CITY COUNCIL REPORT

Date: January 31, 2008

TO: Phillip L. Nelson, City Manager

FROM: John M. Lamerato, Assistant City Manager/Finance
Cathleen A. Russ, Library Director

SUBJECT: Library Needs Assessment Study

Background:

- On March 19, 2007, City Council approved Resolution #2007-03-101(F8), directing staff to obtain requests for qualifications from appropriate consultants to perform a scope of study for a space-needs analysis on the Troy Public Library.
- On May 10, 2007, the Library Advisory Board unanimously approved Resolution LB-2007-05-05 to hire a consultant to further study the various options regarding the library expansion.
- City officials and the Library Advisory Board determined that a study should be done to assess the existing facility, as well as determine current and future space needs.
- Funds were allocated in the FY 2007-2008 budget to pay for this study.
- On October 1, 2007, City Council approved Resolution # 2007-10-284-E-4d, awarding the contract to conduct the Needs Assessment study to Fanning/Howey Associates, Inc.
- The study began on October 4, 2007, and was completed on January 31, 2008.

Financial Considerations:

- There are no financial considerations at this time. Depending on City Council's decision, a plan will be put into place.

Legal Considerations:

- There are no legal considerations associated with this item.

Policy Considerations:

- The outcome of the study addresses the following goals:
- Goal I: Enhance the livability and safety of the community
- Goal V: Maintain relevance of public infrastructure to meet changing public needs

January 31, 2008

To: Phillip L. Nelson, City Manager
Re: Library Needs Assessment Study

Options:

- City management recommends that the results of the Needs Assessment Study be presented to City Council, so that Council may review the information and ask questions of the consultants who performed the study, and agree to the next course of action.

TROY PUBLIC LIBRARY

Space Needs Assessment
and Facility Study

January 2008

TABLE OF CONTENTS

TABLE OF CONTENTS

Section

Executive Summary	1
Focus Group Summary	10
Needs Assessment	16
Technology Needs Assessment	42
Facility Assessment – Functional Issues	48
Facility Assessment – Building Components	54
Site	54
Structural	55
Building Envelope	56
Interior	57
Interior Finishes	57
Code Issues	58
Mechanical	59
Electrical	60
Technology	61
Options	65
Option A	66
Option B	68
Option C	70
Schedule	74
Opinions of Probable Costs	79

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Space Needs Assessment and Facility Study for the City of Troy Library was started on November 3, 2007, and was completed on schedule on January 31, 2008. The team was led by the library design firm of Fanning/Howey Associates Inc., in association with George Lawson Library Planning, Grissim Metz Andriese for landscape architecture, and EAM Associates for mechanical and electrical engineering. The depth and breadth of the team's experience provided local, national, and international perspectives into the complex challenges associated with future-proofing a library. Extensive experience allowed the team to comprehend resident expectations, embrace its diversity, then benchmark it to comparable communities nationally. The outcomes of the study are consistent with embracing cultural diversity, enhancing cultural arts, enriching a knowledge-based community, and reinforcing the strong commitment to family.

There are five overarching themes that resonated throughout discussions. We believe that these themes best characterize the relationship between the library and the community.

- The library is an important gathering place for the community, a place where residents come together for learning and enriching diversions, as well as social interaction and the sharing of ideas.
- The library will continue and strengthen its strong commitment to customer service.
- The library will be positioned to keep pace with the most current developments in its role as the community's access point to technology applications and instruction.
- The Troy Public Library exists in a context of regional library service.
- Staffing and operational cost consciousness is imperative in configuring the facility. Additionally needed is identification of effective ways to enhance productivity.

COMMUNITY INPUT

The planning process started with a series of public meetings held over the course of five days. Approximately 60 individuals, representing all age groups, spoke with members of the planning team. On average, these interviews lasted forty-five minutes, and allowed participants to give their thoughts on the future of the library.

Throughout the interviews, the team heard a very consistent message: whatever is done should be done right and with fiscal responsibility. The issue of the extent that nonresidents use the library is another reccurring theme.

The following are additional critical public issues:

- The library should remain a part of the Civic Center Complex
- There is a shortage of parking that needs to be addressed
- The existing building is overcrowded
- A drive-up book return needs to be provided
- Facilities that will support the cultural arts need to be provided
- There is a lack of quiet study and computer spaces
- The Friends Book Shop is in a poor location
- A more relevant youth environment needs to be incorporated
- A funding mechanism must be established

THE NEEDS ASSESSMENT

The needs assessment quantified library space by confirming the needs of the community, library staff, community organizations, and city representatives. Criteria for sizing the project was established by benchmarking comparable communities nationally for each of the sizing criteria outlined.

THE SIZING PROCESS

- ***Planning for the Future*** - A planning horizon of 2030 was established for use in the planning process. The City's Planning Department provided a 2030 municipal population projection of 85,000 reflecting modest growth from the 2000 Census figure of 80,959.

- The projected building size was developed using two different methods:
  1. An initial, preliminary estimate was developed using a methodology created by the Wisconsin State Library. This broad-stroke process identified a need for as much as 123,670 square feet.

  2. The second process used a sharper pencil – more detailed information, significant staff and community input, and a more rigorous fine-tuning process. This programming process identified a need for 116,190 square feet – the size used to make the recommendations found in this document.

SIZING CRITERIA

- ***Collection*** - Troy's current per capita holdings rate is 3.16 items, well below the target 4.15 items per capita or the 82.5 percentile of holdings for comparable libraries. This would increase the current collection from 255,928 items to 352,750 items, the target collection size used in our planning.

- ***Public Technology Stations*** - Using a common estimating rubric that suggests allowing one computer for every 10 to 20 daily customers, we see that Troy will need between 124 and 248 public computer workstations. This study recommends planning space for 75% of that range - 217 public computers.

- ***Seating*** - Customer use patterns at the Troy Public Library reflect a community that prefers to come to the library to stay and accomplish real work. There is also a strong need for collaborative study spaces that will also increase the need for seating. This pattern, and a sliding scale from the Wisconsin process, supports planning for a minimum of 400 seats.

- ***Program and Meeting Spaces*** - The library has an active schedule of library sponsored programs. There were 667 children's programs in Fiscal Year 2006/2007 with 19,348 participants. For the same period, there were 492 programs for adults and young adults with 11,400 participants. To provide for existing and future community participation in library programs, six program venues are needed.

- ***Staff Work Space*** - Work space is a productivity issue, not a luxury. Staff work space includes both public service areas, such as the check-out desk, and workroom space where staff completes its on-going responsibilities, including cataloging materials, physically processing the items for the shelf, and processing interlibrary loans. Work space is currently badly undersized. The proposal creates more efficient work space and more successful public service desks.

CRITICAL DISCOVERIES ABOUT TROY'S PUBLIC LIBRARY

- ***The Collection is Stressed*** – Troy's turnover rate, or the average number of circulations per item, was 5.51 for FY2005/2006. Most public libraries have a turnover rate of between 2.5 and 3.0. A turnover rate of 3.5 is extremely strong and a rate of 5.51 is actually on the far side of the curve.

- ***People Stay and Study*** - Residents use the Adult Services portion of the library very much like the "learning-commons" model most academic libraries are trying very hard to develop. Secondary and even primary students come and stay to work individually and collaboratively, significantly beyond what is seen in most other public libraries.

- ***An Inquiring Public*** - The percent of Troy Public Library's collections out on loan at any given time is extremely strong. By example, only 85% of the adult nonfiction collection was on the shelf when recently measured in a "snapshot" data analysis. Most public libraries like Troy have 95 to 97 percent of their adult nonfiction collection on the shelf at any given time. This high in-use rate holds for all of Troy's collections.

- ***This is Troy's Library*** - In FY 2006/2007 nonresident borrowers accounted for 7.52% (98,262 items) of the library's total loans (1,306,766 items). This is a relatively low rate of nonresident use for a metropolitan area. In other metropolitan areas, such as Milwaukee or Chicago, nonresident borrower usage often runs between 15% and 25%, two to three times Troy's rate. Troy Public Library primarily serves Troy residents.

FACILITY ASSESSMENT

The site and building were evaluated by landscape and building architects, structural, mechanical and electrical engineers, and technology and library planning specialists. Team members reviewed existing drawings, interviewed staff, and conducted on-site observations. In general, the building is in good condition, well maintained and has had recent mechanical and toilet room upgrades. There are portions of building infrastructure that are at capacity, exterior components which will require preventive maintenance and building codes, and ADA concerns that will need to be addressed.

SITE

The placement of the facility within the Civic Center Complex is desirable, but there is the lack of an appropriate visual identity. The existing landscape hides the building, and an understated entrance identity allows the library to be lost in the context of the Civic Center Complex. The parking lot is confusing and lacks proper pedestrian circulation. The drop-off area has long walking distances and does not have sufficient quantity of parking spaces. There is also a need for a drive-up book return due to the high circulation rate of materials, but this would be extremely difficult to provide with the existing conditions.

BUILDING

The library has been well maintained over the years and has had recent upgrades to mechanical systems and public restrooms. Building codes and ADA compliance issues have evolved since the last library expansion, and will need to be addressed in any significant renovation. There currently are some code violations that will need to be addressed in the near future.

The original library building has a few significant limitations for incorporation in an expanded facility. The original building does not have a fire protection system or humidification, and the exterior walls are an energy liability. When humidification is added to this portion of the building, the dew point will migrate to the center of the wall. The result will be accelerated deterioration of the wall, creating the potential for mold growth within the wall.

The building has been well-used and is showing its age. The acoustical performance of youth and adult areas are poor and detract from the functionality of the spaces. The library as a whole is overcrowded and the staff spaces are substandard and inefficient.

The building electrical infrastructure is at maximum capacity. The structural integrity of the building is sound and was not designed to accommodate vertical expansion. The mechanical systems appear to be adequate, but do not provide complete building humidification. All existing building systems have little or no potential for adaptation in the proposed expansion and renovation options. The majority of interior finishes and walls have little potential for reuse due to location and cost effectiveness.

LIBRARY PLANNING

The public service areas of the building are acoustically and environmentally poor. Neither the youth area nor adult area provide a supportive environment for learning, socialization, or casual reading. The configuration of these spaces generates excessive amounts of unsupervised spaces and additional staffed service points.

The cultural arts and programming appear to be an essential component of the community. The youth program rooms are inadequate in size and lack appropriate amenities. The community room's size, location, and support amenities do not appear to meet community need.

The Friends of the Library Gift Shop and Book Shop are vital to the library. The gift shop has adequate exposure to the public while the Book Shop area does not. Both areas lack adequate space and suitable environments to reach their full potential. The physical limitations of both areas contribute to increased use of volunteer time. Gallery space is available and well positioned, but lacking in quantity and a supportive environment.

The library building's poor configuration increases staffing costs because it restricts the effective processing of materials, increases service points, and complicates providing library programs. The location of the circulation desk creates confusion upon entering and the lobby in general presents an inappropriate first impression. Staff areas are inadequate in size, lack adaptability, inhibit efficiency, and are substandard work environments. There is a real concern for staff safety due to the lack of proper separation between the public and staff work areas.

Future adaptation of the existing building will require complete reorganization due to incremental increases in departmental sizes and the inherent building inefficiency.

OPTIONS

Four options were evaluated, but only three warranted additional development. The fourth option, which retained all of the existing building, was dismissed due to building and site constraints. The three options included are all comparable in quantitative aspects of program and parking, but each varies in the quality of the library created and the cost. All parking is anticipated to be provided without the use of parking structures.

- ***Option A.*** This option includes removing the least adaptable portion of the existing building and renovating and expanding the remaining building. It would require relocation of library services and preparation of temporary facilities. The Opinion of Probable Cost was based on leasing 25,000 square feet, 15,000 square feet less than existing, which would require a reduction in library services for approximately two years.

- ***Option B.*** This option includes utilizing the most adaptable portion of the existing library and renovating and expanding the existing building. It is the most efficient and cost-effective way to adapt portions of the library. This approach allows the building to remain operational throughout construction. The site design maximizes green space and improves distribution of parking within the Civic Center Complex.

- ***Option C.*** This is a replacement building that would be located on property currently owned by the city. It is intended as a three-story structure and will require less total square feet of building to meet the program . There appears to be two potential locations within the Civic Center Complex.

COST AND SCHEDULE

The Opinions of Probable Costs are based on voter approval in November 2008, programming and design starting February 2009, bidding during the first quarter of 2010, and completion in the first quarter of 2012. The schedule allows for additional community input and would be classified as conservative in duration.

The Opinions of Probable Costs are based on a quality level that will result in a simple, elegant, energy-efficient, and future-proof building design. It will allow for the incorporation of sustainable design practices. The dollars allocated are adequate, but will require fiscal discipline by all participants throughout the process.

OPINIONS OF PROBABLE COSTS

Option A - $37,438,351
Option B - $37,196,747
Option C - $36,838,262

OPERATIONAL IMPACT

The assessment of the impact of an expanded library building on operational costs is not intended to be a part of this study, but will need to be addressed. There are some general observations that the team has that will start to establish a reference point for discussion:

- Doubling the size of the building will not increase energy consumption by twice the current levels. Energy conservation practices and a more efficient building envelope will reduce the cost per square foot energy consumption.

- Circulation of materials is at a very high level, and we anticipate 20% increase in circulation. The investment in RFID technology and basic material handling will handle this increase without additional staff. The cost per item for material handling will be reduced.

- The building configuration has created inefficient staff areas and additional service points. It would be reasonable to expect only a modest increase in staff and a reduction in the cost per square foot for staffing.

- Improved Friends of the Library spaces should allow for increased marketing exposure and opportunities for sustained or increased revenues.

SUMMATION

The City of Troy has two options that are distinctively superior: Option B and Option C. Both retain the library in the context of a Civic Center Complex, efficiently use resources, meet programmatic needs, and result in a future-proof library building. Which is the most appropriate solution depends on parameters external to this report and revolve around the central issue of the replacement library. If a replacement library was the solution, is there a viable use for the existing library? If there is a replacement library, will the impact on green space and athletic fields be acceptable? Based on our discussions, whether the existing library remains intact, is altered, or is removed entirely, does not appear to be an issue.

In closing, we believe that the City of Troy has two approaches to solving their library needs. Both will be highly successful and will contribute greatly to overall master plan. We believe the community is ready to be engaged in a dialogue about the future of their library. Your community loves its library!

This report would not have been possible without the efforts and support of the following individuals, groups, and corporations:

Troy Public Library Director
City Administration
Friends of the Library
Library Advisory Board
Library Staff
Community Members

Fanning/Howey Associates, Inc.
George Lawson Library Planning
EAM Engineers, Inc.
Grissim Metz Andriese Associates

FOCUS GROUP SUMMARY

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PROCESS

Focus Group meetings were held at the library on October 2nd, 3rd, 4th and November 13th and 14th, 2007. Meetings convened various times throughout the day starting with library opening and ending at library closing. The October sessions were conducted by George Lawson, library planning consultant and James Mumby, library architect. November meetings were managed by Mr. Mumby. The library director did not participate in meetings for any extended period time in an effort to encourage participants freedom to express their opinions.

Concern about possible limited public participation in the October sessions led to scheduling a second set of meetings in November. ***The consultants were available five days for a total of 25 hours.*** Public announcements were also made in the library on a regular basis throughout each day sessions were held, encouraging user participation. Approximately 55 persons from middle school to seniors talked with the consultants for an average of 45 minutes per person. Size of groups ranged from one to seven with the average being three.

The overall approach proved to be unique and effective. Typically a design team conducts one or two public meetings where attendance averages between 25 to 50 persons, but only a small percentage of attendees speak. These larger groups can produce less effective input. ***The strength of the Troy approach was a more personal environment*** where ideas could be explored in more detail. It provided the team with more opportunity to better understand the community.

Surprisingly, most individuals who participated wanted to know when and where the new library was being built. Once the design team explained the process and how public input would be utilized, information flowed. The teams believe that once the report is complete and direction established, there will be even more public participation. Email addresses of the design team and director were made available to participants. All were encouraged to email additional information either to the team, the director, or leave written material at the circulation desk. Focus group participant comments were documented in meeting minutes.

The following are the highlights of the focus group meetings and represent items expressed by a number of different individuals and/or seemed particularly relevant.

COMMUNITY IDENTITY

Throughout, participants were asked to express their opinions about the personality, identity, or character of the community. Participants described the community as multicultural, highly educated, with above average income levels. ***The cultural arts are important, as is commitment to learning,*** and the community values education. Several individuals referenced student performances and quality of education found in the Troy Public Schools. Many attributed the high quality of the school system, reinforcing the City of Troy as a family-oriented community.

Several individuals indicated that Troy was a "city without a heart," because there is no clearly defined downtown; which is why many felt the ***library should stay in proximity to other central city services.*** A few individuals reinforced the master plan concept of Troy continuing its evolution as a knowledge-based community. Many felt the library has a role to play in this evolution.

THE MOST FREQUENTLY HEARD RESPONSES:

Troy is a...

- ***culturally diverse community***
- ***community that values education, learning, and knowledge***
- ***city without a heart or downtown***

SITE ISSUES

There is a shortage of parking, particularly on Sundays. This concern was expressed by nearly every participant. The second most frequent comment was a ***request for a drive-up window to return materials.*** A number of people felt parking was too remote from the front door and walking distances too great. Many found the parking lot configuration confusing and the drop-off area poor. Several senior library users and young parents noted getting from the car to the front door was difficult and unsafe. Individuals with physical limitations recommended that access through parking areas and into the building be free from obstructions and properly illuminated.

Strong sentiment was expressed in keeping the library associated with the Civic Center Complex. If the existing library location proves impractical, many were comfortable relocating to the site adjacent to the Community Center. A few did not like the idea of placing the library on the play fields unless the fields were replaced.

There was general appreciation for the landscaping and garden areas. Several individuals suggested benches be placed more frequently along sidewalks leading to the entrance.

THE MOST FREQUENTLY IDENTIFIED ITEMS WERE:

- ***Shortage of parking***
- ***Lack of drive-up book return***
- ***Association of Library with the Civic Center***

GENERAL BUILDING ISSUES

The vast majority of people interviewed love the library. At times it was difficult for them to talk about issues they would like to see changed. People want the “homey” character of the library retained, but also wanted the library enlarged. A number of people acknowledged the building was a bit dated. They would like to see more windows and natural light inside the library. The consistent message was - “whatever is done, do it right, but do not be extravagant.” Many felt the community desired and would support a library suitable for the 21st century. There did not seem to be an overriding commitment to saving the existing building.

Investment in sustainable design elements that made sense was encouraged. It was suggested that analysis be done to validate the return on investment for sustainable design features.

There was an overriding consensus that the ***building was too crowded*** and a lack of quiet study rooms and study spaces is a problem. In general, the library was considered noisy with too much congestion and confusion near the circulation desk and entrance. There was also consistent comment about the ***number of non-residents utilizing the library***, and concern this will be become more pronounced after improvements.

THE MOST FREQUENTLY IDENTIFIED ITEMS WERE:

- ***Overcrowding of library and lack of adequate quiet study spaces***
- ***Need for a project that is done right but not too extravagantly***
- ***Environmentally conscious building design***

COST CONCERNS

There were consistent concerns about the cost of the project and how it would be financed. A few individuals suggested providing naming rights for a major donor, and some even offered names. Participants suggested the community might support a project that was logical, responsible, and not too grandiose. The issue on non-resident use and Troy citizens carrying the financial burden was reccurring. This concern encompassed not just funding construction, but also costs for staff, processing materials, and maintenance of the physical plant.

Two individuals suggested validation via research whether library improvements have a positive financial return on investment for a community. Another suggestion encouraged dialogue between local higher education institutions and the library, to explore for the benefits for both entities.

THE MOST FREQUENTLY IDENTIFIED ITEMS WERE:

- ***The cost of nonresident usage***
- ***A logical and cost-effective solution***
- ***Financial implications for Troy residents***

YOUTH AREA

Most interviewed believe ***youth services are essential*** to the community. Children are considered the building blocks of the future community, which illustrates the value this community places on family. Many expressed concern that the ***existing youth area lacked appropriate personality*** and should provide a more engaging environment. The current area was considered excessively noisy. There was a desire for an area that can be closed to contain noise and more space provided for group study rooms and tutoring.

There is support for the new special collections areas and many would like to see it enlarged. Middle school-age children interviewed wanted a group projects area as well as a more focused study environment. They would like to have an area designed and furnished to meet their expectations.

Some parents of young children suggested space be provided for them to gather, have a conversation, and still monitor their children. Improved story time space was also mentioned for consideration in future plans.

THE MOST FREQUENTLY IDENTIFIED ITEMS WERE:

- ***Value the community places on youth services***
- ***Need for more personality in the youth area***
- ***Provision of quiet space and study rooms***

ADULT AREA

Requests by the adult readers seemed to focus more on the collections and computers than building related issues. Users want greater depth and breadth provided in the collections, and desire more public computers. The absence of study rooms and quiet study space needs to be addressed. The existing magazine area, which lacks comfortable seating, is considered confusing, but the number of magazine titles offered seems adequate. There is dislike for how back issues of magazines are place and stored. There is concern expressed about availability of public computers, how usage is monitored, and amount of nonresidents use.

There is conflicting commentary on the adequacy of the collections. Some individuals felt the subject matter and quantity of materials were adequate. Others believed the collections were being weeded too aggressively and valuable materials discarded. Users do not like the long wait periods due to demand associated with popular materials. This appears to reflect the intensity of the strong reading habits of community. If there was a book that everyone was reading, no one wanted to be left out!

THE MOST FREQUENTLY IDENTIFIED ITEMS WERE:

There was a...

- ***lack of quiet study space***
- ***shortage of public computers***
- ***shortage of study rooms***

PROGRAMMING SPACES

The community expressed strong support for the cultural arts and provision of facilities to enhance this library service. They would like larger and more diverse meeting rooms. There was frequent discussion about providing a stepped-floor presentation/ performance space. The space should properly accommodate small musical groups, a featured lecture, video presentation, or a distinguished speaker. Meeting rooms should also support business community needs and might be a source of library revenue. It was clear that new spaces should not duplicate rooms currently found in the Community Center.

Up-to-date technology is an issue. It is important these rooms be furnished with “21st century” technology. It is also considered important to provide proper support space for these facilities and make them accessible to the community independent of library hours.

THE MOST FREQUENTLY IDENTIFIED ITEMS WERE TO:

- ***Provide additional spaces to support the cultural arts***
- ***Provide diversity in the types of meeting spaces***
- ***Equip with 21st century technology***

FRIENDS OF THE LIBRARY

There is strong support for both the Friends Gift Shop and Book Shop. However, all felt that the book store in the basement is a problem and should be located on the main floor near the entrance. There is a consistent message that both the Friends Gift Shop and Book Shop areas are too small and could use qualitative improvements. There is significant support for the benefits the Friends of the Library bring to community and desire for the Friends of the Library Gift Shop and Book Shop to have properly designed spaces.

THE MOST FREQUENTLY IDENTIFIED ITEMS WERE:

- ***Poorly located book sales areas***
- ***Additional space need for Friends of the Library Gift Shop and Book Shop***
- ***Location of both areas on main floor near the entrance***

CAFÉ

The café is considered a ***valuable part of the library***. There are consistent concerns about the quality of service and price structure. One suggestion offered is to provide additional space for vending to give people an alternative. Another idea is to create more of a coffee shop/bookstore feel. Consideration should be given to provide space that could attract a specialized vendor.

NEEDS ASSESSMENT

INTRODUCTION

It is a real pleasure to help plan for the future of the Troy Public Library. The library is absolutely abuzz with use and clearly is a vital part of the community. The library reflects Troy's cultural diversity, but it is also diverse in its customer's age, interests, and use patterns. The library does a wonderful job in serving many different types of customers: young children and their parents; seniors pursuing independent interests; primary, secondary, and nontraditional students; and business people accessing a critical resource.

In researching this study some of the observations and data were both surprising and exciting:

- Troy's turnover rate, or the average number of circulations per item, was 5.51 for FY2005/2006. Most public libraries have a turnover rate of between 2.5 and 3.0. ***A turnover rate of 3.5 is extremely strong, and a rate of 5.51 is actually past good*** and on the down side of the curve to suggest that customers are often unable to find the materials they need.

- Residents use the Adult Services portion of the library very much ***like the "learning commons" model most academic libraries*** are trying very hard to develop. Secondary and even primary students come and stay to work individually and collaboratively, significantly beyond what is seen in most other public libraries.

- The percent of Troy Public Library's ***collections out on loan at any given time is extremely strong.*** By example, only 85% of the adult nonfiction collection was on the shelf when recently measured in a "snapshot" data analysis. Most public libraries like Troy have 95 to 97 per cent of their adult nonfiction collection on the shelf at any given time. This high in-use rate holds for all of Troy's collections.

- ***In FY 2006/2007 nonresident borrowers accounted for 7.52%*** (98,262 items) of the library's total loans (1,306,766 items). This is a relatively low rate of nonresident use for a metropolitan area. In other metropolitan areas, such as Milwaukee or Chicago, nonresident borrower usage often runs between 15% and 25%, two to three times Troy's rate. Troy Public Library primarily serves Troy residents.

- The library has a ***very active schedule of sponsored programs*** with 19,348 children's program participants and 11,502 participants in adult and young adult programs last Fiscal Year.

Listening to community residents, library staff, Friends of the Library, Library Board, and city staff, many excellent ideas were shared. Some of the key, overarching concepts identified include:

- The library is an important gathering place for the community, a place where residents come together for learning and enriching diversions, as well as social interaction and the sharing of ideas.

- The library will continue and strengthen its strong commitment to customer service.

- The library will be positioned to keep pace with the most current developments in its role as the community's access point to technology applications and instruction.

- The Troy Public Library exists in a context of regional library service.

- Staffing and operational cost consciousness is imperative in configuring the facility. Additionally needed is identification of effective ways to enhance productivity.

The Space Needs Assessment and Facility Study takes these and other findings into consideration on how large the Troy Public Library should be to serve Troy residents through the year 2030.

The space needs assessment develops rationales for the projected service population, collection holdings, public technology stations, program / meeting room spaces, and staff work stations. It uses these rationales to broadly estimate the space requirements for those overarching library system categories. The space needs assessment process suggests 123,670 gross square feet will be needed to serve Troy's library service needs through the year 2030.

The second portion of the study, the building program outline, considers the space requirements in a more detailed fashion, estimating the space needed for each functional area of the library. Functional areas reflect how we traditionally think about library space: the children's department, adult services department, media services, and the business center. The building program process references the space needs assessments' rationales, but also applies on-the-ground observations in describing Troy's library space requirements. The building program outline, using a sharper pencil than the space needs assessment, prescribes a need for ***116,190 gross square feet through the year 2030.***

SPACE NEEDS ASSESSMENT

The space needs process provides a preliminary estimate of a community's library space requirements for a 20 to 25 year planning horizon. ***This space needs assessment will use a 2030 planning horizon.*** The space needs assessment provides rationales for sizing the library's collections, seating , and public technology stations. Space requirements are developed using population projections, tested service standards, and nationally accepted space calculation formulas.

The methodology is based on a space needs assessment process developed, revised, and published by the Wisconsin Division for Library Services. It is slightly modified as applied by the consultant. The Wisconsin process focuses on seven types of space utilization commonly found in public libraries:

- ***Collection Space***
- ***User Seating***
- ***Work Space***
- ***Program or Meeting Space***
- ***Public Computing Space***
- ***Special Use Space***
- ***Structure/Support Space***

SERVICE POPULATION

The service population the Troy Public Library can expect to serve in 2030 is one important element in developing an accurate space needs assessment. The service population includes both the projected municipal population and the projected number of other borrowers who also use the Troy Public Library.

TROY MUNICIPAL POPULATION

The City of Troy has experienced regular growth over recent decades. A 2003 study prepared by the Southeast Michigan Council of Governments (SEMCOG) suggests Troy will experience a stabilization and, ultimately, a slight decline in municipal population. ***City of Troy Planning Department data suggests that a more appropriate 2030 population projection is 85,000*** based on more recent data regarding the number of households than the data used by SEMCOG. This study will use 85,000 as the projected municipal population.

TOTAL SERVICE POPULATION

The service population of the Troy Public Library is more inclusive than the municipal population. The library also provides service to nonresident borrowers from the metropolitan and residents of other Michigan communities.

An estimate for the number of nonresident borrowers to be served in 2030 can be based on the percentage of total circulation to those borrowers. In FY 2006/2007 ***nonresident borrowers accounted for 7.52% (98,262 items***) of the library's total loans (1,306,766 items). Given the 2030 planning population of 85,000, this level of nonresident loans would result in a total service population of 91,912, including 6,912 nonresident borrowers who use the Troy Public Library as their primary library. ***This is a relatively low rate of nonresident use*** for a metropolitan area. In other metropolitan areas, such as Milwaukee or Chicago, nonresident borrower usage often runs between 15% and 25%, two to three times Troy's rate. Troy Public Library primarily serves Troy residents.

COLLECTION SIZE

Troy's current collection per capita holdings rate is 3.16 items, well below the target range of 3.66 to 4.64 items per capita. The ***target range is the 75th and 90th percentile range of comparable libraries*** reporting to the national Public Library Data Service (PLDS), libraries with a single building and serving communities with populations of between 75,000 to 85,000.

To provide a collection at the midpoint of the target range, Troy needs to plan for a holdings rate of 4.15 items per capita. This would increase the current collection from 255,928 items to 352,750 items for the 2030 projected municipal population of 85,000.

Another key indicator of the need for a larger collection is Troy's turnover rate or the average number of circulations per item. ***Troy Public Library had a 5.51 turnover rate*** for FY2005/2006. Most public libraries have a turnover rate of between 2.5 and 3.0. A turnover rate of 3.5 is extremely strong and a rate of 5.51 is actually past good and on the down side of the curve to suggest that customers are often unable to find the materials they need.

MUNICIPAL POPULATION - HISTORIC AND PROJECTED

History - Census Bureau

Year	Population
1980	67,102
1990	72,884
2000	80,959

Estimates - Census Bureau

Year	Population
2001	81,034
2002	81,028
2003	81,116
2004	81,313
2005	81,140
2006	81,118

Projections - SEMCOG 2030 Regional Development Forecast (2003)

Year	Population
2030	77,046

Projections - Planning Department, City of Troy

Year	Population
2030	85,000

PERCENTAGE OF CIRCULATION

Circulation	*FY 2005*	*Percentage*
Municipal Circulation	1,208,504	92.48%
Nonresident Circulation	98,262	7.52%
Total Circulation	**1,306,766**	**100.0%**

TOTAL SERVICE POPULATION

Service Population	*FY 2030*	*Percentage*
Municipal population	85,000	92.48%
Nonresident population	6,912	7.52%
Total Service Population	**91,912**	**100.0%**

Planning for a library's periodical holdings has been more volatile nationally in the recent years and communities very much chart their own course in determining appropriate holdings. There has been a strong push-pull between increased subscription rates, a trend towards niche publishing, and uncertainty regarding the effect of digital publishing. Troy Public Library currently receives 537 titles including professional journals. ***This study will plan for that level to remain unchanged.*** Retention of hard copy back issues has reduced significantly in most libraries. The needs assessment will allow for an average of 1 year plus the current year.

PUBLIC COMPUTING

The digital format has become the preferred form for many customers seeking specific pieces of information, accessing digital information sources, and for preparing information to be shared with others. On-line databases, Web access, and sophisticated on-line catalogs are all important components of today's library service program.

Public libraries are the technology access point for many in the community. Even with the falling cost of technology, the public library will continue to be the one source for data applications for many residents. For those with their own equipment and access to technology, the public library will continue to be the provider of electronic services not easily or cost-effectively accessed by individuals.

A recognized method for estimating the number of computer stations and public access catalog stations (PACS) that are needed is to provide one station for every 10 to 20 persons who enter the library daily. In Fiscal Year 2006/2007 an average of 227 customers entered the library hourly or a ***daily average of 2,487 customers*** (Monday - Thursday).

Currently the library has 80 public computers, 73 general purpose computer stations, and seven public access catalog stations. That is often not enough to meet demand. Allowing one computer for every 10 to 20 customers entering the building daily suggests a need through the year 2030 to provide between 124 and 248 public computer workstations. This study will recommend ***planning space for 75% of that range, 217 public computers.*** A common space allocation of per computer station is 40 square feet.

It should be understood that using the current daily door count in projecting for the future is inherently conservative. Library use typically increases permanently between 20% and 50% when libraries build a new building or renovate and expand their existing building. Troy Public Library's use is already so high the permanent increase Troy can expect is likely at the lower end of that range but Troy can still expect about a 20% permanent increase in usage.

TROY PUBLIC LIBRARY COLLECTION HOLDINGS, CURRENT AND PROJECTED

Collections	*Actual Holdings*	*Estimated Holdings **
Adult Collections		
Nonfiction, International	83,721	111,780
Biography, Fiction, Genre, International, Large Print, Rental	41,371	58,564
Reference	7,032	5,905
Business Reference	1,552	1,795
Teen	6,759	8,872
Media	35,841	56,805
Subtotal	**176,276**	**243,721**
Youth Collections		
Print	69,386	87,975
Media	10,266	21,054
Subtotal	**79,652**	**109,029**
Grand Total	**255,928**	**352,750**
	3.16 per capita	4.15 per capita
Periodicals		
Adult	452 Titles	452 Titles
Youth	55 Titles	55 Titles
Professional Collection	30 Titles	30 Titles
Total	**537 Titles**	**537 Titles**
	6.63 per 1,000 residents	6.32 per 1,000 residents

** Note: projections of individual collection sizes are based on existing and projected use patterns.*

PROGRAM SPACES

Public libraries commonly provide spaces to support the library's programming for children, adults, and other needs of the community. The library currently has four program or meeting venues: one large meeting room that seats about 100, one conference room that seats about ten, a children's storytelling room and a children's craft room, each seating about 30.

The library has an active schedule of library sponsored programs. There were 667 children's programs in Fiscal Year 2006/2007 with 19,348 participants. For the same period there were 492 programs for adults and young adults with 11,400 participants. Community groups also make heavy use of the existing meeting and conference room. Six program venues are needed to provide for existing and future community participation in library programs.

- A large program room to seat 200 with sloped floor and fixed seats.
- A general purpose program room to seat 100.
- A 25-seat seminar room.
- A conference room to seat 12 at a conference table with six side chairs.
- Two children's rooms, a program and a craft room, to seat 30 and 50, respectively.

GENERAL USER SEATING

General user seating refers to study and casual seats for library patrons. It does not include seating in meeting rooms, seating for computers or other technology stations, and seats at reference index tables. Projected general user seating calculations are based on a sliding scale of seats per thousand population. A rough estimate of seating can be developed using a scale developed by the state of Wisconsin following studies of actual public libraries and their use by patrons.

Using this Wisconsin scale and the projected service population of 91,912 persons suggests that 2.37 seats be allocated for every 1,000 residents or 218 seats.

WISCONSIN SCALE

Population	Seats per 1,000 Population
1,000	22.50
2,500	14.25
5,000	10.00
10,000	7.00
25,000	4.50
50,000	3.00
100,000	2.25
250,000	1.50
500,000	1.00

2030 MINIMUM SPACE NEEDS CALCULATIONS

Space Use Category	Space Requirement
COLLECTION SPACE 352,750 book and media items x .10 = 35,275 sf 537 current periodicals x 1.3 = 698 sf 537 back issue periodicals x 1 year average x .66 = 354 sf	36,327 sf
GENERAL USER SEATING 400 seats x 30 sf/seat	12,000 sf
PUBLIC COMPUTER STATIONS 217 computers x 40 sf/station	8,680 sf
STAFF WORK SPACE 78 workstations x 125 sf	9,750 sf
PROGRAM SPACE ***Pre-Assembly / Gallery Area: 940 sf*** ***Large Program Room: 3,000 sf total*** 200 seats x 12 sf = 2,400 sf and raised presentation area 600 ***General Purpose Program Room: 1,500 sf total*** 100 seats x 12 sf = 1,200sf and presenter space and amenities 300 ***Seminar Room: 620 sf total*** 25 seats x 20 = 500 sf and presenter space = 120 sf ***Conference Room: 360 sf total*** 18 seats x 20 = 360 sf ***Common Spaces: 600 sf*** kitchen, table/chair storage, coat storage ***Children's Program Areas / Storytelling: 380 sf*** 30 participants x 10 sf = 300 sf and presenter = 80 sf ***Crafts: 720 sf*** 50 participants x 12 sf = 600 sf and presenter, counter, sinks = 120 sf ***Common Spaces: 400 sf*** Storage for crafts, props, tables, chairs	8,520 sf
SPECIAL USE SPACE 15% of subtotal of above (75,277)	11,292 sf
Net Subtotal	*86,569 sf*
STRUCTURE/SUPPORT SPACE At 30% of gross space requirement	37,101 sf
Total Gross Space Requirement	**123,670 sf**

The library currently has 290 general user seats, which is considered inadequate in both the adult and children's portions of the library. Customer use patterns at the Troy Public Library reflect a community that prefers to come to the library to stay and accomplish real work. There is also a strong need for collaborative study spaces that also pushes the need for seating. This pattern supports a more generous seating allocation. ***Planning should allow for a minimum of 400 seats.***

Library seating is typically offered in a wide variety of formats such as study chairs, task chairs, stools, and lounge chairs to reflect the different types of library users and their seating preferences. Each of those seating types has a different space requirement. In the needs assessment, an average space requirement of 30 square feet per seat is used.

STAFF WORK SPACES

Staff work space is critical to an effective and efficient public library. Work space is a productivity issue, not a luxury. Staff work space includes both public service areas such as the checkout desk and workroom space where staff completes its on-going responsibilities such as cataloging materials, physically processing the items for the shelf, and processing interlibrary loans.
The number of workstations is not in a one-to-one relationship to the number of staff. The number of workstations represents how many places where work takes place, not the number of staff. For example, while there may be only one person using a wood shop, there are many workstations: table saw, workbench, lathe, and drill press, each with a specific, dedicated purpose.

Location	Existing Workstations	Projected Workstations
Circulation Desk and Workroom	11	13
Young People's Desk and Workroom	13	13
Adult Services Desk and Workroom	15	17
Technology Services Desk and Workroom	7	11
Technical Services Workrooms	12	14
Outreach Services	1	2
Administration, Business Office and Programming	9	10
Total	**66**	**78**

SPECIAL USE SPACE

Special use space is an umbrella term that encompasses a variety of public and staff spaces not covered by the preceding broad categories. Examples of ***special use space include cafés, Friends shops, copiers, displays, and storage space***. The specific space requirements for these uses should be detailed in the building program document. For the purpose of the space needs assessment, special use space may be expressed as 15% of the preceding spatial needs.

STRUCTURE AND SUPPORT SPACE

Structure and support space includes areas of the building that are of common utility and do not serve a specific library purpose. Structure and support space is sometimes referred to as architectural or unassigned space. Examples of structure and support space include the entry and foyer, restrooms, general

aisle space throughout the building, stairs, elevators, mechanical systems, chases, digital systems distribution closets, and even walls and partitions.

An all new, single-story library typically requires between 25% and 30% of the gross building area for structure and support space. To provide for a multi-story solution or an addition/renovation of the existing building the space needs assessment will need to allocate 30% of the gross building size for structure and support space uses.

BUILDING PROGRAM OUTLINE

The building program is a more detailed approach to describe the space needed for library services and operations than the space needs assessment. While the space needs assessment estimates space requirements by broad category of library space use, the building program examines each functional space of the library to describe the required space. The space needs assessment asks how much space is needed for all the shelving in the library and the building program analyzes the space requirements for all of the individual departments and areas within the library.

The estimated space requirements of the building program outlines the overall space needs for each area of the library. The preparation of schematic plans including furnishing layouts will refine the specific requirements of each area for the building. It is likely that the library will revise its program requirements during the course of schematic design based on additional information, budget considerations, and/or new understandings resulting from the graphical representation of spaces.

The building program outline reflects extensive conversations with library customers, the Library Director, Library staff, and city management. Additional planning will be required, however, following project funding to completely detail the programmatic requirements of each functional area.

PARKING

The existing library has 224 parking spaces immediately adjacent to the building.

A common planning convention for library parking is to allow three customer parking spaces for every 1,000 square feet of building. Excluding meeting or program space, the proposed Troy Public Library of about 116,190 gross square feet would suggest 348 customer spaces. Staff would require 60 spaces. The proposed library also has a significant component of meeting spaces with a combined seating capacity of 415 seats. Allowing one space for every three seats, the rate used for places of assembly such as churches, results in a need for another 135 spaces. ***Combined, these requirements would suggest a total of 543 spaces.***

NEEDS ASSESSMENT

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

ENTRY AREA

- Reconfigure the pedestrian flow to eliminate the cross-traffic and congestion found in the existing building.
- Declutter the entry and lobby experience, providing space and fixtures for displays, storage of mobility aids, brochures, and community information.
- Provide a driver's-side, drive-up return.
- Material return slots that go into the building must deposit materials into a fire-rated room.

Space Use	Net Square Feet	Notes
Lobby	1,200	
Public Restrooms	800	
Exterior Book Return - Walk-up	80	May be conveyed to automated check-in / sort location.
Exterior Book Return - Drive-up	80	May be conveyed to automated check-in / sort location.
Total	**2,160**	

PROGRAM ROOMS AND GALLERY

- Additional program venues will help meet requests for library program space which now exceeds demand.
- Different types of program spaces, auditorium, general purpose, conference room, and seminar, will each help provide the right space for the right use.
- The pre-assembly space will take the program rooms traffic flow out of the lobby as well as provide a quality venue for the library's popular community art gallery program.

Space Use	Net Square Feet	Notes
Pre-Assembly Space / Art Gallery	940	Space for persons to gather prior to and during breaks in the programs. This space alsoprovides gallery functions for the display of temporary artistic displays.
Large Program Room	3,000	200 fixed seats, raised presentation area
General Purpose Program Room	1,500	100 seats, comfortable environment for book groups
Seminar Room	620	25 seats at seminar tables with presenter space
Conference Room	360	12 seat table and 6 guest seats
Shared Features	600	Media closets, table/chair storage, coat storage, refreshment prep/service area
Total	**7,020**	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

CAFÉ

- An updating of finishes and furnishings will create a more contemporary and welcoming environment.

Space Use	Net Square Feet	Notes
Prep Area/Counter/Sales/Storage/Support	500	
Customer Seating	1,000	40 customer seats
Total	**1,500**	

FRIENDS GIFT SHOP

- A dedicated shop space will increase volunteer productivity.
- Effective display and marketing fixtures will help increase the return on the Friends' investment.
- A shop space will reduce the congestion immediately in front of the circulation stations.

Space Use	Net Square Feet	Notes
Counter and merchandise display	400	A room with retail ambiance and glass walls for display in a visible, accessible location.
Storage / Support	300	Support space for shop that permits productivity and security.
Total	**700**	

FRIENDS BOOK SHOP

- A more accessible and visible location is needed for this high demand feature.
- A more secure, less isolated location will reassure the volunteers.

Space Use	Net Square Feet	Notes
Merchandise Display and Sales Counter	1,300	This is an increase of about 45% in sales space.
Workroom and Storage / Support	600	A location and space for collecting donations is included elsewhere in the Circulation Desk Area section.
Total	**1,900**	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

CIRCULATION AREA

- Concurrent with the building project the library should implement a Radio Frequency Identification system to support efficient materials handling.
- Implementation of an automated check-in system with a 3 to 6 bin sort capability will increase productivity and speed the return of materials for customer availability.
- Implementation of direct customer access to reserves and self-check check-out stations will speed customer transactions for those who find these methods helpful.
- Creation of a dedicated home for customer donations to the Friends book sale will improve the library ambiance and assist donors in their efforts.
- Items checked-in and awaiting reshelving will be located in a public space so that customers may select directly from these highly sought-after materials.
- An interactive building directory will be provided to help customer wayfinding.
- An appropriately sized and equipped staff workroom will support effective and efficient work.

Space Use	Net Square Feet	Notes
Directory	80	
Interior Book Return	60	Deposits into check-in / reshelving workroom
Desk and Customer Queue	1,050	3 express-check stations and 4 staffed stations
Book Sale Donation Alcove	140	8 sections of industrial shelves, open floor space, and wagon
Customer Service Center	310	Copier, side table, bulletin board, brochure racks, mobility aid storage (Amigo, walker, wheelchair)
Self-Serve Reserves	192	16 shelving sections
Recently Returned	115	15 carts
Staff Workroom	595	three workstations, telephone station, dept. head office, 1 work table, counter / sink, lost & found cabinet, 2 supply cabinets, 2 shelving sections for snags
Check-in /Reshelving Workroom	600	Allowance for automated check-in / sort or 3 check-in stations, space for delivery bins
Total	**3,142**	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

NEW BOOKS / DISPLAY

- Improved marketing display and acquisitions focus for new and topical materials will respond to customer's high interest in the latest fiction, nonfiction, and areas of current interest.
- Strong adjacencies with media and teen collections will help build a popular materials center concept.

Space Use	Net Square Feet	Notes
New Books	288	Low density display shelving affects space required. Plan for 24 single-face sections of shelving
Topical Display	140	Allowance
Seating	60	Browser benches
Catalog Stations	80	2 stations
Total	**568**	

MEDIA CENTER

- Expanded capacity and display fixtures will support use of these high demand collections.
- Adjacencies with new book and teen collections will help build a popular materials center.

Space Use	Net Square Feet	Notes
Media Collections	3,860	56,805 items
Seating	60	Browser benches
Catalog Stations	80	2 stations
Total	**4,000**	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

YA/TEEN SERVICES

- Adding computer stations, magazines, and a more defined space will leverage the success of the teen area.
- Let the location and architectural treatment of this space provide a measure of separation from adult library users while maintaining integration and visibility.
- Provide power at study tables for customer laptops and other technologies.
- Select furnishings and interior treatments to reflect the customers' preferences.
- Increase collection shelving capacities.

Space Use	Net Square Feet	Notes
Public Service Desk	80	1 place station
Seating	1,030	30 study seats and 8 casual seats
Collections	715	8,872 items
Public Computer / Catalog Stations	640	16 stations
Other	120	Allowance for feature element
Total	**2,585**	

TECHNOLOGY CENTER AND LIBRARY TECHNOLOGY STAFF WORKROOM

- Increase the number of public computing stations to respond to customer demand and changes in information sources.
- Provide a public digital training lab to meet resident needs and allow use of that space for general computing to ensure higher utilization of those resources.
- Create individual computer rooms for activities that require the use of sound and customer interaction.

Space Use	Net Square Feet	Notes
Public Service Desk	600	
General Public Computing	5,400	
Language and Small Group Computing Rooms	200	
Computer Instruction Lab	840	
Staff Workroom	720	
Server Room	180	
Total	7,940	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

BUSINESS CENTER

- Increase collection shelving capacities.
- Enhance the use of the successful business center by including computer stations to access online business resources.
- Relocate general interest periodicals to the general adult collections area to reflect the center's targeted focus.
- Provide power at study tables for customer laptops and other technologies.
- Strong adjacencies with media and teen collections will help build a popular materials center concept.

Space Use	Net Square Feet	Notes
Seating	510	12 study seats and 6 casual seats
Collections	227	1,710 items and 30 journals
Public Computer/Catalog Stations	160	4 stations
Support Furnishings	280	2 index tables
Total	**1,177**	

OUTREACH SERVICES

- Create more effective work space to support current and projected community service activities.
- Service for a growing senior population.

Space Use	Net Square Feet	Notes
Staff Workroom	320	2 staff stations, work table, shelving/cabinets/printer, and 6 book carts
Total	**320**	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

ADULT SERVICES

- Use an increased proportion of two-place study tables for higher seating utilization.
- Create collaborative study spaces to support team projects and study groups.
- Break-up the seating areas into less congested groupings to provide customers a greater sense of personal space.
- Increase collection shelving capacities.
- Provide higher visibility for the International Collection and other special collections.
- Develop the periodical collection as a destination within the adult library with a special aesthetic.
- Look to "Learning Commons" model from academic libraries to support Troy's secondary and independent learners.
- Provide power at study tables for customer laptops and other technologies.
- Provide an appropriately sized and equipped staff workroom that is organized to support effective and efficient work.

Space Use	Net Square Feet	Notes
Reference Desk	450	3 staff stations
Book Collections	14,740	176,249 items
Periodicals	886	404 titles and 1 year plus current year + newspapers
Special Feature	160	Public art, fireplace, or other attraction
Catalog Stations	240	6 stations
Microforms	200	2 reader printers and microform cabinets
Support Furnishings	160	copiers, atlas stands, and dictionary stands
General Seating	5,250	126 study seats and 60 casual seats
Study Rooms	1,360	6 two-place rooms and8 eight-place rooms
Staff Workroom	1,550	15 staff workstations, dept. head office, 2 work tables, 2 four-drawer files, 6 sections shelving, 3 cabinets, printer, 6 cart corral, 2 files, and 3 sections for book discussion groups
Total	**24,996**	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

YOUTH SERVICES

- Fashion engaging, unique service environments for young children, early elementary students, and tweens reflecting their specialized interests and preferences.
- Provide additional seating in each area to support the children's learning activities.
- Provide collaborative study rooms for team projects and study groups.
- Provide power at study tables for customer laptops and other technologies.
- Increase collection shelving capacities.
- Create appropriate locations for special collections such as the special needs collection.
- Create more responsive storytelling and craft spaces.
- Provide express-check stations for enhanced customer convenience.
- Integrate customer service functions to develop a more effective public service desk.
- Provide additional computer stations in response to high demand for these resources.
- Provide an appropriately sized and equipped staff workroom that is organized to support effective and efficient work.

Space Use	Net Square Feet	Notes
Service Desk	450	3 staff stations (includes circulation)
Express Check	80	2 express check stations
Catalog Stations	200	5 catalog stations
Technology Support Station	80	1 staff station
Public Computer Stations	1,280	26 general purpose computers and 6 game computers
New Books and Topical Displays	205	12 single-face shelving sections and display fixtures
Book Collections	6,404	87,975 items
Periodical Collections	110	55 titles
Media Collections	1,262	21,054 items
Seating	3,080	28 casual seats and 84 study seats
Study Rooms	480	3 six-place study rooms
Emergent Literacy / Playscape Area	300	Puppet theater, castle, house, and manipulative learning toys
Special Features	120	Allowance for public art or other attraction
Storytelling Room	380	30 seats with space for the presenter and wireless computer lab capabilities
Craft Room	720	50 seats for participants
Store Room	400	Supplies to support both the storytelling and craft rooms
Staff Workroom	870	Dept Head office, 8 staff stations, work table, and shelving/cabinets/printer
Children's Restrooms/Nursing Area	180	2 single occupant and nursing room
Total	**16,601**	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

CITY OF TROY IT SERVICES

- Continue to provide the space and needed for these important activities.

Space Use	Net Square Feet	Notes
Computer Instruction Lab	840	16 participant stations, instructor station, and storage cabinet
Staff Workroom	120	1 staff station, work table, and shelving/cabinets
Total	**960**	

TECHNICAL SERVICES

- Provide the space, furnishings, and infrastructure needed for this critical support activity.
- Configure the space to allow effective workflow in processing all new acquisitions and materials requiring repair or re-cataloging.
- Maintain and improve the adjacency and workflow between Technical Services and the Receiving Area described in the Back-of-House section.

Space Use	Net Square Feet	Notes
Cataloging workroom / office	730	5 staff workstations, 1 intern workstation, 1 dept. head office, cart corral for 20 carts, 2 four-drawer files, and l LAN printer
Processing workroom	690	5 staff workstations, 1 mending station, and 1 media workstation, 1 receiving workstation, cart corral for 15 carts, and l LAN printer, 2 free-standing supply cabinets.
Total	**1,420**	

What follows are ***observations*** and ***recommendations*** for improving customer service and increasing operational efficiencies.

ADMINISTRATION, BUSINESS OFFICE, AND PROGRAMMING

- Maintain accessibility for customers.
- Create an efficient copy / supply / mail center to serve all staff.
- Provide work spaces to reflect reconfigured staff and responsibilities.

Space Use	Net Square Feet	Notes
Offices and workstations	840	Director's office, Administrative Assistant and outer office Special Services Coordinator, Business Manager and assistant's office, and Programming workstations (2)
Staff / Board Conference Room	280	8 place table with common amenities
Media Production / Mail / File Room	340	Staff copiers, laminator, paper cutter, and layout table, 6 four-drawer files, mail station and staff mail boxes,
Office Supply Room	130	8 sections industrial shelving and 2 cabinets
Total	**1,590**	

BACK-OF-HOUSE

- Create adjacencies between these services and functions to maximize effective operations.
- Provide security entry at the receiving room for deliveries and staff and at all staff workrooms.

Space Use	Net Square Feet	Notes
Data Distribution Closets	240	3 closets @ 80 square feet each
Staff Room and Coat/Locker Area	1,065	24 table seats, 10 comfortable chairs, 2 microwaves, 2 refrigerators, 3 vending machines, and ample storage
Staff Restrooms	400	allowance
Receiving	185	Exterior: Raised dock platform, dumpster and recycling bins, designated smoking area, Interior: Receiving room with two and four-wheel carts and space to accept large deliveries
Supply / Storage	750	Building supplies, equipment and furnishings parts, cleaning supplies, and seasonal decorations
Janitor's Closet	120	4 closets
Total	**2,760**	

SPACE REQUIREMENT SUMMARY

Functional Area	Net Square Feet	Unassigned Space	Gross Square Feet
Entry Area	2,160	308	2,468
Program Rooms / Art Gallery	7,020	1,002	8,022
Circulation Area	3,142	448	3,590
Café	1,500	214	1,714
Friends Gift Shop	700	100	800
Friends Book Shop	1,900	271	2,171
New Books / Display	568	81	649
Media Center	4,000	571	4,571
YA / Teen Services	2,585	369	2,954
Business Center	1,177	168	1,345
Technology Center	7,940	1,134	9,074
Adult Services	24,996	3,570	28,566
Youth Services	16,601	2,371	18,972
Outreach Services	320	45	365
City of Troy IT Services	960	137	1,097
Technical Services	1,420	203	1,623
Administration / Business / Programming	1,590	227	1,817
Back-of-House	2,760	394	3,154
Subtotal	**81,339**	**11,613**	**92,952**
Mechanical, electrical, and plumbing systems and chases; walls; general circulation(20% of Total Gross)	0	23,238	23,238
Total	**81,339**	**34,851**	**116,190**

Total unassigned space = 30% of gross

Unassigned space per functional area = 12.5 % of functional area gross

COLLECTION PROJECTION SUMMARY

Collection	Actual Holdings October, 2007	Projected Holdings Program Outline	% INCREASE	% of Collection to Shelve	% of Collection To Shelve
Adult Collections					
Nonfiction, International	83,721	111,780	+ 33.5	85.81	95,918
Biography, Fiction, Genre, International, Large Print, Rental	41,371	58,564	+ 41.5	81.24	45,577
Reference	7,032	5,905	- 16.0	100.00	5,905
Business Reference	1,552	1,795	+ 15.6	100.00	1,795
Teen	6,759	8,872	+ 31.3	80.32	7,126
Media	35,841	56,805	+ 58.5	67.94	38,593
Subtotal	**176,276**	**243,721**	**+ 38.3**		**194,914**
Youth Collections					
Book	69,386	87,975	+ 26.8	72.79	64,037
Media	10,266	21,054	+ 105.1	59.91	12,613
Subtotal	**79,652**	**109,029**	**+ 36.9**		**76,650**
Grand Total	**255,928**	**352,750**	**+ 37.8**		**271,564**
Periodicals					
Adult	452 Titles	452 Titles		100	452 Titles
Youth	55 Titles	55 Titles		100	55 Titles
Professional Collection	30 Titles	30 Titles		100	30 Titles

SPATIAL RELATIONSHIP SUMMARY

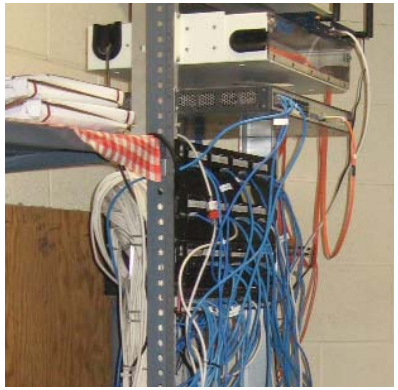
The following core relationships are provided as a guide to their schematic location.

Building Area	Primary Relationship	Secondary Relationship
Entry Area	Program Rooms / Art Gallery Circulation Area	Café Friends Gift Shop
Program Rooms / Art Gallery	Entry Area	Café
Circulation Area	Entry Area	Youth Services New Books / Display Media Center
Café	Entry Area Program Rooms / Art Gallery	
Friends Gift Shop	Entry Area Program Rooms / Art Gallery	
Friends Book Shop		
New Books / Display	Circulation Area	
Media Center	Circulation Area	New Books / Display YA / Teen Services
YA / Teen Services	Circulation Area Technology Center	Media Center
Business Center	Adult Services	Technology Center
Technology Center	YA / Teen Services	Media Center
Adult Services	Business Center	YA / Teen Services
Youth Services	Circulation Area	Program Rooms / Art Gallery
Outreach Services	Back-of-House	Adult Services
City of Troy IT Services		
Technical Services	Back-of-House	Circulation Area
Administration / Accounting	Circulation Area	Back-of-House
Back-of-House	Technical Services Outreach Services	

SEATING AND PUBLIC TECHNOLOGY SUMMARY

	CUSTOMER SEATING			PUBLIC TECHNOLOGY STATIONS (INCLUDES CATALOG STATIONS)		
Functional Area	**Existing**	**Space Needs**	**Building Program**	**Existing**	**Space Needs**	**Building Program**
New Books				0		2
Media				0		2
Teen	21		30	5		16
Tech Center	0		0	52		146
Business Center	28		18	0		6
Adult	162		262	4		6
Children's	76		112	19		37
Total	**290**	**400**	**422**	**80**	**217**	**215**
Other						
City IT Lab	0		0	16		16

TECHNOLOGY NEEDS ASSESSMENT



CABLING INFRASTRUCTURE FOR VOICE, VIDEO, AND DATA

The cabling infrastructure will include all of the necessary cabling for the voice, video, and data network.

The ***voice system*** shall consist of 85 Category 6A, plenum rated, 4 pair, unshielded twisted pair (UTP) horizontal cable from the Telecommunications Room to each Administrative or Public area within the building. Additional multi-pair (25, 50, or 100 pair) Category 3 copper cable shall be installed from the Main Cross Connect/Equipment Room to each of the three Telecommunication Rooms.

The ***data system*** shall consist of 325 Category 6A, plenum rated, 4 pair, unshielded twisted pair horizontal (UTP) from the Telecommunication Room to each Administrative or Public area within the building. An additional 12 strand fiber optic backbone cable shall be installed from the Main Cross Connect/Equipment Room to each of the Telecommunication Rooms. Ethernet connections will be provided to accommodate the mechanical system. This will allow monitoring of building systems via the network.

The ***video network*** shall consist of 87 RG-6 plenum-rated coaxial cable installed from the Telecommunications Room to each Administrative or Patron area within the building. Additional coaxial backbone cable, RG-11 or 1/2" hardline plenum rated coaxial cable, shall be installed from the Main Cross Connect/Equipment Room to each Telecommunication Room.

The computer spaces will have data drops at each computer floor box. Administration areas will have two data and one phone at each outlet location, wireless access devices though out the building, and coaxial connections to each of the video displays or LCD locations. The computer learning lab will have a minimum of 24 data drops located in the area. Video projectors with audio systems will be included within labs, meeting rooms, conference rooms, and the community rooms.

VIDEO DISTRIBUTION SYSTEM/AUDIO SYSTEM

The ***Video Distribution System*** includes all of the LCD, VCR/DVD, and video distribution head-end equipment with 10 cable channels, video projectors and sound reinforcement systems, bi-directional video amplifiers, and modulators. Additional items like video cameras, document cameras, remote video conferencing equipment, and mobile televisions on carts will also be included. Common spaces will have LCD units with local input. The screens will also act as an information bulletin board. Group study rooms will have local video inputs. The large meeting room supporting 250 seats, small meeting room supporting 50 seats, the two conference

rooms, and the two children's program rooms will have fixed video projectors with full audio systems in the spaces. The system will be controlled with a hard-wired control system in the space so remotes do not have to be used. Due to code requirement, assisted hearing must be provided in the large meeting room to accommodate the ADA requirements in a space holding more than 100 occupants.

DIGITAL TELEPHONE SYSTEM

The ***Telephone System*** will be an extension of the (city's) phone system. VOIP phones, receptionist console, and the voicemail system will be centralized at the (city's) location. Phones will be installed in all administration offices, staff rooms, and conferences rooms. Standard 10-button, digital display speakerphones will be provided for most administrative offices. The circulation desk and other service points will have 20-button phones installed. The reception area will have 20-button, digital display speakerphones with direct station select console. The plan will be to install a remote phone cabinet to support the library phones. This will allow the phone to continue to work if the connection between the city and the library is broken.

BUILDING ACCESS/SECURITY SYSTEM

The building will have a ***security system*** installed. Several doors will have access controls to allow staff to enter with the use of a card or other device. The Technology rooms will be locked with limited access. The security system will allow both the intercom and site to be monitored simultaneously in an emergency.

COMPUTER NETWORK ELECTRONICS

The ***Computer Network Electronics*** will include the network electronic switches in each Telecommunication Room and the Main Cross Connect/Equipment room. Each Telecommunication Room will have 24 powered switches and 48 port 10/100/1000 Ethernet switches installed. Every 96 ports shall have a Gigabit Ethernet connection to the Main Cross Connect/Equipment room. The Main Cross Connect/Equipment room will have an Ethernet core switch installed. The core switch will be either a chassis or stackable. The building will have 100 percent of the data connections active to allow the most flexibility in the building. The building will offer a filtering system, which will control public filtering based on age, as needed.

COMPUTERS & PRINTERS

Each full-time staff member will have a computer with a 17-inch flat screen monitor. In addition, there will be 165 public computers for public use. The computer lab/learning lab will have 24 connections, although the building program will only have 16-18 computers. There will be a high end copier/printer located in the work room that can be shared for high volume printing. The public areas will have network printers that will allow public printing. A print recover system will be installed to allow the library to recover the printing cost from patrons. There will be several local laser printers for staff members in each work space. In the Work Rooms there will be a large format plotter as well as a color/black and white printer.

WIRELESS CONNECTIONS

The building will have ***wireless connections*** both inside the building as well as outside the building for Public/Staff use. The staff will also have wireless connections to all the staff resources. The staff must log into the wireless access points for authentication in order to get their necessary resources.

FILE SERVERS/BACKUP

The ***file servers*** will be updated throughout the building. The project timeline is to assure the new servers are brought on line as needed. In addition, this will allow the equipment to be the most current when needed. The project will not only include the cost of the staff servers, but the ILS server. As networks are used more and more, it is essential to have a backup solution as part of the plan. This will also be included in the technology plan.

RFID SYSTEM/SELF CHECK

The plan is to roll out a ***RFID system*** for the library to be done as part of the bond project. The manufacturer has not yet been determined. Before the final decision is made, an evaluation of the different manufacturers must be made.

BUILDING PAGING – WHITE/PINK NOISE

The building will have a general overhead ***paging system***. The system will have different zones within the building. As part of the design, the building will have a white/pink noise system. This system masks the ambient noise in the building.

BOOK SECURITY SYSTEM AND GATES

The main entrances will have a ***materials security system*** installed to help deter collection theft. This system will be determined at the same time the RFID system is investigated.

BOOK HANDLING SYSTEM

Based on the number of collections handled in the library, the plan would be to include a ***book sorting system*** to handle the general sorting. This is only a placeholder for cost. The system will need to be investigated to determine which manufacturer has the best fit. At this time, based on the number of volumes being processed, the system should be at a minimum a six bin sorting system.

STAFF TRAINING

Due to all the new technology, phones, and equipment planned for the building, it is essential that training be a key component and a part of the plan. ***Training*** will be provided to all staff members for the use of the new equipment, as well as how to maintain the systems. To ensure the staff is familiar with the system, the training will be recorded. This will allow the staff members to refer to the training as needed at any time for convenience or further reference. The training will be based on all levels of expertise starting from the end user training or general training, working its way up to the local support staff supporting the network. The goal is to ensure all staff members have adequate training and will use the equipment and technology as tools to provide the best patron service for the library.

FACILITY ASSESSMENT – FUNCTIONAL ISSUES

LIBRARY PLANNING ISSUES

The purpose of this section is to identify areas of the existing library that support or inhibit the ability to deliver library services in an efficient and cost-effective manner. It has been our experience that building configurations can evolve into the "ways things are always done" approach and not necessarily reflect best practices. The Troy Library has not been immune to this condition. Review of the library has identified the following issues that impact the library experience.

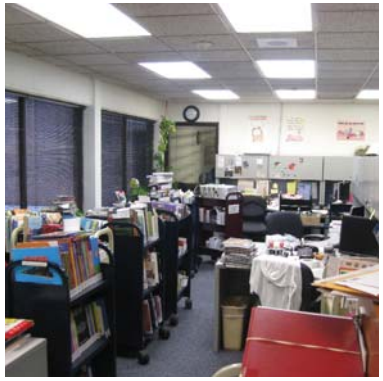
BUILDING ENTRY

Of first concern is the location of the circulation desk. Although clearly visible upon entry, it is in the wrong place. The preferred placement is on the right side of the lobby when exiting, out of the line of traffic. Such an arrangement will eliminate the current exiting issues. The existing situation is problematic because people using the youth area, friends book sale, café, or rest rooms must pass through the line instead of by-passing. This is particularly dysfunctional after a large community event. Access to the adult collection and Administrative Office are not affected by the current configuration.

Access to the café is a concern. The café does not have a separate entrance that can be operated independently; this compromises the library. Opening the building to the public before scheduled library opening hours creates an undue burden on library operations.

The Friends Gift Shop is in a different situation. It actually benefits from the placement of the queuing line. People standing in line are positioned directly adjacent to display cases, which encourages spontaneous purchases.

The lobby in general presents a poor first impression. It is cluttered with overflow book carts from the circulation workroom and boxes of used books for the Friends Book Shop. The storage for the Friends Book Shop is not only unsightly, but also a fire and safety issue. It is ill-advised to store flammable materials in the means of fire egress, particularly in vestibules.



GENERAL STAFF AREA ISSUES

The library's mission is to deliver quality library service and properly designed staff work spaces are essential to that purpose. Poorly organized, unpleasant, and inefficient staff work environments

absorb financial resources that should benefit the public. ***The staff work areas in the Troy Library are substandard***. It is remarkable that such high volume use and quality programming can be provided with these facilities.

The following observations highlight deficiencies common to all staff work areas in the library. Staff areas are undersized and have physical environments that inhibit flexible plan layouts and efficient work flow. Individual staff work stations are too small, particularly in the circulation and technical services area which process massive amounts of materials. Due to space constraints, materials are moved multiple times, which increases the cost per item to handle. There is a lack of cart storage, counter space, general storage, and volunteer work areas.

Security is highly compromised in the majority of staff areas because there is no distinct separation from the public. Because the elevator to access the Friends Book Shop area is located within staff areas, the public is allowed to enter, which compromises staff's safety. Compounding the issue is the lack of visibility between staff areas and closed offices. It is possible for an intruder to access staff areas undetected.

In almost all instances the size of the ***individual workstations are inadequate for the task.*** Many staff members have advanced degrees and high level skills, but are required to work in closet-size spaces incompatible to their work requirements. There are also issues with acoustical performance and privacy. Some tasks in the library are very detail oriented and require "quiet, study-like" spaces. Privacy between offices protects human resources needs and patron confidentiality.

CIRCULATION SERVICES

The circulation work room is located directly behind the circulation desk. The work room is poorly situated because the circulation desk is located in the center of the building and remote from materials return and technical service. Good library planning incorporates the materials return function directly into the circulation work room to minimize material handling. The ***current situation creates additional work***, requiring them to move material through the lobby from the remote location.

The circulation work room has good proximity to the circulation desk, but the configuration of the space is inefficient.
Two conditions, the triangular shape and three entrances and exits, are the cause. The multiple entrances generate excess internal circulation and the room shape restricts efficient space use. Two entrances which have direct public access do not clearly define public from staff spaces, which can compromise staff security. The present location of this work area also precludes exterior windows and accessibility to natural light.

FRIENDS' FACILITY

The ***Friends Gift Shop and Book Shop plays a vital role in bringing the cultural arts to the community***. The store and book sales generate a significant amount of revenue that supports library programs, but both are located in woefully inadequate spaces. The store has adequate visibility, but the book sales area does not.

Each day the Friends Store has to be set up and taken down, consuming valuable volunteer time. The store needs high visibility and convenient opening and closing operations. The book store's location in the basement is a material handling nightmare. Materials are collected in the lobby, sorted and delivered via elevator to the basement, the epitome of inefficiency. The book sale area lacks storage and proper display space. It is not a comfortable retail environment. This area also represents a safety issue to the volunteers due to its lack of visibility and remoteness.

MATERIAL RETURNS

After-hours material return slots empty material into the conference room off the lobby. This location is remote from the circulation work room and requires staff to move materials through the lobby. There are also fire safety and security concerns that need to be addressed. Book return slots should be located in a fire-rated area to protect the building against vandalism. The existing situation poses a health and safety concern and is inefficient for material handling.

CAFÉ

The café provides a valuable service to library users as a refreshment station, social gathering center, and supplemental study space. ***The café is in an excellent location at the midpoint*** of the building and is easily accessible from the lobby. It was observed that due to its location, the café does function as surge space before and after programs. The lack of direct exterior access, allowing separate hours of operation from that of the library, is a difficult problem.

CULTURAL DISPLAY SPACE

The configuration of the building does have one positive effect. The multiple floor levels and entrances have increased the amount for floor area dedicated to circulation, creating ample amount of wall space for art displays. The ***displays are nicely positioned, very accessible for viewing,*** and are points of interest for the community. In an expanded facility, additional display cases and lighting enhancements should be provided.

RECEIVING

The original site and building was designed to receive shipments via step van and semi trucks. The current receiving dock is in ***need of repair*** and due to changes in recycling practices, does not accommodate the library's current needs.

Receiving facilities within the library are inadequate. It is common practice for materials to be staged in the vestibule and corridor system, creating safety concerns. There is inadequate space to receive and hold materials in a secure environment prior to process. This is particularly acute for computer equipment. Inter-library loan delivery, a well used service, lacks proper staging, receiving, and a processing area.

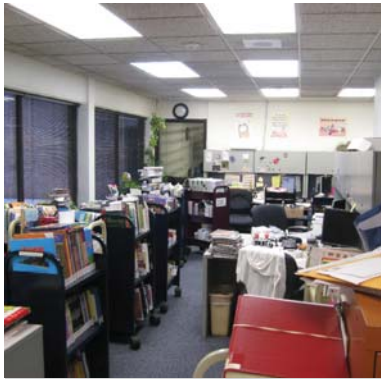
YOUTH SERVICES

Youth Services is critical to developing and inspiring t he community's youth, but the current area presents many challenges towards supporting this goal. The quality of the existing youth environment is lacking in aesthetics and acoustical performance. ***The youth area, well used over the years, is outdated by today's standards.*** The space lacks a culturally-relevant environment that is age appropriate and fulfills recreational and study needs for different age groups.

Interior architectural design features present several limitations that will need to be addressed. The acoustical performance of the space is poor, creating a loud and disruptive study environment. The long narrow configuration of the space limits flexibility and results in areas that cannot be supervised easily. On the east side of the area, remnants of the original building entrance causes planning inefficiency and child security issues. The vestibule takes up valuable floor area, generates additional internal circulation, and provides easy access for persons with criminal intentions.

Programming and story-time spaces are highly utilized and showing the effects of usage. The operable wall that separates the two rooms is essentially nonfunctional. Clerestory windows, which provide natural light, are not equipped with room darkening devices. The configuration of the rooms, their size, and lack of storage make this facility inadequate to meet future needs.

Youth Services staff areas suffer the issues identified earlier in this section; lack of space, lack of proper workstations, inefficient work environment, acoustical issues, and an overall challenging aesthetic atmosphere.



TECHNICAL SERVICES

The Technical Services location near receiving is desirable, but it has a poor relationship to the circulation workroom. Each area has different functions, but an adjacency allows for shared amenities which improve operational efficiencies. Technical Services currently has adequate natural light and an appropriately quiet environment. However, the irregular configuration of the room and inadequacy in size make |this an inefficient work area. In addition to undersized workstations and shortage of workspace, basic amenities such as counter space for material handling and repair, and a sink are missing.

This is one of two areas in the building that is the most vulnerable security-wise due to the lack of clear separation from the public. It would be quite easy for someone to access this area unnoticed and compromise staff security.

ADMINISTRATION AREA

The administration area consists of the director's office, administrative assistant, and other office spaces. It is in a good location. It has convenient access from the lobby and an appropriate level of accessibility to the public. Placement of some office space on the exterior wall provides natural light into these spaces, but precludes it reaching the interior work area.

The administration area is the executive component of a library and should project a more corporate image. The existing administrative area lacks an appropriate image, waiting area, reception area, supporting work space, and confidential filing space. As a result, the office space appears cluttered, over-crowded, and inconsistent with the image of a major municipal library. Additionally, the Friends materials stored in the lobby create a poor first impression and backdrop from within the office.

ADULT SERVICES AREA

The staff area for the adult area is undersized and overcrowded. The irregular shape of the room makes efficient space planning and workflow difficult. Location on an exterior wall does provide an adequate amount of natural light.

ADULT SERVICES AND COMPUTER LAB

The magazines are located in the far corner of the adult collections. The space allocated for this collection is inadequate in size and does not provide the proper variety of seats typically provided in current library designs. The space does have a character that is consistent with casual reading and study.

There are three separate service desks located within approximately 60' of each other. This is an unusually high number of service points for a collection of this size and results in an unnecessary increase in operational costs.

The arrangement of shelving and seating in the adult area results in a large number of spaces that cannot be properly supervised. Seating areas located around the perimeter of the building provide excellent views to the outdoors but become hidden from view.

The tall shelving located around the perimeter of the building in the lower ceiling areas is nonconforming to current fire codes. Current fire codes require a minimum of 18" from the top of shelving to the ceiling in locations where a fire suppression system is required. The current condition has a clearance of 13" to 14", which will need to be corrected in an expansion.

The business collection has excellent visibility and adequate space dedicated to this function. The overall impression of adult collection is one of being overcrowded and disorganized. The quantity of materials has forced the library into compressing shelving and seating areas into configurations that are too tight and lack an appropriate feel and character.

FACILITY ASSESSMENT – BUILDING COMPONENTS

FACILITY ASSESSMENT – BUILDING COMPONENTS

The current Troy Public Library building was constructed in 1969 – 1970 and is located on the municipal city campus. An addition to the library in 1983 more than doubled the size of the library. Smaller renovations within the library added office space as needed. These additions comprised the original plan and have created operational problems within the library. The library is approximately 48,400 square feet on two levels.

The general appearance of the building indicates it has been well maintained with some exceptions as noted later in this report. The building has been updated in some locations. The toilet rooms, for example, have been renovated. Other areas that have not undergone renovation have a "dated" and "tired" appearance.

SITE

The identity of the library is weak from a visibility and building recognition standpoint. The identity problem is mostly derived from the library's location within the Civic Center Campus, low building profile, and landscaping.

Pedestrian circulation is connected to the Civic Center Campus primarily from the west. Pedestrian access to the library is limited from Civic Center Drive due to grade change. There is limited area at the main entrance for pedestrian use. Space is used primarily for circulation with minimal seating opportunities.

The 'Peace Garden' is adjacent to the library building; however, access is so limited from the building that it does not feel like part of the library. No outdoor pedestrian spaces are immediately accessible from library building for patron use.

Site vehicular circulation access is from interior campus roads only. There is no clear route to the building entrance (or book return); access is through the parking lot drive aisles. ***The existing site configuration precludes providing a drive-up book return.***

The parking lot configuration limits the number of parking spaces located within close proximity to the building entrance because the site narrows near the entrance, creating a "wedge shape" or restricted layout. 'Overflow' parking south of the library is not clearly identifiable and is a long walking distance from the building entrance. ***The parking lot location and layout detracts from clear identification of the building entrance.*** The parking lot design and configuration creates excessive pedestrian and vehicular conflicts.

Primarily, the landscape consists of lawn areas with many species of trees ranging from small to mature. The trees and lawn create a 'park-like' setting for the library and overall civic campus. ***Views to the building are limited by the placement*** of several trees, as well as grade change from Civic Center Drive to the parking lot. Due to the parking and service area configurations, green space is minimal adjacent to the building where people enter and exit the building. The service area and receiving dock is not properly screened and creates a poor image.

Site furnishings such as benches, trash receptacles, and bike racks are worn and antiqued. Outdoor seating is limited to a few scattered benches.

Site lighting is provided by a design based on the city center overall approach. This approach provides excellent illumination of the roadway, but inadequate light levels for the library parking lot and walkway system. All light fixtures are in need of upgrading to improve performance and appearance.

The exterior receiving area is in generally poor condition due to vehicle damage to vertical surfaces over the years of use. This damage has allowed water infiltration into the masonry finishes, with freeze and thaw cycles causing deterioration to the walls. The exterior mechanical yard has a loose stone base and there does not appear to be adequate yard drains to remove ground water. This could be creating some of the problems in the receiving area and contributing to the water infiltration problem in the lower level exterior stairwell. Additional comments are included later in the report.

STRUCTURAL

The main floor is constructed using spread footing and concrete slab on grade. The drawings indicate the concrete slab has perimeter insulation installed at both the original building and additions. There is an approximate 1,300-square-foot basement area that uses hollow core precast plank with concrete topping for the first floor construction.

The roof structure is steel joist and metal deck framing on masonry bearing walls. All of these structural elements appear to be in good condition and no problems were reported. Precast decorative panel supported by steel angle frames are used to screen the rooftop mechanical units. The angle frames, though rusting, are in good condition, but will require preventative maintenance. The existing building foundations and structural steel is not designed for vertical expansion.

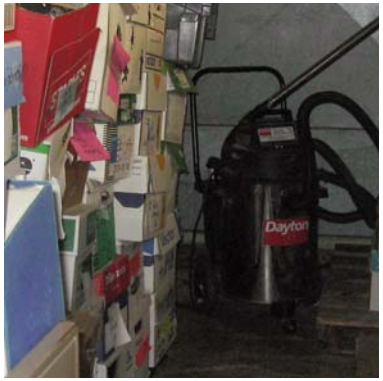
BUILDING ENVELOPE

The original building is constructed using non-insulated masonry cavity walls and non-insulated precast concrete. The addition uses an insulated cavity wall construction and interior insulated pre-cast concrete wall construction.

The non-insulated cavity wall will be problematic in a renovated project. The humidity levels required in a library will create mildew in the interior of the wall.

Two other areas of concern were noted in the masonry construction. There is moderate to severe corrosion to the steel lintels supporting the face brick over the windows in the original building. This is likely the result of water infiltration at the roof base flashing into the cavity wall along the perimeter walls, and the lack of flashing installedabove the lintels.

The second concern is at the projecting masonry wall of the original building. These projections are constructed with face brick caps where the joint has allowed water to infiltrate to the interior. This has resulted in effervescence (leaching of natural salts contained in the face bricks) to appear on the interior of the building. Although the effervescence is an appearance issue, the continued infiltration of water will result in eventual deterioration of the wall. The masonry projections used for the addition utilized a concrete cap to lessen the number of joints and possibility of water infiltration.



There is a serious problem with water entering the building at the lower level from the exterior stairwell. The library has to use pallets to elevate material stored in the adjacent storage room to prevent water damage. This area is also used as an areaway for air intake for the mechanical system. This areaway is approximately four feet by ten feet and drained by a single floor drain. Because of the areaway being used for both

the mechanical system and as an exit way, solutions to correct the problem are very limited. Both the manner in which this area is drained, and the amount of water that is allowed to enter the area, is contributing to the problem.

Joint sealant appears to be in reasonably good condition with less than five percent indicating adhesion or deterioration problems. The masonry mortar joints are showing some cracking, indicating the need of some masonry restoration. Minimal cracked bricks were noted.

The windows in the original building are generally single glazed in aluminum frame, except where upgrades or remodeling occurred. The windows in the addition are insulated double panes in aluminum framing. The windows use an adjustable horizontal blind to control sunlight. A number of perimeter sloped skylights are used on both the original building and the addition. The original building uses a butt glass installation and the addition uses an aluminum framed system. Caulking of the butt joint glass system has recently been repaired. There are eight large domed skylights used in the adult service area of the addition. The owner did not report any leaks or problems with these skylights.

Automatic entrance doors exist at the main library entrance. The doors appear to be operating properly and repel if an obstruction is encountered. The entrance "feels" somewhat awkward due to the alignment of the wall and the door at a forty-five degree angle. The door opening does not allow patrons to enter and exit at the same time. A manual single door opening is adjacent to the automatic doors.

The roof, base flashing, and metal flashing were reported to have been replaced four years ago. The replacement roof is a coal tar roof system.

Horizontal finned aluminum louvers are used for the ventilation system and located in the exterior stairwell to the lower level. The louvers appear in good shape; however, they are located close to the bottom of the areaway floor and contribute to the water infiltration problem to the lower level.

INTERIOR

The interior stairs to the lower lever are constructed such that would not conform to current design standards. The handrails do not meet existing code, as they do not extend beyond the last riser. A ramp that meets code is located adjacent to the stairs leading to the adult service area.

INTERIOR FINISHES

Adult Services

The majority of the ceiling consists of two-by-four lay-in acoustic tiles. The tile and grid are in good condition; however, they are dirty from age, especially adjacent to air diffusers. The central area of the adult service ceiling is acoustical plaster and is in generally good condition. However, due to the comments of acoustical concerns, it is assumed that the ceiling has been painted with material that has degraded the performance. Walls are face brick and drywall and in generally good condition. There are locations where minor effervescence is apparent. The floors are carpeted and showing wear conditions in traffic areas, particularly at adult services. The space lacks "freshness" and does not create an interesting environment.

Youth Area

The majority of the ceiling area is acoustical plaster and again, based on comment of acoustical concerns, it is assumed the ceiling has been painted with material that has degraded the performance. Walls are face brick and drywall and in average condition with the effervescence discussed elsewhere in this report more prevalent. The floor utilizes the same carpet as the adult services area, except there are "rugs" used to create the youth "sensation." The adjacent Craft and Story rooms are lay-in ceilings. The movable partition that separates the two program rooms is in poor operating condition and will require replacement. The space lacks "freshness" and does not create a stimulating environment.

Staff and Office Areas

Ceilings are lay-in acoustical tile and generally in good condition. Walls are drywall and in generally good condition. Floors use the same carpet as the adult services and youth area.

Toilet Rooms

As indicated earlier in this report, the toilet room finishes have been completely refurbished to "freshen" the appearance.

CODE ISSUES

Codes used in assessing this building are based on the 2003 Michigan Building Code incorporating 2003 IBC and ANSI A117.1 1998 for accessibility. Both of the codes are expected to be revised in spring of 2008. Changes to the codes may affect other items in the library that we are not aware of until codes are published. The library building would fall under the "grandfather" provision - "Existing Conditions. " We have based our comments as if the building were to be updated to meet current code requirements.

Current construction classification is IIB. This construction classification is a type using noncombustible materials and is appropriate for expansion.

Libraries fall into Use Group A-3. Current code requires that buildings of Use Group A-3 with an occupancy load of over 300 be fully sprinklered. The original building does not have a fire protection system, but the later addition is fully sprinklered. The separation between sprinklered and nonsprinklered areas should be separated with a fire-rated wall and door. One area of the building has a wall that meets the required separation. The door is equipped with a label stating it was built to fire rated requirements, but that because of size, it does not have the required fire label. ***Any renovation or expansion of library would require the entire building to be sprinklered.***

The adult services area ***does not have proper space between the tall shelving and the ceiling*** around the perimeter of the building based on current fire codes.

The emergency exit stair from the basement exits into the mechanical equipment area near receiving. There is no emergency exit from this area. This is a code violation.

Not all storage rooms have rated walls or doors as required by code. Areas in nonsprinklered areas would be of primary concern.

None of the toilet rooms within the Library meet current accessibility requirements. The public toilet rooms adjacent to the main circulation desk appear to have sufficient space within to alter them to current requirements. However, renovation would require

the loss of one fixture in both the men's and women's rooms. The staff toilet rooms lack sufficient space to be remodeled to meet accessibility requirements. Toilet rooms at the youth area may have sufficient space to remodel and make accessible, but this would require changes to the entrances. They lack the required clearances at the latch side of the doors. The loss of one fixture in both rooms would also be necessary. A plumbing fixture count was not reviewed.

The library has an adequate number of sinks, urinals, and water closets based on current code requirements. Any expansion of the library would require additional toilet rooms.

Drinking fountains protrude into the walking spaces more than the allowed 4 inches.

Many doors within the library lack the required clearances on either the push or pull side of the doors. In some instances, it is possible to relocate furniture to provide the necessary clearances. In the youth area, doors to the Craft Room and program room would require cutting back shelving units on the latch side of the door to provide the required clearances. Other doors within the library would require re-working entrances and changing walls to provide required maneuvering clearances at swinging doors.

The rear vestibule at the staff area does not have the required distance between doors.

The clear maneuvering areas at doors for exiting do not meet current codes for accessibility. This is primarily in the staff areas where offices and corridors have been added.

The glass adjacent to the doors requires safety glass within 18 inches of the floor, and where walking surfaces are within 36 inches horizontally of the plan of the glazing. While safety glass is provided in the doors, it does not appear to be in the glass adjacent to the doors.

The ***elevator does not meet current accessibility*** requirements because of its size.

The ramp to Adult Services is carpeted and the carpet does not meet the required slip resistance for ramps.

Books and other combustible materials are stored in exit access corridors, which is a code violation.

Guardrails are required where stairs are located 30 inches or more above the floor below. The existing stairs have required handrails, but not guardrails. This is a code violation.

Audible and visual fire alarms are now required by code. Both appear to be lacking in the library.

The book return is in the lobby. Code requires that the book return should be enclosed in a one hour fire-rated room.

MECHANICAL

HVAC in the original building is provided by a multi-zone air handler installed in the lower level. The air handler uses hot water coils for heating and chilled water coils for cooling. Hot water is provided by a natural gas-fired boiler installed in the lower level, and chilled water is provided by an air-cooled chiller installed outside.

Humidification was not provided for this system. The air handler, boiler, chiller, and most of the piping was replaced in 2005.

HVAC for the addition is provided by rooftop units with DX cooling and natural gas heating. Steam humidifiers were provided with these systems. All of the ***original rooftop units have been replaced over the last six years and are in good condition***.

Several small cooling units have been installed to provide additional cooling in specific areas. Both ducted furnaces with remote condensers and unducted units with remote condensers have been used.

Toilet rooms include automatic flush valves, sensor-operated faucets, and wall-hung water closets. The Toilet Rooms have been completely remodeled, including new fixtures, over the last year.

The addition is fully fire-suppressed using wet sprinklers. The original building is not sprinklered.

The mechanical systems appear to be well maintained and have been upgraded as older equipment wore out. The systems are maintaining acceptable levels of comfort in the library; however, they are not designed for expansion and would need to be supplemented to service additional space.

ELECTRICAL

The main electrical service for the original building is in the lower level of the building on the southeast side. This ***equipment is 30+ years old and has limited capacity for renovation or expansion.***

The electrical service equipment for the addition is also on the lower level of the building, north of the original equipment. It is located on an outside wall, but the room is not suitable for additional equipment. It backfeeds the original library's electrical service.

The general power throughout both footprints is distributed to specific lighting and power panels. Lighting is controlled by operating the local breakers in these panels, not by conventional wall switches or motion sensors.

The ***fire alarm system has been utilized to its maximum capacity*** and is not suitable for an upgrade to provide audio and visual alarms as required by today's standards. The existing building has audio (horns) only. It was also noted that the beam detectors in the stack area are not operating.

The facility has been updated with T8 electronic ballast for linear fluorescent and compact fluorescent lighting, replacing all incandescent lamps. The older section has foot candle readings in the 30 fc range while the newer section has 50 fc at the desks and 20-30 fc at the skylight areas. These ***values are within the acceptable range for library usage.***

The library is on a primary electrical service rate, which is controlled and monitored thru a "Building Management System" (BMS). The utility bill is prorated monthly.

The site needs upgraded lighting. The parking lot has common parking with the other facilities, and patrons that park farther away from the building need additional lighting.

TECHNOLOGY

Existing technology closets are located within a storage room/electrical closet. There are several concerns with this arrangement: the equipment is not protected in the space; the data racks are not grounded properly; power is not dedicated in the closets; and the space is shared with power panels which may be causing EMI across the data system. The space is not cooled, therefore, heat builds up in the room. ***This reduces the lifetime of the equipment.*** The file server is located within an office cubicle, sitting on the floor. This causes dust and debris to be pulled into the system. The system is not in a secure location. The building needs to have a main server room which will allow the servers, network, phone system, and video systems to be in a controlled environment. When new computers are being installed, the IT staff does not have a location for staging the systems before they are installed.

There are several code concerns relating to the existing technology cabling. The existing voice and data cabling penetration are not fire-stopped, which violates code requirements for fire-rated wall construction. The existing cabling is not supported above the ceilings. Cable must be supported every five feet in accordance with the national electrical code. The above ceilings have existing old cabling. According to the national electrical code, all unused cables must be removed from the ceiling spaces unless it is tagged at both ends and identified for future use. Old cabling is considered to be a fuel source in the above ceiling space and must be removed. The existing phone system is a city-wide system which is in good condition. The library may want to add a remote node to assure if the connection or system has a failure between the library and the city, it will provide the library with a working system.

Computer lab locations are configured via wireless. It would be our recommendation to ***hardwire the labs to provide the most bandwidth possible.*** The building does have wireless, but it is totally open. It would be our recommendation to secure the wireless network.

Printing is done at the reference desk and circulation desk. Currently, the patron must go to the desk to pay for the print job, and then the staff will provide the sent print job. It would be our recommendation to look at a print management system, which is self supported to recover printing costs.

Updating of equipment should be considered. The meeting rooms have older video/audio equipment. It is an option to upgrade to allow more functions and better quality of sound. The network switches are out-of-date and do not provide the capabilities of creating different V-Lans. Computers/printers are in need of an upgrade within the timing of the project. It was requested by the staff to have the capability to be mobile and support the patrons. The mobile request was for phones, computers, or tablets to help support the patrons in the stacks area.

OPTIONS

OPTIONS

INTRODUCTION

Design options range from minimal disruption of the existing library to creating a replacement library. The option that precluded demolition of any portion of the library appeared unrealistic for three significant reasons:

- Expansion of the building to the east would require relocation of the existing boulevard.
- The east half of the library is inefficient and reuse would exaggerate this condition throughout the whole project. The results would be a long-term increase in operational costs.
- Utilization of the existing east half of the library would increase the gross building area needed for meeting the library space needs.

Essential consideration in the expansion and renovation to an existing library is ***maintaining quality library service, the community's well being, and library staff's health and safety.*** Projects involving multiple construction phases and numerous staff relocations create undue hardship on everyone. The team's strong recommendation based on experience was to develop options predicated on ***optimizing the community's well being and library staff's health and safety.***

The goal of quality of library design and building infrastructure are consistent for all three options. If concerns about library performance or building infrastructure did develop, it will be noted. All three options require that at least 60,000 square feet of the library to be located in new library space that is three floors in height. This amount does vary with Option A, providing the least new floor area and Option C the most.

OPTION A

Option A

25' 50' 100' 200' 400'

OPTION A

Option A attempts to retain as much of the existing building as is reasonable. The portion of the building to be removed is everything east of the corridor that leads to the youth room. This area contains: meeting room, café, Friends Store, staff work areas, shipping and receiving, rest rooms, and basement. The premise behind this approach is to make the existing youth area more functional by expanding eastward, thus creating a larger, more correctly portioned library space. The current adult collection area would be renovated and new library space would be constructed to the east. This new space would be approximately 60,000 square feet distributed between three floors.

Unfortunately, the portion of the library that requires demolition contains the essential library services and building infrastructure. ***Therefore, relocating the library to a temporary location for the duration of construction is recommended.***

From a library planning design and operational perspective, this approach retains the most significant ***negative aspect of the existing building-three different floor elevations.*** This single element would create planning and architectural design issues that would telegraph throughout all aspects of the new library. The exact nature and cost implications will involve more detailed analysis.

In terms of site development, ***this is the least user-friendly of all three options*** because it requires all parking be consolidated north of the library. The consequence is that a significant amount of parking is located greater walking distances from the main entrance, which was a concern identified during the focus groups. A portion of existing parking south of the library, near City Hall, would be removed, displacing valuable parking.

Another significant disadvantage of this option is relocation to temporary space; requiring additional cost for leasing space, lease space improvements, and two moves of the library. The amount of temporary space leased would be dependent on availability and the cost for improvements would vary by location. Due to weight, tall library shelving typically cannot be located on standard office space above ground floor level.

Advantages of Option A include:

Retaining the majority of the existing building
Removing residents and staff from construction zones
Relocation for efficient execution of construction
Maintaining library as back drop for Peace Garden
Ease of locating affordable lease space in current economy

Disadvantages of Option A include:

Moving the library twice
Facing challenges posed regarding multiple floor elevations
Planning and operational shortcoming due to existing conditions
Reducing parking spaces near city hall
Moving larger quantity parking farther from entrance
Affording leasing space
Affording improvements for lease space
Spending time locating lease space
Losing a potential two years of some library services
Removing library from City Center for two years
Retaining portion of existing building that requires exterior corrections

OPTION B

Option B

OPTION B

The premise of ***Option B is to salvage only the best part of the building*** most suited for addressing library needs and expand the existing facilities. The existing adult services area is quality library space that can be effectively reutilized, most likely as a youth library due to size, scale, and location. By retaining this section of the ***building the limitations associated with three different floor elevations are eliminated.***

This approach allows the library to remain in place and retain full operations. First, the new construction would be executed in the current parking lot, with the main entrance closed. New parking would be constructed and the west library entrance would remain open. There would be some expenditures for temporary sidewalks, temporary construction separations, and temporary fire exits in selected locations.

In Option B, the library moves north into the existing parking lot, creating additional parking south of the building, near City Hall. This building configuration provides entrances on the south, west, and east building facades without compromising library security. This approach enables relocation and consolidation of parking which benefits all elements of the Civic Center Complex. Though the parking lot expands parking to 430 cars, ***no parking space will be farther away from an entrance than in the current configuration.*** Once the youth library is removed, the Peace Garden will need some consideration.

One of the primary benefits of this option is the existing library can remain in place with no loss in library services. There is only one move for the majority of library functions, but two moves for the youth library. It does require demolishing 50% of the existing building, but enhances Civic Center Complex parking distribution.

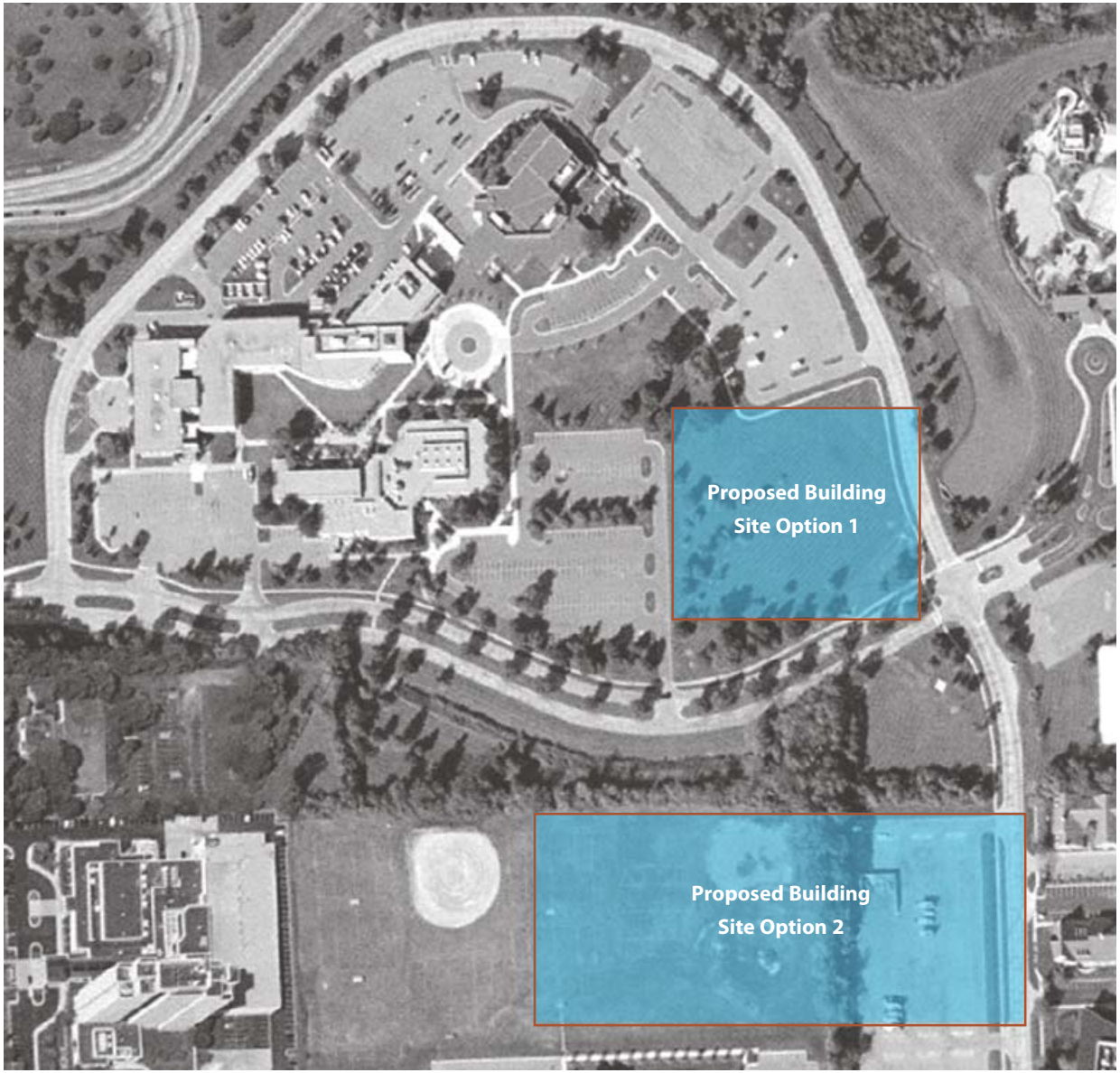
Advantages of Option B include:

Operating existing library without interruption
Distributing parking effectively
Leasing space is not necessary
Improving temporary lease space is not necessary
Retaining best part of existing library
Effectively integrating existing library into the expansion
Relocating majority of library space in a single move
Limiting unforeseen existing conditions by utilizing most adaptable portion of existing building
Eliminating portion of building requiring exterior wall corrections

Disadvantages of Option B include:

Demolishing 50% of the building
Budgeting for some phasing and temporary construction costs
Facing design restrictions due to existing conditions
Increasing walking distances for library users during construction

OPTION C


Proposed Building
Site Option 1
Proposed Building
Site Option 2

OPTION C

Option C proposes a replacement library located on city property between the Civic Center Complex and the Community Center. The relocation of playfields, which was a concern raised in the focus group, would need to be addressed and is not a part of this study. Placement of the new library would require that it retains its own identity, and not detract from the Community Center.

A replacement library, since not impacted by existing conditions, will be more efficient to plan, ***requiring less square feet of building*** to accomplish same library program. Experience shows a reduction of 3% to 5% in square feet of building. For the purposes of the study, a 4% reduction in space was used, or approximately 5,000 fewer square feet. The construction contingency can be reduced by 1% without having to utilize portions of the existing building.

In Option C, the existing library remains in operation, services continue as usual, and library users avoid the construction site. There would be only one library move. There would be no temporary lease improvements, no lease costs and no phasing costs. There is a higher percentage of new construction, which is more costly than renovation.

A consequence of this approach is that the ***existing library will be vacated.*** If there are unmet space needs within city facilities, this could be an asset. Retaining the existing building will increase operational costs for the city and relocation of playfields will require land and capital improvements.

Advantages of Option C include:

Limiting library users and staff's exposure to construction site
Precluding temporary facilities and phasing costs
Requiring less square feet of building
Providing best opportunities for library planning and design
Providing best opportunity for effective site design
Reducing parking impact within the Civi Center Complex
Providing greatest opportunity for new identity
Retaining the existing library for other purposes

Disadvantages of Option C include:

Requiring additional property and cost for playfield relocation
Dissipating use for existing building
Maintaining existing building costs
Facilitating adaptive reuse of existing building at additional cost

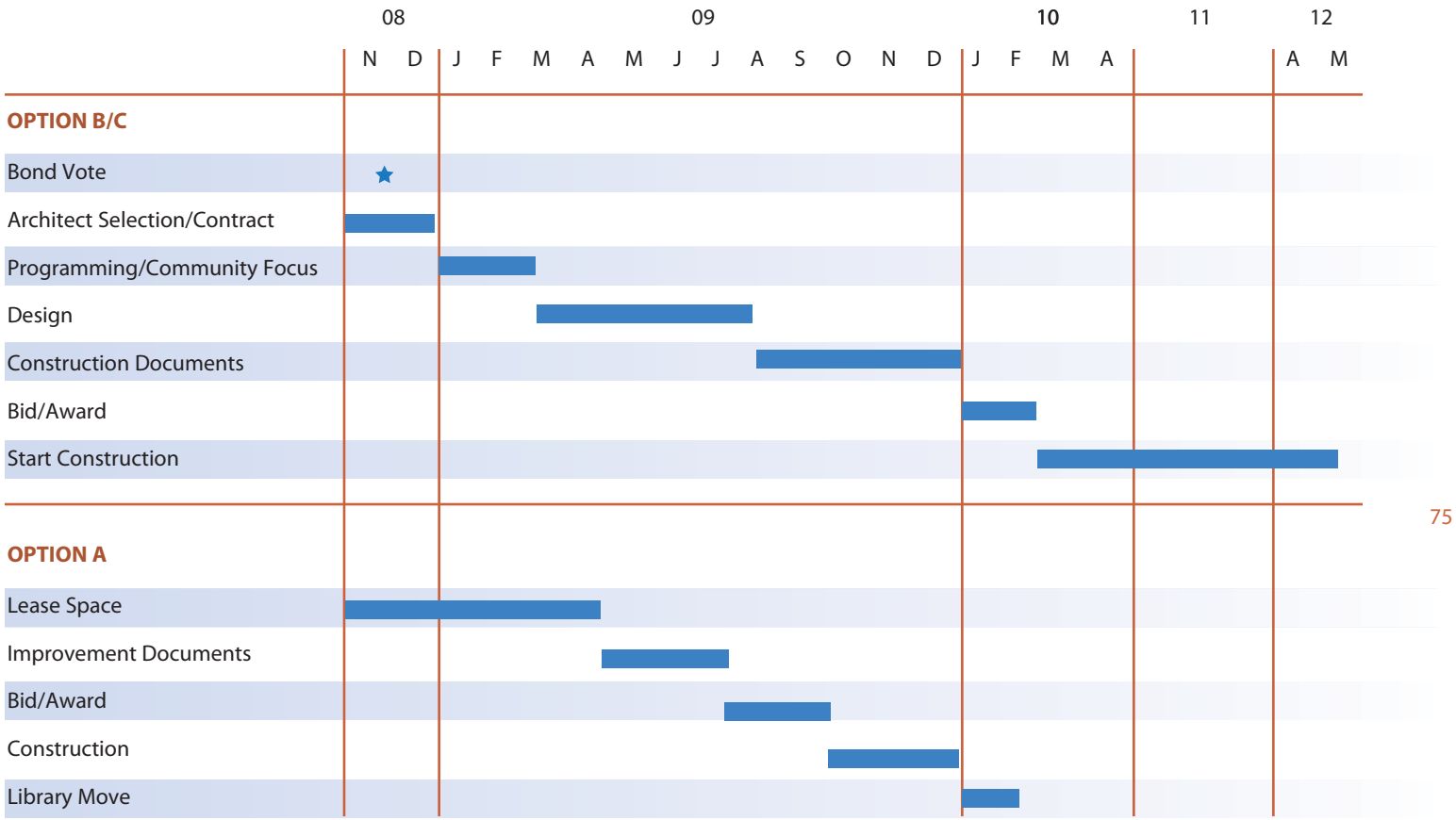
SCHEDULE

SCHEDULE

The schedule outlined is conservative and should establish the longest duration that could be expected. Key determinates are: a successful bond vote in November of 2008; architect's selection to be completed by January 2009; construction bids by January 2010; and construction start by spring 2010. It has been our experience that a bid process starting in January offers the most competitive climate and allows preferred construction start sequence.
The schedule reflects a traditional design and construction process. The construction delivery method of either general contractor or construction manager does not effect the construction duration.

In discussions with focus groups, library staff, and city representatives, ***it is apparent that the community wants a voice. Therefore, we suggest an extended programming period to accommodate additional community input.*** The Troy Library has the potential to be one of the most significant library projects ever done in Michigan. Therefore, take the time to do it right! That is in line with what the community wants. The suggested schedule provides for extending the design and construction documentation period, but the additional time will not increase design and engineering fees.

The construction period of twenty-four months is conservative and does apply to all three options. There will likely be slight variations between options and a more detailed schedule should be developed after November 2008. The longest schedule will likely be Option B and the shortest Option C.


08
09
10
11
12
N D J F M A M J J A S O N D J F M A A M
OPTION B/C
Bond Vote
Architect Selection/Contract
Programming/Community Focus
Design
Construction Documents
Bid/Award
Start Construction
OPTION A
Lease Space
Improvement Documents
Bid/Award
Construction
Library Move

OPINIONS OF PROBABLE COSTS

OPINIONS OF PROBABLE COSTS

Opinions of Probable Costs are based on set quality and quantity factors which require definition. The quantity of building is net program area increased by a grossing factor. The grossing factor accounts for stairs, circulation, mechanical, electrical, structure, toilet rooms, walls, etc. In Option A and B, the net program area was increased by 30% due to inefficiency of expansion and renovation. In Option C, the replacement building, the program area was increased by 26% due to efficiency of new construction.

Projects costs are based on a November 2008 bond passage, with start of construction in the second quarter of 2009. Schedule is based on 36 months from start of planning to substantial completion. Schedule delays will result in cost adjustments due to inflation.

A consistent message heard in meetings with the community focus groups, City personnel, Friends of the Library, Library Advisory Board, and Library staff is ***do it right, but use some restraint.*** The budget numbers provided represent this sentiment, ***illustrating a quality project that will require financial discipline*** by those involved.

The site costs provide for 430 cars of new parking with site area set aside for future parking. The intent is to provide parking that satisfies the majority of library situations without overbuilding and to utilize existing parking when possible. The landscape budget includes plaza developments at entries, planted parking lot islands, and landscape integration into the Civic Center site design. Lawn areas and planting beds will contain irrigation. A detailed courtyard execution between city hall, library, and police would be left for future projects.

The building design will ***allow disciplined incorporation of green technologies and practices.*** A best practices approach that embraces good resource management and energy practices has been accounted for. The building design is ***budgeted to be creative, simple, elegant, and constructed of durable materials.*** There are adequate dollars to accentuate specialty areas with increased ceiling height, quality materials, and additional natural light. In staff areas, behind-the-scene spaces, and collection areas, the budget expects more modest architecture. The budget should support durable materials with lower maintenance and good life cycle costs, but yet be attractive.

Investment in ***infrastructure that allows future adaptability and reduces energy consumption*** is important. Budget numbers provide for mechanical and electrical systems that conform to both sustainable and library design best practices. Electrical and technology systems are budgeted so every public seat has an appropriate work environment. Building infrastructure will be designed in a manner that reconfiguration of spaces should be easily accommodated. The ***technology budget provides for hard-wired and wireless environments, and meeting rooms, which will be equipped to enable more sophisticated presentations.***

There are two significant costs that will be required to complete the project, but should not be included in the bond amount; these are computers and collection costs. It was clear from community focus groups and city staff that computers and items that have a short life expectancy should not be bonded for twenty years. The cost of the opening day collection, RFID tagging of the collection, and computers are not included in the bond costs.

OPTION A: RENOVATION AND EXPANSION

Site Work	
New Work	$2,150,000
Demolition	
Site and Building	$250,000
Renovation of Existing Library	
31,600 sq. ft. @ $130 / sq. ft.	$3,792,000
New Construction	
84,590 sq. ft. @ $200/ sq. ft.	$16,960,000
Technology Infrastructure	
116,190 sq. ft. @ $18/ sq. ft.	$2,095,200
Construction Contingency	
8% of construction	$2,019,776
Furniture and Furnishings	
116,190 sq. ft. @ $23/ sq. ft.	$2,677,200
Subtotal	**$29,944,176**
Architectural/Engineering/CM Fees	
@ 10%	$2,994,418
Bond Issue Expenses	
@ 1.8%	$538,995
Testing/Reproduction/Permits	
@ 1.5%	$449,163
Moving	
Allowance	$80,000
Temporary Facility Improvements	
25,000 sq. ft. @ $25/sq. ft.	$625,000
Phasing	
No phasing needed	$0
Subtotal	**$34,631,751**
Lease Expenses	
25,000 sq. ft. @ $20/sq. ft. for 2 years	$1,000,000
Opening Day Collection	
30,000 items @ $35 per item	$1,050,000
Technology Hardware	
116,190 sq. ft $6.50 / sq. ft.	$756,600
Total Project Cost	**$37,438,351**

OPTION B: RENOVATION AND EXPANSION

Site Work	
New Work	$2,150,000
Demolition	
Site and Building	$300,000
Renovation of Existing Library	
19,000 square feet @ $130/ sq. ft.	$2,280,000
New Construction	
97,190 square feet @ $200/ sq. ft.	$19,480,000
Technology Infrastructure	
116,190 sq. ft. @ $17.50 / sq. ft.	$2,037,000
Construction Contingency	
8% of construction	$2,099,760
Furniture and Furnishings	
116,190 sq. ft. @ $23/ sq. ft.	$2,677,200
Subtotal	**$31,023,960**
Architectural/Engineering/CM Fees	
@ 10%	$3,102,396
Bond Issue Expenses	
@ 1.8%	$558,431
Testing/Reproduction/Permits	
@ 1.5%	$465,359
Moving	
Allowance	$40,000
Temporary Facility Improvements	
No temporary facility improvements needed	$0
Phasing	
Allowance	$200,000
Subtotal	**$35,390,147**
Lease Expenses	
No lease expenses	$0
Opening Day Collection	
30,000 items @ $35 per item	$1,050,000
Technology Hardware	
116,190 sq. ft @ $6.50/ sq. ft.	$756,600
Total Project Cost	**$37,196,747**

OPTION C: RENOVATION AND EXPANSION

Site Work	
New Work	$2,150,000
Demolition	
Site and Building	$0
Renovation of Existing Library	
No renovations needed	$0
New Construction	
111,750 square feet @ $200/ sq. ft.	$22,350,000
Technology Infrastructure	
111, 750 square feet @ $17.50/ sq. ft.	$1,955,625
Construction Contingency	
7% of construction	$1,851,894
Furniture and Furnishings	
111,750 sq. ft. @ $23/ sq. ft.	$2,570,250
Subtotal	**$30,877,769**
Architectural/Engineering/CM Fees	
@ 10%	$3,087,777
Bond Issue Expenses	
@ 1.8%	$555,800
Testing/Reproduction/Permits	
@ 1.5%	$463,167
Moving	
Allowance	$40,000
Temporary Facility Improvements	
No temporary facility improvements needed	$0
Phasing	
No phasing needed	$0
Subtotal	**$35,024,512**
Lease Expenses	
No lease expenses	$0
Opening Day Collection	
30,000 items @ $35 per item	$1,050,000
Technology Hardware	
111,750 sq. ft @ 6.50/ sq. ft.	$763,750
Total Project Cost	**$36,838,262**

TERMINOLOGY

Site Development Cost: Includes parking lots, walkways, landscaping, site lighting, storm water management, utilities, outdoor reading areas, and entry plazas. Amount of new work is consistent between all options.

Site and Building Demolition: Removal of parking lots, walkways, landscaping, and abandoning utilities. Building demolition is selective and varies between Option A and B.

Renovation: Quality level is consistent between schemes. This includes retaining the building superstructure, replacement of building infrastructure, and new interiors.

New Construction: New library space inclusive of all finishes and building systems.

Technology Infrastructure: Cabling, meeting room technology, phone system, public address system, fire alarm system; library security system, and self-check.

Furniture and Furnishings: New furniture for entire library and youth features. Existing shelving to be used in staff areas.

Construction Contingencies: Money allocated for unforeseen site, building, and construction conditions. Options A & B are at 8%, Option C is at 7%.

Phasing Cost: Option B only. Includes costs for temporary fire exits, walks, building separations, and phased parking lot construction.

Architecture/Engineering/Construction Management Fees: Includes fees from programming through certificate of occupancy and percentage of site, building, technology, furniture, and contingency costs.

Permits/Reproduction/Testing: Includes building permit, tap fees, printing of bid documents, and third-party testing by owner consultants.

Relocation Cost: Cost of moving collections, library resources, and staff.

Temporary Facility Improvements: Cost of upgrading existing space for temporary library.

Lease Expense: Based on leasing a space for 24 months.

Bond Issue Expense: Legal fees and expenses for selling bonds.

Opening Day Collection: New materials needed to supplement existing collections (not included in bond amount).

Technology Equipment: Computers, software, RFID tagging of collections (not included in bond amount).