacement.

1974 Wing

1. Structure

The 1974 wing uses a system of cast-in-place concrete with steel beams. Walls are a combination of glass and precast concrete infill. There are no visible structural issues. With further evaluation by a structural engineer, it might be possible to replace some of the concrete wall panels with glass to open views to the creek to the north and south of the wing.

The bridge was built with the 1974 wing, and uses the same construction technology.

2. Finishes

Finishes were replaced during the 1992 renovation. As the 1974 wing does not receive the same intensity of traffic as the 1992 wing, the finishes are generally in better condition.

3. Systems

The café in the bridge lacks a water supply; café workers carry their water supply from the nearest utility sink.

Possible future arrangements of the 1974 Wing may be constrained by low soffits that define the current locations of passageways through the stacks. The soffits need to be examined to see whether their removal can be achieved without mechanical or other complications.

The elevator pump was replaced in 2000.

The expansion joint, which allows the 1992 and 1974 wings to move independently in response to changing temperature and other dynamic loads, needs repair work.

1992 Wing

1. Structure

The 1992 wing consists of cast-in-place concrete columns (cylindrical section) with post-tensioned concrete structural floors. The roof structure is supported by a combination of steel bar-joists and architecturally exposed tube-steel trusses. There are no visible structural issues. It should be kept in mind that post-tensioned slabs are very difficult to modify or cut through without first locating structural tendons.

Exposed concrete elements, such as the columns and the main stairway, are integrally colored with a pink pigment.

Interior partitions are typically aluminum storefront systems with ¼" clear glazing. The expense of moving / replacing these partitions is likely to be higher than replacing a typical gypsum board partition. Certain acoustic issues also arise from the use of this system in acoustically critical separations.

2. Finishes

In numerous locations, carpet is peeling up from the floor-slab, creating a safety hazard in addition to a generally shabby appearance. The basement, additionally, needs new floor finishes.

Focus groups indicated strong distaste for the dominant pink color scheme through much of the library. New paint could make a major difference in the character of library spaces.

The Children's area, along with the second level reference room, is built around three *ficus* trees. After 15 years of living in this space, the health of the trees is rapidly deteriorating. It should also be noted that roughly 1,000 total square feet on the upper level are lost to the floor openings that accommodate these trees.

3. Systems

The 1992 Wing was built with an in-slab electrical system which has since become obsolete. Parts are no longer available for the system, and the library is currently subsisting on its own inventory for maintenance. Carpet replacement is necessary whenever the system needs to be accessed for maintenance. Additionally, the system's 'tombstone' electrical receptacles protrude from the floor slab, creating physical obstacles and trip hazards. Funding for electrical replacement, and the associated carpeting replacement, is currently on the Library's Capital Improvements Plan. However, City budgets have delayed these projects, along with scheduled replacement of the 1992 Wing elevators.



Figure 5: Carpet peeling up in 1992 Wing



Figure 7: Carpet peeling up in 1992 Wing



Figure 6: Floor outlets, 1992 Wing

A design solution for the replacement electrical system has not yet been established.

Diffusers were removed from several supply registers as part of the process of adjusting the HVAC system. These diffusers should be replaced with a suitable product that will allow adequate airflow. Evaluation and balancing of the HVAC system is ongoing.

A replacement of the HVAC control system software is in planning.



Figure 8: 'Tombstone' electrical receptacle in the 1992 Wing



Figure 9: Water-stained ceiling tiles, 1992 Wing

Roof flashing was replaced in 1998. A full roof replacement, for all three wings, was completed in 2009. Water-stained ceiling tiles remain in several locations.

The basement of the 1992 wing sits in the 500-year floodplain of Boulder Creek. The sump pumps serving the basement need replacement on a five-year schedule. The potential for flooding should be considered in evaluating the uses most appropriate to the basement.

II.2.3: Code Analysis & Compliance

The City of Boulder has adopted the 2006 International Building Code and its related mechanical, electrical, and other codes. However, certain conditions that do not comply with current codes may be 'grandfathered' so long as they are not altered in the course of renovations.

The Main Library has mostly been brought into compliance with the code over the course of its renovations. The following items note only potential issues, and not the general condition of compliance. Please also note that there is always interpretation involved in applying the code,

and some of these conditions may have been approved in previous conversations with local building officials.

1961 wing

Stairway separation: the 2006 IBC requires exit stairways in buildings equipped with a fire suppression system to be separated by a minimum of $\frac{1}{3}$ rd the diagonal of the floor. The diagonal of the upper level of the 1961 wing is 134'. $\frac{1}{3}$ rd of 134' would require an exit stair separation of 44'. The two stairways from the upper level of the 1961 wing are only separated by 22'. This condition is shown clearly on the plans for the 1992 renovation.

Floodplain control: The 1961 wing sits in the 'high hazard' flood zone as established by the City of Boulder and the FEMA 100 Year floodplain. The 1992 renovation added 'floodgate' doors to the walls around the gardens on either side of the entrance. The 1992 drawing set also shows an 8" thick, 3' tall concrete retaining wall being added to the existing perforated precast concrete screen wall. For unknown reasons, this retaining wall was not constructed as part of the 1992 construction. The garden wall is, therefore, not actually capable of resisting floodwaters. Further evaluation by a civil engineer would be needed to determine whether this condition meets the requirements of ASCE 24, "Flood resistant design and construction," adopted by reference in the 2006 IBC.

1974 wing

The 1974 wing sits in the 'high hazard' flood zone as established by the City of Boulder and the FEMA 100 Year floodplain. It copes with the technical requirements of this site by using columns to elevate the building over the flood zone. The space under the building, approximately 10'6" from slab to underside of structure, could conceivably be used for a future addition. However, it would have to meet the requirements of ASCE 24, "Flood resistant design and construction." A civil engineer's evaluation would be required.

Currently, the space under the 1974 wing attracts a variety of inappropriate behaviors. The Boulder Parks & Recreation Department is currently engaged in a study of the entire Central Municipal Complex park area. Coordination with the Parks & Recreation department is recommended with a goal of redesigning the space with appropriate security measures and landscape features to make the space into a public asset.



Figure 10: 1974 wing from across Boulder Creek

The required restroom facilities for the 1992/1974 wing are supplied in the 1974 wing. The accessible stalls comply with accessibility requirements for alterations where a typical stall is not feasible, but they are smaller than would be required by current code.

1992 wing

The current stack layout at the 1992 wing has several dead ends without sufficient radius for a wheelchair to turn around. Columns adjacent to shelving need to be checked for a minimum clearance of 32".

II.2.4 Usability Assessment

Between focus groups and the 2007 master plan, the following issues have been identified with the current functionality of the Main Library:

1. Security
2. Navigability
3. Acoustics at the Curved Wall
4. Other Acoustic Issues
5. Children's Shelving
6. Inadequate Teen Space
7. Insufficient Meeting and Study Space
8. Isolation of Literacy Programs
9. Crowding on the Bridge
10. Dark Stacks / Dark Winter Evenings
11. Staff spaces
12. Automated Book Return

- **Security**

The original design of the 1992 Wing treated the first floor as a broad, open space with a porous boundary between the entry and the children's space. This design resulted in perceived security issues, and library staff responded by using shelving and furnishings to establish a continuous perimeter around the children's space. This perimeter has a major impact on the navigability and functionality of the library's basic design.

Beyond the children's space, there are significant security issues in the 1974 Wing. Long rows of high shelving limit sight-lines, and motion-sensor activated stacks lighting can leave the entire wing in darkness when a user approaches. The Boulder Public Library is highly urban in its character; dark, unused corners present security issues. Lower shelving and new lighting controls are needed to improve both the security and the usability of the 1974 wing, but the best solution would be to activate all areas of the library with resources, features, and spaces that attract users at all times of day. Like any city street, a busy library is safer than an empty library.

- **Navigability**

Focus groups frequently reported the experience of being ‘overwhelmed’ by the library’s complexity. Some potential users reported avoiding the library after a first encounter with confusing, compressed, excessively crowded spaces. The adjacent diagram shows how the children’s space, shown in yellow, acts as a ‘wedge’ that restricts the rest of the library to a long, narrow, complicated passage. The majority of the library’s users must pass through a series of bottlenecks on the way to the rotunda, which is constricted on one side by the children’s space, making the stairway, elevator, columns, and help desk into a sort of obstacle course. Finally, the long, narrow ramp between the 1992 and 1974 wings creates a definitive division between elements of the collection that would function better as an integrated whole.

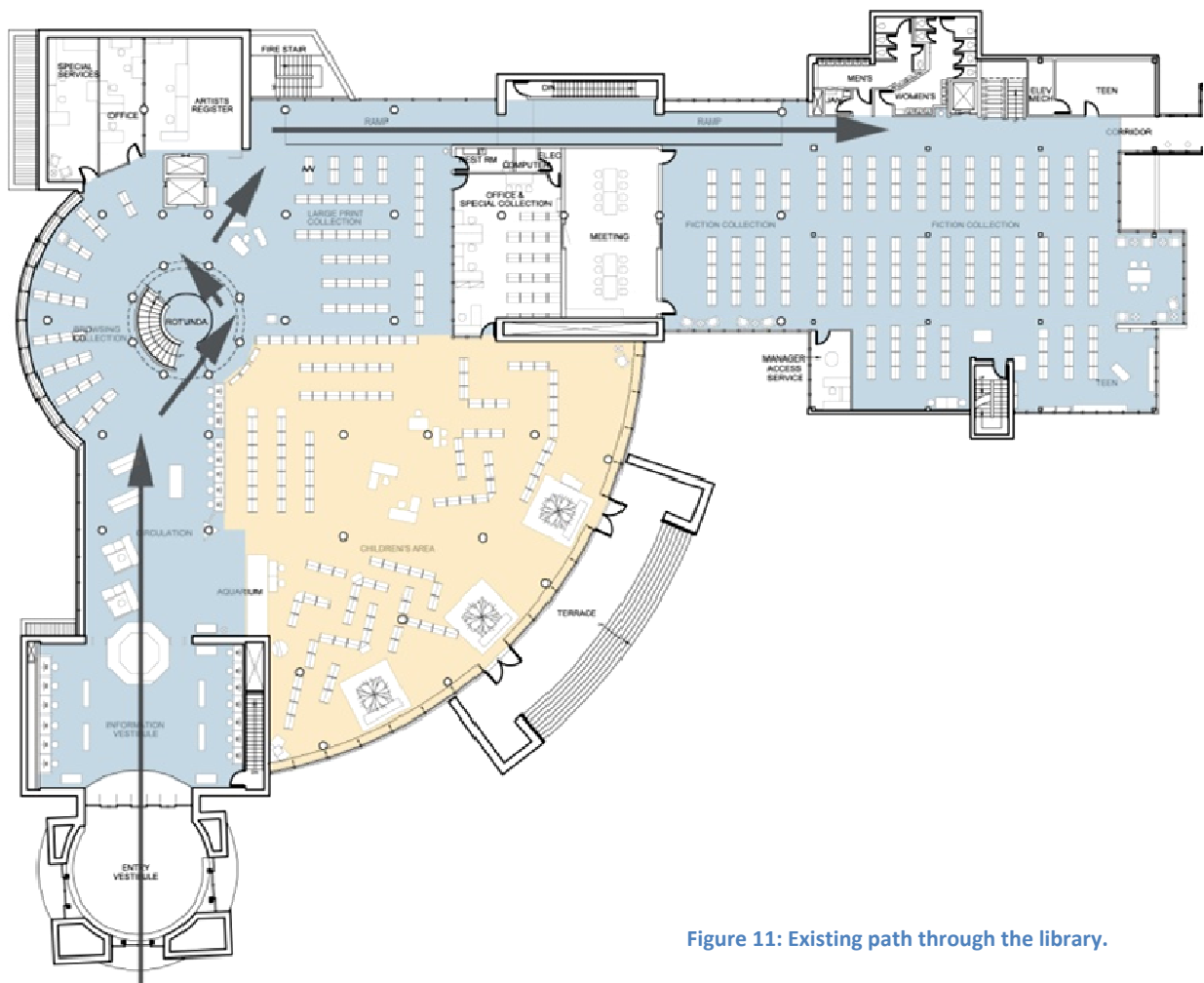


Figure 11: Existing path through the library.

Solutions

Through the course of the study process, a consensus has grown in support of relocating the children's space to allow the first floor to function as the grand, open space it was intended to be. The rotunda should be treated as the library's central point of order, from which the entire space can be surveyed and comprehended. Finally, the ramp to the 1974 wing needs to receive special architectural treatment. It should indicate the contents of the space beyond, and open out to invite users deeper into the library.

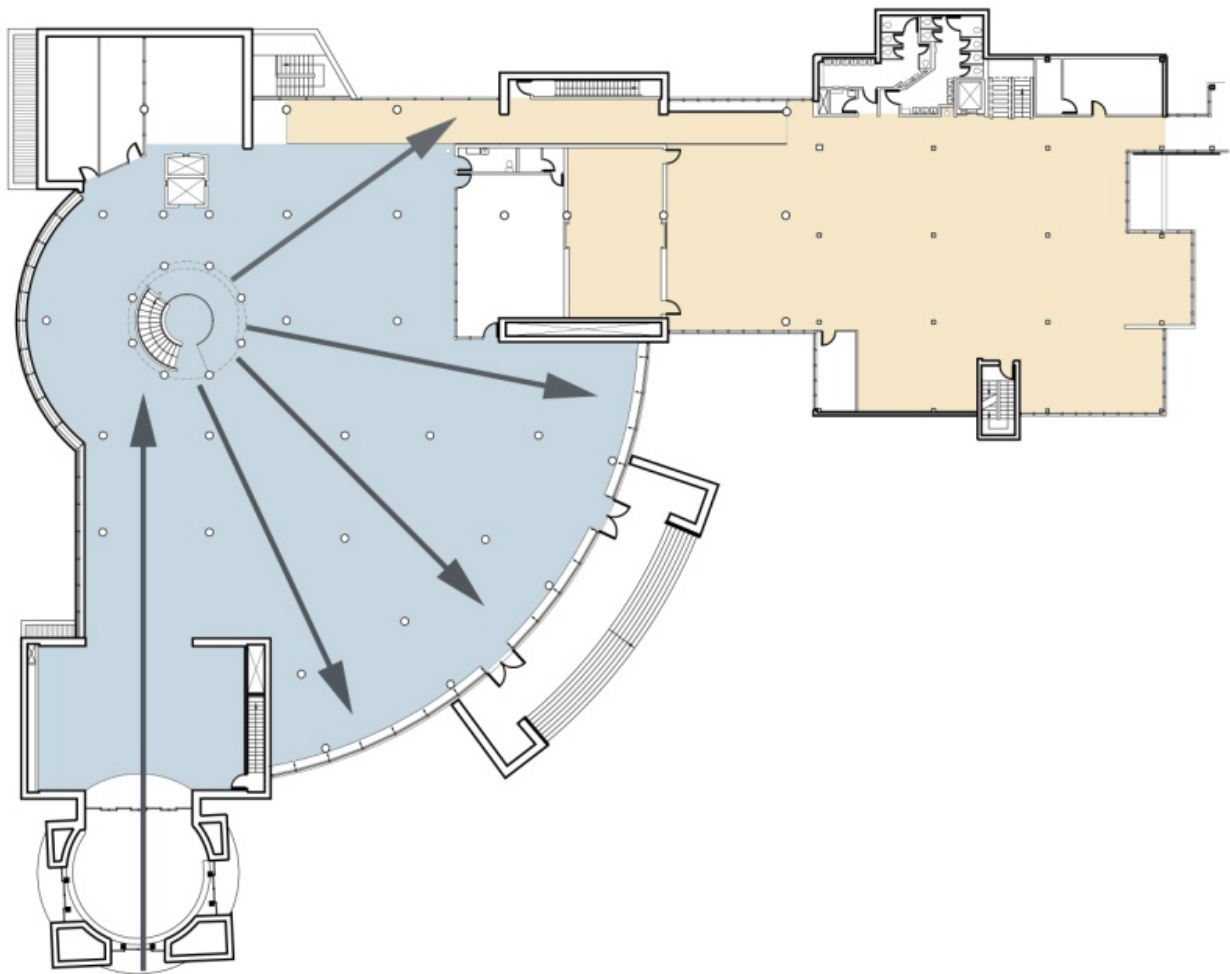


Figure 12: Rotunda as Central Point

A further possibility would move the entry of the library to a position along the curved wall. This would resolve the series of bottlenecks and immediately expose users to a broad, richly lit space and the full span of the library's collection. The outdoor steps, modified for accessibility,

would offer the kind of ceremonial, civic entry found at the great libraries of the 19th and early 20th centuries. The relocated entrance would dramatically improve the usability of the library while offering a welcoming new civic space to the people of Boulder.

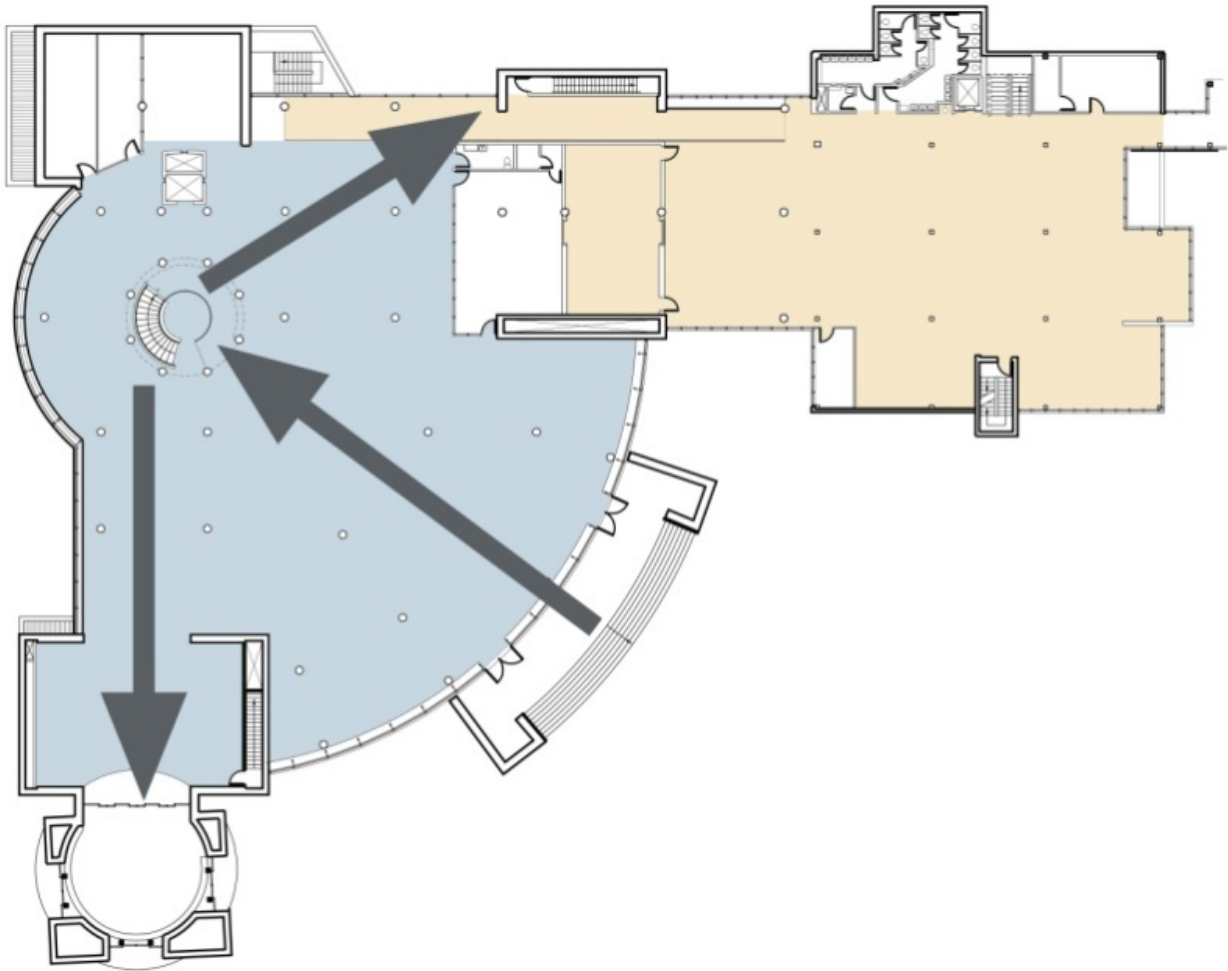


Figure 13: Entrance realignment

In the course of all renovations, new signage, lighting, carpeting, and paint must be deployed in a way that will contribute to the library's legibility. The current color scheme is frequently monochromatic, especially where pink wall paint, pink concrete, and pink shelving are combined in the same zone. The revision of this color scheme will create opportunities to use color and material to indicate pathways to various destinations, and to enhance the distinct identities of the library's different spaces.

- **Acoustics at the Curved Wall**

The Children's Room is currently in a two-story atrium along the curving glass wall. There is no acoustic divider between the children's room and the general collection. Even if the children's room is relocated, there may be acoustic incompatibility between the bustle of the first floor and the reference room above.



Figure 14: Children's area with Reference above

¼" glass, which transmits sound readily.

Solutions

A minimal intervention at the conference room would be to install clouds or other acoustic elements to intercept more sound before it reaches the reflective glass surfaces alongside and over the Arapahoe conference room. However, it would be more effective to bring the glass enclosure around the room all the way to the wall and ceiling.

It may be possible to identify functions which will work better in the existing study room locations. New study rooms could then be constructed with full acoustic partitions.

Solutions

It would be possible to create an acoustic barrier between the Children's area and the Reference area above. Necessary adjustments include the removal of the unwell trees. The acoustic barrier would be best constructed as a translucent or transparent system to preserve the light balance currently found in the spaces on both floors.

- **Other Acoustic Issues**

The Arapahoe conference room is open at one side and at its ceiling, resulting in poor acoustic separation from the rest of the library. The study rooms are only separated by

- **Children's shelving**

Most of the shelving in the Children's room is 7' tall. The height is far too tall for children and not standard for a high-performing library. The high shelving also reduces the ability of parents and library staff to monitor and supervise the space, an essential for a children's library to be safe, secure, and welcoming.

Solutions:

Children's shelving should be replaced with shelving at age-appropriate heights. It will be necessary to weed the collection to reduce the needed shelving capacity. It may also be necessary to allocate additional space to allow for the lower heights.

- **Inadequate Teen space**

The original design of the 1992 wing did not provide an enclosed space for teen use. However, the Library later reallocated a small storage/office space as an acoustically separated teen room. This room is isolated from service points and has to be closed when staff is not available for direct supervision. Demand for the space has outpaced its capacity. Focus groups requested a new 'tween' space so that middle school students will not be in competition with high school students for limited space and resources. The teen space was identified as the library service needing the most attention in the Library's 2008 service evaluation.

Solutions:

A new contiguous area should be established for teen use. Proximity to permanently staffed service points would allow full-time availability. The space allocation should be increased. The space should be open and welcoming while still creating an acoustic separation between teens and the rest of the library's users. The middle-school area is recommended to be included as part of the children's area. The majority of the teen collection should remain interfiled with the general library collection, but the room should include displays of high-use and popular materials.

- **Insufficient meeting and study space**

The library currently offers one sub-dividable multi-purpose room; one conference room; two small study rooms; and a 207-seat auditorium. None of the rooms are equipped to support children's crafts activities. According to the 2007 Master Plan, the multi-purpose room is typically booked 2-3 months in advance, and groups are turned away on a daily basis. The Business focus group repeatedly emphasized the value that additional meeting space would present to the business community.

Solutions:

The library needs an additional or expanded multi-purpose room, a children's program space, and 4-6 new study rooms. This could best be achieved by developing 'multi-use' scenarios where multiple user groups and type of uses may benefit from new spaces. Transparency into the meeting rooms would improve awareness of library programming and allow use of the rooms as public space when not booked for meetings.

Alternately, if the meeting rooms are kept in place, they should be refurbished with new finishes, lighting, kitchenettes, and technologies such as digital projectors and digital whiteboards.

- **Isolation of literacy programs**

The BoulderReads literacy program is isolated at the 2nd floor of the 1961 building. This isolation is not only inconvenient for the programs; it deprives the library of the opportunity to expose new users to library culture in the course of tutoring sessions.

Solutions:

Relocate the literacy program to a more prominent and easily accessible space. Design the tutoring spaces to serve as study or conference rooms when not being used by the literacy program.

- **Crowding on the Bridge**

With views to the creek on either side, the bridge is one of the library's most spectacular spaces. It is currently used for a coffee kiosk and a book sale area. Focus groups emphasized that the area is excessively crowded and cluttered.

Solutions:

Relocate the book sale area, the coffee kiosk, or both. Dedicate the bridge to reading areas or another function that will make best use of its extraordinary views.

- **Dark stacks / dark winter evenings**

Certain areas of the library have excellent daylighting. However, other areas are less well lit, and many areas of the library become excessively dark during winter and evening hours. Certain stack areas require motion-sensor activation, or manual switches, to control stack lighting. While highly efficient, the dark ranges of stacks do not present a friendly or welcoming aspect to users.

Solutions:

The existing fixtures should be re-lamped with brighter, more efficient tubes. Annual dusting of the tubes should be added to the maintenance schedule to prevent light reduction due to accumulated dust.

The stacks lighting should be redesigned to offer more continuous lighting for improved security. However, the most effective improvement to the stack areas would be to redesign the stacks with greater openness, lower stack heights, and areas that will attract users at all times of day.

- **Staff Spaces**

Various small staff areas are scattered around the library. Consolidation of some of these offices would allow greater efficiency and long-term flexibility. The largest staff area is in the basement. There are no easy opportunities for bringing daylight down into this area.

Staff spaces currently lack private conference areas for such basic functions as performance reviews. Any renovation should, at a minimum, provide a 2-4 person conference space in the basement staff area and the upper floor administrative offices.

- **Automated Book Return**

The existing automated sorter was added to the library after the 1992 renovation. Since its installation, it has required a high level of staff supervision. Recent technological improvements have significantly increased the utility of automated sorting systems. Significant savings in operational costs could be achieved with an updated sorter.

The current sorter's poor level of functionality has extended the time required for reshelving by days. Current library standards call for a maximum of 24 hours from the return of a book to its placement on the shelf. The Boulder Library's delayed reshelving reduces circulation, especially for rapid-turnover items such as DVDs and CDs. Some items may spend more time waiting for reshelving than they do on loan. The delay creates disappointment for library users and stress for library staff, especially when a user travels to the library after seeing an item listed as 'available'.

Solutions:

Installation of an efficient, reliable, RFID-based automated book return system should be an immediate priority for the Library. Conversion to RFID will also reduce operating costs by improving library inventory control and facilitating self-service circulation.

II.2.5: Sustainability Assessment

Lighting

The 1992 wing of the library has excellent daylighting, but multiple focus groups noted that it is too dim in evening and winter conditions. A sustainability audit performed in 2007 suggested re-lamping fixtures with high-efficiency T8 lamps. These lamps, in addition to being more efficient, give out 5% more light than the current lamps.

Additionally, the sustainability audit stated that there is no mechanism installed to automatically dim the lamps when daylighting conditions make them unnecessary. Installation of daylight sensors in the reference room would allow easy energy savings for minimal investment. The concurrent installation of dimmable ballasts would allow continuous variation of light levels to balance daylighting conditions.

The stack lighting in the 1974 wing uses motion sensors to light a range of stacks when someone enters it. Other stack areas rely on manually-activated timer lights. Although these are efficient in purely technical terms, focus groups reported a strong impression of the stacks as a dark, potentially unsafe place. The stack lighting thus constitutes an obstacle to the library's public service mission.

Daylighting is relatively poor in the 1974 wing. More windows at the perimeter could improve daylighting and offer views to the creek. Tubular skylights or Sundoliers could be considered at the second floor.

The upper floor of the 1961 wing offers no windows to its enclosed office space. The structural system should be evaluated for its potential to accept new windows, which would greatly increase the potential of the space while also reducing energy use through daylighting.

Power generation

The 1961 and 1974 wings have significant areas of unshaded, flat roof suitable for solar photovoltaic installation.

Green Roof Systems

Green roof systems consist of plant life in a growth medium over a membrane roof. Typical systems vary from a soil depth of 3", which can support sedum and other shallow-rooted plants, to depths of over a foot to support grasses and trees. Green roofs improve building insulation, reduce the 'urban heat island' effect, and



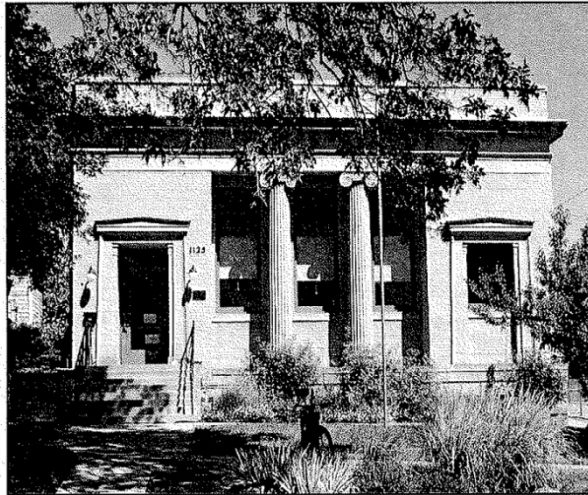
Figure 17: Green roof at Des Moines Public Library



Figure 16: Bridge roof from 1974 Wing, 2nd floor

reduce stormwater runoff. The flood threat associated with Boulder Creek would make the Main Library a particularly appropriate location for a green roof system. Of all the roofs at the Main Library, the most visible is the top of the bridge that crosses the creek. Given sufficient structural capacity, a green roof at this location would constitute a dramatic and beautiful contribution to the sustainability of the Main Library.

II.3: Carnegie Library



III.3.1 History & Use

The Carnegie Library was built in 1906, and served as Boulder's sole library until the construction of the 1961 wing at the main library. The Carnegie was used as a recreation facility and a warehouse until 1983, when it reopened as a branch library for local history. A mezzanine was inserted to increase space for archival processing and storage. The building is a historic landmark; it is listed on the National Register of Historic Places in addition to being locally designated.

A Historic Structure Assessment prepared in 2005 found the building to be "in good condition," with a list of minor repair and restoration issues. The Executive Summary concluded that

"Perhaps the most intractable problem is that the building has reached a point on the interior that there is no additional archive space available to provide for the future expansion of the library's collections. The site is so tight that there are no viable alternatives for an addition. An addition on the roof would be very difficult to achieve due to the very significant negative effect on the historic character of the library. The same problem exists on the interior; it would be disastrous (from the point of view of architectural integrity) to add a mezzanine in the large

reading room. One excellent possibility is to dig a full basement under the building; another is to transfer collections and/or departments to an off-site location." (*Historic Structure Assessment SHF#2003-HA-083 – The Carnegie Branch Library, Boulder*, p. 7)

Long-term obstacles to the Carnegie's function as a local history archive include limited space, limited resources, and the difficulty of inserting archival-grade climatic controls into a historic structure. Ongoing digitization projects and offsite storage of digitized material are the best options for reducing the space pressure on the Branch.

III.3.2 Physical Condition Assessment

The Carnegie library has received a \$170,945 grant from the State Historical Fund for exterior rehabilitation. This funding is to be matched by 35% matching funds from the City of Boulder for a total project budget of \$262,997. The scope of work includes the following:

1. Install underground drainage for foundation protection.
2. Replace the deteriorated concrete entrance steps with a historically appropriate design.
3. Masonry repairs as described in the HSA.
4. Installation of a fire alarm system.
5. Widening the accessible entrance ramp and adjusting its slope.
6. Rust removal and repainting of exterior steel components.
7. Replacement of the EPDM membrane at the top of the cornice to reduce the visual impact of the drip edge.

Upon completion of this work, the following issues (as identified in the Historic Structure Assessment) will remain:

1. Brick & stone site walls are deteriorated.
2. There are voids in the crawlspace brickwork that should be filled and mortar joints that need repointing.
3. The stone cornice should be re-flashed to improve drainage.

4. The brick parapet has deteriorated. While it is currently protected by sheet metal flashing, the HSA recommends repairing the parapet and installing a stone cap to match the original.
5. The wood windows and trim need repainting. The HSA recommends matching the original ivory/tan color as documented in historic photographs.
6. The pine flooring in the main reading room was patched with oak. The HSA recommends refinishing the floor and replacing the patches with pine to match the original.

The Carnegie roof was replaced in 2006.

III.3.3 Code Analysis & Compliance

Historic buildings are exempt from many accessibility provisions when the building cannot feasibly meet code. However, even historic buildings are required to have at least one accessible entry route. The existing accessible entrance ramp is narrower than required and does not have railings. It leads to a side entry near the back of the building. Funding to improve the ramp is included in the State Historical Fund grant.

If the pitch of the rebuilt ramp is steep enough to require handrails, they should be anchored to the ramp, rather than the building.

Due to the considerable grade change at the Carnegie Library site, emergency exits are available at grade from both levels.

III.3.4 Usability Assessment

Beyond the basic issue of insufficient space for a growing collection, a these further issues deserve to be mentioned:

1. There is no dedicated parking for the Carnegie Branch. Instead, the Carnegie uses the lots of nearby churches. This may limit potential alternate uses the library might want to evaluate for the Carnegie.
2. There is no signage to indicate that the Carnegie Branch is a library.

3. The Carnegie is frequently staffed by a single librarian, who is responsible for the security of rare and irreplaceable materials. The librarians have requested the replacement of the restroom fan units so that they will at least be able to hear activities within the library when using the restroom.
4. If the Carnegie is re-positioned in a primary role other than a historic repository, it will be important to provide an accessible entrance route that leads to the front entrance, rather than the long and isolated route currently in use. At the same time, the front façade of the Carnegie is perhaps its most important historical feature. This will preclude some of the potential resolutions to accessible entry. Further architectural study would be recommended to establish the potential of the Carnegie as a fully accessible public facility.

III.3.4 Sustainability Assessment

Historic Structure Reuse

As the continuing use of a historic structure, the Carnegie Library is inherently sustainable. Additionally, it was designed for an era before air conditioning and fluorescent lighting. The tall windows bring in excellent daylight, and the thick masonry construction is by its nature thermally stable. Future uses of the Carnegie should appropriately capitalize on these qualities.

Task Lighting

The HSA recommended installation of task-lighting at library tables to match that shown in historic photographs. Task lighting is an excellent option for sustainable lighting, since it provides individually controllable conditions and can be designed to promote a lower overall level of lighting wattage.

III.4 George Reynolds Branch Library



Figure 18: George Reynolds main entrance at sundown

III.4.1 History & Use

The George Reynolds Branch was designed in 1968 by Bill Heinzman, with an addition in 1994 by Peter Heinz. It sits on land donated by the estate of George Reynolds, a highly regarded professor of English Literature at Colorado University. The architecture features clerestories, cathedral ceilings, arched windows, indoor/outdoor spaces, and flagstone floors in certain areas. Focus groups indicate great appreciation for the library's comfort and 'living-room' ambiance.

The location of the library is ideal for service to South Boulder. Table Mesa Drive is one of the area's most significant thoroughfares, and the library is also near to Highway 36. The library sits on high ground with excellent potential visibility from Table Mesa Drive.

III.4.2 Physical Condition Assessment

1. Structure

The Reynolds Branch appears to be in good general condition. However, signs of several roof leaks can be noted in the course of a library walkthrough. The many leaks suggest a flawed roof replacement, which occurred in 2000. These leaks appear to be occurring primarily at the flat-roofed portions of the building. Full replacement of the roof at flat-roofed areas may be necessary to resolve the issue.

A crack was noted in the south wall, adjacent to the courtyard, in 2007.

2. Finishes

Reynolds Branch carpeting has not been replaced since the 1994 renovation. High-traffic locations show severe wear. Carpet replacement is currently in planning. A carpet tile product would be recommended to allow easy replacement of worn areas in the future.

Acoustic ceiling tiles should be replaced where damaged by leaks.



Figure 19: Carpet at Reynolds circulation desk



Figure 20: Water marks on acoustic ceiling

3. Systems

There are no current issues with the Reynolds library mechanical systems.

A 10kw solar photovoltaic system was installed in 2008.

4. Site

The existing landscaping has grown to obscure the visibility of the library. Plans are in progress to trim the trees, remove several overgrown junipers, and replace the existing potable-water irrigation system with one that uses water from the nearby creek.

III.4.3 Code Analysis & Compliance

The Children's storytime area features an accordion partition to close the space off from the rest of the library when in use. There is no provision for emergency exit from the space when the partition is closed. The partition does not offer much in the way of acoustical separation, and is rarely used. Because of the life safety issue involved, it is recommended that the existing partition be taken out of service entirely until it can be replaced with a model offering emergency exit capability.

The branch does not have an elevator. The accessible route to the lower level meeting room is achieved with a sloping path from an on-street accessible parking space on Stanford Avenue.

Parts of the Reynolds Branch site are within the 100 and 500-year floodplain. The current footprint of the branch has been carefully shaped to remain outside the floodplain. However, any future additions will need to be either of flood-resistant construction or restricted to the 1,500 sf of open space land outside the flood zones.



Figure 21: Aerial image of George Reynolds branch with 100 and 500-year floodplains.

III.4.4 Usability Assessment

Between focus groups and the 2007 master plan, the following issues have been identified with the current functionality of the Reynolds Library:

1. 'Reading Court' acoustics

The 'reading court' is a narrow, tall space with excellent daylighting from clerestories above. The flagstone floor, drywall ceilings, and glazed openings are all acoustically reflective. The high level of reverberation reduces the usability of the space, especially when sound transmits over the partial-height wall at the circulation desk. The archways around the room have been, for the most part, glassed in.

Solutions:

The addition of acoustic treatments is necessary. As Reynolds already possesses several excellent reading spaces, the space should be reallocated for another use. The space has considerable architectural potential. Completing the acoustic enclosure and damping reverberation with acoustically absorptive panels would allow the current teen space to move into this bright, welcoming area.

2. Fireplace

George Reynolds was a CU professor of English Literature who was known for his 'fireside chats' with students. A fireplace was included in the original design to evoke the professor's legacy. However, emissions regulations have prohibited the use of fireplaces in Boulder, and the fireplace is now used as a dictionary stand.



Figure 22: Existing Fireplace at Reynolds Branch

Solutions:

There are various technologies which could be

installed in the fireplace to meet regulations. These technologies include natural gas fireplaces, EPA-Phase II certified woodstoves, pellet stoves, or gel fuel fireplaces. Relocation of the fireplace is recommended in order to fully support the branch space plan.

3. Internal Visibility

Sight-lines from the service desk to the teen room and study room are poor.

Solutions:

Add glazing to the relevant walls. The low, enclosed space of the existing teen room would serve very well as a computing lab. Relocate the teen room to the Reading Court.

4. Workroom

The book drop / workroom is small and unpleasant. The book drop itself has no fire-barrier closet to reduce heat loss and protect the library from burning objects dropped through the slot.

Solutions:

The service desk and workroom should be simultaneously redesigned to support the Library's current service model.

III.4.5 Sustainability Assessment

Power Generation

A 10kw solar array was donated to the library by Bella Energy in 2008. It was installed flush with a roof that happened to be angled appropriately for solar power generation. The Reynolds Branch is one of the first libraries in the state with solar capabilities.



Figure 23: Solar array at Reynolds Branch. Image from [http:// Bella Energy](http://BellaEnergy)

Daylighting

Several spaces at the Reynolds Branch have excellent daylighting. The addition of dimmable ballasts and daylight sensors, as described in the Main Library sustainability discussion, would allow significant energy savings.

III.5: Meadows Branch Library

III.5.1 Use & History

The Meadows Branch was designed in a donated lease-space at a shopping center in 1989. The floorplan is triangular, with the hypotenuse opening as a window-wall to the south and two shorter party-walls on either side. The character of the branch is, naturally enough, retail-oriented. One popular feature of the branch is the read-along bench in the Children's Room.

III.5.2 Physical Condition Assessment

1. *Structure*

Because Meadows is in a leased space, the library has limited control over the condition of the building.

2. *Finishes*

Plastic laminate countertops are cracked and peeling. Replacement is recommended. Carpet was replaced in 2003.

3. *Systems*

Meadows is equipped with four roof-top heating/cooling units, but two currently do not work. There are also issues with frequent backups in the sewer line.

III.5.3 Code Analysis & Compliance

The wheelchair-accessible stalls at Meadows are narrower than called for under current accessibility code. However, they comply with accessibility requirements for alterations where a typical stall is not feasible.

III.5.4 Usability Assessment

Although it is located in a high-traffic shopping center, the Meadows Branch is hidden at the back side of the building. A 75' long service corridor offers some possibility of direct access adjacent to the Safeway entrance. The corridor is 4' wide with un-finished walls, and would require considerable work to convert into a welcoming passageway.

The entry and meeting rooms at Meadows have been designed to allow after-hours access. The Boulder Public Library does not currently make use of this capacity.

The Meadows Branch is well suited for ongoing use as a popular-materials branch with additional resources for children.

III.5.5 Sustainability Assessment

Several skylights improve daylight at the interior of the library.

The exterior wall of the Meadows Branch faces directly south. The windows capture large amounts of light, as well as warm sunbeams in the winter. The daylight available at the interior of the building could be further enhanced by the addition of a light-shelf at this wall.

The lease for the Meadows Branch is up for renewal in 2009. While the Southeast quadrant of Boulder is projected to see rapid growth over the next 20 years, the Meadows Branch is closer to the Reynolds Branch than is ideal. Its placement on the site is also awkward. Even if the service corridor can be turned into a route to bring customers from the front of the shopping complex, it will be a long path of travel requiring the redesign of the Meadows interior for two entry points.

II.6 Priorities and Phasing

The most significant decisions ahead of the Library relate to the prioritization and phasing of needed improvements. The following list is an initial suggestion based on current physical, spatial, and capital conditions.

PHASE ONE

1. The Main Library's obsolete electrical system needs to be replaced. All work on the in-slab electrical system will also require carpet replacement, which in turn requires the relocation of shelving. The closure of a public space for work also presents a good opportunity for painting and lighting replacement. The Library should plan its phasing so that electrical work, carpeting, painting, refurnishing, and space rearrangement are coordinated in each area of the library as funds become available for the work.
2. The greatest immediate improvement to the library will be made by the relocation of the Children's Room as shown in the proposed revised space plans in Section V. The extensive area impacted by the relocation will provide an opportunity for all recommended 1st floor renovations to the 1992 and 1974 wings at this time.
3. The infilling up the upper floor tree-wells, and the relocation of the entry to the curving glass wall, would be best accomplished in coordination with the work on the lower floor.
4. The Library should proceed with repainting all areas that are not planned for further renovations in the future.
5. Creation of a prototype limited-service or automated service branch to serve North Boulder should also be accomplished in the first phase.
6. The Main Library should also convert to RFID and replace its book sorter at this time.

PHASE TWO

1. The second phase should begin with electrical, carpeting, refurnishing, and rearrangement of the upper floor of the 1992 and 1974 Wings.
2. The second phase should also include creation of new spaces such as upper floor study rooms and the meeting room behind the elevator.
3. The relocation of the café and the renovation of the Bridge constitute a separate scope of work that can be accomplished at any time, provided the new location for the café has been established and prepared.

PHASE THREE

1. Phase three should consist of all proposed work in the 1961 Wing and in the Main Library basements.
2. Phase three should also include refinishing and space rearrangement at the Reynolds Library.

III: Geographic Service Area Study

III.1: Introduction

Since 1995, the Boulder Public Library has pursued a service delivery model that calls for creation of a full-service branch library in a geographic quadrant of the city when the population reaches 10-15,000 residents (2007 Master Plan, p. 39). Boulder's libraries currently serve Central Boulder, South Boulder, and Southeast Boulder with neighborhood facilities. The remaining quadrants are North Boulder, with a population of 17,314 in 2007, and Northeast Boulder, which is primarily industrial and relatively sparsely populated. Significant growth is also taking place in the Crossroads neighborhood, with the development of a mixed-use 'transit village' in anticipation of the Fastracks commuter rail line scheduled to open in 2014.

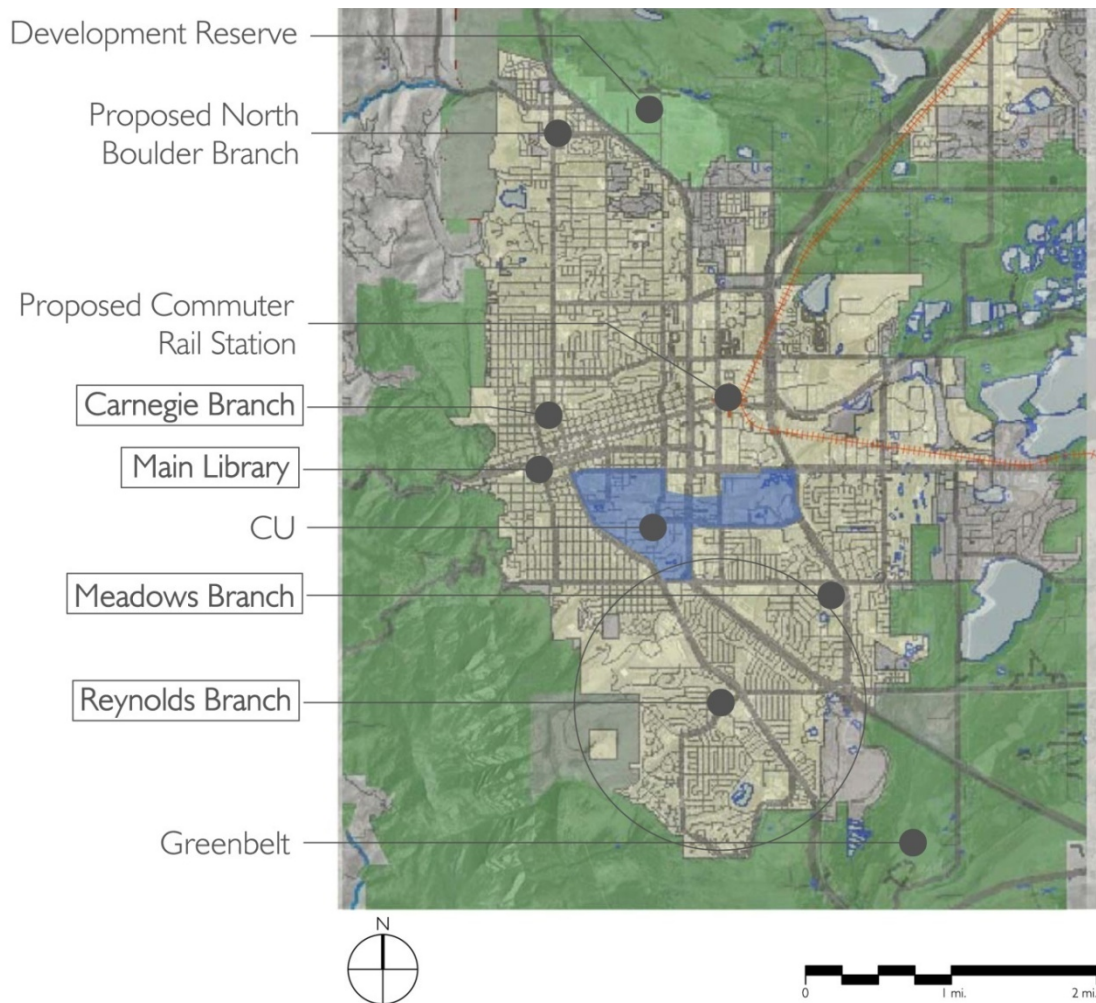
The City of Boulder is currently in possession of an undeveloped site at the southern edge of the Uptown Broadway development. After examining the most critical demographic patterns for the Boulder Public Library's long-term geographic distribution, this report will study in detail the city-owned North Boulder site.

This Geographic Service Area Study consists of five sections:

1. **Major Geographic Considerations** – an overview of Boulder's unique geography and the Boulder Public Library's current locations
2. **Service Areas and Demographics** – this section introduces the question of the 'radius' that should be served by each branch, and maps out patterns of population density, education level, family size, income, multilingual service demand, and concentrations of youth and the elderly across Boulder.
3. **Branch Types and the Service Arc** – this section proposes a hierarchy of branch services, ranging from the Main Library to full-service branches to limited-service points and automated service points. It also proposes an 'Arc' concept of library service distribution to replace the 'Quadrant' model that has been in place since 1995.
4. **Branch Library Site Options** – This section is a cursory study of multiple potential locations for a North Boulder branch.
5. **North Boulder Branch Site Study** – This section studies the city-owned site at Broadway and Four Mile Canyon Creek in depth.

III.2: Major Geographic Considerations

The map below shows the City of Boulder with some of the most significant factors to consider in planning future branch locations:



- **Greenbelt:** Boulder is separated from its suburbs by a greenbelt zoned for agricultural use. Boulder's 'edge' is fixed in the long term, and can be considered a permanent boundary in the Library's planning.
- **Development Reserve:** The Boulder Valley Comprehensive Plan sets aside one portion of greenbelt for potential development with a long-term time horizon.
- **Proposed Commuter Rail Station:** This station, part of the Fastracks Northwest Rail Corridor running from Longmont to Denver, is projected to open in 2014. The development of a 'transit village' at the site has already begun in anticipation of the transit link.

- **Proposed North Boulder Branch:** A developer donated a parcel to the City of Boulder south of the Uptown Broadway development. A discussion of the site's capacity to support public library service is included below in Section III.5.
- **CU:** Colorado University is well-served by its own academic libraries. However, it also enjoys great proximity to the Main library. The large population of students may present an opportunity for targeted library services.
- **Existing Branches:** Any new branches should be located far enough from existing branches to open up new parts of the city to library service.

III.3: Service Areas & Demographics

Many library systems set a target for all areas to be served by a branch within a certain radius. In low-density, suburban areas, this can be five or ten miles. In dense urban areas, this radius can be as low as a mile. On the left is an image of Chicago with its public libraries marked with a one-mile radius.



Figure 24: Chicago with Public Libraries with 1-Mile Radius

Urban designers frequently consider a $\frac{1}{4}$ mile radius as a short neighborhood walk and $\frac{1}{2}$ mile as a catchment for mass transit stations. Boulder Public Library focus group participants frequently mentioned a 15-minute drive as the maximum they might travel to visit a library. Taken literally – and given good traffic -- this means that any location in Boulder could conceivably serve the entire city. Indeed, this probably has something to do with the ability of Boulder's main library to serve people from across the city.

However, people have different expectations of branch libraries than of a central library. Branch libraries are important neighborhood amenities, with an opportunity to serve children, young adults, and those elderly who might not have the means or the energy to make it to the core of a thriving urban center. Branch libraries also allow for more precise targeting of services to specific populations, such as people with language needs.

The image below shows Boulder's existing libraries with the same one-mile radius shown for Chicago. Several things can be noted in this diagram:

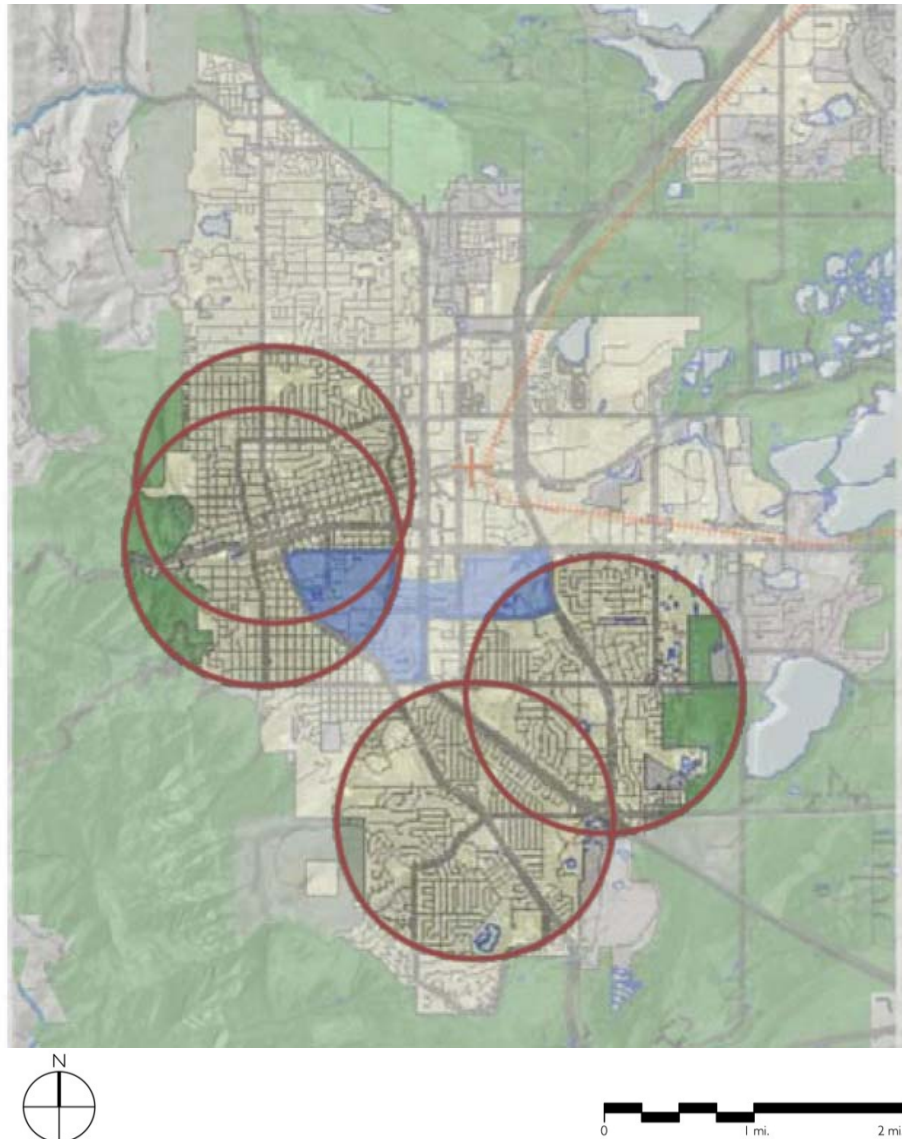


Figure 25: Boulder with Public Libraries with 1-mile Radius

1. There is considerable service overlap between Meadows and the Reynolds Branch in the Southeast of the city.

2. There is so much overlap between the Main Library and the Carnegie library that there is little point in considering the Carnegie an independent branch.

3. There are large areas of the city without neighborhood branch service.

Population Density

Boulder's areas of highest density are in the vicinity of the University, and are served both by CU's libraries and the Main library. After that, the neighborhoods around downtown have the highest density. These areas are well served by the Main library.

Areas of notable density without neighborhood library service are found in North Boulder along Broadway and Highway 36.

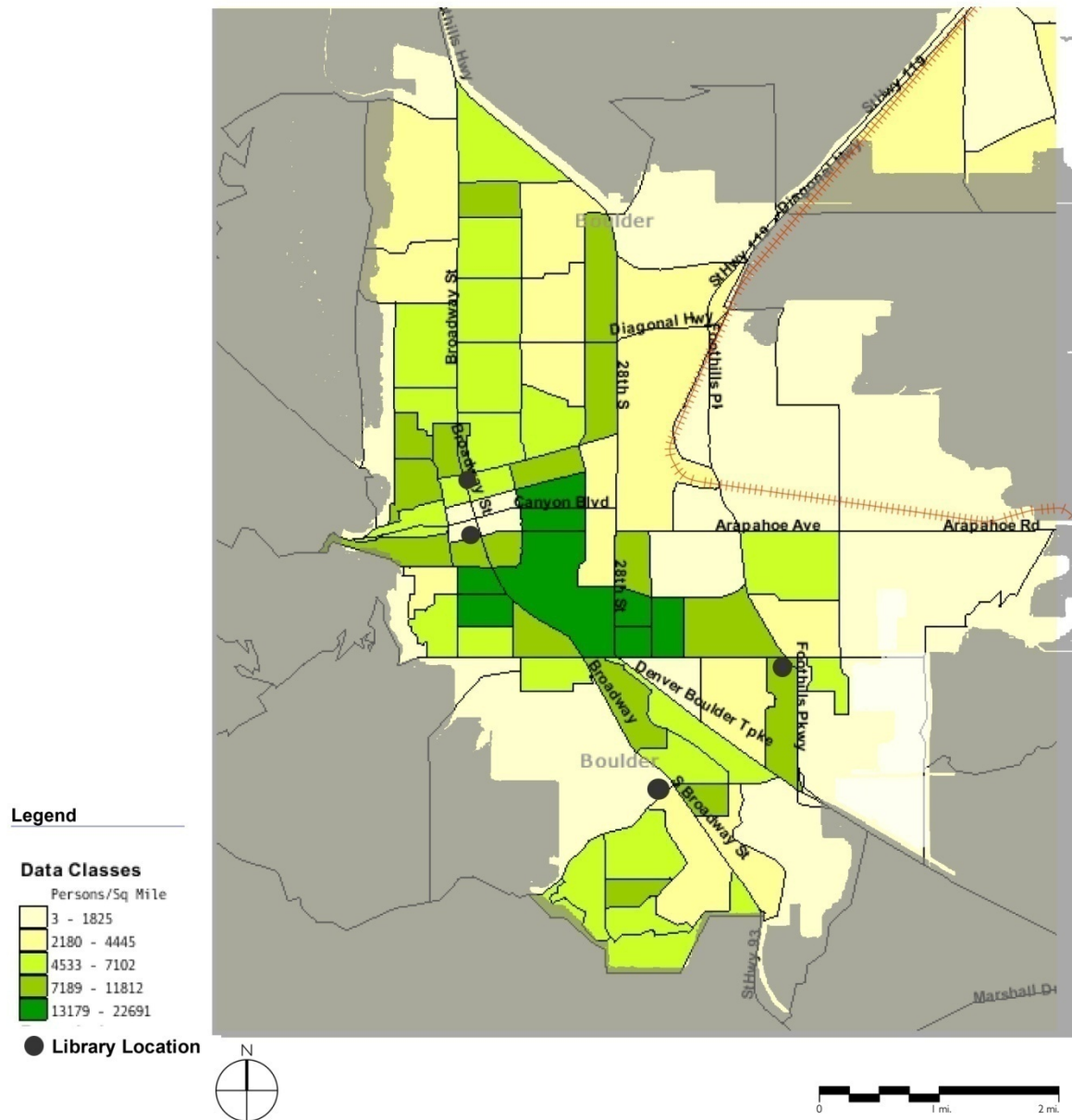


Figure 26: Boulder Population Density per 2000 Census modified by Growth 2000-2008

Projected Growth: 2008 to 2030

The highest projected growth is in the Crossroads neighborhood, influenced by the Transit Village development. Southeast Boulder is also expected to see major growth.

North Boulder had the highest growth over the 2000-2008 period. It is expected to continue to grow to a total buildout of around 22,000 residents.

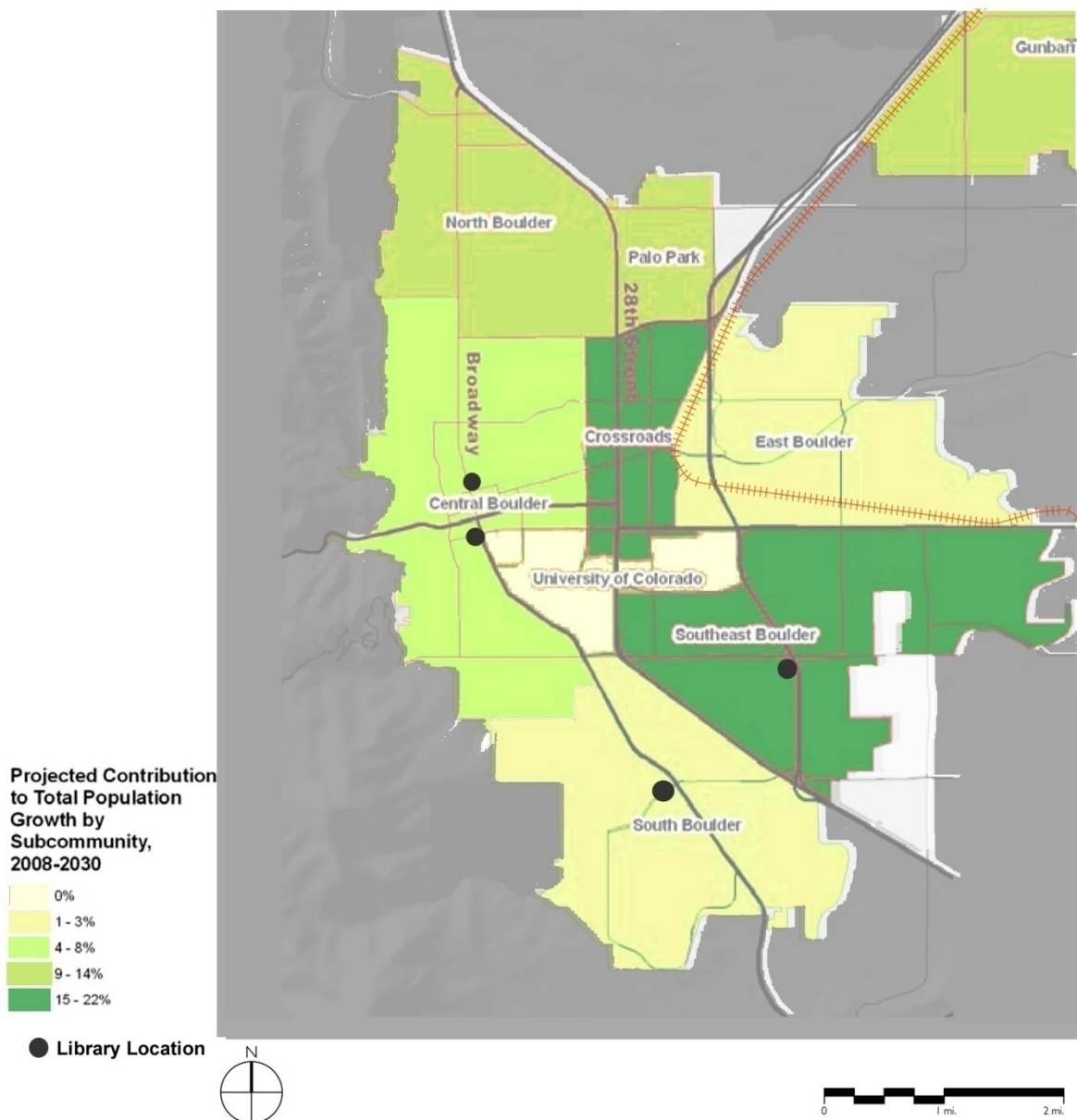


Figure 27: Boulder Projected Growth 2008-2030 per *Boulder 2008 Community Data Report*

Median Family Income

Boulder's areas of highest income are distributed along its West, with views to the Flatirons, and in the non-annexed outer reaches of Southeast Boulder. North Boulder features an exceptional combination of high and low-income neighborhoods side by side.

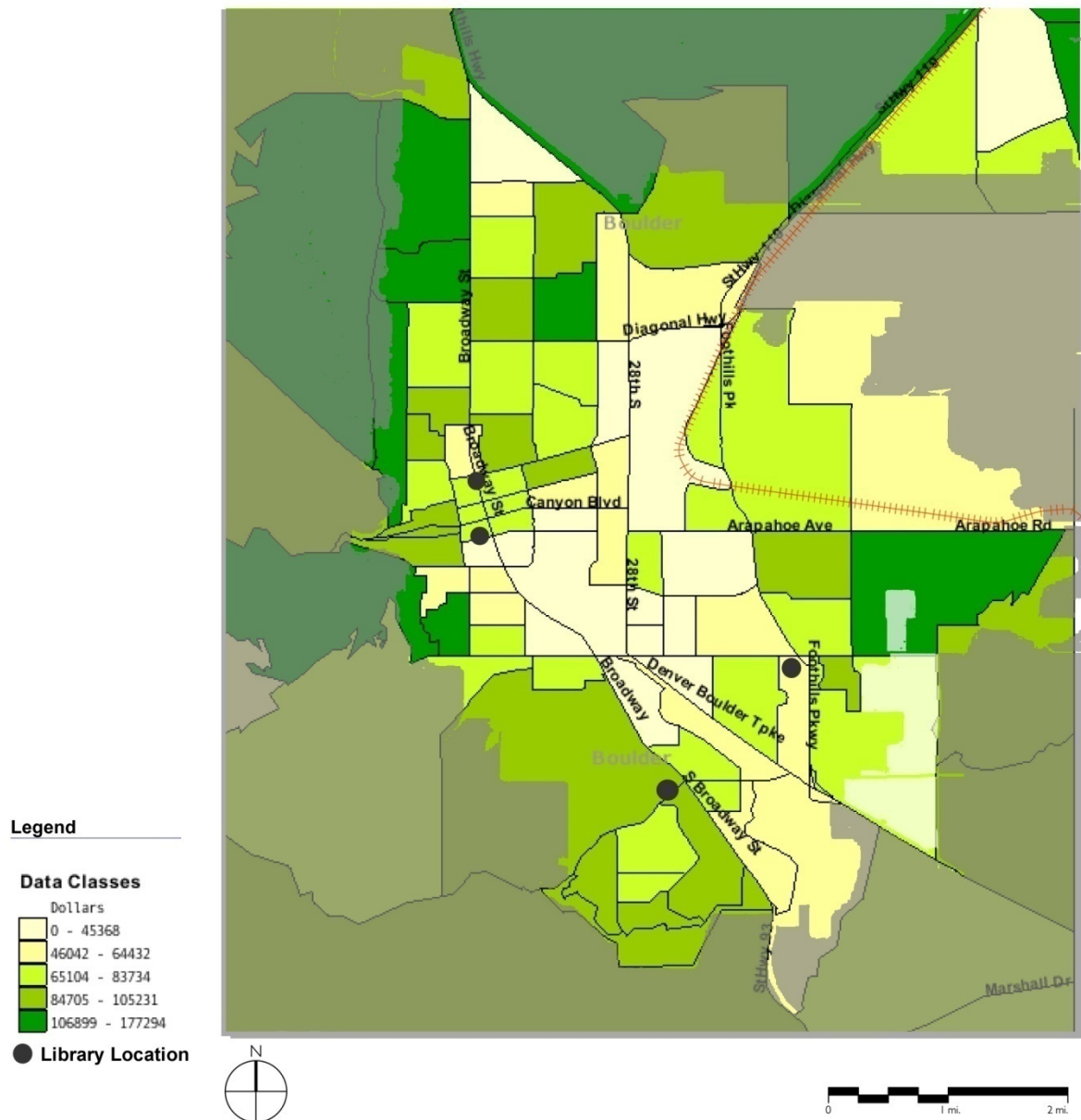


Figure 28: Median income per 2000 Census

Average family size

The neighborhoods with the largest average family size are, for the most part, concentrated in North Boulder.

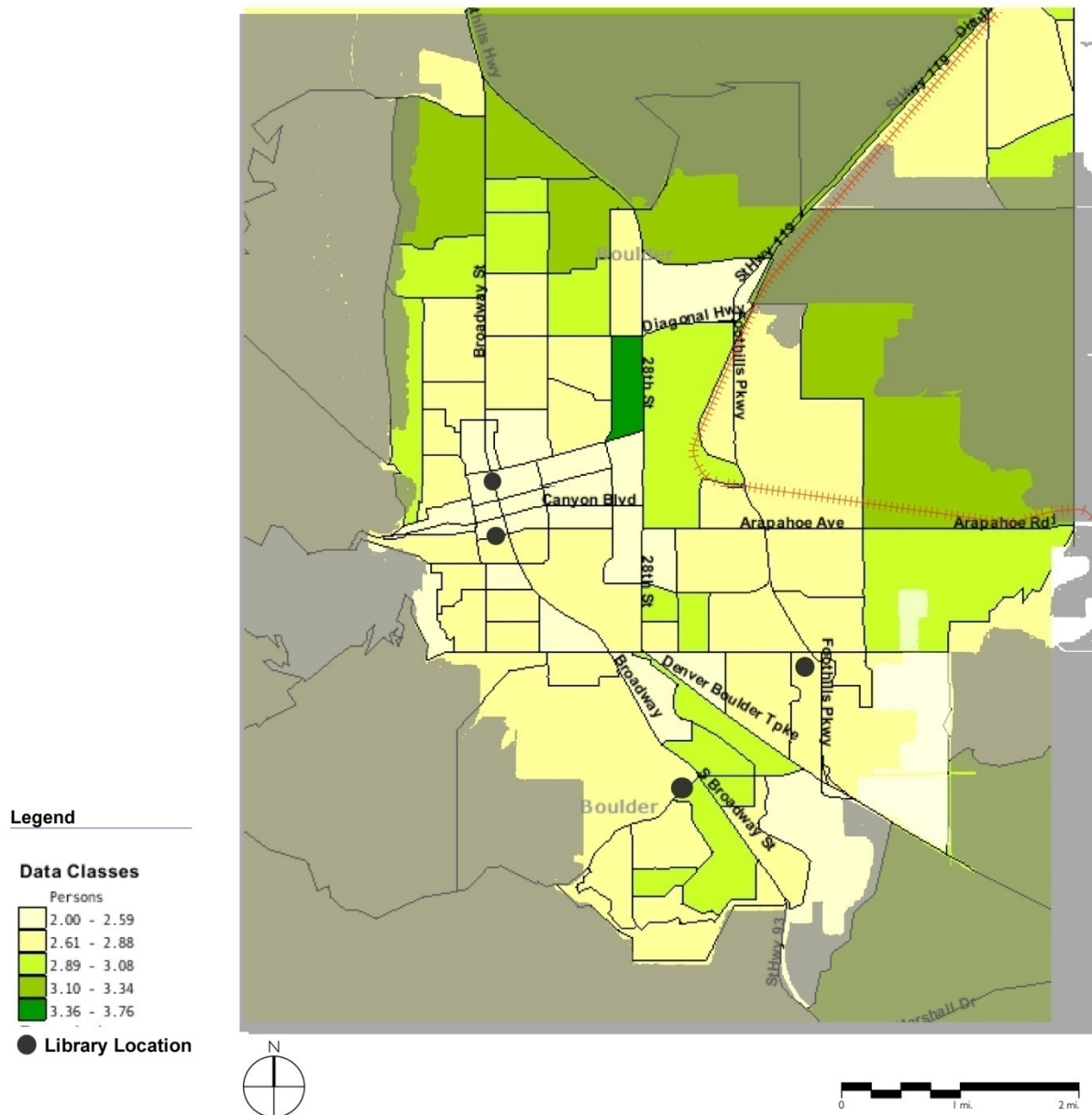


Figure 29: Average Family Size per 2000 Census

Children under 5 as a Percent of the Population

Focus groups frequently reported using the Meadows Branch for Children's Services. However, demographic studies show a relatively moderate concentration of children in the Meadows neighborhood area. Indeed, the largest concentrations of children are currently found in North Boulder, without neighborhood library service.

It is important to consider the Population Density diagram alongside this diagram for a sense of the actual number of children needing service. Again, the North of the city has the combination of medium-density population and medium-high concentrations of children.

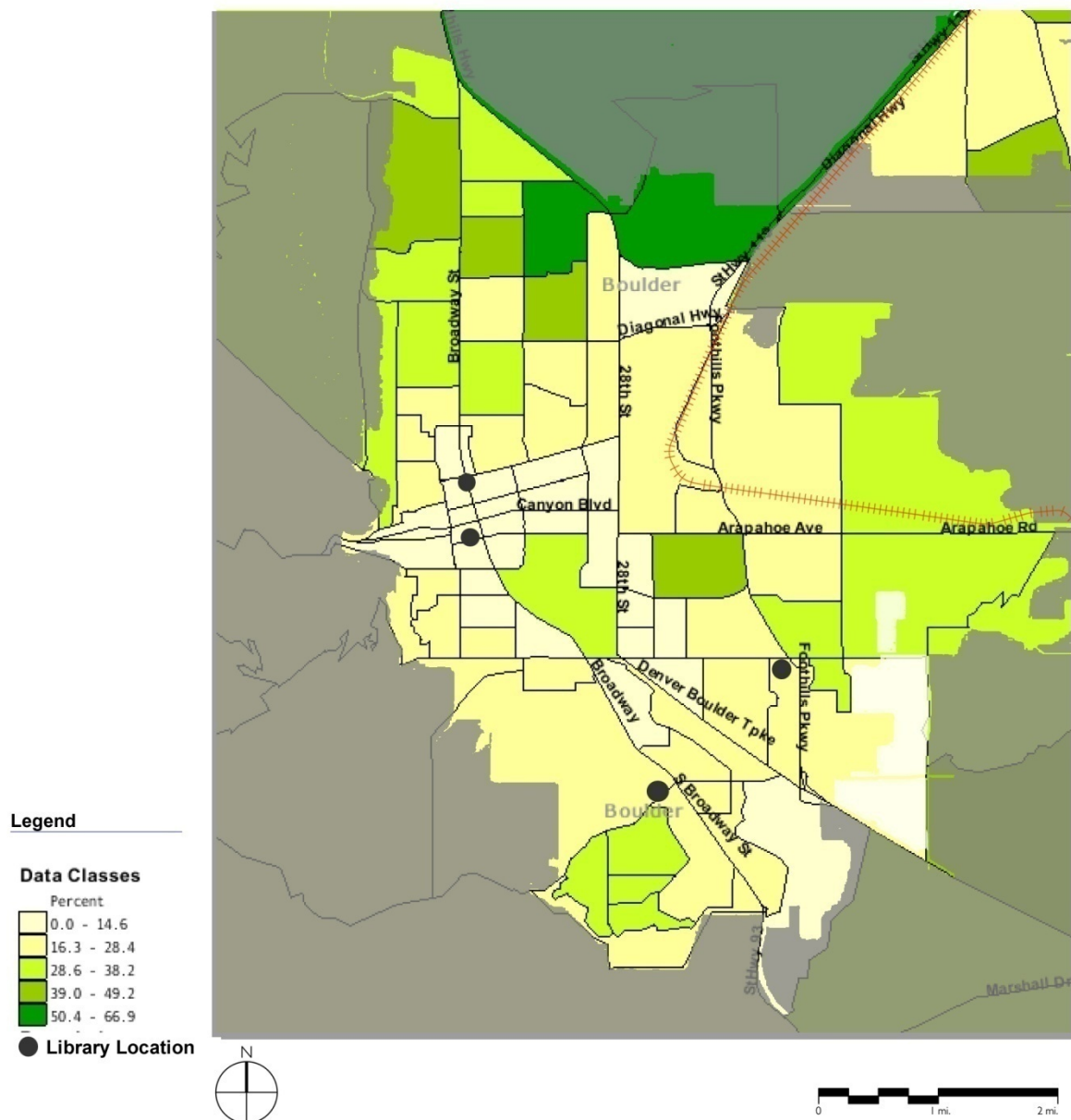


Figure 30: Children under 5 as a Percentage of Population, per 2000 Census

The Meadows and Reynolds Branches are well positioned to serve older neighborhood populations. The north of the city has a relatively low concentration of senior citizens.

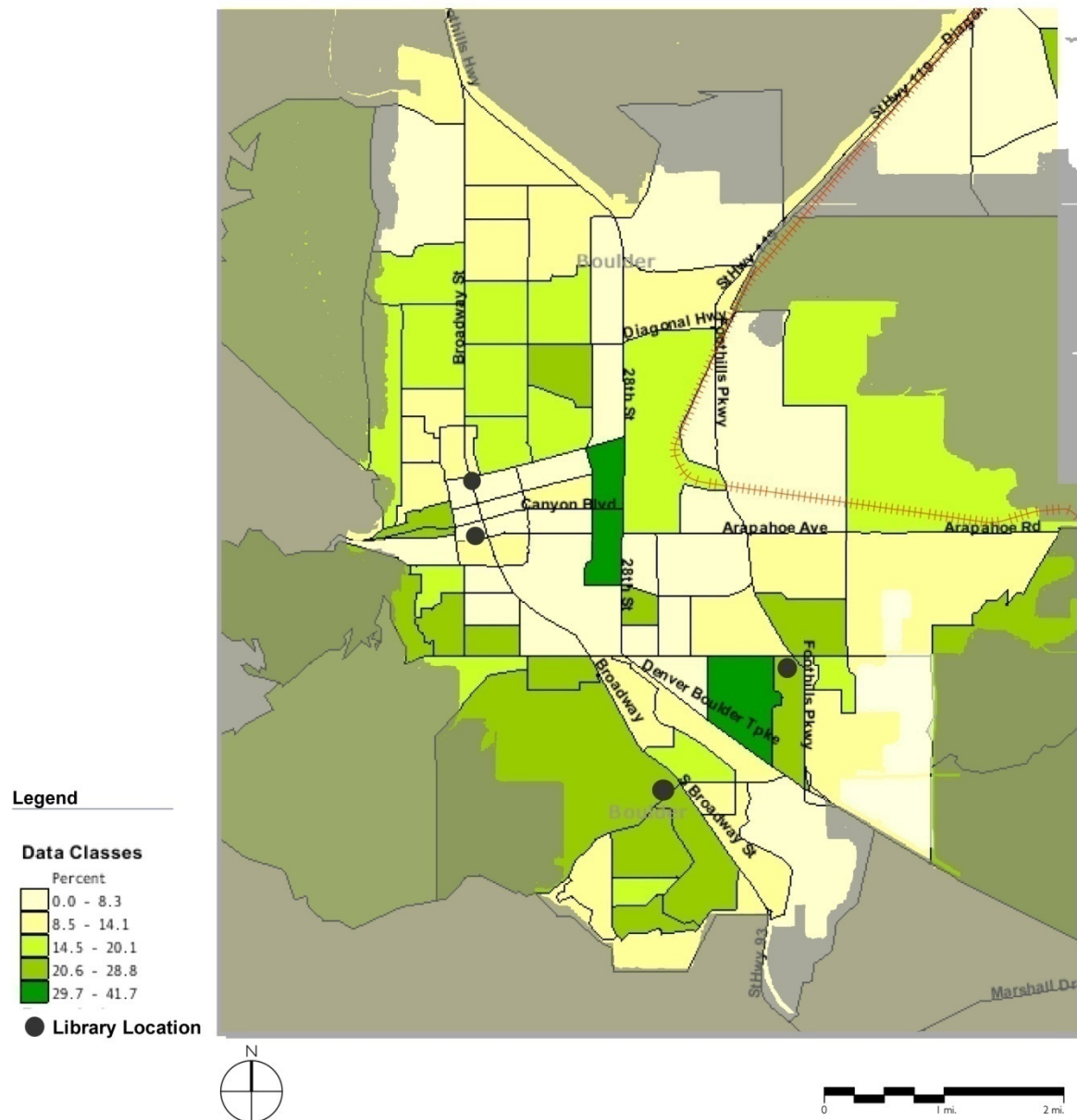


Figure 31: Percentage of Population Over 65 per Census 2000.

Percent of population who speak English 'less than very well'

This population is loosely distributed across the city. The most notable concentration is found in Crossroads and along the I-36 corridor in North Boulder. The conditions in Crossroads are very likely in transition as the neighborhood gentrifies. North Boulder has good potential to offer targeted services for language learning.

This diagram would also suggest the importance of providing small language-oriented collections and rotating services at the southern branches, which both have neighborhoods with some concentrations nearby.

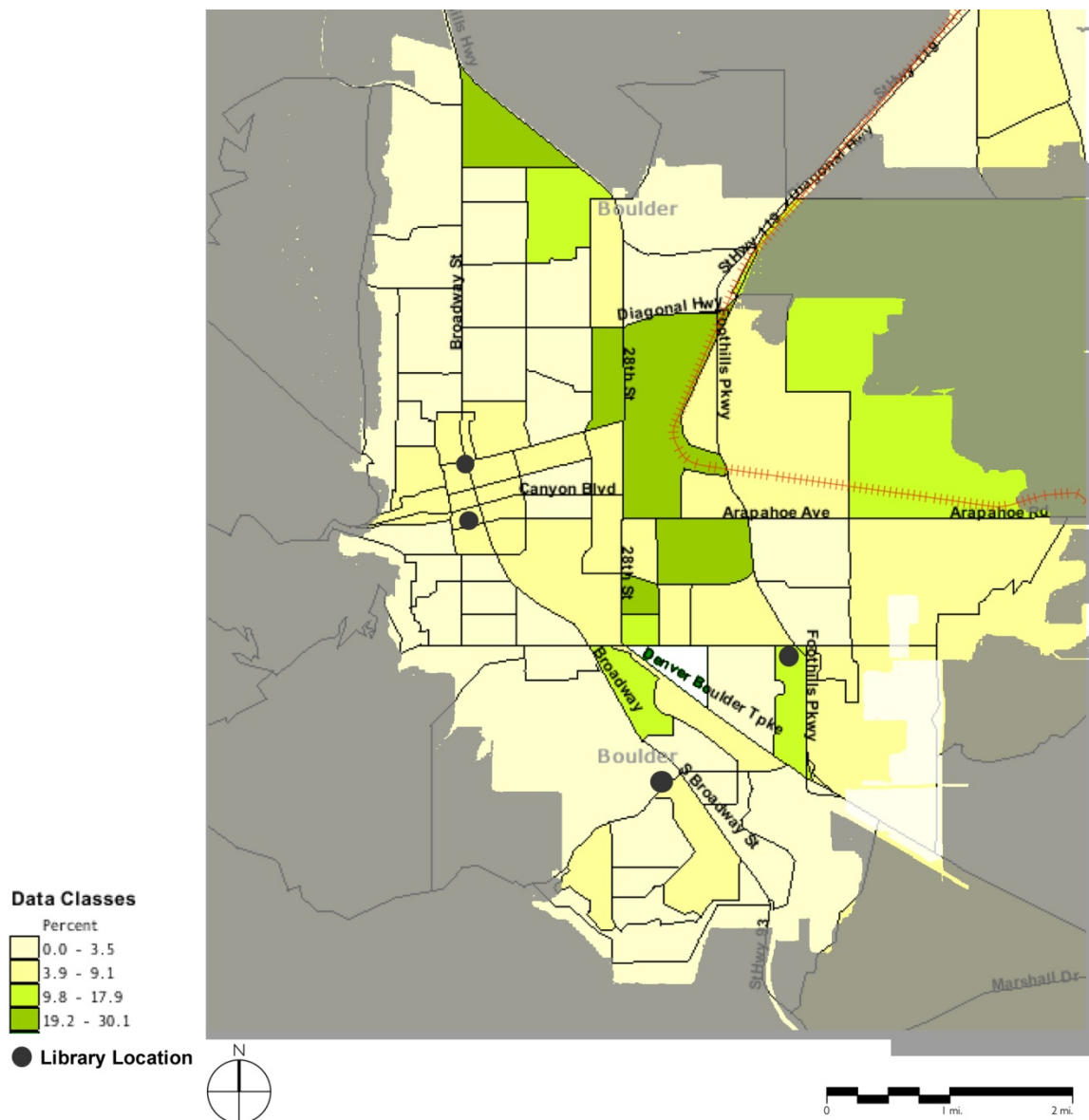
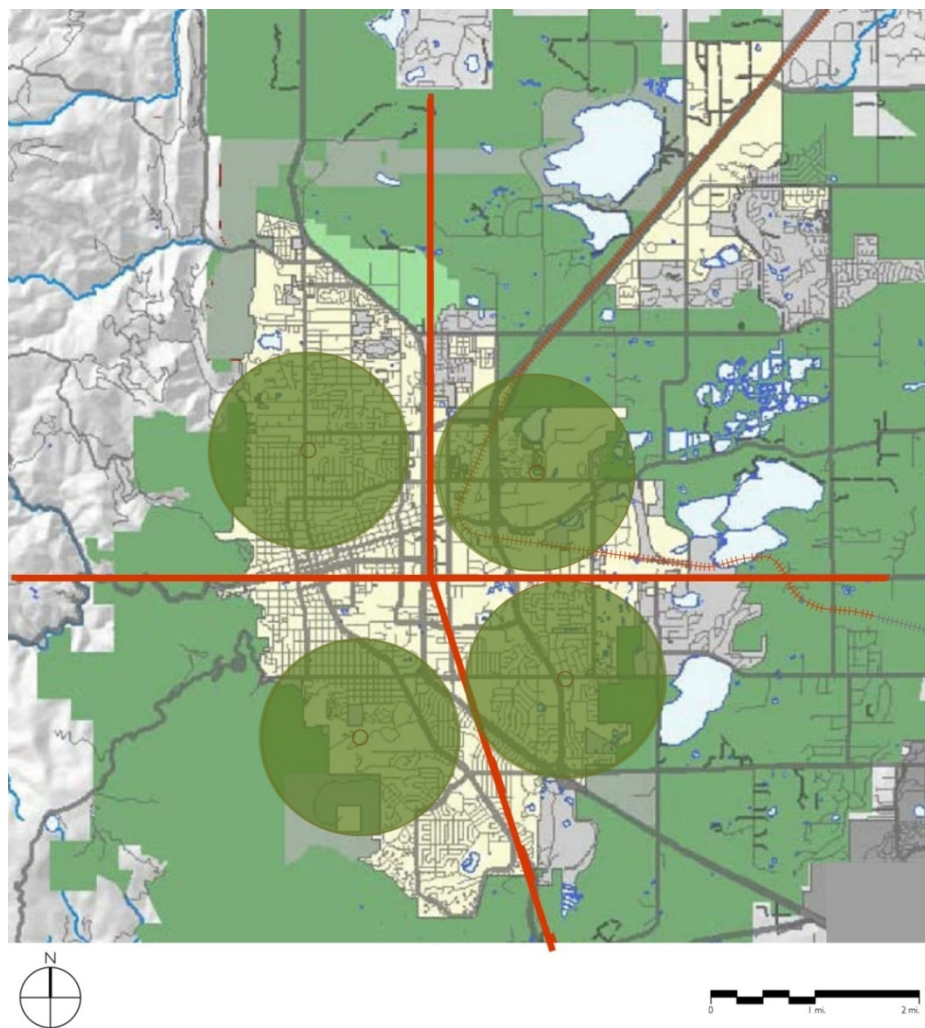


Figure 32: Percent of Population who speak a Language other than English at Home, and who speak English 'Less than very well,' per 2000 Census

III.4 Branch Types & Service Models

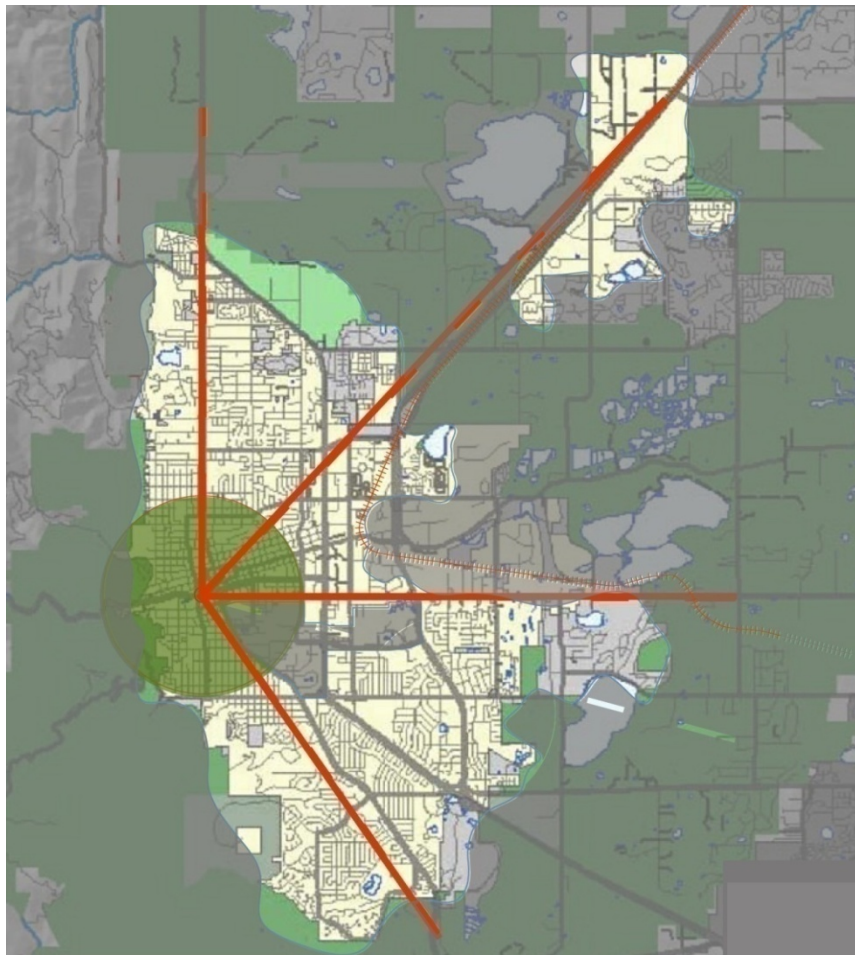
For many years, Boulder library branch planning has been guided by the 'quadrant' model. "The quadrant service model, ensuring that each quadrant of the city is served by a library facility, was first approved by the Library Commission in 1984, was included in the adopted 1995 Master Plan, and has the support of the Library Commission today." (2007 Master Plan, p. 39). However, in the context of a geographic library service study, there may be more useful models. The diagram below shows Boulder divided into quadrants, with an idealized set of branch libraries located in each quadrant:



This diagram shows what would happen if one placed four branch libraries with the objective of maximizing proximity to a library for the broadest set of locations around the city. However, the actual conditions of Boulder complicate the diagram. First, the Northeast quadrant is sparsely populated, with business, industrial, and airport uses being dominant. Farther out,

Gunbarrel has a mix of City territory and land the City has not been able to annex. The University is served by its own libraries. Finally, there is the Main Library, with the Carnegie nearby, both near the centerline of the quadrants.

A diagram taking these factors into account might look like this:



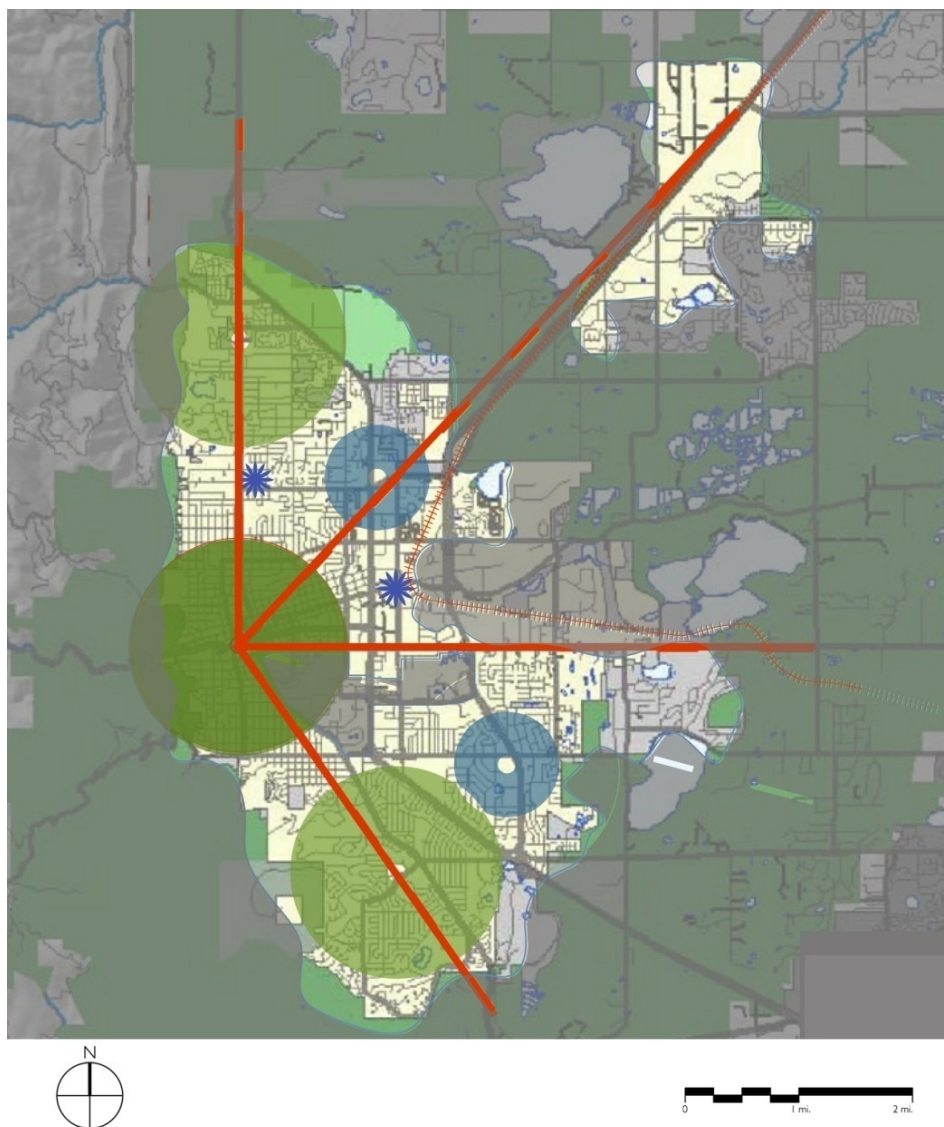
Non-populated areas have been grayed out, as has the university. The quadrant dividing lines have been changed to axial lines radiating out from the Main Library along Boulder's major thoroughfares. In this diagram, the neighborhood service needs fall into two *arcs* – North-Northeast and South-Southeast. The 'arc' model would consist of:

1. A strong Central library providing full informational, recreational, civic, and community activity services.
2. Two branch libraries, serving the North-Northeast arc and the South-Southeast arc with concentrations on services to youth, the elderly, and neighborhood users.
3. Two or more micro-branch libraries acting as delivery points for the Prospector system and small popular-materials collections. These could potentially be automated systems, or limited-service points staffed at targeted hours.

These varying levels of service would give the Library a new degree of flexibility in its long-term planning. As noted in the Executive Summary, the extraordinarily high level of usage of Boulder's online library services, combined with the depth of the Boulder Public Library's collections, means great potential for small, automated delivery points for holds and popular materials. The operating costs for such a system are limited to the retrieval, processing, delivery, and stocking of holds.

In this diagram, the branch libraries are shown at the Reynolds location and the city-owned North Boulder site, while the limited-service branches are shown at the Meadows site and the commercial area at 28th & Iris. Automated delivery points are used as needed to fill in gaps in the system, and are indicated with blue stars. This layout is only one example of a possible

long-term system plan; its elements should be adjusted and recombined depending on the opportunities and resources available to the Library as it moves forward.



III.5 Branch Library Site Criteria

For the preliminary evaluation of potential branch library sites in North Boulder, this study applied the following set of criteria:

- *Site Capacity*
- *Accessibility*
- *Image/Visual Quality*
- *Visibility*
- *Demographic Patterns*
- *Neighborhood Compatibility*
- *Zoning*
- *Physiography*
- *Tie-Breaker: Site Related Costs*

Site Capacity: The buildable area of the site needs to have room for the library structure, required parking, zoning setbacks, and landscaping. A site that can be built out with a single-story building will be more economical than one that requires a multi-story building or structured parking. A rule of thumb, in library site selection, is that a site with one buildable acre will support a 10,000 square foot library.

The 2007 Master Plan called for a 13,000 square foot library to serve North Boulder. However, this was not used as a base site requirement in the following section. As discussed above, there may be many combinations of services and facilities that would supply the library service needed in North Boulder. Additionally, the library is not currently in an economic position to build a 13,000 square foot branch. This section therefore gives consideration to smaller locations with potential to provide interim service. All sites are considered for their potential to contribute to a long-term strategic solution for providing library service across Boulder.

For a conclusive site selection study, it will be necessary to develop a preliminary program to define the sizes, functions, and goals of the combination of service locations that will optimally serve North Boulder. This will allow comparison of alternate sites using maximally objective criteria, and will allow the identification of further sites that are not under consideration by the Facilities Sustainability Study.

Accessibility: Library sites should be easily accessible by automobile. Proximity to major thoroughfares will promote library use across a wider area. Adequate parking is a key element of automobile accessibility. Additionally, in a city as progressive as Boulder, accessibility by bicycle, by foot, and by mass transit deserves equal consideration. Can young people access

the library without needing a ride? Are nearby street crossings safe and comfortable for the elderly? The Boulder Public Library's 2008 service evaluation found that an extraordinary 44% of library users access the library by walking, biking, or riding the bus.

Image/Visual Quality: The quality of the existing neighborhood surrounding the library needs to complement rather than detract from the building. The site should be located in an area with a strong positive identity and image. The building's construction should be compatible with surrounding land uses, both existing and proposed.

Visibility: A prominent location is among the most basic marketing strategies for a public facility. A site along a major street is ideal. If the site involves other major buildings, the Library should be placed in the portion of the site with the highest visibility.

Geographic and Demographic Patterns: In the context of Boulder's needs, and the factors established in the demographic study above, the following demographic criteria are relevant:

1. Proximity to residential neighborhoods.
2. Proximity to populations of youth, seniors, or others with a high need for library services.
3. Proximity to land with a high probability for future residential growth.
4. Locations where people can conduct other common activities alongside a trip to the library.

Neighborhood Compatibility: Certain sites will provide unique opportunities to serve neighboring populations. Other sites have the potential to disrupt existing neighborhoods with new traffic. Will the Library be a good neighbor? Does the neighborhood complement the library's mission?

Legal Matters: Boulder presents a complex regulatory environment, with a distinctive zoning code, floodplains, wetlands buffer zones, 'solar shed' ordinances, and other unique considerations. This study focuses on sites with Public, Commercial, and Mixed-Use zoning. As part of the preliminary site search, this study attempted to identify City-owned sites in the North Boulder Area. However, the search did not find any City-owned sites of sufficient size to support library operations that are not already occupied by parks or other City functions.

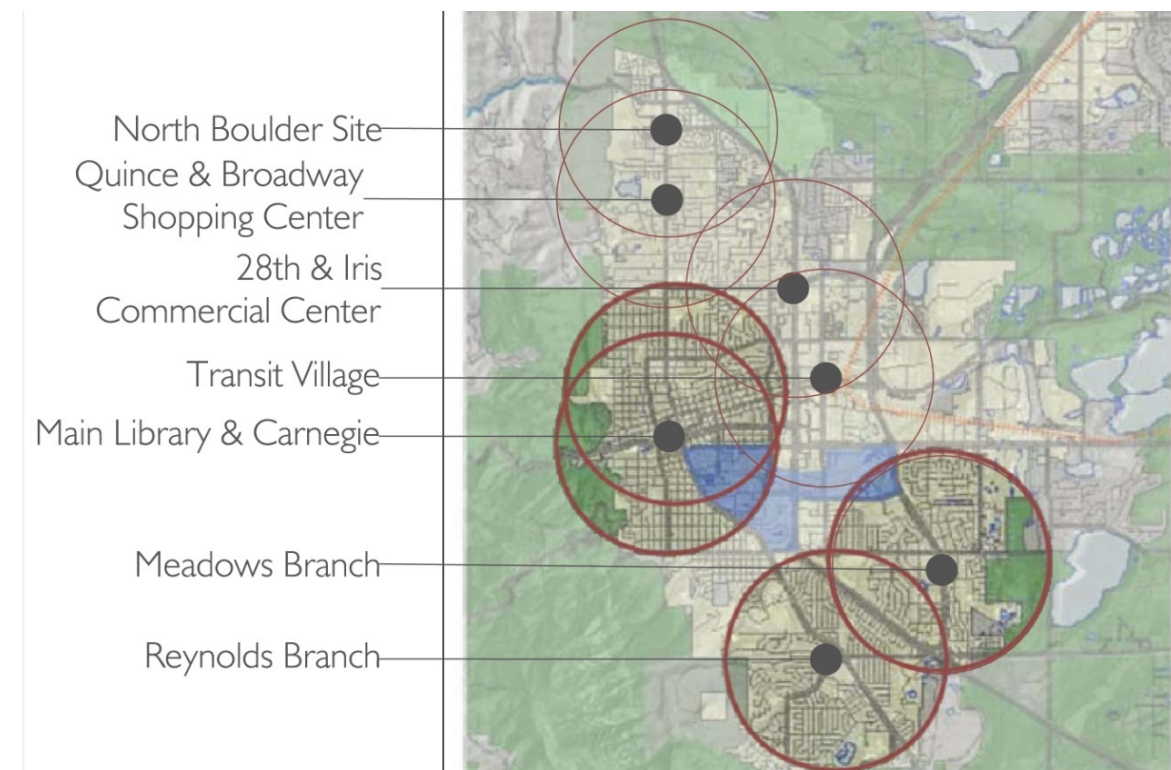
Physiography: Floodplains, soils, topography and orientation are major considerations. Floodplains can escalate construction costs. Western exposures offer views to the Flatirons, while southern exposures are optimal to support passive solar design. Sites should support the placement of the library entrance where winter sunlight will be available to melt snow and ice.

Tie Breaker - Site Related Costs: If several sites are ranked equally, or nearly so, in all of the above criteria, then site related costs should serve as a “tie-breaker” to finalize the selection of a building site. Site related costs should be compared on the basis of all of the following factors:

- Acquisition costs – often the most significant cost, especially given Boulder’s land values.
- Renovation costs where an existing building can be adapted for library use.
- Demolition costs where an existing facility cannot be adapted.
- Any unusual site development costs, such as from a site with underground utilities and/or water.
- Any extra construction costs that will occur due to such things as poor soil conditions, limitations of the site such as underground versus above grade parking, or site configuration resulting in a more expensive building solution.
- The cost of providing sufficient utility service to the site.

III.6 Potential Branch Library Sites

This study has identified the following sites for preliminary consideration as locations for future library service:



28th & Iris: There is a major commercial center at this location with a large variety of leasable space. It is not particularly pedestrian-friendly, but it is in range to offer service to North Boulder, Palo Park, the Transit Village development, and Gunbarrel via the Diagonal Highway. This location would work for either a limited-service point or a branch in leased commercial space.



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potential. On 28th, at mid-block between Iris Avenue and Glenwood Drive, there is a vacant two-story building, approximately 6,000 sf in size. With forbidding black glazing and a tightly partitioned interior, this building would require significant renovations to be useful as a library branch.

The study area is primarily zoned BC-1. It is not affected by any floodplains.

Transit Village – The Transit Village has begun development in anticipation of commuter rail service, scheduled to begin in 2014. This location would offer the Library a unique opportunity to serve commuters along the Denver – Boulder – Longmont corridor, and to participate in the creation of a new neighborhood designed along green urban principles. Land values are likely to be high.



Figure 37: Transit Village area plan, September 2007

The Library has an excellent opportunity to establish a limited service point at or near the station, staffed at hours coordinated with the daily commute. The historic train station itself would be an ideal location, in partnership with other uses. Another service model applicable to this location was pioneered by the Contra Costa County Library with its 'Library a Go-Go' service, featuring touch-



Figure 36: Boulder Depot, prepared for transport to its planned location at the multimodal transit station.

screen-operated automated book dispensing machines in Bay Area Rapid Transit stations and other locations around the County.

The City of Boulder owns several other pieces of land in the Transit Village that might deserve consideration for library service provision. However, the entire Transit Village area is too close to the Main Library for a full-service branch.



Figure 38: Automated library materials dispensing machine -- shopping mall installation with 400-volume capacity.

III.7: City-Owned Site at Broadway and Four Mile Canyon Creek

One site under consideration at this time is a City-owned parcel at Broadway and Four Mile Canyon Creek. This site was donated to the City by the developers of Uptown Broadway, a medium-density mixed-use neighborhood immediately to the north.

This preliminary site study finds that the City-owned site is worthy of further consideration for an area that is currently lacking neighborhood library service. Due to floodplain and wetlands buffer issues, the site would be relatively expensive to develop, especially at the 13,000 sf branch size proposed in the 2007 Master Plan. Given the current financial obstacles to new construction and new services, the Library may wish to explore options such as the establishment of a smaller, temporary North Branch; the reduction in the targeted size of the branch at the City-owned site; or a partnership with another public service organization to develop the site for community use. Once a budget strategy and preliminary program have been established, a full site study is recommended to compare all potential sites using an objective set of criteria.

As noted previously, current operational budgets will require any increase in services to North Boulder to be balanced against service levels in the southern part of the City. Under current conditions, reduction or elimination of service at the Meadows branch will be a necessary step toward establishing service in the North.

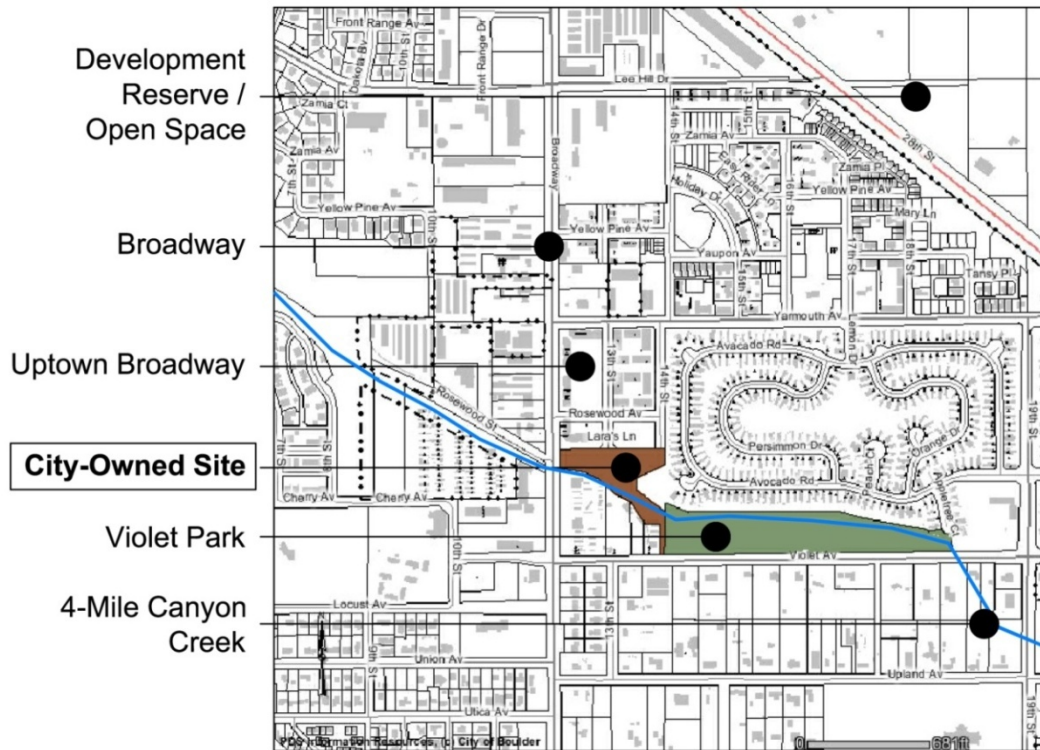
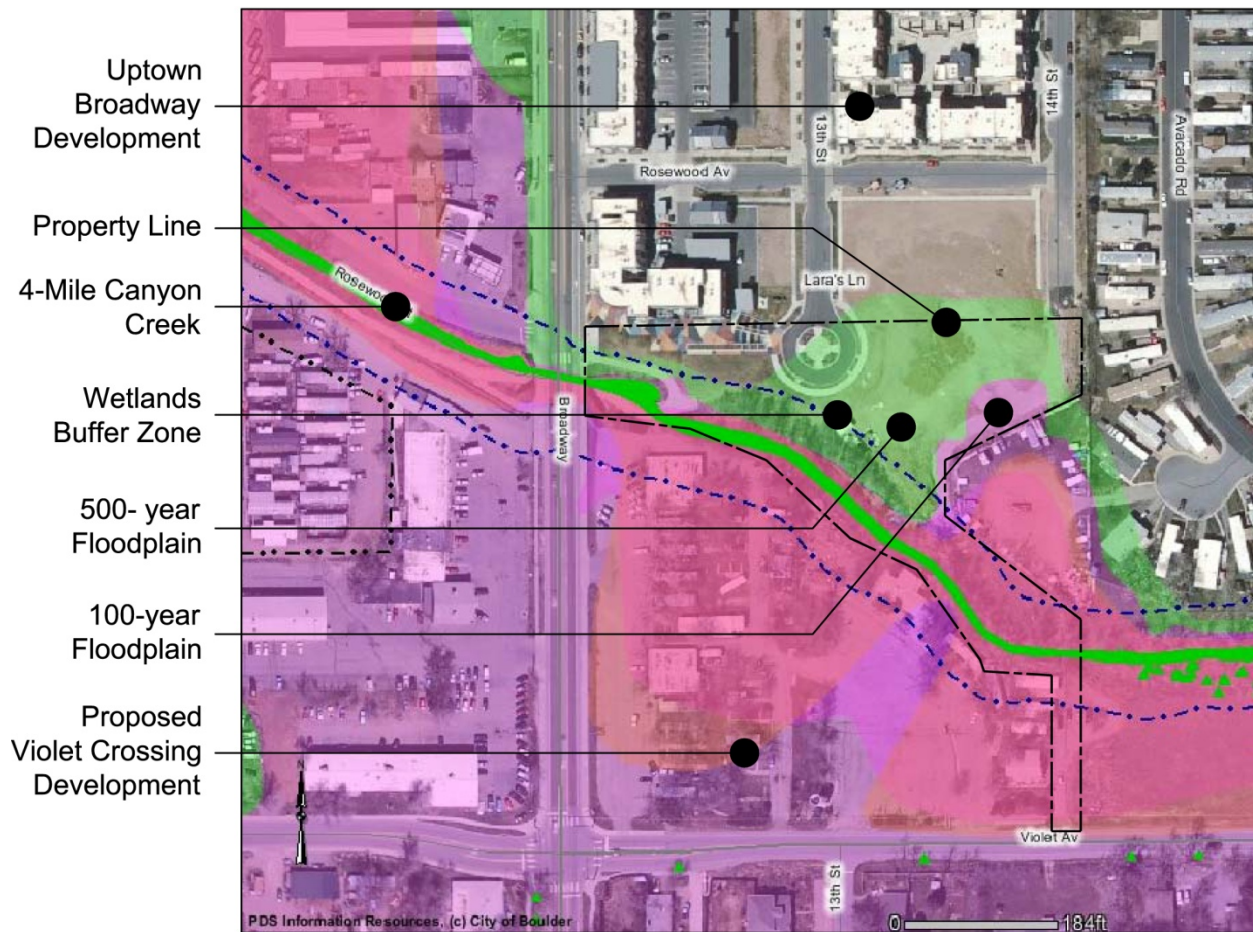


Figure 39: City-owned Site in North Boulder

- **Site Capacity**

The North Boulder site sits alongside Four-Mile Canyon Creek just south of the Uptown Broadway development. The site is irregular in shape. The site is referred to in various publications as being 3.2 acres, 2.2 acres, and 1.67 acres. However, much of the site is within the wetlands regulatory buffer zone around Four Mile Canyon Creek. Taking into account the irregular shape, the wetland buffer zone, zoning setbacks, and the turnaround circle already constructed at the north end of the site, the total buildable area, for both building and parking, is approximately .75 acres. The entire site sits within the 500 year floodplain, and another portion is in the 100 year floodplain.

The 2007 Master Plan called for a 13,000 sf facility. Preliminary studies suggest that a multi-story building or structured parking would be necessary to meet this program. If the site is developed as a single-story building with surface parking at the zoning minimum of 1 space to 400 square feet, the maximum size of the library would be approximately 7,500 square feet.



- **Accessibility**

1. Automobile: The site is close to Broadway, one of Boulder's most important N-S corridors. However, it is not immediately adjacent to the arterial; it will be necessary for library users to pass through a side-street on the way to parking.
2. Transit: Bus lines provide Broadway with frequent service. 6 stops are within ¼ mile.
3. Bike: The site has direct access to the Four Mile Creek multi-use trail, as well as the bike lanes on Broadway.
4. Pedestrian: The site is within ¼ mile of several dense, pedestrian-friendly neighborhoods.



Figure 40: Path to site from Broadway

- **Image/Visual Quality**

1. The site features two strong visual components. First, the Uptown Broadway development establishes a strong urban streetscape with Four Mile Canyon Creek as the strongest visual factor at the site. Any library design should address the creek and treat it as an amenity for library users.
2. There are views over the creek open space to the Flatirons nearby.

- **Visibility**

1. The site is visible from Broadway, but only from a southern approach. A colorfully paved outdoor plaza leads from Broadway to the site. From the north, visibility will be blocked by the 3 and 4-story mixed-use neighborhood already built.



Figure 41: View to site from Broadway

- **Demographic Patterns**

1. North Boulder is rapidly growing. The City of Boulder predicts 9-14% growth by 2030. Nearby neighborhoods have a high proportion of children. Average family size was 3.25 in 2000. The median age was 38. The population is economically diverse, with highly affluent and relatively affordable neighborhoods nearby.
2. The site is within ½ mile of the Boulder Valley Comprehensive Plan Planning Reserve, projected for development post-2030.
3. A medium-density



Figure 42: Proposed development at Violet and Broadway

development is currently in planning immediately across Four Mile Canyon Creek from the prospective site. This development would further increase the density of the branch's immediate neighborhood.

- ***Neighborhood Compatibility***

1. The immediate neighborhood is a walkable medium-density mixed use neighborhood developed according to New Urbanist principles. A library has the potential to serve as a thriving community center for this kind of environment.
2. To the east, the site adjoins the backyards of a single-family modular home development. The library would be in a position to serve an unusually economically diverse population. The interface between library site and backyard would require attention in site planning.

- ***Legal Matters***

1. In addition to the wetlands buffer zone, the 100 and 500-year floodplains impose significant regulatory requirements on the site. These requirements typically raise the cost of construction significantly. However, land values in Boulder are high enough that development in the 500-year floodplain is not unusual.
2. Easements and drainage have not yet been studied.
3. The zoning district requirements are favorable for efficient development of the site. The MU-2 zone district allows buildings to come up to the sidewalk edge, framing the street for a pedestrian-friendly environment.

- ***Utilities Availability***

1. Utilities access has not been studied. The presence or absence of utility lines in Lara's Lane should be researched prior to developing initial estimates of construction cost.

- ***Physiography***

1. Site exposure is primarily southern, with excellent solar design potential.
2. Soil conditions have not been studied. It will be necessary to commission a geotechnical report for the site prior to development activity.

3. The site has significant topography, but it occurs within the wetlands buffer zone, where construction activity is already prohibited.

- **Cost**

1. The site is already owned by the city. With current land values in Boulder, this is a significant factor.
2. The floodplain will escalate the cost of construction.
3. A cost threshold is crossed at 7,500 square feet requiring multistory construction and/or structured parking.

IV. Libraries Services Needs Assessment

IV.1 Introduction

Boulder presents a set of unique conditions that demand a distinct approach to library services. With one of the most educated populations in the United States, the Boulder Public Library must supply a demand for greater breadth and depth in collections and services than most public libraries. At the same time, the importance of providing civic, community, technological, and recreational spaces has increased dramatically for public libraries across the country. In Boulder, as elsewhere, the library must respond to the challenge of serving as ‘the last great civic space’. The needs of the current era demand that the *use* of the library always take priority over the materials stored there.

The Boulder Public Library is in position to break new ground as it adapts its service model to the needs of its city and the resources available over the next ten years. This section identifies current service practices, current demands, and suggests opportunities available to the Library as it moves forward. It consists of three sub-sections:

1. A statement of the new library director’s vision for library services.
2. A summary of community input regarding library services and facilities.
3. Recommendations for improvements, and a preliminary space program, for the Main Library.
4. Recommendations for service and collections at the branches.
5. Recommendations for increasing the efficiency of library operations.
6. A calculation of the ‘target size’ for the Boulder Public Library according to state and national standards.

IV.1.2 Library Services Vision: the Community Laboratory

The Boulder Public Library recently hired a new Library Arts Director, Tony Tallent. A crucial part of his role in the organization is to develop a vision for the future of library services in Boulder. Mr. Tallent provided the following statement for inclusion in this study:

In the past several years, the world shifted. It became more social, more savvy, more curious and—in many ways—more complicated. The World Wide Web has created a ripple effect that has changed our expectations for communication and information. It has changed the way we interact and has opened up new ways of learning and creating community. Public Libraries have moved along with this global shift. As new innovations and technologies emerge, traditional services are still expected, but the format for offering library services has broadened. As Boulder Public Library moves forward, we will move forward with a spirit of curiosity and dedication to learning.

Being a unique venue for discovery and direction, Boulder Public Library will grow into the community's "laboratory." This community laboratory will be a place where staff and customers learn from one another. We will foster curiosity and wonder in new ways and experiment with turning curiosity into learning opportunities. Traditional programs will morph into fuller experiences, combining the library's collection, interactivity, and robust dialogue.

The Public Library has always been a place that embraced a diverse community. How can the many facets of who we are as an entity grows to reflect our community needs? We listen. And then we respond. Our doors are open, and so are our minds.

(Tony Tallent, *Boulder Public Library: A statement about approaching the future*, Nov. 12, 2008)

The image of the 'community laboratory' has considerable architectural potential, especially when applied to the existing architecture of the Main Library. It also suggests that the library will be a place where *activity* and *use* take priority over static functions such as materials storage. This vision corresponds with much of the community input received over the study process.

IV.2 Community Input

IV.2.1 Methodology

Community input for the Library Services Needs Assessment was gathered during the months of August and September, 2008 using four types of collection methods: focus groups,

interviews, an online survey, and a public meeting. Each method allowed access to a different cross-section of the community.

1. **Focus Groups** involve a targeted, homogeneous group of people participating in a facilitated discussion regarding topics such as library services, spaces, and usage patterns. In addition to generating valuable ideas and observations, these sessions increase community awareness of the library's needs and help to prepare the ground for future changes. A total of 164 people participated in fourteen different focus group sessions. Particular sessions were targeted to groups of children, teens, the Boulder business community, North Boulder residents, users of the Meadows and Reynolds branches, the Library Commission, department heads, administrative staff, and frontline library staff.
2. **Interviews** are used to acquire spontaneous opinions from local citizens. They are particularly useful for gaining input from people who do not currently use the library. This study makes use of fourteen patron interviews at the Main Library and twenty-three interviews at a local book store.
3. **Online surveys** access the opinion of the largest number of people. For the purpose of this study, an online survey was accessed off the library homepage throughout September 2008. Paper copies of the survey were also available at the library. A Spanish-language version was also made available. A total of 818 surveys were returned, providing a statistical base for this study's evaluation of library services.
4. A **Public Meeting** was conducted September 3rd in the Main Library Auditorium. This meeting provided a follow-up to the focus groups and interviews. Twenty-nine participants offered responses to the study's initial findings.

IV.2.2 Community Insights and Ideas: Focus Groups and Interviews

The following lists compile concerns and ideas that were expressed multiple times during focus group and interviewing sessions.

The Main Library:

- Noise at the Main Library was the most frequently stated concern, with emphasis on the children's area and patron use of cell phones.

- The Main Library needs more study spaces.
- The Main Library needs improved seating, especially areas with comfortable chairs.
- Parents have difficulty supervising more than one child at a time in the Children's Area of the Main Library.
- Parents and children indicated a need for a "tween" space for upper elementary to middle school children with activities specific to their age level and a place to study.
- Teens need more computers in the teen space at Main, as well as a variety of spaces for quiet study, socialization, gaming, and collaborative work.
- Temperature and humidity levels are frequently uncomfortable in summer and winter.

Library Use Locations

- Patrons in the northern part of the city need a local branch.
- The web site is often used for locating specific resources. After locating the material, people either request that those materials be couriered to the library they use, or they drive to the library where the item is located to get it faster.
- Patrons who use the Meadows and Reynolds Branches also use the Main Library.
- North Boulder residents use the Main Library rather than traveling to Meadows and Reynolds.

Collections

- Patrons are quite pleased with the current libraries' collections.
- Prospector, interlibrary loan and courier services are used often by a variety of people to enhance what they can get from their local library.
- Patrons experience problems with finding the books and media listed as "on the shelves" after searching the web site. Especially at the Main Library, the item frequently proves to be awaiting reshelving.
- Finding materials in the children's area at the Main Library is difficult due to the tall stacks and confusing flow of materials.
- Patrons looking for specific materials at the Meadows Branch need staff help.
- Patrons want more popular DVD's.
- Teachers look to the public library to help with books and information because their school libraries don't have enough of what they need.

Support Staff Areas

- Staff members in many work areas have no place to meet with other people privately. This is especially difficult for supervisors.
- Providing collaborative spaces would enhance the teamwork of the staff.
- Staff need more efficient work spaces and appropriate space for storage.

IV.2.3 Community Insights and Ideas: Public Meeting

- The library has spectacular architecture and a good art collection, both of which should be respected.
- Too few holds of materials are allowed. (The library system has a 5 holds limit, which is less than neighboring systems).
- It has become difficult to do work at the Main library, due to rude behavior and the layout of computing areas. Computer stations at study areas for quiet use would help.
- Any North Boulder Branch would need to be a place with ambiance, rather than a kiosk / bank type of branch.

IV.2.3 Community Insights and Ideas: Online Survey

Characteristics of survey population

- 23% of survey respondents were not library users.
- 40% lived in Boulder County, but outside city limits.
- Of those who use do use the library, 84% use the Main Library, with the remainder evenly divided between Meadows and Reynolds.
- Most respondents work, go to school, or shop in Central Boulder.

Obstacles to using the Main Library

- Parking is difficult.

- Study and small group spaces are unavailable.
- Disinterest in library programs.
- Difficulty finding items at the Main Library.

Preferred Uses of the Library

1. Checking out books
2. Reading
3. Attending programs
4. Checking out DVDs
5. Doing research
6. Picking up holds

Children's Preferred Uses of the Library

1. Looking for and reading books
2. Using computers for gaming and getting information
3. Studying for school
4. Reading magazines

Teens' Preferred Uses of the Library

1. Reading or finding books
2. Using the computers
3. Homework
4. Meeting friends

Requests for the Library

- More library hours, especially on evenings and weekends.
- Less confusion about when branches are open and closed.
- More reading spaces and comfortable furniture.
- Different organization of the Main Library children's space.

- An enclosed Children's area to reduce noise at the Main Library.
- Improved security at the Main Library.
- Better lighting at the Main Library.
- Construction of a North Boulder Branch.

IV.3 Recommendations: Main Library

Based upon the findings of the Facilities Assessment and input from all the public sources noted above, the following steps are recommended to revitalize the Main Library. Please refer to **Section III.6, Priorities and Phasing**, for a discussion of specific steps and the order of their implementation.

- Reduce the noise coming from the children's area which spreads throughout the first floor and up into the quiet areas of the reference department.
- Improve the organizational layout of the building and signage to make it easier to find materials.
- Add more comfortable seating areas using the window areas for reading, relaxing and studying
- Repair and replace worn carpeting, and improve lighting. Repaint with a variety of warm, bold colors to replace the monochromatic pink paint scheme.
- Replace high shelving with lower shelving, especially in the children's department.
- Enhance the collections with more display of materials, appropriate seating areas, and less clutter to work around.
- Provide small group study areas and add enough meeting room spaces to allow outside organizations to use the Main Library for meetings
- Expand the teen area for greater variety of uses.
- Provide a 'tween' area for upper elementary/middle school students.
- Integrate the cultural arts offerings with other library services for greater awareness and use by all who use this library.

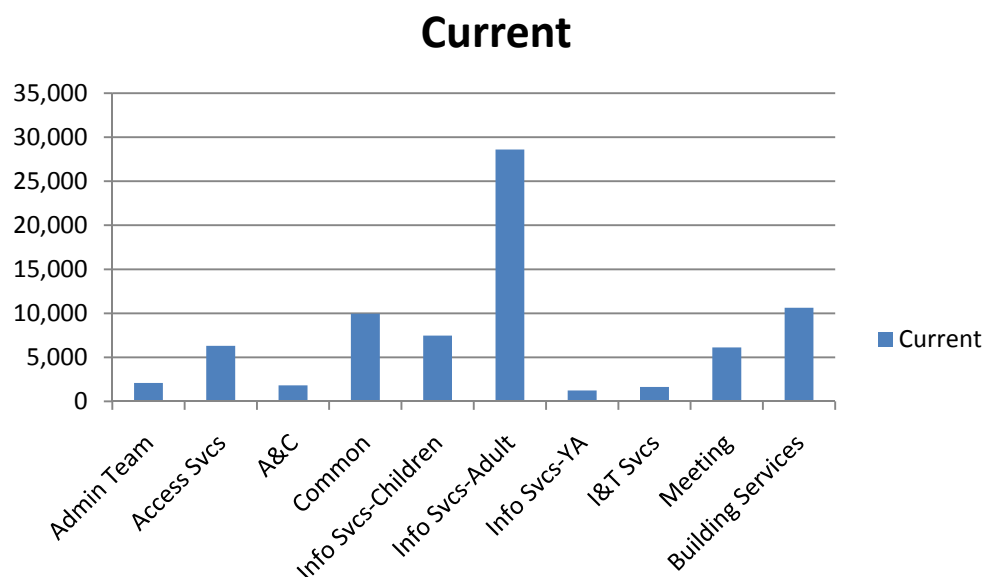
The implementation of these recommendations would alter the space allocation of the Main Library as follows:

	Current	Renovation target level	Renovation provides	Comments
Readers' Seats	231	425	440	Goal of 5 seats per 1000 sf, for 425 seats total. (The base square footage, 85,000, does not count meeting rooms & performance center.)
Meeting Room Seats	288	400	396	Includes the Performance Center, Community Rooms, Conference Rooms, the Boulder Reads Classroom, and the Children's Story Time room.
Study /Tutor Rooms	4	6	6	
Patron Computers	42	60	60	

These recommendations have been used as the basis for the conceptual space plan designs found in Section V.

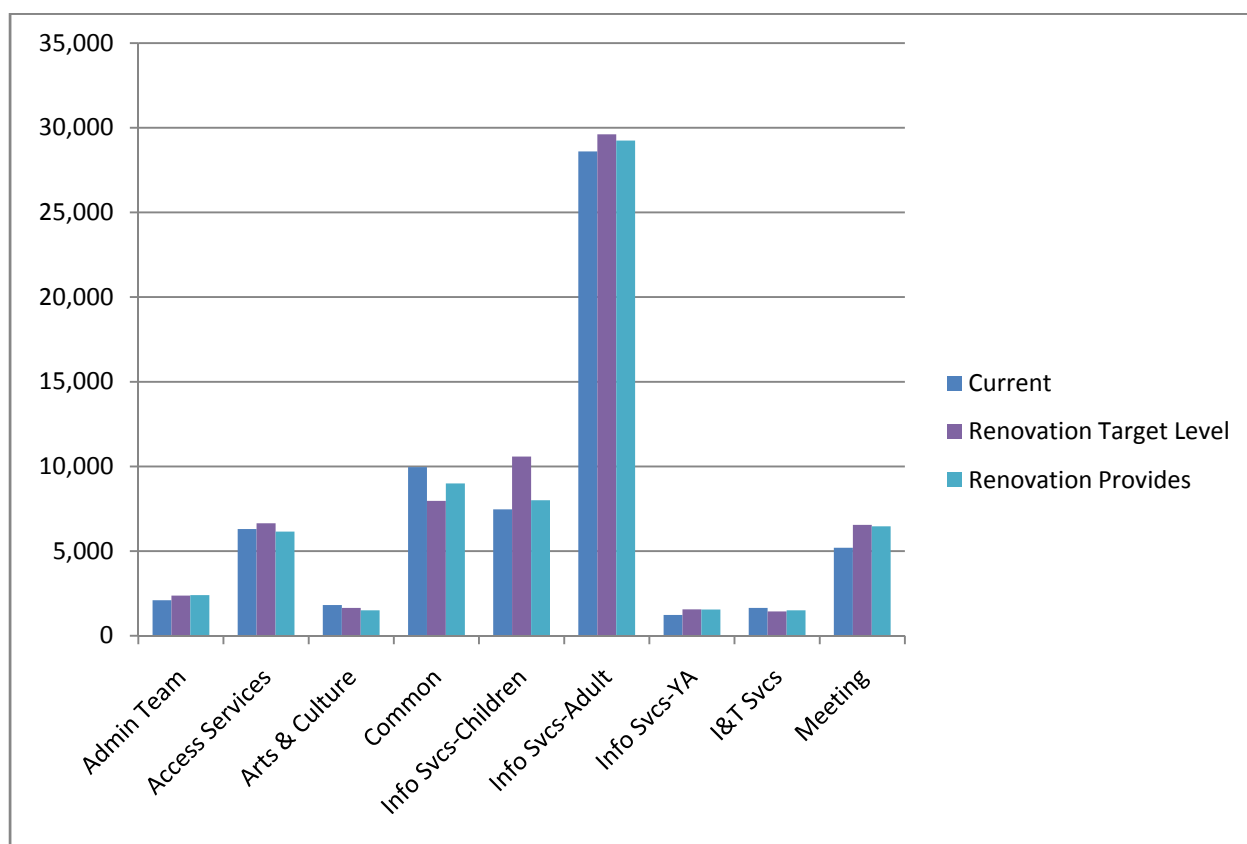
IV.3.1 Library Space Allocation

Current space allocation favors the Adult collections with secondary emphasis on Children and Teens.



The library's expressed intention is to increase the space allocation of Children and Teens. Increased space for these functions can be found through the reallocation of library common space and improvements in the efficiency of various functions.

The projected areas are designed to allow the current Main Library facility to continue its excellent library services in the existing structure for the next ten years through efficiencies of space, and balance between collections and users. The projected square footages are provided in the Report Data as the Divisional Square Foot Summary.



IV.4 Recommendations: Branch Libraries

Library services in Boulder are currently structured as a traditional Central/Branch library model:

1. The Main Library provides extensive collections and research materials in addition to large children's and popular-materials collections. In addition to typical community

meeting and conference rooms, it features a 207-seat auditorium with a busy schedule of performances and programs. It also offers literacy programs and serves as a base for library outreach.

2. The Reynolds and Meadows Branches are full-service branch libraries with popular materials, children's collections, some research materials, and community meeting spaces.
3. The Carnegie Branch Library for Local History serves as a repository and reading room for local historical documents. It also provides space for the local genealogy society.

This relationship between the Main Library and the branches is not unusual, but it may not be fully appropriate for Boulder's conditions. First, Boulder is geographically compact, a condition which supports the strength of the Main Library relative to the branches. The Main Library can offer certain services at a comprehensive level to the entire city without any branch support. At the same time, Boulder also has an exceptionally high proportion of people who walk, bike, or use mass transit to reach the library. Localized services are especially convenient to these users, as well as to children and the elderly.

As suggested in the Geographic Service Area Study, it is excessive to have two full-service branches within 1.5 miles of each other when the northern portion of the city has no branch at all. However, neither Reynolds nor the Meadows Branch is a candidate for closure; Reynolds is a fully owned facility with strong architecture and a pleasant atmosphere, while Meadows offers a retail-oriented location for a nominal lease. Both branches have enthusiastic user populations. Given these conditions, the two branches should be structured as mutually-supporting entities, each with its own strengths and services. Of the two, Reynolds should be the primary target for future investment, due to the Library's ownership of the facility. For its part, Meadows should be a candidate for service reductions to reduce operating costs.

Future library services should capitalize on the distinct qualities of each branch. The recommendations below are based upon the respective strengths of each branch, the demographics of nearby communities, and the needs identified through community input.

Enhance the Reynolds Branch

- Improve the children's area with study spaces and special places for parents to interact with their children.

- Promote the use of the meeting room downstairs.
- Improve the landscaping around the library and add distinctive, clear signage.
- Provide adequate work space for staff away from the circulation desk and reduce the scale of the desk for a more welcoming entry.
- Create useable storage for courier bins and bags in the workroom.
- Improve computer availability, study space, meeting space, conversational space, and materials organization.

Clarify the focus of the Meadows Branch

- Dedicate the Meadows Branch primarily to popular materials and rapid turnover use.
- Reduce the overall collection size, using the Main Library and Prospector to provide depth when needed.
- Continue to provide children's services at their current level. Provide comfortable seating for parents to read aloud to children in an area non-disruptive to other patrons.
- Provide signage to the library from the front of the shopping center, especially the supermarket.
- Use lease re-negotiations as an opportunity to support the goals of the branch and improve exposure at the front of the shopping center.
- Improve computer availability and conversational space in response to the survey.

Resolve growth issues at the Carnegie Library

- Aggressively pursue the digitization of the local history collections to make them accessible from any point with internet service.
- Define the purposes of the local history collections and develop a collection development policy that definitively focuses on the types of materials to be collected and those ephemeral materials which are not appropriate for this collection.
- Partner with other local organizations to reduce duplication of materials and to enhance the viewing of primary source materials of high interest to Boulder residents
- Increase the use of offsite storage.

Redefine service to children at all branches

- Deemphasize extensive collections by continually upgrading new materials and eliminating worn and less asked for items.
- Include eye-catching displays of books that attract children to them.
- Accent the curiosity of children with individual exploratory activities that develop their imaginations.
- Provide spaces for parents and children to read, learn, and investigate together.
- Provide study spaces and materials to emphasize learning.
- Provide computers that link students with web sites designed and recommended for children's interests.
- Create an inspiring new children's area at the Main Library.

Support staff efforts to improve services

- Provide efficient, appropriate-sized offices and work areas.
- Provide collaborative spaces that encourage teamwork.
- Provide private areas for supervisors to meet with patrons, vendors, and the staff they supervise.
- Group together appropriate offices and service stations for improving communication with colleagues and patrons.

Create limited-service points to extend the reach and convenience of library service

- Establish a prototype automated service location for the distribution of holds and popular materials.
- Establish a prototype limited service location to be staffed at targeted hours, providing holds, popular materials, and informational services.
- Increase outreach efforts, with an emphasis on the underserved areas in North Boulder.
- Provide more places to remotely return books
- Continue to add services to the library web site to support the concept of a 'virtual branch' serving homes, work places, schools and other community spaces.

IV.5 Recommendations: Library Operations

Library operations have been reviewed with an eye to 'quick victories', where efficiency or service can be improved with little or no initial investment. The following procedures should be targeted for change within a short time horizon.

IV.5.1 Donations of Books, Media, and Other Materials

The public has been very supportive of the library with its donations of used materials. These items are used to either supplement the purchased collections or to be sold so the library has money for collection purchasing or other benefits. However, the reality is that less than 5% of donations are used for library collections, while a great deal of staff and volunteer time is expended on the evaluation of these materials. Usable space is also lost to the storage of books have not yet been evaluated. These materials need to be evaluated and dispatched quickly and decisively. Options could include using a third-party service to manage the online sale of library donations.

IV.5.2 Automatic Materials Handling

As noted in the Facilities Assessment, there are numerous issues associated with the existing automated sorter. Its replacement would reduce operating costs by reducing the amount of staff time dedicated to sorting and monitoring the automated sorter. The ergonomic improvements in the new generation of materials handling technology would reduce staff injuries and absences. A new sorter would also improve library service by eliminating the current 4-5 day delay between materials return and reshelving.

IV.5.3 Security Measures for Media

Technology for securing DVDs and CDs is changing rapidly. At present, the cost of media dispensers can exceed the cost of the materials themselves. However, media dispensers should also be evaluated with reference to the labor and time associated with materials processing and handling.

A security plan for digital media could identify opportunities for savings in both operational costs and materials budgets. In the longer term, the Library should eagerly pursue technologies for library-based downloads of movies, audio books and music.

IV.5.4 Processing Magazines for Circulation

Current library policy is to process all magazines for check out. However, many magazines have limited circulation and are primarily used for in-library consultation. The library should evaluate which magazines require processing for circulation, and address the rest on an ad-hoc basis.

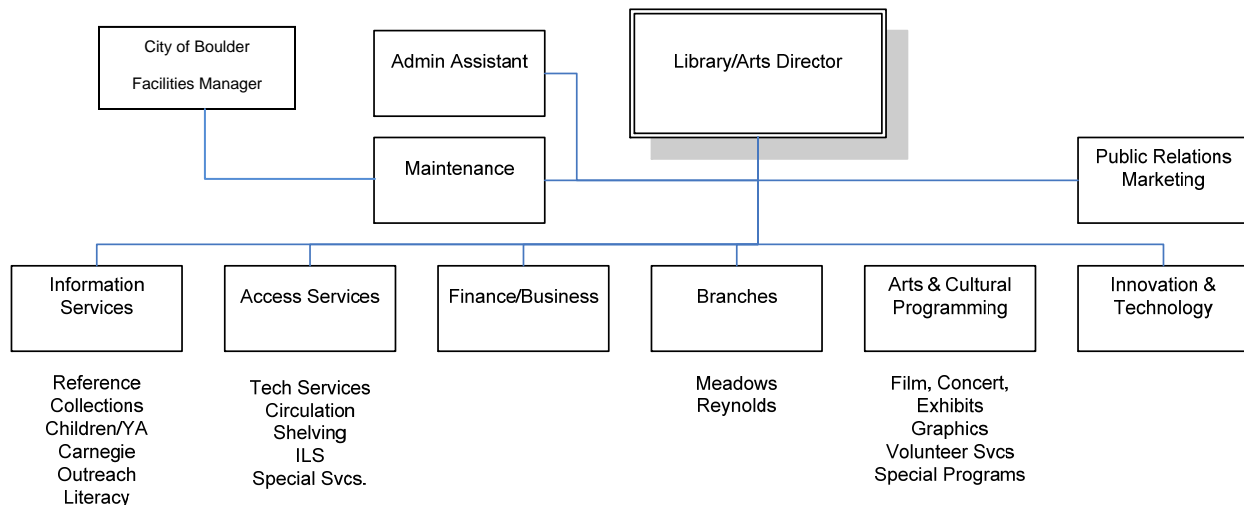
IV.5.5 Updating the Web Site

The needs assessment survey indicated that patrons heavily use the Boulder Public Library web site to find locations of books and media, renew the materials they currently have checked out, and put items they wish to borrow on hold. These are excellent services that save time and effort for patrons and staff.

The web site is currently pioneering the provision of digital audiobook and classical music downloads using the Overdrive service as part of the Front Range Downloadable Library. Opportunities to expand such services change from one year to the next. The hiring of a Digital Services Specialist, which is currently in process, will support future growth and innovation in these services.

IV.5.6 Multiples Entrances at Main

The current design of the Main Library includes entrances to both the 1992 and 1961 wings. The current address of the library is 1000 Canyon Blvd., which creates significant confusion for potential library users who follow directions to an art gallery and auditorium without any books in sight. The library should change its official address to correspond with the 1992 entrance on Arapahoe Avenue. This would then allow the library to achieve operational cost savings by closing the Canyon Blvd. entrance during normal operating hours. This would allow the elimination of the reception desk at the base of the Bridge. The Canyon Blvd. entrance could then be opened for gallery openings and auditorium events.



IV.6 Target Size for Facilities

Many libraries and library systems attempt to calculate a 'target size' on the basis of established state and national standards. Due to Boulder's unique demographics, and the Boulder Library's distinct approach to library services, these standards are not necessarily fully applicable. However, they do provide a useful baseline for evaluating the current size of the Library.

Calculations for library target size are generally based on a locality's population. The Library Research Service at the Colorado State Library lists Boulder Public Library's service area at a population of 97,671. However, this number is based on out-of-date Census information. According to the 2008 Community Data Report, Boulder's current population is 103,100, with a total 'buildout' in 2030 of 118,500. Due to Boulder's job market, high land value, and strong planning department, this projected number is likely to be more accurate than most statistical projections of population. Assuming linear growth between 2008 and 2030, the library system will need to be equipped to serve a population of 110,100 in a ten-year timeframe.

The Library Research Service suggests a multiplier to reflect the varying levels of library service provided by different library systems. For a city of 100,000 people or more, 'Essential' library services can be provided with .47 square feet per person. 'Enhanced' services require .68 square feet per person, while 'comprehensive' services require 1.12 square feet per person. Given Boulder's highly educated population, its eagerness for cultural programming, and the Boulder Library's role in providing essential services to many of the city's disadvantaged, the

'comprehensive' service level should be considered a minimum for the Library to function effectively over the long term.

To complicate this model further, the Boulder Public Library contains several spaces which are outside the types of spaces normally covered by Library Research Service standards. The Channel 8 TV station is unrelated to library services, and cannot be counted toward the Library's total square footage. The gallery, the auditorium, and the basement storage area are all out of the ordinary for libraries in Colorado, and are counted at 50% of their square footage.

TARGET SQUARE FOOTAGE

EXISTING SQUARE FOOTAGE				
Facility	Base SF	Modifier	Planning SF	
Main Library			93,000	
(TV Facility)	(3,204)	100%	(3,204)	
(Auditorium)	2,974	50%	(1,487)	
(Gallery)	2,284	50%	(1,142)	
(Basement Storage)	3,621	50%	(1,811)	
Modified Main Total			85,000	
Carnegie Branch Library			4,000	
Reynolds Branch Library			9,600	
Meadows Branch Library			7,800	
Boulder Public Library Total Planning Area			106,400	
TARGET SQUARE FOOTAGE				
	Population	Modifier	Target SF	Deficit
2008 Community Data Report	103,100	1.12	115,472	9,072
2018 Projected Population	110,100	1.12	123,312	16,912

These figures clearly show that the Boulder Public Library is undersized by current state standards for comprehensive library service. This is additionally evidenced by the shortage of comfortable reading areas, study rooms, meeting spaces, and popular material display areas at the Main Library.

As the City continues to grow, this situation can only be expected to worsen. Although Boulder's greenbelt acts as an urban growth boundary, and Boulder planning currently projects an upper limit to the city's population, efforts are also ongoing to annex adjacent areas (which are already, in effect, non-taxpaying benefactors of the Boulder Public Library's services). Counting adjacent neighborhoods targeted for annexation by the City of Boulder, the current and long-term populations increase by over 10,000. If this factor is included, the total long-term target square footage increases to 145,000. To provide comprehensive service to this population would require 38,000 sf of new construction.

The fiscal conditions currently faced by the library will not support new construction on this scale. This study has focused on short-term, economic changes to improve library services within the constraints of existing facilities. However, in the long term, the baseline square footage deficit can be expected to place additional pressure and strain on all Boulder Public Library facilities.

IV.7 Collection Allocation

Main Library

- To facilitate the vision of the Main Library as a “laboratory” for interactive learning and exploration, a new balance between book collections, other collections, and people spaces must be established.
- The size of media collections are expected to remain stable in the long run, due to increasing public preference for downloadable digital media.
- Due to full-text online access to periodicals, the Library will only be retaining one year of magazine subscriptions, reducing the collection's space allocation.
- The Main Library only began regular weeding four years ago. Addressing the backlog of weeding will increase the space available for the priorities identified by this study
- In the Report Data, a Collection Plan has been provided suggesting optimum sizes for the Main Library's collections within current constraints. It shows the current total volumes in each section, the projected total volumes based on this study's recommendations, and includes an amount for numbers of items expected to be in circulation at any given time.

Carnegie Branch Library

- The Carnegie Branch Library is reaching maximum space for its collection. With the planned accession of the *Boulder Daily Camera* print archives, the space situation will become potentially incapacitating.

- Historic photographs show the Carnegie Library as a lively, active branch with open and attractive interior spaces. The Carnegie should pursue programming and services to regain some of that liveliness within the context of its current mission as a library for local history.

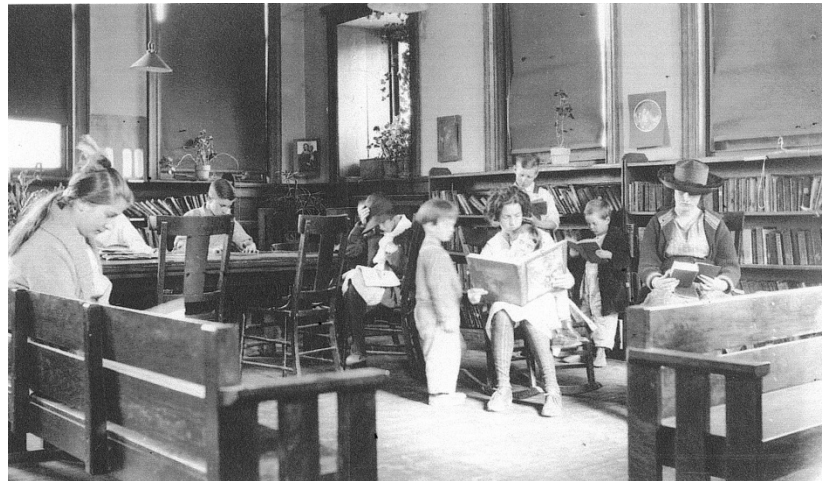


Figure 43: Carnegie Branch, 1924.

- An aggressive digitization program will improve access to the historic collections while supporting the increasing use of offsite storage.
- The collection management policy should be revised for greater selectivity, with special attention to avoiding any duplication with other local collections.

Meadows Branch Library

- The Meadows Branch Library already serves as the Boulder Library's most retail-oriented facility, with topical arrangement of its collection and an emphasis on popular materials. The branch should increase its emphasis on these collections, while continuing its services to children at their current level.
- The overall size of the collection should be reduced as part of the effort to reduce operating costs at the branch.

George Reynolds Branch Library

- The Reynolds Branch Library has reached its limit on collection space. A weeding program is needed to free space for other functions and create room for future growth.
- The Reynolds Branch has the character and facilities to support a high-quality full-service branch library. It should rely on the Main Library to provide depth of collection, while providing pleasant environments for library use and service alongside a collection emphasizing fiction, children's, and popular nonfiction.

V. Conceptual Space Plans & Cost Estimates

V.1: Introduction

The following section consists of conceptual space plans and cost estimates for two major rearrangements of the Main Library and one rearrangement of the Reynolds Branch. As discussed in the Facilities Assessment, the rearrangement of the Main Library will be a crucial step toward restoring the facility to an acceptable level of efficiency and functionality.

V.2: Main Library: Children's Room Relocated

As discussed in the Facilities Assessment, the current location of the Children's Space is the most significant factor preventing an open, flexible, intuitive layout of the Main Library. One possible place for the relocation of the Children's Space would be the 1974 Wing at the first floor. With excellent views over Boulder Creek, the 1974 wing has considerable unrealized architectural potential. Features of the space plan include:

1. Access for all patrons to the area within the curved glass wall. The area is designed to feature soft seating, small tables for those bringing their own laptop, and a coffee cart area to encourage patrons to linger and browse.
2. The existing entry would become a bright area of activity and energy with displays of new materials, reading suggestions, self check-out, program postings and a small number of stand-up express e-mail stations.
3. The large, open spaces of the adult collection would feature lower shelves, more places to read and browse, and more intuitive way-finding. Seating areas and displays are arranged to draw patrons through the library from one interesting area to the next.
4. The children's area and the Readers' Bridge beyond would be approached via a ramp designed for displays to draw patrons through to the 1974 wing. The entrance to the children's area would represent a special design opportunity, with portals of translucent materials that do not block the view entirely, but suggest a "secret garden" beyond. The children's library is laid out with intriguing diagonal book-stack sightlines to the window space surrounding, where many choices of activities or opportunities to quietly read are

available. This design would take advantage of the existing multi-purpose room to create an enclosed story time and crafts area, allowing greater breadth in children's programming.

V.3: Main Library: Entrance and Children's Room Relocated, Second Floor Infilled

The relocation of the children's room opens up further possibilities for the Main Library. This space plan shows a combination of several major modifications:

1. First, the main entrance would be relocated to the curved glass wall. This would create a dramatic entry situated for immediate contact with the full breadth of the library's collections.
2. The existing stone stairway outside the curved glass wall would be enlarged to create an expansive entry plaza, with stairs designed for sitting and lingering and a new ramp for accessibility.
3. The café would be relocated to a position just north of the new entrance vestibule, allowing for indoor / outdoor seating and enlivening the entrance plaza.
4. At the second floor, the tree-well openings would be infilled with a combination of structural floor and glazing. This step could gain the library over 1,000 sf of additional collection space at the second floor. Translucent panels would be inset into the new structural floor to transmit some of the upper level's generous daylight to the first floor.
5. Finally, the current entry vestibule would be recreated as a 'winter garden' for reading and programming.

The elements of this plan would be more expensive to implement than the first. Costs unique to the plan would include sitework to modify the approach to the entry, and construction of a new awning, new entry doors, and a new vestibule. Infilling the tree-wells at the second floor would require structural evaluation to identify the appropriate method of construction.

V.4: Estimated Costs for Proposed Improvements to the Main Library

First Phase Improvements: 1st Floor, 1992 and 1974 Wings

Relocate & refurnish Children's Services, with associated electrical, lighting, & HVAC:	\$1,034,000
Refinish & refurnish 1992 wing, 1 st floor, with associated electrical:	\$1,057,660
Add new meeting room behind elevator:	\$27,840
Renovate ramp between 1992 and 1974 wings:	\$137,000
First Phase Subtotal:	\$2,256,500

Entrance Relocation and 2nd Floor Infill

Construct new entry vestibule & infill 2 nd floor over entry	\$333,200
Sitework & awning for new entry:	\$227,600
Winter Garden	\$93,390
Infill upper floor (other than over vestibule):	\$412,450
Entrance Relocation & Second Floor Infill Subtotal:	\$1,066,640

RFID Conversion and Automated Materials Handling Replacement

Convert to RFID and install new automated materials handling system:	\$1,000,000
Deduct for current balance of replacement fund:	(\$500,000)
RFID / AMH Subtotal:	\$500,000

Second Floor Renovation, 1992 and 1974 Wings

Refinish & refurnish & relight 1992 wing, 2 nd floor:	\$362,285
Refinish, refurnish, & relight 1974 wing, 2 nd floor:	\$300,656
Convert microfilm room to study rooms:	\$43,230
Construct computer lab, 2 nd floor:	\$78,600
Fix conference room acoustics, update technology:	\$60,500

Remodel administration spaces, 2 nd floor 1992 wing:	\$147,840
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Second Floor 1992 & 1974 Wings, Subtotal:	\$993,111
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Café & Bridge Renovation

Relocate café:	\$25,960
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Refinish & refurnish the Bridge:	\$61,056
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Café & Bridge Subtotal:	\$87,016
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1961 Wing Renovations

Construct literacy / program room in 1961 Wing 1 st floor:	\$57,200
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Convert woodshop to meeting space at 1961 wing 1 st floor:	\$78,980
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Renovate offices, 2 nd floor 1961 wing:	\$185,970
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1961 Wing Subtotal:	\$322,150
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Basement Renovations

Refinish & relight basement workspaces:	\$270,300
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Construct new basement workspace for Children's Services:	\$137,740
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Basement Subtotal:	\$408,040
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MAIN LIBRARY TOTAL PROPOSED RENOVATION COST:	\$5,633,457
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V.5 Reynolds Branch

As noted in the Facilities Assessment, the Reynolds Branch has excellent architectural potential that can be harnessed with relatively economic investments. Features of this revised plan include:

1. The Service Point would be reduced in size and pulled back from the entrance, opening up a generous space for current materials and items of interest. It would also create more inviting access to both the Children's and Adult collections.
2. The remaining portion of the Reading Court would be set aside for a Teen area. With high clerestory lighting, the Teen space would be distinctive and attractive. The library's computers would move out of their current position in a corridor and into the space vacated by the teens. This would provide opportunities for open lab use and computing classes.
3. The fireplace would be relocated to a new quiet reading area built around the arched windows at the east of the building. A two-sided gas fireplace model would be selected to infill the hearth of the relocated fireplace.
4. The children's area would become a more fluid space, with story time programs in a semi-enclosed flex-space. The revised layout would offer a better environment for parents to interact with children as well as a greater choice of activities and seating. Though not attached to the children's library, the new cybercafé along the corridor would provide parents and caregivers a place to visit or work while their children browse nearby.

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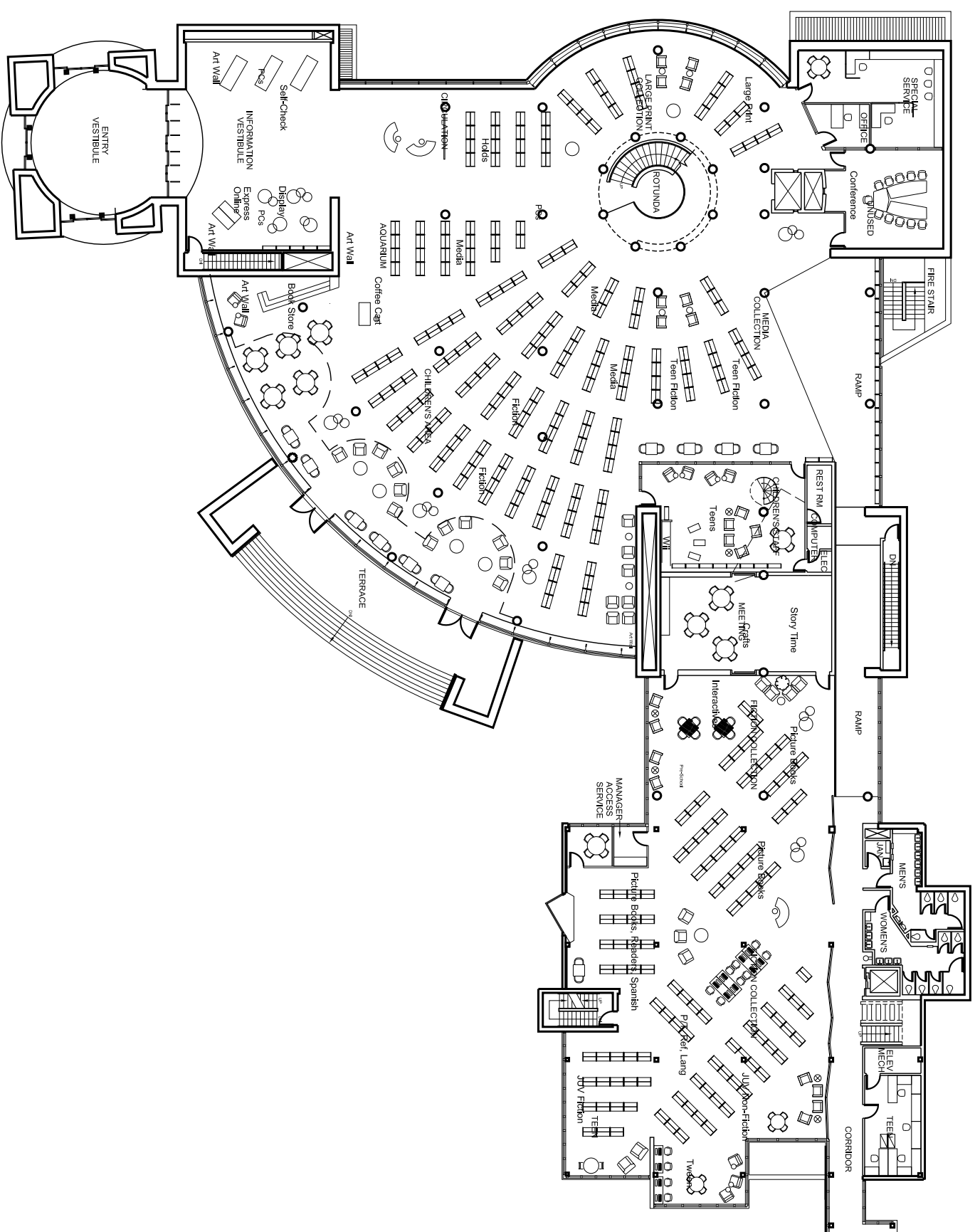
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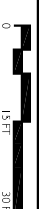
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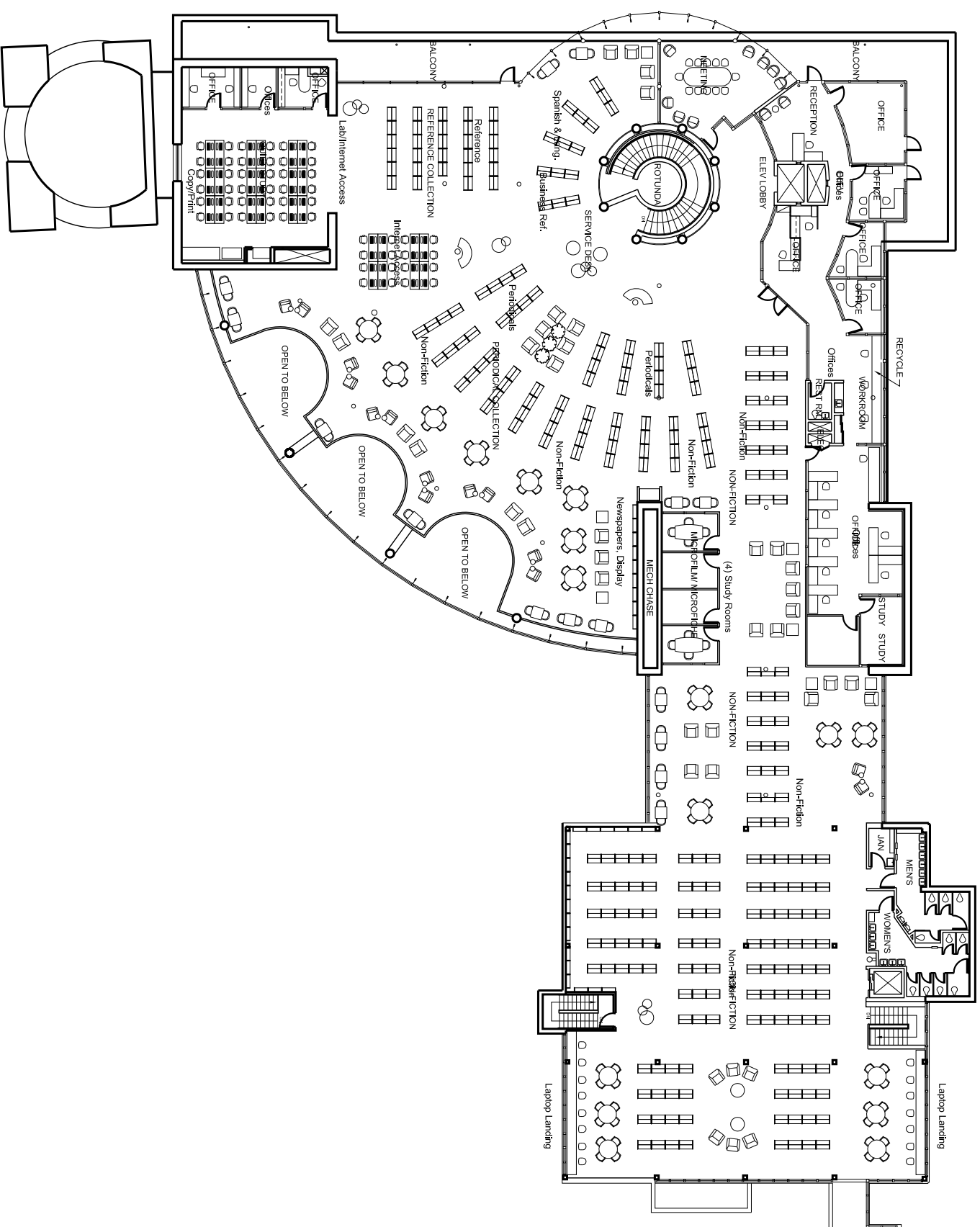


FIRST FLOOR PLAN, 1992 WING -- CHILDREN'S ROOM RELOCATED

$$I'' = 30'0''$$


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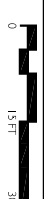
FIRST FLOOR PLAN



1" = 30'-0"

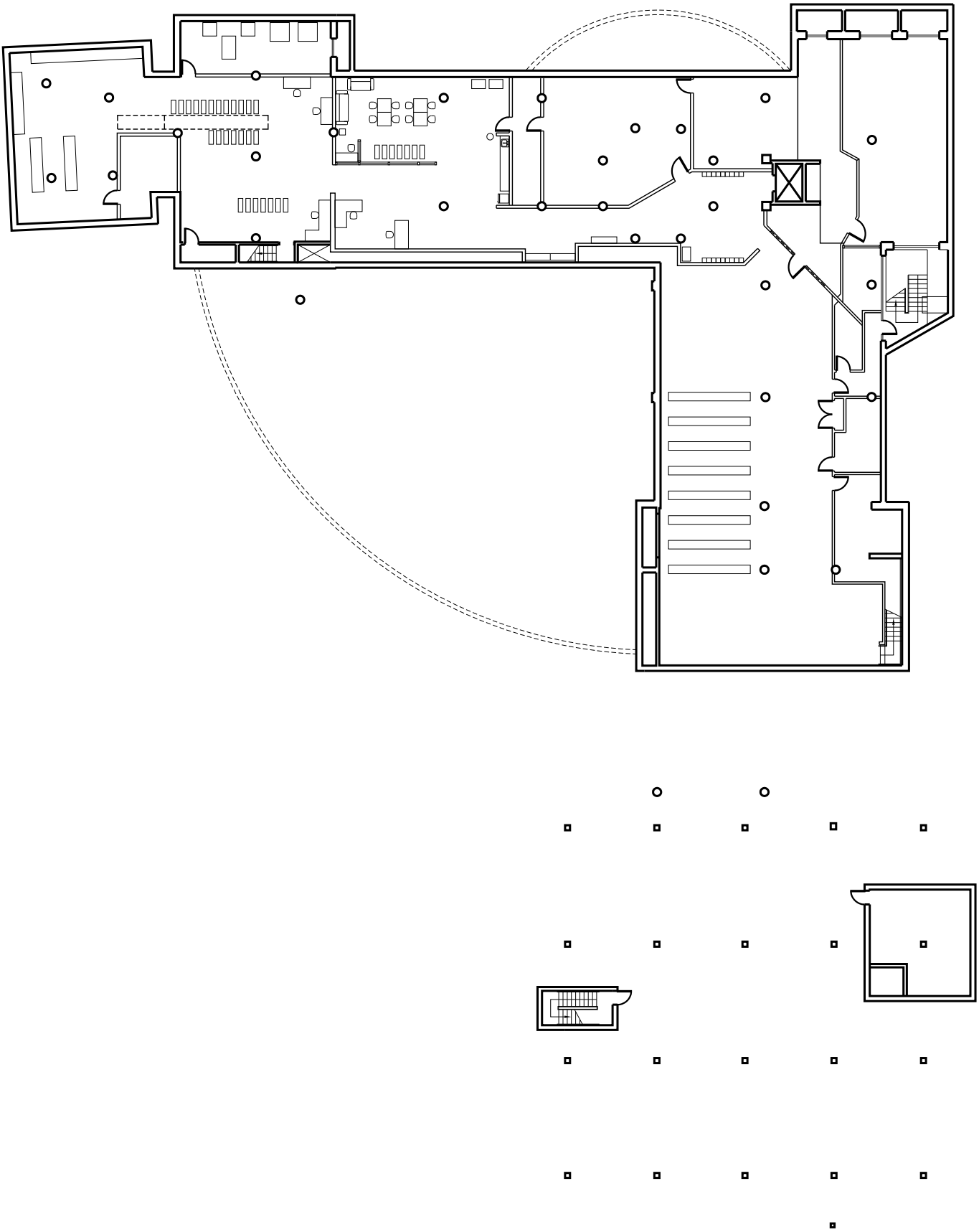
SECOND FLOOR PLAN, 1992 WING -- CHILDREN'S ROOM RELOCATED

0 15 FT



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SECOND FLOOR PLAN



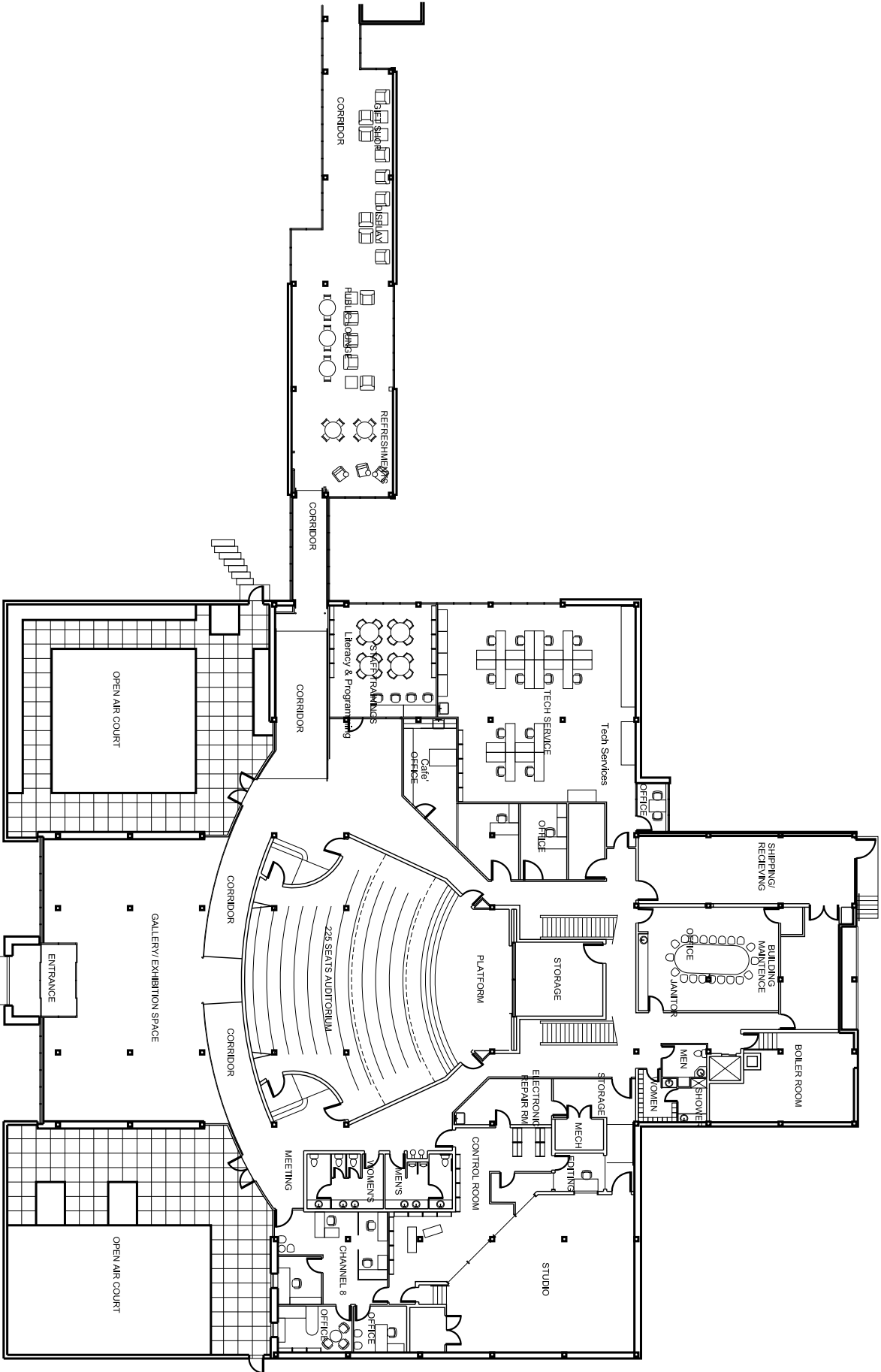
BASEMENT FLOOR PLAN 1992

1" = 30'-0"



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BASEMENT FLOOR PLAN



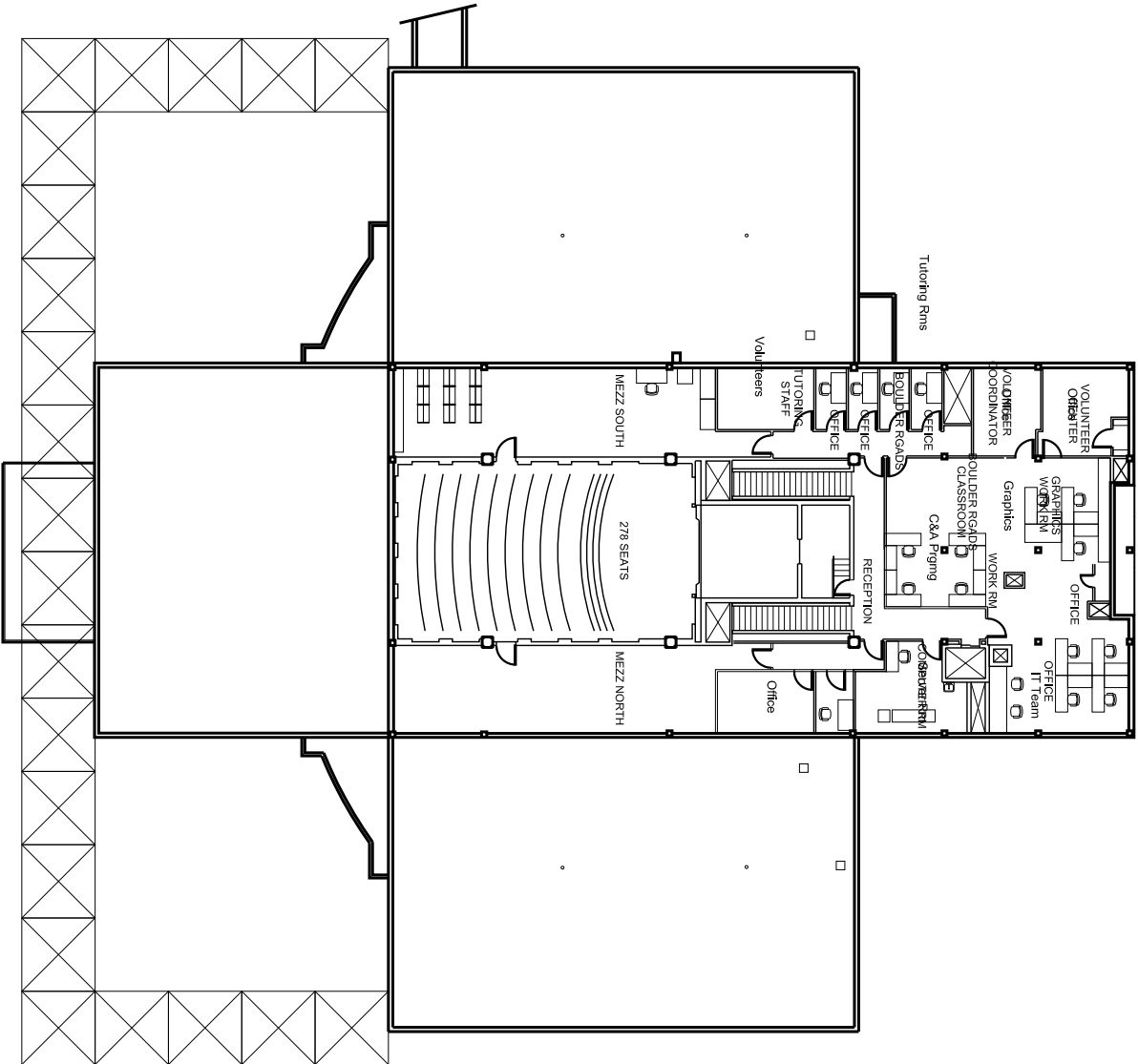
REVISED FIRST FLOOR PLAN, 1961 WING

1" = 30'-0"



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FIRST FLOOR PLAN



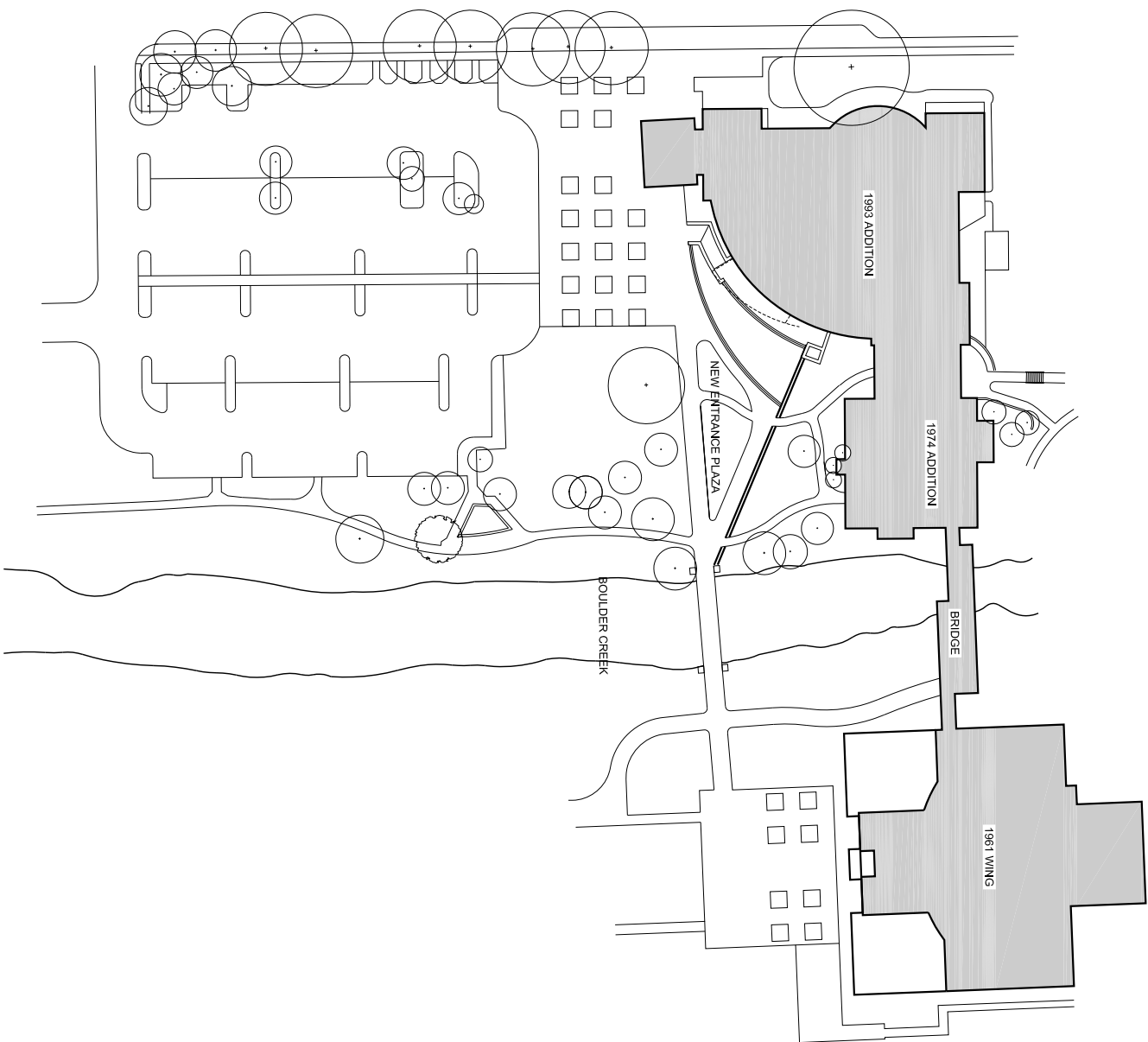
REVISED SECOND FLOOR PLAN, 1961 WING

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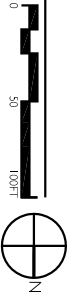
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SECOND FLOOR PLAN



SITE PLAN WITH NEW ENTRY

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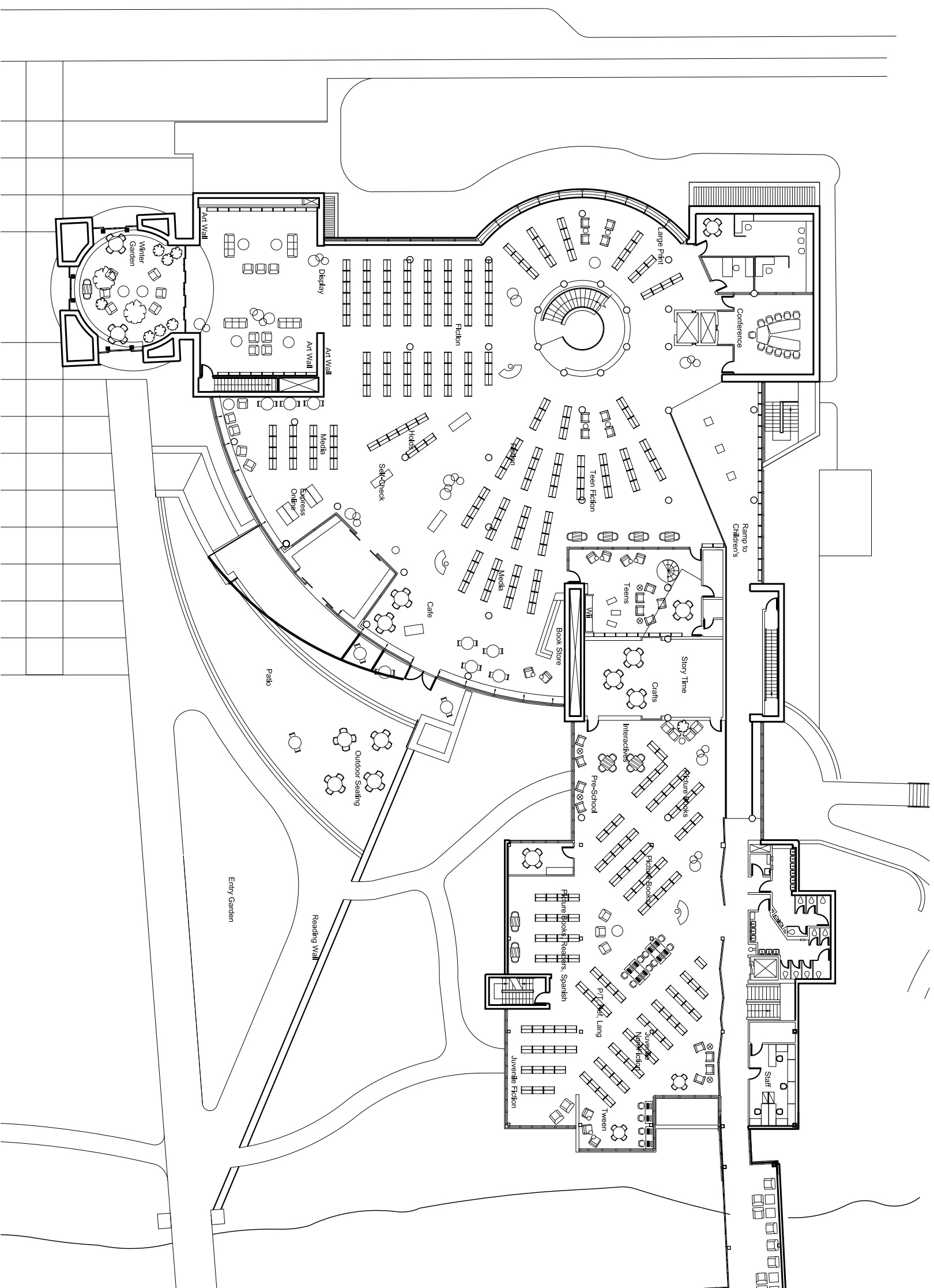


BOULDER PUBLIC LIBRARY

GROUP 3 PLANNERS / HUMPHRIES POLI ARCHITECTS

JANUARY 2009





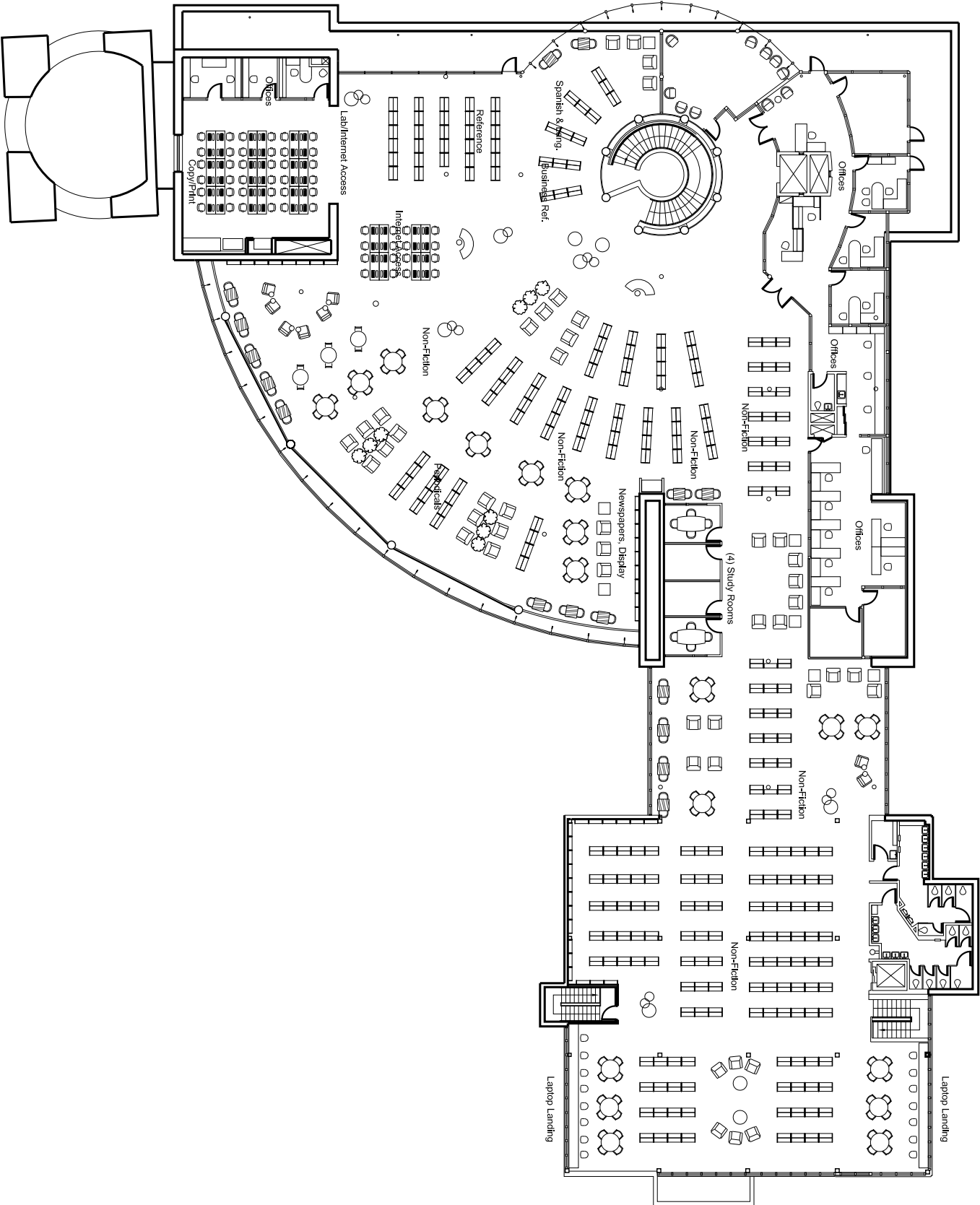
FIRST LEVEL FLOOR PLAN -- ENTRANCE RELOCATED

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GROUP3 PLANNERS / HUMPHRIES POLI ARCHITECTS

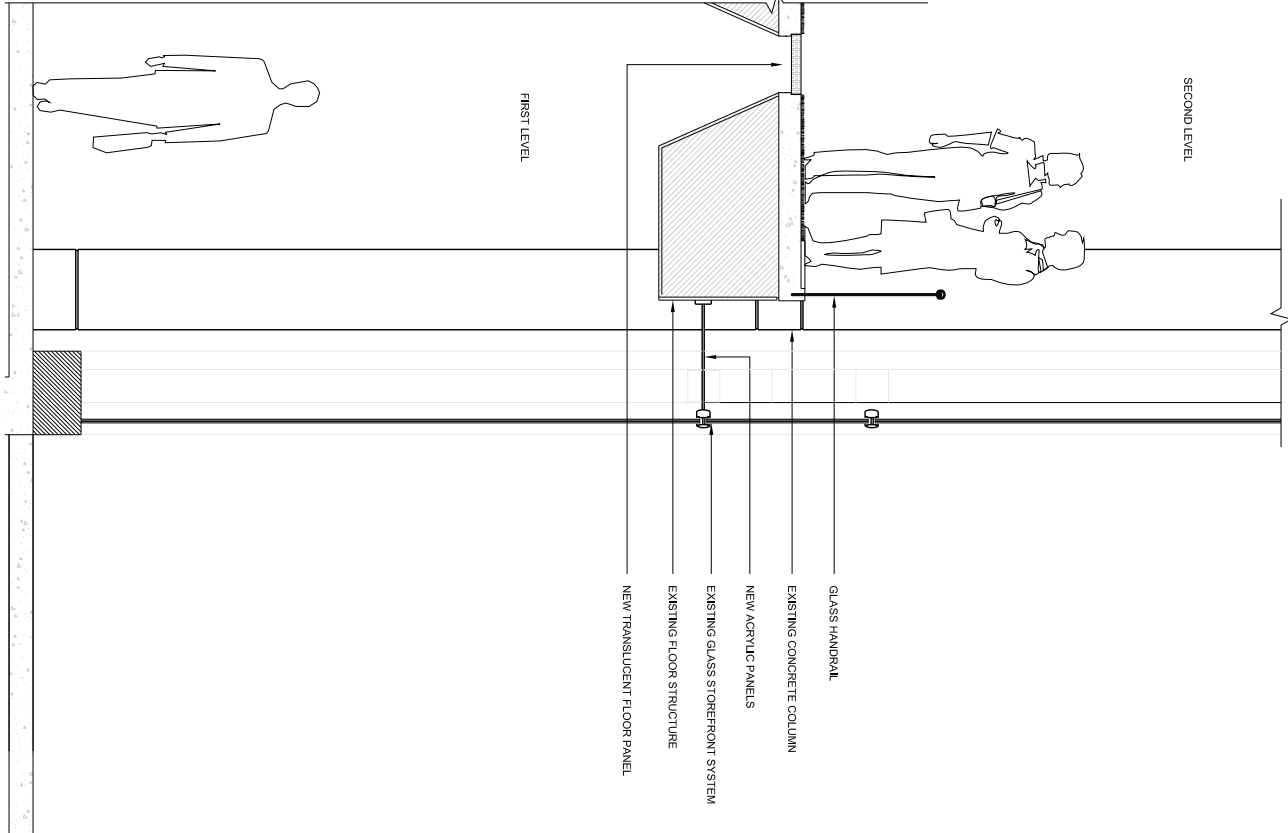
JANUARY 2009



REVISED 2ND LEVEL FLOOR PLAN -- INFILLED TREE-VELLS

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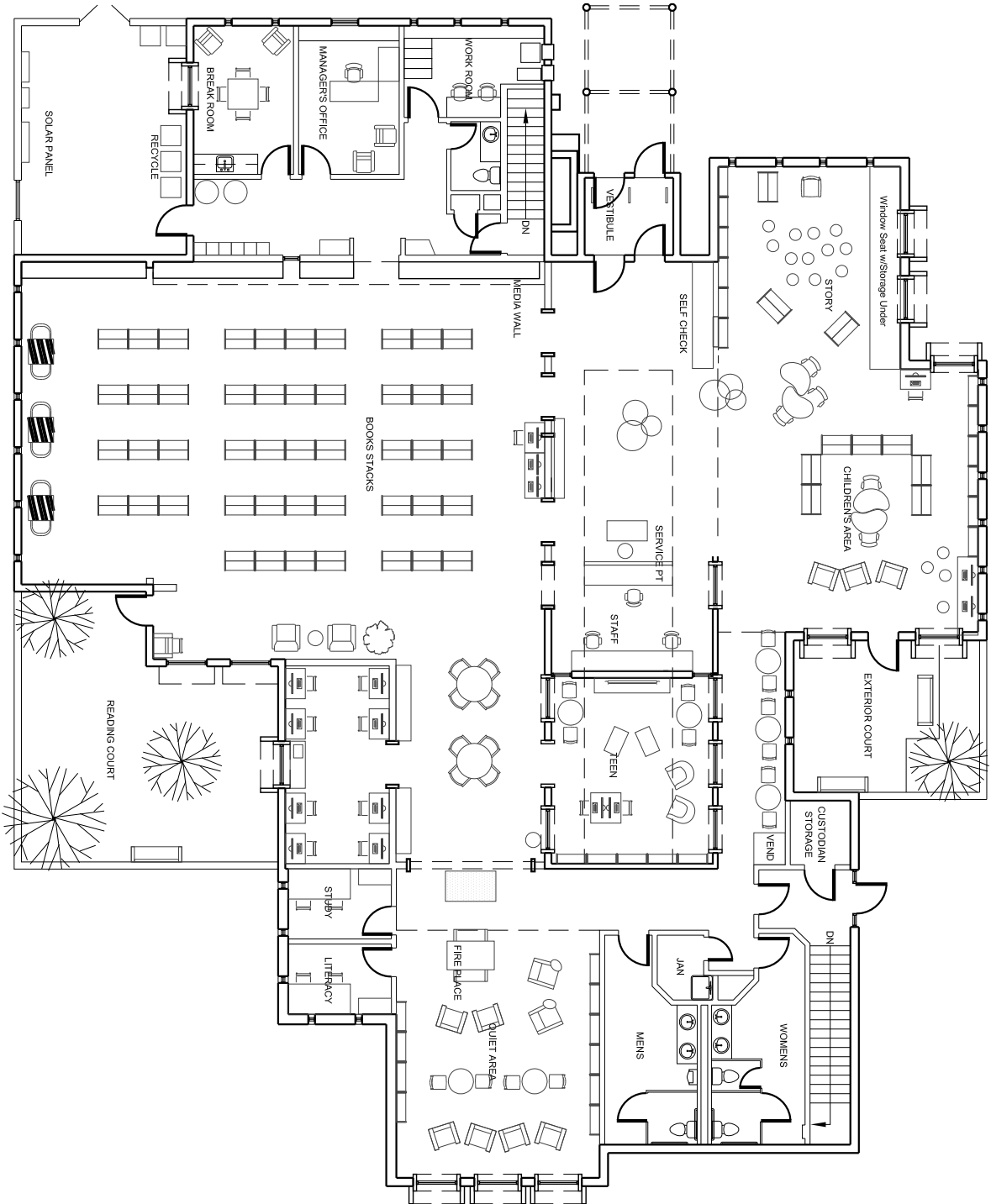
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SECTION @ INFILLED TREE-VELLS

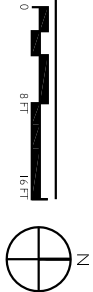
1/4" = 1'

0 4 FT 8 FT



REVISED FLOOR PLAN

1/16" = 1'-0"



REYNOLDS BRANCH LIBRARY

BOULDER PUBLIC LIBRARY

FLOOR PLAN