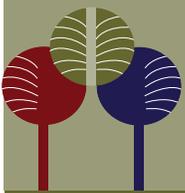


**A NEW JOINT LIBRARY FOR
FANWOOD AND SCOTCH PLAINS
SITE CONCEPT FEASIBILITY STUDY**

MAY 2009

RTKL



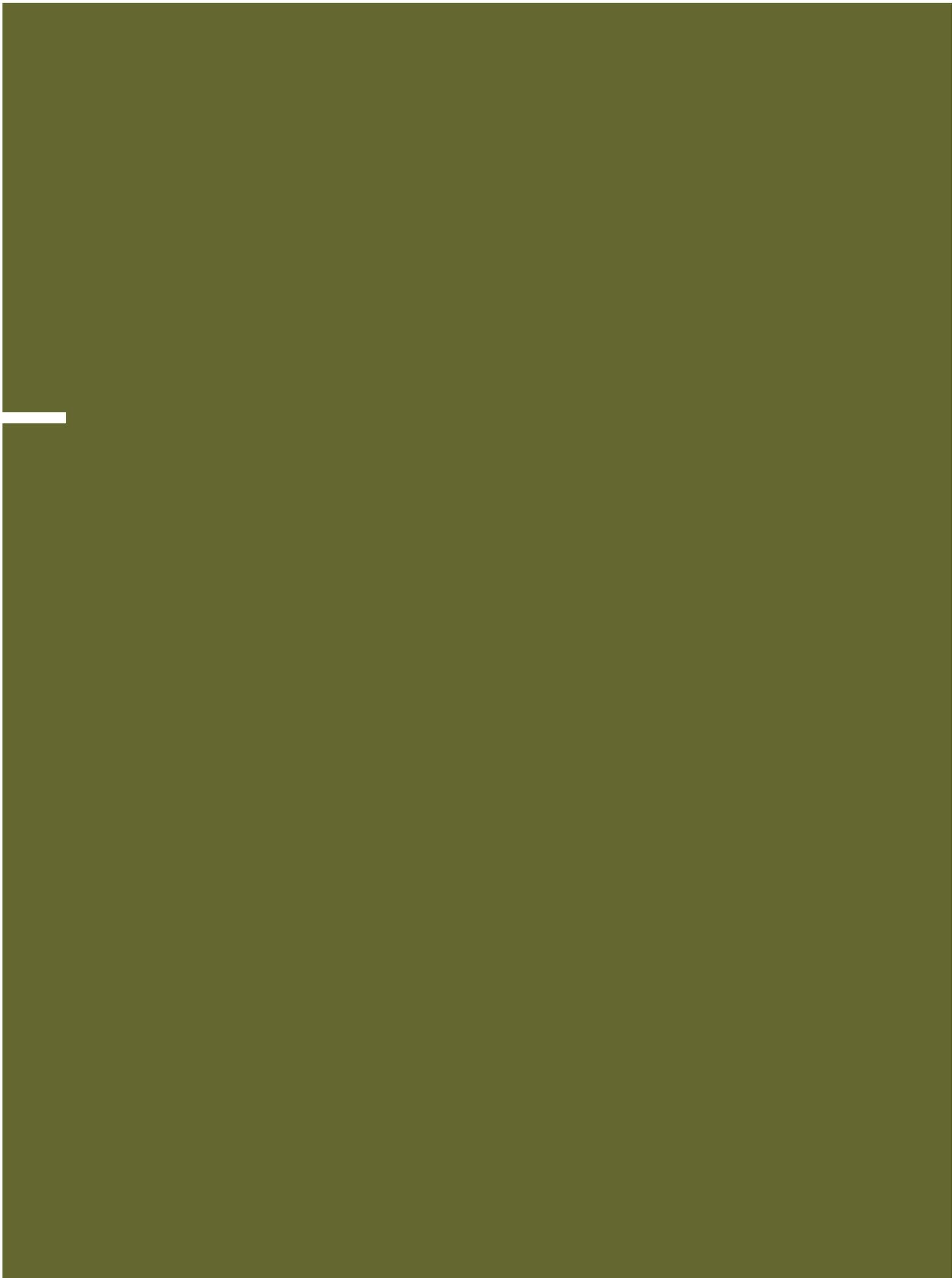


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INTRODUCTION

1



(ABOVE) FANWOOD MEMORIAL LIBRARY
(BELOW) SCOTCH PLAINS PUBLIC LIBRARY

INTRODUCTION



The following Site Concept Feasibility Study was based upon findings and recommendations of the May 2009 Project Feasibility Study entitled “Shared Services: Let Libraries Lead the Way,” prepared by Library Development Solutions who was retained to explore the viability of establishing a joint library to serve the residents of Fanwood and Scotch Plains.

RMJM, a Princeton based architectural firm with extensive public library design experience, was commissioned to prepare a pre-design study to evaluate various options to determine the best location, site requirements, and basic physical configuration of the proposed combined library facility; and to develop a comparative analysis of the preliminary project schedule and budget impact of the most promising schemes.

The consultants attended several of the early planning sessions with the Library Directors and Leslie Burger of Library Development Solutions and participated in a public workshop that included members of both Library Board of Trustees, which provided additional input and insight that guided their planning efforts.

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SITE CONCEPT FEASIBILITY STUDY

2

A. PRELIMINARY SITE AND BUILDING CONCEPT EVALUATIONS



The goals and restrictions included with the NJ DCA Grant received for this study limits design work to a basic analysis of the proposed Joint Library site and its ability to support a building that meets the program requirements outlined in the accompanying Project Feasibility Study by Library Development Solutions.

Preliminary Evaluation of Alternative Library Sites

On September 5th, 2007, the consultants met with the Mayor of Fanwood to discuss the joint library study, which was funded by a NJ DCA Shared Service Grant. We then reviewed three options the Mayor outlined during this meeting and identified several challenges and opportunities associated with each.

The Fanwood Municipal Site Option

This site provides several benefits but also presents a number of potentially difficult challenges;

- It is centrally located and easy to access by residents of both communities;
- It is in a Historic District, which may involve some restrictions and includes the old Carriage House now used for public meetings and events.
- There is a Borough owned flag lot across Watson Road that is used for parking and passive recreation, but it was not clear whether it could be used to help cover increased parking needs.
- It opens the existing libraries to be vacated in both communities to alternative uses. For example, the Fanwood Library site could provide a place for the relocation of the Fanwood Board of Education that would free up school space for much needed classrooms; and the Scotch Plains facility might be used as a Community Center.

- Though the site looks fairly open and roomy, development is constrained by:
 - A private residence at the northeast corner of the block
 - surrounding residential development on all sides
 - Several mature trees set along the north exit drive
 - A storm-water detention basin at the southern end of the site
 - Existing on-site parking, much of which is dedicated and not available to help meet the library's needs for 80 or more new spaces
 - An extensive existing building complex already on site including the Municipal Offices and Courts, Police Department, and Volunteer Fire Department and Emergency Squad, and related surface parking lots



THE FANWOOD MUNICIPAL COMPLEX SITE OPTION (THE ORIGINALLY PROPOSED PLAN)

During public review, residents of Fanwood were largely negative towards the idea of building the library on the municipal site.

The Scotch Plains Library Site Option

This site is much larger and less constrained than the Fanwood Municipal site, and provides several potential benefits and challenges.

- The site is somewhat less central than Fanwood's, but still reasonably proximate to all residents of both communities, and easily accessible by car and from the majority of local schools.
 - It is within the Central Business District of Scotch Plains, which will promote greater use and avoid potential conflicts that might occur if it were completely within a quieter residential neighborhood.
 - It already has reasonably good access to dedicated library parking and several nearby municipal parking lots, but this may have to be increased to support a larger joint library.
 - The existing Library appears to be in relatively good condition, so the consultants will consider the feasibility of both an addition/renovation solution as well as a new replacement facility.
- The addition/renovation strategy provides the opportunity to phase construction and thereby avoid temporarily relocating library operations during construction, but will require the use of more land to accommodate the building.
 - The replacement strategy would probably be more expensive, and to avoid the cost and disruption of a temporary relocation during construction it would have to be constructed in a different part of the site than the existing Library, such as an existing parking lot.
 - Both schemes would constrain parking availability during construction.



(ABOVE) THE SCOTCH PLAINS LIBRARY SITE ANALYSIS
 (BELOW) THE SCOTCH PLAINS LIBRARY SITE OPTION

The Fallback Position – Maintaining the Two Existing Library Locations

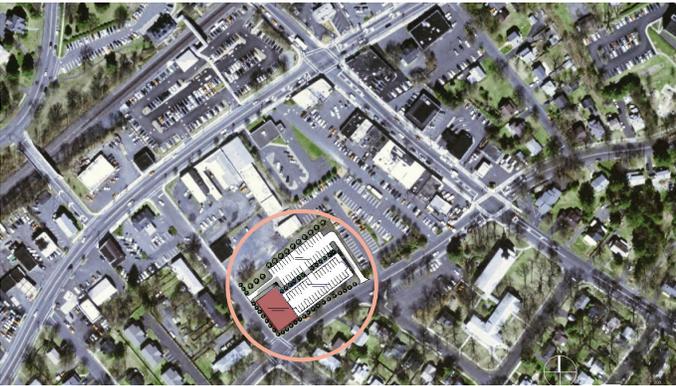
Meeting the goals and expectations of the program with this scheme would be very difficult, if not impossible for several reasons, but the Directors want to know what could be achieved if this were the only option available to them.

- Given the limited size of the existing Fanwood Library site there are very limited opportunities to expand the building and increase parking without acquiring more land and vacating at least one street, which is highly unlikely.
- This would relegate the Fanwood site to what would be in effect a “branch library” function, with the larger Scotch Plains Library facility providing the majority of the additional space required and probably operating as the “central” or “main library” of the joint system. This would be something like the present Montclair Public Library System.

- The most serious downside of this option is that it runs counter to the consolidation goals and spirit of the Grant because it maintains two sites and limits potential service, productivity and efficiency improvements. Studying this option may serve as a way to illustrate the many reasons why it is impractical and inequitable to maintain two library sites.

Study of an Alternative Joint Library near the Fanwood Train Station

In October of 2007, during the preliminary evaluation of the options outlined above, another potential location for the Library was identified and subsequently studied by the consultants, which proved to be a viable alternative. However, it was later determined that the site was no longer available for purchase.



(ABOVE) THE FANWOOD LIBRARY SITE ANALYSIS
(BELOW) STUDY OF AN ALTERNATIVE JOINT LIBRARY
NEAR THE FANWOOD TRAIN STATION

B. FINAL SITE AND BUILDING CONCEPT OPTIONS

After carefully evaluating the preliminary set of alternative sites for the new joint library, the consultants presented these to the Library Directors, who then obtained the input of both communities, including the Mayors. It was determined that the final schemes to be studied in greater detail would be limited to the following concepts:

- A New Replacement Library at the existing Scotch Plains Library Site;
- An Addition and Renovation of the existing Scotch Plains Library;
- Or, if necessary, as a fall back position – a combination of smaller additions and renovations to both the existing Scotch Plains and Fanwood Libraries – and to put a real cost on the needed improvements and renovations if the two libraries were to remain independent.

It was assumed that in all three concepts there would be an attempt to meet as many of the requirements outlined in the space program as possible, even though in the case of the Fanwood component it is apparent that there would be severe restrictions on growth due to the limited size and parking availability of that site.

During the development of these concept studies, the consultants decided it would be useful to consider both a 2-story and a 3-story addition and also identified another potential scheme for the new replacement library at Scotch Plains. This new scheme would retain the existing library for another use. Scotch Plains has been considering construction of a Community Center, especially to serve its senior population, but apparently has had some difficulty finding an appropriate site.

Program Net to Gross Analysis

In order to properly assess the total space needs and its impact on the site, the consultants prepared an analysis of both the assignable and non-assignable space requirements of the program to establish the appropriate net-to-gross multiplier to be applied to the space program recommendations included in LDS 2009 Project Feasibility Study. The following table illustrates the non-assignable building components that comprise the 1.33 multiplier, which leads to the 52,254 SF gross area figure used in the site and building concept studies of each option.

Based upon this analysis the net usable (plannable) area of a 50,000 GSF building would be 75% of the gross area, or 37,500 NUSF, resulting in a 1.33 net usable to gross area multiplier

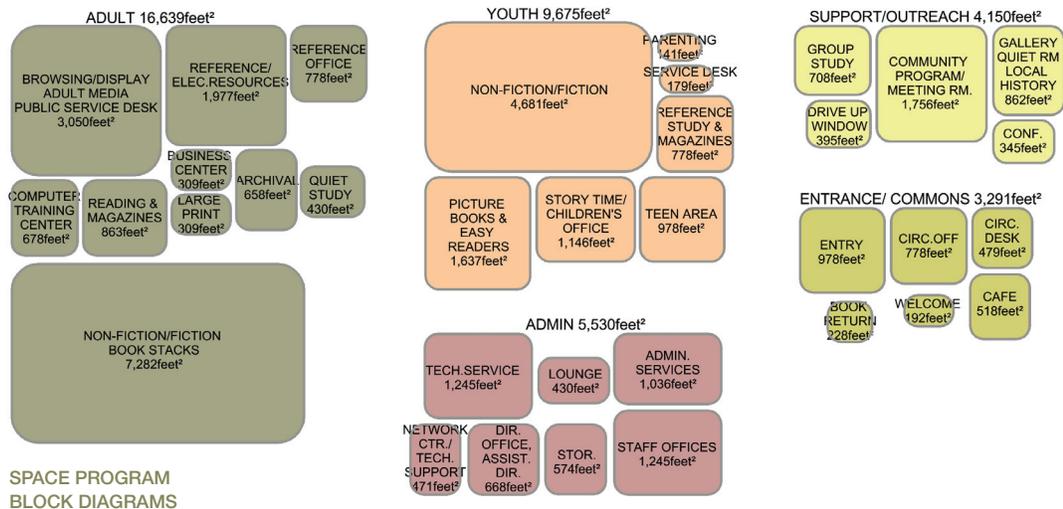
NON-ASSIGNABLE SPACES	AREA (in square feet)	NOTES
1. Exterior Walls	2,195	50,000 GSF / 3 floors = 16,667 SF = 90' x 185' or 550 LF / floor x 3 = 1,650 LF x 1.33 SF/LF
2. Exterior Columns at Walls & Free-standing Interior Columns	228	Assumes 30' x 30' structural bays - 3 bays wide x 6 bays long 18 - exterior wall cols. @ 2 SF = 36 SF / floor x 3 floors = 108 SF 10 - interior cols. @ 4 SF = 40 SF / floor x 3 floors = 120 SF
3. Interior Partitions	600	Assumes 600LF / floor x average of .333 SF / LF = 200 SF / floor x 3
4. Primary Horizontal Circulation	1,890	Assumes route equal to width of building, or 90 LF x 7' wide = 630 SF x 3 floors
5. Fire Stairs	1,200	Assumes 2 stairways @ 10' wide x 20' long = 200 SF x 2 stairs x 3 floors
6. Monumental Stairway (primary vertical circulation route)	720	Assumes 12' wide x 20' long stairway = 240 SF x 3 floors
7. Elevators & Elevator Machine Rooms	644	Assumes 2 elevators @ 8' x 10' = 80 SF x 2 = 160 SF x 3 floors = 484 SF + 2 machine rooms @ 80 SF each
8. Toilet Rooms & Janitor Room Facilities	1,440	Assumes Approx. 8% of gross area for rooms and shafts, or 50,000 GSF x .08
9. Mechanical Room & Shafts	4,000	Assumes Approx. 8% of gross area for rooms and shafts, or 50,000 GSF x .08
TOTAL:	12,717 SF	Approx. 25% of Gross Building Area.

PROGRAM ANALYSIS OF NET TO GROSS MULTIPLIER
FOR AN APPROX. 50,000 GSF 3-STORY LIBRARY

PROGRAM NET TO GROSS ANALYSIS

When a space program uses net areas that do not include an internal circulation factor for the various assignable components (i.e. collections, user seats, staff workstations) an additional factor of 1.10 should be applied to the 'net usable to gross area multiplier' to cover internal circulation corridors and aisles, which would result in a net to gross multiplier of 1.46. With this multiplier the net area of a 50,000 GSF building would be 34,247 NSF. For reference, in such cases a factor of 1.42 is generally accepted by many consultants for a multi-story library building.

However, evaluation of the net area assignments provided in the Library Development Solutions program indicates that they used net usable factors that include local circulation space, which would suggest we use the 1.33 net usable to gross multiplier, and that we should assume 37,500 NUSF is available in a 50,000 GSF library scheme. Applying this factor to our net area calculations of the latest program resulted in a gross area of 52,254 GSF used in the space program summary and concept studies.



FUNCTIONAL AREA	COLLECTIONS		USER SEATING		STAFF/OTHER AREAS		TOTAL AREA	COMMENTS
	VOLUMES ETC.	AREA NSF	SEATS	AREA NSF	WORK STATIONS	AREA NSF		
ENTRANCE/COMMONS								
Entry	-	-	10	300	-	700	1,000	Lobby, waiting area and displays
Concierge/Welcome	-	-	-	-	-	200	200	Welcome desk and 2-3 patrons
Book Return	-	-	-	-	-	250	250	2 slots & bins in office
Café/Bookstore/Gift Shop	-	-	16	240	-	300	540	Café/gift counter and storage
Circulation Office	1,000	200	-	-	4	600	800	
Circulation Desk and Self Check*	500	50	-	-	3	450	500	350 SF desk & 2 self check stations
Entrance/Commons Total	1,500	250	26	540	7	2,500	3,290	
ADULT								
Browsing/Displays	5,000	1,000	6	180	-	-	1,180	
Adult Media	15,000	1,500	4	120	-	-	1,620	
Public Service Desk	100	10	-	-	4	320	330	
Reference/Electronic Resources	5,000	500	50	1,500	-	-	2,000	
Computer Training Center	100	10	13	585	-	100	695	
Non-Fiction/Fiction Book Stacks	70,000	7,000	10	300	-	-	7,300	
Reading and Magazines	190	127	26	780	-	-	907	
Business Center	-	-	-	-	-	-	300	We need more details
Large Print	3,000	300	2	60	-	-	360	
Local History/Archival Collection	1,500	150	15	450	-	100	700	Volunteer desk
Quiet Study	-	-	16	480	-	-	480	
Reference Office	100	10	-	-	5	750	760	
Adult Total	99,990	10,607	142	4,455	9	1,270	16,632	
YOUTH SERVICES								
Service Desk	-	-	2	200	-	-	200	
Reference, Study & Magazines	2,000	200	20	600	-	-	800	
Parenting	200	40	4	120	-	-	160	
Picture Books and Easy Readers	7,500	750	30	900	-	-	1,650	
Non-fiction/Fiction Book Stacks	45,000	4,500	8	240	-	-	4,740	
Teen Area & Homework Help Center	5,000	500	18	450	-	-	950	
Story Time/Crafts	-	-	50	500	-	100	600	Lectern & storage
Children's Office	500	50	-	-	6	530	580	
Youth Total	60,200	6,040	132	3,010	6	630	9,680	
SUPPORT AND OUTREACH SERVICES								
Group Study	-	-	30	750	-	-	750	
Community Program/Meeting Room	-	-	175	1,750	-	-	1,750	Entry located outside Library security
Conference Room	-	-	15	375	-	-	375	
Gallery Space	-	-	8	240	-	-	240	Standing space and displays
Quiet Room	-	-	8	240	-	-	240	
Local History Room	1,000	100	8	240	-	60	400	Volunteer desk
Drive Up Window	400	-	-	-	1	400	400	
Outreach Total	1,400	100	244	3,595	1	460	4,155	
ADMIN/BACK OF HOUSE								
Technical Services	400	40	-	-	8	1,200	1,240	
Network Center/Technology Support	100	10	-	-	3	450	460	
Director's Office	100	10	-	-	1	300	310	
Assist Director	100	10	-	-	3	300	310	
Administrative Services	100	10	-	-	10	1,000	1,010	
Staff Offices	-	-	-	-	8	1,200	1,200	
Staff Lounge	-	-	-	-	12	400	400	Includes 100 SF kitchenette
Receiving/Custodial/Storage	-	-	-	-	2	600	600	See Note 1
Admin/Back of House Total	800	80	-	-	47	5,450	5,530	
TOTAL LIBRARY	163,890	17,077	544	11,600	70	10,310	39,287	
Non-Assignable Area (33% X NASF)							12,965	
GRAND TOTAL GSF							52,252	
Scotch Plains Library Existing Building							17,419	
GRAND TOTAL GSF Addition							34,833	

FINAL SITE CONCEPT OPTIONS

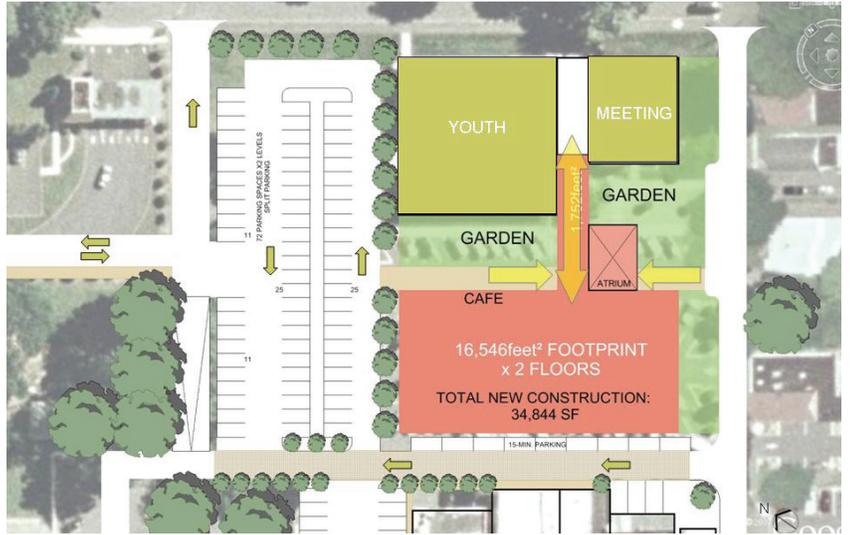
Option 1: Scotch Plains
New Construction
52,254 GSF



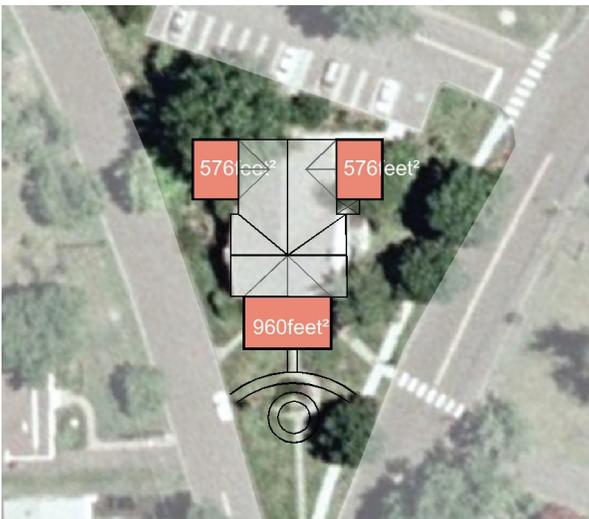
Option 2: Scotch Plains
3 story 34,209 GSF Addition
17,419 GSF Renovation
to Existing Library



Option 3: Scotch Plains,
 2 story 34,844 GSF Addition
 17,419 GSF Renovation
 to Existing Library



Option 4: Scotch Plains
 51,390 GSF New Building
 17,419 GSF Renovation of Existing
 for Other Use (budgeted separately)



Option 5:
 • Fanwood: 4,224 GSF Addition and
 6,000 GSF renovation to Existing

Option 5:
 • Scotch Plains: 24,630 Addition and 17,419 GSF renovation to Existing

OPTION 1 – NEW 3-STORY REPLACEMENT LIBRARY AT EXISTING LIBRARY SITE

Existing Scotch Plains Library Site and Township Parking Lot 1

This scheme involves the demolition of the existing 17,419 SF Scotch Plains Library and construction of a new 52,254 SF 3-story Library. To minimize the visual impact of its height on the adjacent residential neighborhood across Forest Road, the new structure is set approximately 22 feet further back from the street than the existing library, which provides space for a better buffer of trees and landscaping.

The building is L-shaped with one wing on Forest Road and the other on Bartle Avenue providing a much stronger public presence for the Library by making it more visible from Downtown, especially from City Hall and the attractive public park at the busy intersections with Bartle Avenue, Park Avenue and Front Street.

The proposed location of the atrium lobby, set between both wings, provides for dual entry from Bartle Avenue and the public parking lot to the south, as well as from the public parking lot to the north. To promote convenient pedestrian and driver access to the library, this user-friendly entry concept has been recommended for all the schemes at the downtown Scotch Plains site.

The greatest strength of this scheme is that it makes it possible to rethink and reinvent the combined library as a totally new high quality facility without any of the limitations of the current building. It provides the opportunity to create a completely new exterior and interior image, to plan the library with the highest level of flexibility, and make the fullest use of new mechanical and electrical systems technologies and sustainable design principles.

This option also has the smallest footprint, or building site coverage, of any scheme, 17,417 SF, or approximately 25% more than the existing Library, which has a footprint of 15,590 SF. This minimizes the impact and disruption of the new building to the remaining areas of the site. The existing Library site and adjacent municipal lot provides 115 parking spaces in a large 97 space open lot at the center of the block and one small 18 car lot just north of the building. With minor reconfiguration of the existing parking lots, Option 1 provides 112 parking spaces, and offers the opportunity to create a small protected outdoor reading area and playground just north of the Library. A drive-up book pickup and return window is located at the north end of the Forest Road wing.

OPTION 1

The following blocking & stacking plans illustrate the proposed distribution of the program.

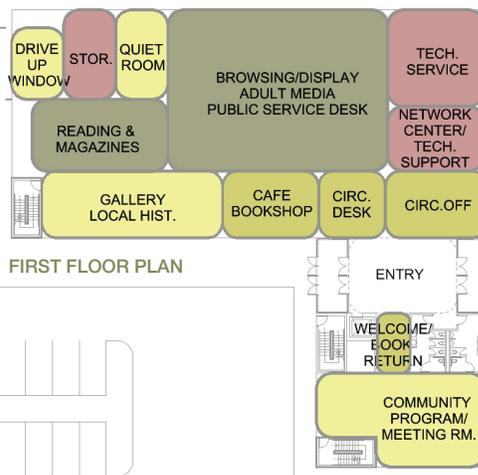
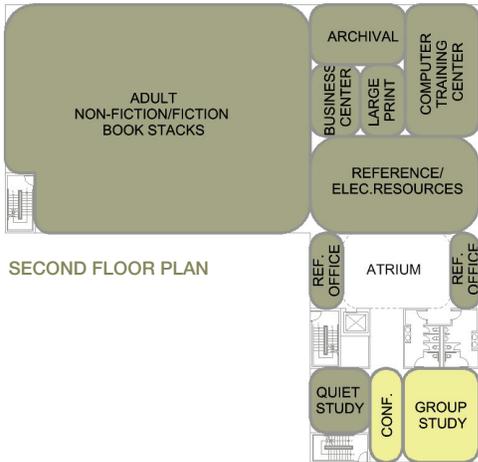
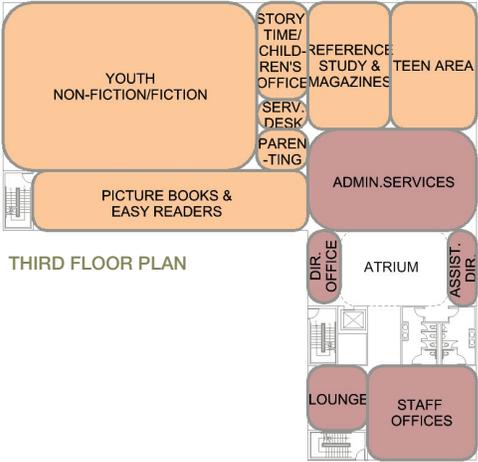
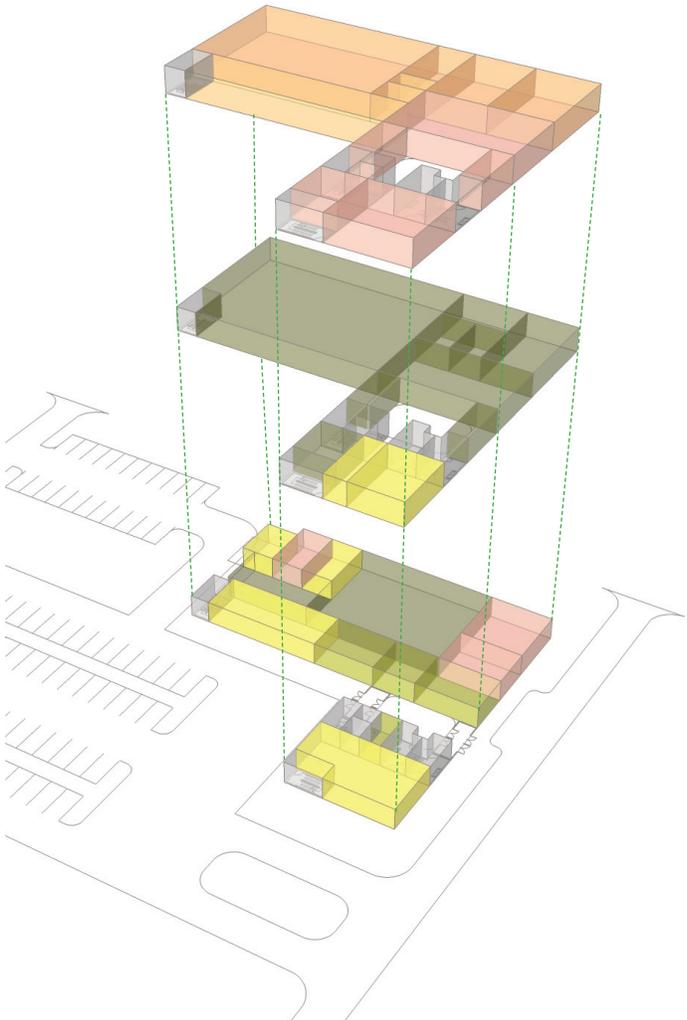
The First Floor houses the major public service and staff areas one would expect at the entry level such as the Circulation Desk and Office and Community Program Room, with the Café/Gift Shop, Gallery, Adult Browsing/Displays and Media prominently located and highly visible, and with the Quiet/History Room, the Drive-up Window and Technical Services Department in the background.

The Second Floor holds the balance of the Adult Collections and service areas such as Reference/Electronic Resources and Computer Training, Group and Quiet Studies, and the Business Center.

The Third Floor houses Youth Services, including the Story Time and Teen Areas in one wing, and various Administrative Services and other offices which do not directly serve the public in the other wing. This is similar to the very successful arrangement utilized at the Princeton Public Library, which provides children with their own special and protected place.

The most serious downside of this scheme is the disruption and additional costs associated with the temporary relocation site that must be found and leased for from 14 to 18 months. It is also the most costly construction scheme, and the demolition of a relatively well-built sound structure that has been renovated within the last decade will tend to offset at least some of the sustainable design benefits of a new facility.

- ADMINISTRATION
- ADULT
- YOUTH
- SUPPORT / OUTREACH
- ENTRANCE / COMMONS
- CORE / NON-ASSIGNABLE



OPTION 2 – NEW 3-STORY ADDITION & RENOVATION OF EXISTING LIBRARY

In this scheme the existing Library is used to provide a distinct and convenient location for Youth Services and Technical Services Department offices, with the new 34,209 SF 3-story addition holding the balance of the program including all of Adult Services. This creates a convenient easy to access special environment for children and teens that minimizes the potential for noise disruption and potential conflict with Adult areas, an important design goal identified in the Project Feasibility Study.

By retaining the existing 1-story facility this scheme presents practically no visual impact on the adjacent residential neighborhood, while the 3-story addition wing provides even greater presence for the Library on Bartle Avenue as seen from Downtown than Option 1. Building coverage is approximately 26,200 SF, which also has a relatively minor impact on the remaining site. It provides both a large and a small parking area like Option 1, with a total of 106 spaces; and offers a protected outdoor reading area & playground just north of the Library, and a small reading garden at the south entry between the original Library and the new addition.

As in all options for the Scotch Plains site, the overall plan for the block envisions a significant enhancement of the site design and parking for the back entries of the businesses that primarily front Park Avenue, but which are most accessed by the public via entrances off the rear parking lot. While not detailed here, if Township Parking Lot 1 were redesigned, improvements along the west edge could include sidewalks, landscaping, and a pedestrian friendly block paver road instead of asphalt paving to improve the appearance of this zone. The goal of the design would be to both increase ease and accessibility of parking (making sure not to lose spaces for quick pickups at the rear of the stores), and to provide a pleasant landscaped outdoor place with planters and benches.



(ABOVE) THREE-STORY ADDITION
(BELOW) 3D AERIAL DIAGRAM

OPTION 2

The following blocking & stacking plans illustrate the proposed distribution of the program.

Besides the Youth Services and Technical Services Department in the existing 1-story building, the new addition wing of the First Floor also houses the major public service and staff areas expected at the entry level such as the Circulation Desk and Office and Community Program and Meeting Room, with the Café/Gift Shop, Gallery, Adult Browsing/Displays and Media prominently visible and the Drive-up Window and Circulation Office in the background.

The Second Floor holds the balance of the Adult Collections and service areas such as Reference/Electronic Resources.

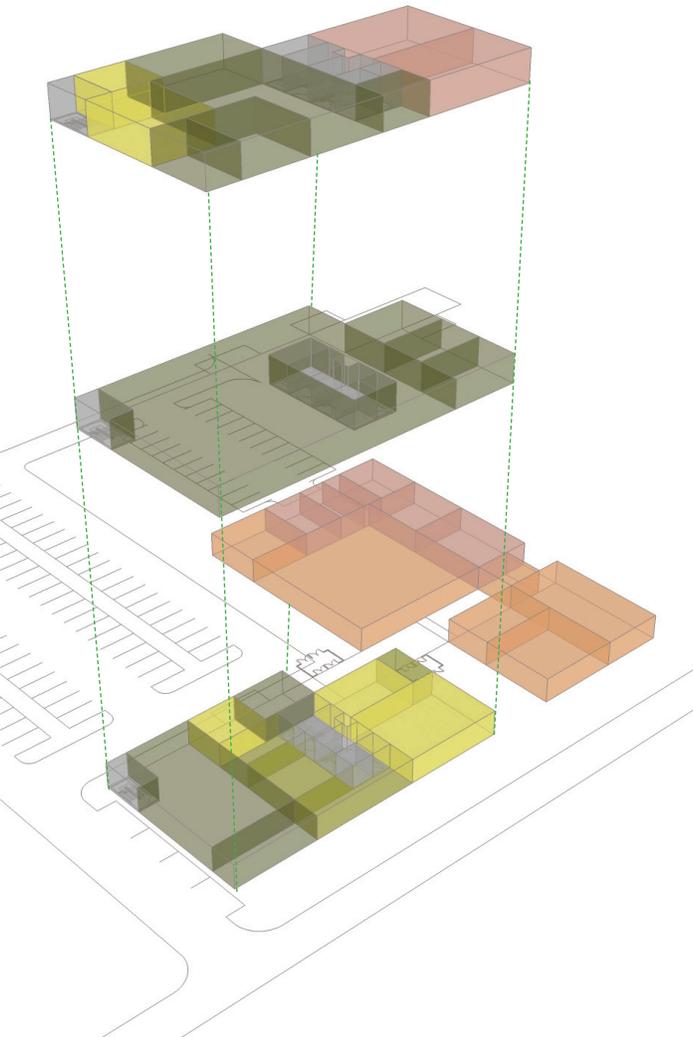
The Third Floor houses more specialized Adult Service areas like Computer Training and the Business Center, and also provides for a variety of Group and Quiet Studies and various Administrative Services and non-public service offices.

One of the greatest strengths of this scheme is that the existing Library can remain in full operation while the addition is constructed, and can be renovated after all operations are temporarily located within the new addition. It will have a lower construction cost than Option 1.

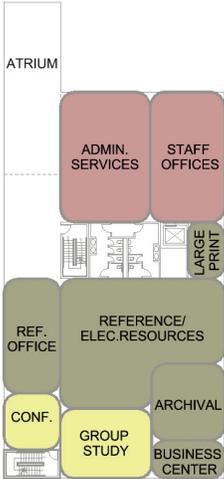
From a sustainable design perspective, the addition can employ the newest sustainable design principles and this option also preserves a significant amount of existing construction, where some sustainable design opportunities can be pursued.

Among the challenges faced with Option 2 is to effectively blend the new exterior design materials and scale of the taller 3-story addition with that of the existing low-slung 1-story building. Another is the need to properly plan the schedule and construction phasing of the project so that construction, temporary relocations, partial demolition and renovations, and final fit-up and moves do not create delays or disruption of services.

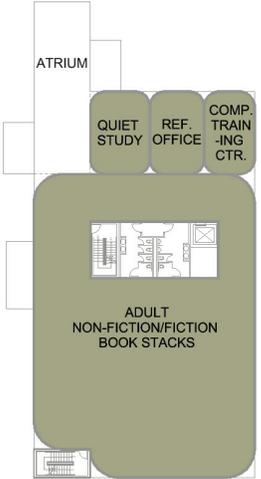
- ADMINISTRATION
- ADULT
- YOUTH
- SUPPORT / OUTREACH
- ENTRANCE / COMMONS
- CORE / NON-ASSIGNABLE



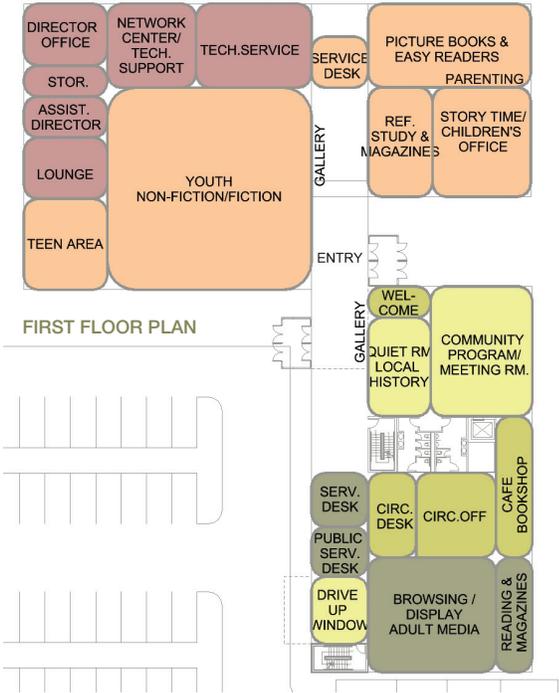
THIRD FLOOR PLAN



SECOND FLOOR PLAN



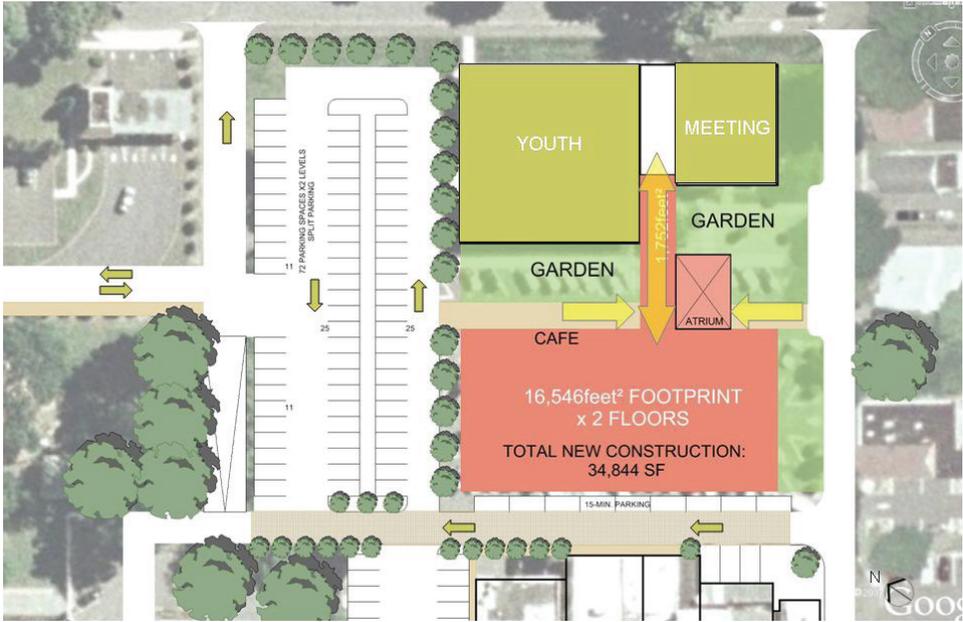
FIRST FLOOR PLAN



OPTION 3 – NEW 2-STORY ADDITION & RENOVATION OF EXISTING LIBRARY

This is a variation of the Addition & Renovation scheme that is similar to Option 2, but with a 2-story addition. As a result of it having one less floor of new construction, the building footprint is significantly larger, approximately 34,844 SF, which calls for a major realignment of the site and providing only about 81 surface parking spaces. It is possible to provide about 153 spaces by creating a split-ramped open air parking deck, with the lower level approximately half a floor below grade and the upper level half a floor above grade.

The new addition is oriented parallel to the existing library structure and is set approximately 55 feet to the west to avoid crowding it and to create an attractive garden at the north entryway. The addition is connected to the existing 1-story library structure via a glass enclosed 1-story passageway and features a 2-story entry lobby. The passageway and Lobby are effectively used to provide Gallery space and a Café, and can be secured to provide after hours access to the Program/ Meeting Room complex at the south end of the existing structure. As with the earlier schemes, the Lobby can be conveniently accessed from the south through a formal pedestrian courtyard on Bartle Avenue, or from the public parking lot or deck to the north.



(ABOVE) TWO-STORY ADDITION
(BELOW) 3D AERIAL DIAGRAM

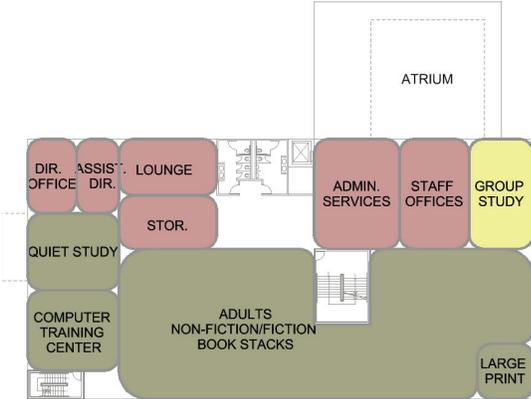
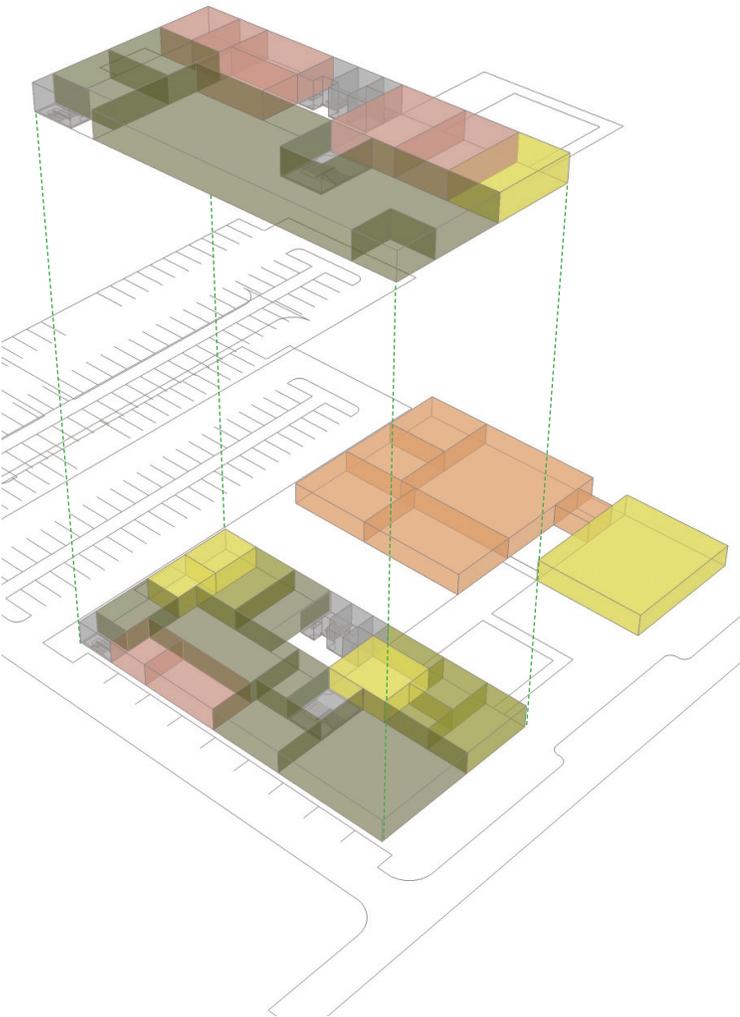
OPTION 3

The following blocking & stacking plans illustrate the proposed distribution of the program.

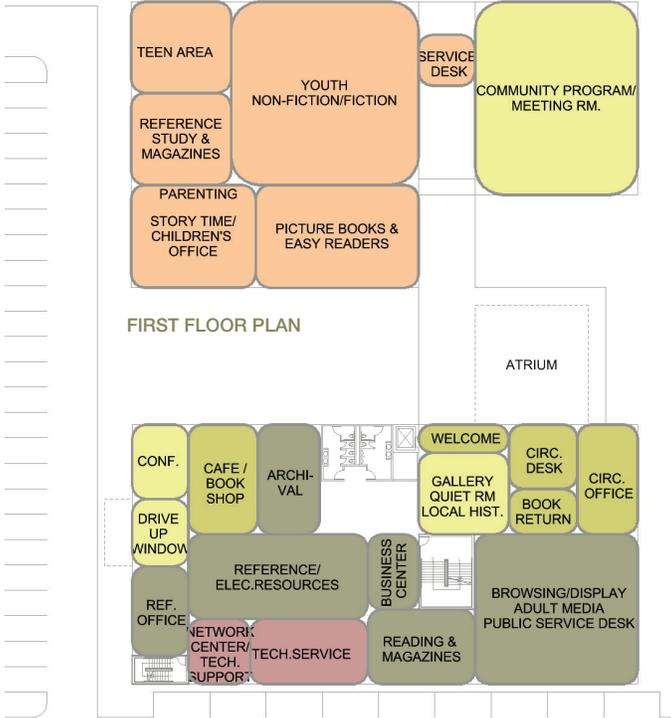
Besides Youth Services, in this scheme the Program/Meeting Room complex is located in the existing 1-story Library and is connected to the entry and new addition wing with a glazed 1-story passageway. The First Floor of the addition houses the other major public service and staff areas expected at the entry level of the Library such as the Circulation Desk and Office, with the Café/Gift Shop, Gallery, Adult Browsing/Displays and Media prominently located for high visibility, and with the Drive-up Window and Circulation Office and Technical Services Department in the background.

The Second Floor holds the balance of the Adult Collections and service areas such as Reference/Electronic Resources and the more specialized Adult Service areas like Computer Training and the Business Center, and also provides for a variety of Group and Quiet Studies and various Administrative Services and other non-public service offices.

- ADMINISTRATION
- ADULT
- YOUTH
- SUPPORT / OUTREACH
- ENTRANCE / COMMONS
- CORE / NON-ASSIGNABLE



SECOND FLOOR PLAN



FIRST FLOOR PLAN

OPTION 4 – NEW 3-STORY REPLACEMENT LIBRARY & ADAPTIVE REUSE OF THE EXISTING LIBRARY

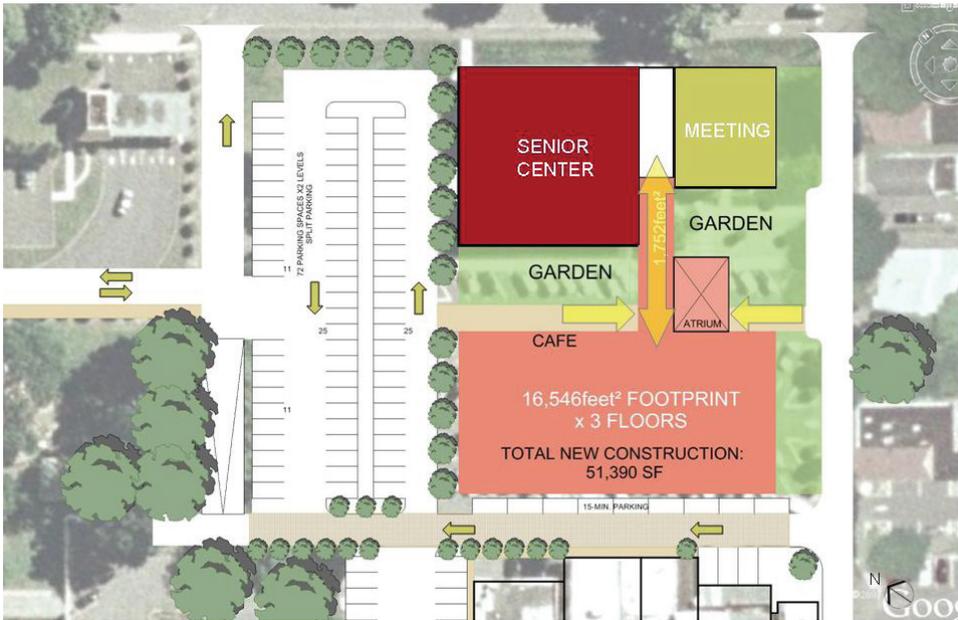
In this scheme the new 3-story Library building is set in approximately the same location as the 2-story addition in Option 3, about 55 feet west of the existing library building, which would probably be used to provide a home for a new Community Center. This is an especially good example of collocating complimentary public facilities that would also provide convenient access to and support for downtown Scotch Plains.

The greatest benefit of this scheme is that like Options 2 and 3 the existing library can remain in operation during construction, and because it will not be renovated for library use it will require only one move after the new Library is completed.

Since it doesn't require major demolition and temporary relocation, the Library construction cost for this scheme would be somewhat less than Option 1. However, the added user population related to the Community Center may call for construction of the 2-level open air parking structure at the north end of the site.

Option 4 assumes adaptive reuse of the existing Library building, which may or may not be a shared facility with the Library, which would require additional funding. However, the renovation and additional parking structure expense would be significantly less costly than purchasing a new site and constructing a new Community Center building.

Program distribution for the first and second floors would be similar to Option 3 and it is recommended that the new Library entry should be located on the east side across from the entry to the Community Center and protected with a common covered walkway or glazed passageway. It is possible to reduce the size of the new Library by locating at least some of the required program, like the Meeting Room complex, within the Community Center, resulting in a total facility size of 51,390 GSF.



(ABOVE) 3 STORY NEW LIBRARY AND EXISTING BUILDING FOR OTHER USE
(BELOW) 3D AERIAL DIAGRAM

OPTION 5 – ADDITIONS AND RENOVATIONS TO THE EXISTING FANWOOD & SCOTCH PLAINS LIBRARIES

The most serious limiting factor of this scheme is the limited size of the Fanwood Library site. As indicated in the site plan, at best the existing 6,000 SF could be expanded by 4,224 SF, for a total of 10,224 SF, and like the existing facility half this space would be in the basement.

Because it would be only about one quarter the size of the expanded Scotch Plains facility, and especially because of the very limited parking available, it is recommended that the Fanwood Library should provide less extensive library services than Scotch Plains. It would house a proportional amount of the Adult and Youth Collections and limited public seating and meeting space, with only Public Services staff offices. Administrative and Technical Services offices and major Program/Meeting spaces would be best located at Scotch Plains.

To achieve the total capacity of the proposed program the Scotch Plains site would require a 24,630 SF addition and 17,419 SF renovations, for a total of 42,030 SF. It would have a building configuration and program distribution similar to either Option 2 or 3.

Because it involves two construction sites and the need for a temporary location for Fanwood during construction it would be the least desirable scheme. This and the fact that it requires the continued operation and management of two unequal library facilities are the major downsides of this scheme.



(ABOVE) SCOTCH PLAINS ADDITION
(BELOW) FANWOOD ADDITIONS

C. COST ANALYSES AND RECOMMENDATIONS

International Consultants, Inc. of Philadelphia, PA were retained to develop a comparative analysis of the construction costs and project costs for the five options under consideration.

This Site Concept Feasibility Study does not involve the level of architectural design and engineering typically needed to produce a detailed cost estimate. However, it does provide sufficient information to provide the ROM (rough order of magnitude) comparative estimates for:

- Existing site and building assessments,
- Proposed site development schemes,
- General building and systems requirements,
- Configuration and scope of the five Site Concept Options.

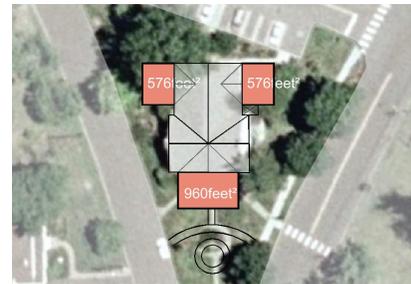
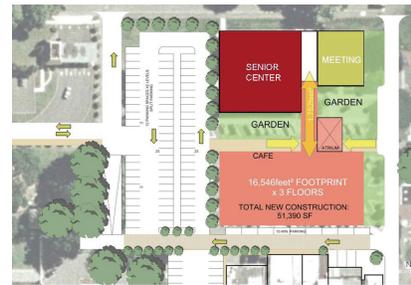
“Raw” Construction Costs

Depending on the specific scope of each option, Construction Costs include current unit costs for the following construction categories:

- Demolition of the Existing Library . . . (Option 1)
- Renovation of the Existing Library(Options 2, 3, 5)
- New Construction (All Options)
- Reconfiguration of Existing Parking(Options 1, 2, 3 & 5)
- Parking Structure (Partial Pro- rated). (Option 4)
- Site Development, Outdoor Reading, Playground (All Options)
- Temporary Protection/ Phasing Existing Library(Options 2, 3 & 5)

The unit cost for new construction in Options 2 & 3 is slightly higher than Option 1 because they are additions, which tend to be more costly and because they are somewhat smaller. These addition options involve a relatively costly, extensively glazed one-story connecting passageway.

The unit cost for the Fanwood Library is much higher because it involves three very small additions, with half the space below ground in an area with a high water table. Renovation costs at Fanwood are also higher because of the advanced age and poor condition of the building and its systems and the limited size of the project.



(ABOVE) OPTION 1
(MIDDLE) OPTION 2
(BELOW) OPTION 3

(ABOVE) OPTION 4
(MIDDLE) OPTION 5 SCOTCH PLAINS
(BELOW) OPTION 5 FANWOOD

Description	Quantity	Unit	Unit Cost	Amount
<u>OPTION 1 - SCOTCH PLAINS NEW CONSTRUCTION</u>				
Demolish Existing Library Building	17,419	SF	\$ 16.50	\$ 287,414
New Building, 3 Story, 17,418 sf/Floor	52,254	SF	350.00	18,288,900
Reconfigure Existing Parking	110	Car	1,500.00	165,000
Site Development, Outdoor Reading, Playground	1	LS	750,000.00	750,000
Subtotal				\$ 19,491,314
Contingency	10%			1,949,131
Subtotal				21,440,445
Escalation to Midpoint (1.5 Years @ 5%/year)	7.5%			1,608,033
TOTAL CONSTRUCTION COST - OPTION 1				\$ 23,048,478
Lease for Temp Library (\$20/sf/year x 18 Month)	17,419	SF	30.00	522,570
Soft Cost/Fees/Furnishings/Project Contingency/IT	30%			6,914,543
TOTAL PROJECT COST - OPTION 1				\$ 30,485,592
<u>OPTION 2 - SCOTCH PLAINS ADDITION (3 STORY) & RENOVATIONS</u>				
Renovate Existing Library Building	17,419	SF	\$ 150.00	\$ 2,612,850
New Addition, 3 Story, 11,403 sf/Floor	34,209	SF	360.00	12,315,240
Reconfigure Existing Parking	106	Car	1,500.00	159,000
Site Development, Outdoor Reading, Playground	1	LS	750,000.00	750,000
Temporary Protection/Phasing Existing Library	1	LS	50,000.00	50,000
Subtotal				\$ 15,887,090
Contingency	10%			1,588,709
Subtotal				17,475,799
Escalation to Midpoint (1.5 Years @ 5%/year)	7.5%			1,310,685
TOTAL CONSTRUCTION COST - OPTION 2				\$ 18,786,484
Soft Cost/Fees/Furnishings/Project Contingency/IT	30%			5,635,945
TOTAL PROJECT COST - OPTION 2				\$ 24,422,429
<u>OPTION 3 - SCOTCH PLAINS ADDITION (2 STORY) & RENOVATIONS</u>				
Renovate Existing Library Building	17,419	SF	\$ 150.00	\$ 2,612,850
New Addition, 2 Story, 16,546 sf/Floor	33,092	SF	365.00	12,078,580
Connection Link	1,752	SF	450.00	788,400
Reconfigure Existing Parking	81	Car	1,500.00	121,500
Site Development, Outdoor Reading, Playground	1	LS	750,000.00	750,000
Temporary Protection/Phasing Existing Library	1	LS	50,000.00	50,000
Subtotal				\$ 16,401,330
Contingency	10%			1,640,133
Subtotal				18,041,463
Escalation to Midpoint (1.5 Years @ 5%/year)	7.5%			1,353,110
TOTAL CONSTRUCTION COST - OPTION 3				\$ 19,394,573
Soft Cost/Fees/Furnishings/Project Contingency/IT	30%			5,818,372
TOTAL PROJECT COST - OPTION 3				\$ 25,212,945

Design/Construction Contingency

10% is added to the raw construction costs for Options 1, 2, 3 & 4; with 15% applied to Option 5 because it involves two sites and due to the greater potential for unforeseen problems at the old Fanwood Library.

Cost Escalation

Though the construction industry is currently weak, based upon recent experience 5% has been added to Construction Cost for each year until the mid-point of construction. The current estimate assumes this will be 18 months from today, or 7.5% of Construction Cost, but this date could easily be pushed out an additional year or two.

Soft Costs, Fees & Furnishings

An allowance of 30% is added to cover Soft Costs, which includes an owner's project contingency of 10%; surveys, permits and legal fees and moving expenses; an allowance of 10% for architectural engineering and special consultants' fees; and an allowance of \$25.00/SF is included for furniture and equipment. AV, office and computer FFE is usually not included in construction and project costs.

Temporary Relocation Costs

Option 1 includes an allowance for leasing a temporary location for the Scotch Plains Library so that the existing building can be demolished and replaced.

Description	Quantity	Unit	Unit Cost	Amount
OPTION 4 - SCOTCH PLAINS NEW CONSTRUCTION w/ADAPTIVE REUSE OF EXISTING				
Reuse/Renovate Existing Library Building				N I C
New Building, 3 Story, 16,546 sf/Floor	49,638	SF	350.00	17,373,300
Connection Link	1,752	SF	450.00	788,400
Structured Parking	76.5	Car	20,000.00	1,530,000
Half of Total Required, Prorated with Reuse of Existing				
Site Development, Outdoor Reading, Playground	1	LS	750,000.00	750,000
			S subtotal	\$ 20,441,700
			Contingency 10%	2,044,170
			S subtotal	22,485,870
Escalation to Midpoint (1.5 Years @ 5%/year)	7.5%			1,686,440
TOTAL CONSTRUCTION COST - OPTION 4				\$ 24,172,310
Soft Cost/Fees/Furnishings/Project Contingency/IT	30%			7,251,693
TOTAL PROJECT COST - OPTION 4				\$ 31,424,003
OPTION 5 - ADDITIONS/RENOVATIONS @ SCOTCH PLAINS & FANWOOD				
Scotch Plain				
Renovate Existing Library Building	17,419	SF	\$ 150.00	\$ 2,612,850
New Addition	24,630	SF	390.00	9,605,700
Reconfigure Existing Parking	110	Car	1,500.00	165,000
Site Development, Outdoor Reading, Playground	1	LS	750,000.00	750,000
Temporary Protection/Phasing Existing Library	1	LS	50,000.00	50,000
Fanwood				
Renovate Existing Library Building	6,000	SF	\$ 200.00	\$ 1,200,000
New Additions (3 Small 2 Story Additions)	4,224	SF	500.00	2,112,000
Site Development, Outdoor Reading, Playground	1	LS	250,000.00	250,000
Temporary Protection/Phasing Existing Library	1	LS	35,000.00	35,000
			S subtotal	\$ 16,780,550
			Contingency 15%	2,517,083
			S subtotal	19,297,633
Escalation to Midpoint (1.5 Years @ 5%/year)	7.5%			1,447,322
TOTAL CONSTRUCTION COST - OPTION 5				\$ 20,744,955
Soft Cost/Fees/Furnishings/Project Contingency/IT	30%			6,223,486
TOTAL PROJECT COST - OPTION 5				\$ 26,968,441

RECOMMENDATIONS/CONCLUSION

Based upon their review and analysis of the benefits and challenges (pros & cons) of each scheme, the consultants recommend Option 2, because it provides the following benefits:

- It is the least costly option;
- It provides a stronger visual presence from Downtown than Option 1;
- It limits the need for extensive reorganization and reconstruction of the site;
- It has limited impact on the operations and public access to commercial properties to the west;
- The existing Library can remain in operation during the construction of the addition;
- It provides the opportunity to achieve high sustainable design goals by saving and upgrading the existing library structure, while creating a new high performance building that provides 67% of the total space of the expanded Library;
- It provides the second largest first floor footprint of all schemes (Option 3 is slightly larger), which is desirable for public libraries; and which provides easy access to a clearly defined dedicated Youth Wing.

However, if Scotch Plains, as has been suggested, would like to create a Community Center to repurpose the existing Library, then the consultants recommend that consideration be given to Option 4 because:

- It would be a very cost-effective way to provide a much-needed Community Center, without the difficulty of finding an appropriate site in an extensively developed town, and avoiding the potential political fallout;
- These are very compatible public uses that would provide great convenience to citizens of all ages, but especially seniors;
- Some areas, such as the large meeting space, might be shared reducing the size of both facilities;
- It would increase the user traffic Downtown benefiting the local business community;
- It is a very effective use of limited Township – owned land;

The one potential detriment is that it may require the construction of a low structured parking facility, the cost of which could be shared by both projects.

**SUPPORTING ASSESSMENTS
AND SCOPE DESCRIPTIONS**

3

SITE AND BUILDING PLANNING ASSESSMENTS SCOTCH PLAINS LIBRARY



The current Scotch Plains Public Library building was designed by McDowell, Goldstein Associated Architects and opened in 1967. Evidence of systems at the end of their lifespan surfaced in 2003, when a major fire broke out in the rooftop HVAC units. Following emergency replacement of the rooftop HVAC units and damaged ceilings, and replacement of electrical wiring that was discovered to not comply with code, in 2004 the Library Board hired Robert Wanhouse AIA to perform a complete conditions assessment of the building.

The Wanhouse report recommended needed “priority and safety” repairs and updates to the building in order to rehabilitate aging systems. Based on the findings in the report, MRM Architecture was subsequently hired in 2005 to prepare construction documents for the renovation of the building, which was completed that year at an approximate total cost of \$800,000. The work included:

- Complete replacement of the metal and built-up roofing systems, including insulation and vapor barriers, downspouts and gutters
- Replacement of all exterior windows and doors to provide energy efficient insulated glazing units
- Reconfiguration and replacement of toilet rooms, including provisions for A.D.A. barrier free access
- Stair railing replacements to comply with building life safety codes
- New lighting in children’s area and all office spaces



The recent renovation achieved the immediate needs of preventing imminent failure of the roof and bringing the building into minimum compliance with current building code and A.D.A. requirements. This study poses several options for the future of the existing library building, including:

- Demolition of the structure to make way for a new building
- Renovation of the building for specific library functions such as offices and expanded youth and children's library programs (in conjunction with a new addition to the building)
- Renovation of the building for non-library but complementary uses such as a Senior Center, Civic Meeting Space (Scouts etc), Teen Center, etc.

The renovation options would by necessity require further upgrade of the facility to meet current building and energy codes, but would preserve an essentially sound structure for reuse, which is in itself a desirable "green" option. Additional green initiatives in a renovation could include:

- Improvement of the insulating value of the exterior enclosure walls – a need evidenced by the thermal transmission of heat and cold to the interior brick
- Replacement of the 'emergency replacement' rooftop AHU's with acoustically insulated and more energy efficient units
- Consideration of use of a raised-floor displacement ventilation system, to only condition the "people" zones in these very tall spaces. There is no need to waste energy and dollars providing air conditioning to lofty ceiling spaces.
- Further upgrade of electrical systems and provision for more wired and wireless data access points in the building

Renovated interior finishes, and new furnishings and equipment would also need to be provided depending on the future function of the space.

The following sections outline the building design and infrastructure requirements that inform our Preliminary Project Cost Estimates for the Library's public vetting and future fundraising consultant's efforts.

SCOTCH PLAINS LIBRARY RENOVATION AND ADDITION

Section I – Project Description

Facility: Scotch Plains Public Library, Union County, New Jersey

The building is located in the downtown business district off Park Avenue in Scotch Plains.

Project Description:

The project options include either demolition of the existing structure and construction of a new library on the site, or several sub-options for renovating the existing building and constructing a linked but essentially separate new building addition.

Section II – Scope of Work

The existing building is approximately 17,419 GSF, including 12,775 NSF on the first floor and 4,644 NSF in the basement, for a total of 17,419 NSF. According to IBC classification, the Use Group is “A-3 Assembly” and the Construction Type can be assumed to be “3-B Combustible.” Scope Options are fully illustrated and described in Part 2 of this report, and include:

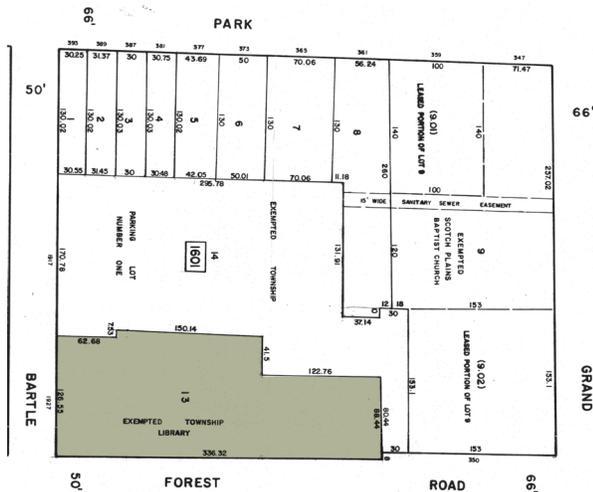
Option 1: New Construction @ 52,254 GSF

Option 2: 3 story 36,804 GSF Addition and 17,419 GSF Renovation to Existing Library

Option 3: 2 story 33,322 GSF Addition and 17,419 GSF Renovation to Existing Library

Option 4: 3 story 43,646 GSF New Building and 17,419 GSF Renovation of Existing for Other Use (budgeted separately)

Option 5: 25,776 Addition and 17,419 GSF renovation to Existing (this option assumes a 4,224 GSF Addition and 6,000 GSF renovation to the Existing Fanwood Memorial Library)





Section III – Applicable Codes and Regulations

The project would be permitted by the Township of Scotch Plains and would be required to comply with the New Jersey Uniform Construction Code (N.J.A.C. 5:23) which includes the following codes and regulations:

1. Building: 2006 International Building Code
2. Mechanical: 2006 International Mechanical Code
3. Electrical: 2008 National Electric Code with local amendments
4. Plumbing: 2006 National Standard Plumbing Code
5. Accessibility: Barrier Free Subcode and ANSI A117.1-2003
6. Renovation: Rehabilitation Subcode (N.J.A.C. 5:23-6)

Zoning : Joseph Timko, Scotch Plains Township Engineer, confirmed on 4/21/2009 that the current Scotch Plains Public Library lot and the adjacent Township parking lot 1 are in "Zone P" (owned by the township), and that there are no restrictions for setbacks and maximum height. Therefore no variance is required if the project exceeds the limit above neighborhood restrictions.

Section IV – Site Access

1. Passenger Vehicular Access: Currently, the Library (Block 1601, Lot 13) is contiguous to "Township Parking Lot 1" (Block 1601, Lot 14). A drop off and A.D.A. parking is near the Library's entry patio
2. Loading Dock Access: No dedicated loading area exists for the existing building, and deliveries are typically made through the front entrance. An exterior stair also provides access/egress from the basement level.
3. Pedestrian Access: Pedestrian access is provided from all sides of Library, from both the parking lot and sidewalks along Bartle Avenue and Forest Road.
4. Parking Accessibility: Permitted availability in designated spaces.

Section V – Site Development

1. Site preparation: Grading and excavation for both surface and decked parking options, as well as excavation for new addition foundations.
2. Paving and Site Lighting: New work anticipated for both the Library's existing parking lots and adjacent Township Parking Lot 1. New and renovated sitework assumes:
 - a. Loading Dock and Entrances: Poured-in-place concrete apron.
 - b. Sidewalks: Poured in place concrete.
 - c. Curb & Gutter: Poured in place concrete.
 - d. Curb Cut for Handicapped Ramps: Cast-in-place concrete ramp with exposed aggregate finish.
 - e. Site Lighting: Township standard lighting and bollards.
3. Landscaping: Landscaping along perimeter streets and sidewalks and along existing building foundations. New landscaping includes an outdoor reading area and children's playground.

Section VI – Structural Systems

Information provided primarily for new building and addition options:

1. Live Loading Design Criteria: Final load determinations would be provided by the Structural Engineer during subsequent phases of the project:
 - a. *Stack areas:* 150 psf
 - b. *High-Density File Areas:* 250 psf
 - c. *Roof:* 40 psf (min.)
 - d. *Penthouse:* 150 psf
 - e. *Office:* 50 psf + 20 psf Partition Load
 - f. *Lobbies, Stairs, Corridors:* 100 psf
 - g. *Mechanical Rooms:* 150 psf
 - h. *Loading Dock:* 250 psf

Design live loads can be reduced based on tributary area as permitted by the building code.

2. Substructure: (Foundations)

Cast-in-place concrete spread footings, foundation walls, retaining walls, and slab on grade.

3. Superstructure: (Floor Framing System)

Typical floor framing will consist of structural steel beams and girders with composite metal deck slabs. Braced frames around the atrium and elevator core to resist lateral loads. Metal roof decks.

Lateral stability for wind and seismic loads will be provided by the floor, roof, and column frames.

4. Concrete Strengths:

- a. 4,000 psi NW – Basement walls, grade beams, foundation walls
- b. 3,000 psi NW – Slab-on-grade
- c. 3,000 psi LW – Metal deck slabs
- d. 3,000 psi LW – Interior topping slabs
- e. 5,000 psi NW – Concrete columns and walls supporting columns slabs
- f. 5,000 psi NW – Exterior topping slabs

All reinforcing will conform to ASTM A615, Grade 60.



Section VII – Shell (Exterior Enclosure)

1. Walls above Grade: Aluminum curtain walls and aluminum windows and entrances. Exterior painted hollow metal doors and frames. Metal panel penthouse enclosures and screens.
 - a. Replacement Windows, Curtain Wall and Storefront Framing Systems: All framing for replacement windows, curtain walls and storefronts will be extruded aluminum. Finish for all interior exposed faces of the aluminum framing will be a thermosetting acrylic resin coating. Finish for all exterior faces of the aluminum framing will be a three (3) fluorocarbon resinous coating. Typically the replacement windows, curtain wall and storefront framing systems are to be 4-sided dry glazed structural systems with silicone wet sealed vertical, and horizontals; butt glazing where indicated.
 - 2) Replacement Windows: All replacement window framing will be attached to the existing opening substrates. Typical insulating glass units will be 1" thick and be composed of a ¼" thick clear glass outboard light with a low emissivity coated second surface, a ½" hermetically sealed air gap, and a ¼" thick clear inboard light, heat treated as required to sustain wind loads and resist temperature stress breakage. All window frame profiles to match existing exactly or to further minimize sightline obstructions as determined by Architect.
 - 2) Curtain wall and Storefront Framing: All curtain wall and storefront framing will be attached to the building's structural frame. Typical insulating glass units will be 1" thick and be composed of a ¼" thick green tinted glass outboard light with a low emissivity coated second surface, a ½" hermetically sealed air gap, and a ¼" thick clear inboard light, heat treated as required to sustain wind loads and resist temperature stress breakage.
 - c. Louvers: Sight-proof, extruded aluminum type with integral flashings, finished to match curtainwall and storefront framing systems; alternately, to match existing building's original design documents.
 - d. Masonry Cavity Wall: 4" face brick + 2" air gap + 2" polyisocyanurate insulation + continuous air and moisture barrier membrane + concrete masonry unit back-up wall, using stainless steel anchors. Punched openings with steel lintels. Continuous long span openings to be framed with steel tubes with continuous angles or plates supporting face brick on metal tube or angle framing, braced to structure.
 - e. Door Entrances: Custom fabricated, medium-stile stainless steel swing doors retaining clear, monolithic or laminated safety glass and glazing materials with custom stainless steel pulls. Swing doors shall be supplemented with overhead concealed door operators.
 - f. Aluminum Panels: Custom fabricated solid 1/8" (0.125") thick aluminum sheet panels with stiffeners and heli-arc welded corners, finish matching curtain wall and storefront framing.
 - g. Flashing Systems: Continuous stainless steel sheet metal flashing.
 - h. Exterior Wall Interior Side Finish: Steel studs supporting gypsum wallboard, ready to receive joint treatments.
 - i. Walls below Grade: Reinforced concrete walls with below grade waterproofing and vertical drainage and sub-drainage system around perimeter of building.
3. Roofing Systems: Roofing will consist of single ply fully adhered membrane EPDM roofing system on the flat roof areas with tapered insulation sloping to drains. Overflow drains to be provided per code requirements. Flat roofs shall be supplemented with continuous stainless steel flashing and counter-flashing around perimeters and penetrations.

Section VIII – Interiors

Typical wall construction will be metal stud framing with painted 5/8" gypsum board. Rated walls and noise control partitions will run to deck above. All other partitions will terminate 4" above the suspended ceiling. Typical doors will be transparent finish, solid core wood in transparent finish wood frames. Interior construction includes painted masonry and gypsum wallboard partitions, vinyl and ceramic tile flooring, terrazzo flooring, suspended acoustical tile ceilings, aluminum framed interior glazing at offices and sidelights with wood doors, butt-glazed recessed aluminum frame full height glass wall partitions at information commons and other areas where maximum visibility is desired. Rated interior doors to be aluminum clad matching interior glazing framing and hollow metal frames with hollow metal doors at service areas.

Stairs. New fire stairs will be painted, prefabricated steel with cast in place concrete treads and painted steel railings. New open stairs will be ornamental metal, monumental stairs with all glass guardrails with brushed stainless steel handrail and caps.

Equipment and specialties include operable partitions, visual display boards, café food service equipment, walk-off mat grilles and acoustical wall panels, loading dock and library equipment.

a. Atrium Entry Vestibule & Storefronts

- 1) Floors: Walk-off Grid
- 2) Walls: Glazed aluminum storefront.
- 3) Ceilings: Perforated aluminum panels with acoustical insulation.
- 4) Lighting: Downlights.

b. Main Lobby:

- 1) Floors: Honed and flame finished, thickset stone.
- 2) Walls: Wood panels on z clips over gypsum wallboard partitions.
- 3) Ceilings: Suspended, painted gypsum board, with reveals.
- 4) Lighting: Recessed compact fluorescent downlighting and wallwashers, Specialty light fixtures.

c. Elevator Lobby area

- 1) Floor: Carpet.
- 2) Wall: Painted gypsum wallboard.
- 3) Elevator Entries: #4 directional polished stainless steel doors, with matching stainless steel plate stock elevator door jambs.
- 4) Elevator Call Stations: Recess mounted #4 directional polished stainless steel, with etched graphics.
- 5) Ceiling: Suspended, painted gypsum board, with reveals.



- 6) Lighting: Recessed compact fluorescent downlighting & wallwashers.

d. Loading Dock:

- 1) Floors: Concrete on dock
- 2) Walls: concrete
- 3) Ceiling: Painted stucco or exterior gyp.bd.
- 4) Lighting: Surface mounted energy efficient fluorescent.

e. Service Corridors:

- 1) Floors: Linoleum tile, color and surface texture to be determined.
- 2) Walls: Painted gypsum wallboard, with protective wainscot and rub rail to 4'-0" above finished floor.
- 3) Ceiling: 2'-0" x 2'-0" Acoustical ceiling tile with 9/16" exposed "T" grid system.
- 4) Lighting: Recess mounted 2'-0" x 2'-0" fluorescent.

f. Building Service Areas

- 1) Floors: Sealed concrete, painted.
- 2) Walls: Painted gypsum wallboard or concrete, semi-gloss finish.
- 3) Ceiling: Exposed structure, 2 x 2 acoustical tile ceiling in areas to be determined.
- 4) Lighting: Surface mounted energy efficient strip fluorescent.

g. Janitor's Closets:

- 1) Floors: Hardened and sealed concrete, painted.
- 2) Walls: Painted gypsum board with resilient base and protective surface material to 4'-0" AFF.
- 3) Ceiling: Exposed structure.
- 4) Lighting: Surface mounted strip fluorescent.
- 5) Accessories: Brushed stainless steel mop rack and shelf, slop sink.

h. Core Service Areas (Mechanical and Electrical/Telephone/Server):

- 1) Floors: Exposed concrete hardened and sealed.
- 2) Walls: Painted gypsum wallboard.
- 3) Ceilings: Exposed construction, 2 x 2 acoustical tile ceilings at telephone and communication closets.
- 4) Lighting: Surface mounted strip fluorescent.

i. Toilet Rooms:

- 1) Floors: Terrazzo, 3 colors/patterns to be determined.
- 2) Walls:
 - a. Wet Walls: Full height precast terrazzo, patterns and colors to be determined; wet walls to have terrazzo cove base.

- b. All other walls: Vinyl wall covering with terrazzo cove base.

- 3) Ceiling: Painted gypsum wallboard ceilings.
- 4) Toilet Partitions: Ceiling hung, baked enamel, steel.
- 5) Vanities and Countertops: 1-1/4" granite, polished finish.
- 6) Accessories: Brushed stainless steel.
- 7) Lighting: Architectural cove with fluorescent fixtures and recessed compact fluorescent fixtures.

j. Exit Stairwells:

- 1) Stairs: Concrete filled, painted steel pan stairs with rubber tile covered treads and platforms.
- 2) Walls: Painted gypsum board with resilient base at landings.
- 3) Soffits: Exposed steel stair framing, painted.
- 4) Railing: Steel tube framing with perforated metal infill panels, painted framing and panels.
- 5) Lighting: Surface mounted compact fluorescent.

k. Library Areas:

- 1) Floors: Carpet.
- 2) Walls: Walls and column enclosures to be painted gypsum board, eggshell finish.
- 3) Ceiling: Combination of articulated acoustical panel and specialty ceilings with existing exposed painted concrete ceilings. Multi level ceilings with reveals to be determined.
- 4) Lighting: Specialty fluorescent with indirect/direct fixtures at stack areas

l. Service Desk Zones:

- 1) Floors: High quality carpet tile.
- 2) Walls: custom interior butt-glazed walls; fabric wrapped panels.
- 3) Ceiling: Suspended wood acoustical panels and refurbished existing exposed concrete.
- 4) Lighting: Cable hung fluorescent lighting supplemented with recessed can incandescent lighting.

m. Community/Presentation Room:

- 1) Floors: Carpet.
- 2) Walls: Walls to be covered with tackable, fabric wrapped, acoustical panels; acoustic seal to be provided to underside of deck above. Wood base.
- 3) Ceilings: multiple ceiling types including large scale acoustical ceiling panel with concealed grid system and exposed existing concrete.
- 4) Lighting: Direct/indirect 2 x 2 fluorescent specialty fixtures with recessed incandescent wall washer type fixtures at fabric wrapped panels.
- 5) Accessories: Marker boards with display capability on three walls; A/V package to include motorized recessed mounted front projection screen as well as large screen flat panel monitor(s) with full wireless interface to laptops and integrated lighting/dimming systems.

n. Offices and staff areas:

- 1) Floors: Carpet.
- 2) Walls: Painted, gypsum wallboard, and wood base.
- 3) Ceilings: 4'-0" x 4'-0" acoustical ceiling panel with exposed grid system.
- 4) Lighting: 2 x 2 fluorescent type fixtures.
- 5) Accessories: Transparent finish wood casework with counters and upper cabinets.

o. Open Stair:

- 1) Floors: Stone.
- 2) Railings: Glass guardrail with continuous stainless steel railing secured to stair supports.
- 3) Structure: Metal framing from floor to floor cantilevered between floors with no hangers or posts.



Section IX – Millwork and Furnishings

Main Circulation Desk: Custom designed veneered wood with stone countertops and transaction ledges and stainless steel detailing.

Secondary Reference Desks per floor: Custom designed veneered wood with stone countertops and transaction ledges and stainless steel detailing.

End Panels: Custom designed wood end panels at the ends of each run of shelving.

Shelving Tops: Custom designed veneered wood with stone countertops and transaction ledges and stainless steel detailing.

Section X – Conveying Systems

Conveying systems include one 3500# hydraulic passenger elevator.

Section XI – Plumbing, Fire Protection, Mechanical, and Electrical Systems

Plumbing

Installation of the plumbing systems shall be per the New Jersey Uniform Construction Code (N.J.A.C. 5:23) and National Standard Plumbing Code 2006

Storm water foundation drainage systems with sump and pumps if required.

Plumbing fixtures will consist of wall hung water closets and urinals. Auto-flush valves will be provided for the urinals.

The water closets will be 1.6 gallon per flush units. The urinals shall be 1 gallon per flush units.

Lavatories will be counter mounted. Automatic faucets will be provided for the lavatories with one mixing valve per toilet room. Water coolers shall be a dual level style. A mop basin with pail hook, mop hangers and hose will be provided at each floor in a janitorial/housekeeping closet.

Domestic water piping shall be type “L” copper. All piping will be insulated with 1” fiberglass insulation.

All drain, waste and vent piping shall be cast iron. This is preferred over PVC due to sound control.

Fire Protection

The building will be fully protected per NFPA 13.

A fire command center panel will be located on the first floor.

All public areas will have a sprinkler density based on Light Hazard as described in NFPA 13. All storage and mechanical areas will have a sprinkler density based on Ordinary Hazard Group 1.

Hose allowances shall be per NFPA 13.

Stairwells shall be provided with a Class I standpipe riser. These should run vertically in the stairwell or adjacent to building columns.

A remote freestanding fire department connection shall be located with access for the fire department unencumbered.

HVAC

The HVAC system will consist primarily of variable air volume systems to serve most areas and dedicated constant volume systems if needed (for instance a community room or special collections room) Heating will be provided with a hot water system. Cooling will be provided with a chilled glycol/water system.

A general exhaust system will ventilate the main toilet rooms.

Pressure Relationships

<i>Space Area</i>	<i>Relationship to Adjacent</i>
<i>General Library</i>	<i>Neutral</i>
<i>Special Collection Areas</i>	<i>Positive</i>
<i>Office, Conference Areas</i>	<i>Neutral</i>
<i>Toilet/Janitor Closet</i>	<i>Negative</i>

Noise Criteria

<i>Office, Conference and Administrative Areas</i>	<i>NC 40</i>
<i>General Library</i>	<i>NC 35</i>
<i>Special Collection Areas</i>	<i>NC 35</i>

Electrical - Power

The best location for the main electrical room is in the basement. The room should be located away from any computer equipment, including PC's, to reduce the electro-magnetic field effect on sensitive computer equipment.

The electrical room can be part of a larger mechanical space if there is sufficient room for the switchboard, panelboards, and transformers including code required clearances. Whether the electrical equipment is located in the mechanical space or in a separate room, foreign piping or ductwork cannot be run above the equipment.

Grounding

For the service and lightning protection grounding, a continuous underground loop will be installed around the building. Intermittent cross connections will extend from the loop on one side of the building, under the floor of the lower level, to the loop on the other side of the building. All steel building columns will be connected to the ground mat. The main service entrance ground and the lightning protection down leads will be connected to the ground mat.

Telephone/Data System

Upgrades to all telephone and data cabling as required.

Wireless network antenna system to be upgraded for the renovation.

SITE AND BUILDING PLANNING ASSESSMENTS FANWOOD MEMORIAL LIBRARY

Built in 1951 and expanded in 1980, the 6,000 square foot Fanwood Memorial library is located on a small triangular shaped lot in a residential district of town, not far from the Municipal Complex and a short walk to the train station. Similar to the Scotch Plains Library site, because the site is owned by the municipality, lot zoning regulations (Zone R-150), including off-site parking regulations, do not apply to the parcel. However, the serious constraints of both the site and the existing structure – as well as the symbolic nature of the building and site as a Veteran’s Memorial – are a deterrent to significant alterations or additions.

A major obstacle to providing library service to the entire Fanwood community today is the fact that the building is not fully A.D.A. accessible. Without an elevator, people in wheelchairs, the elderly, and parents who visit the library with children in strollers cannot freely access the lower level children’s library.

Other A.D.A obstacles within the building include non-compliant restrooms and insufficient space between book stack aisles and other furnishings.

While a person in a wheelchair can get up to and inside the entrance, accessibility beyond that point is limited.



In 2003, DeBiase and Seminara Architects provided a limited feasibility study for bringing the Fanwood structure into building code and A.D.A. compliance. Recommendations included the addition of an elevator to connect the two levels, increasing the toilet fixture count to meet code and A.D.A. requirements, and adding a mid-sized multi-purpose meeting room (capacity 68) with kitchenette and storage for public use.

The study made special note of the inherent parking constraints at Fanwood. Parking at Fanwood is always extremely limited with only 14 actual parking spots - one of which is handicapped only. On any given day there might be 3 to 5 used by staff, and during typical peak hours the rest are always full. In general, and especially for special events like concerts and story-times which attract up to 50 people, patrons resort to street parking in the surrounding neighborhood. Like Scotch Plains, a modest amount of foot traffic to the library does occur.

In 2008, following a recent interior refurbishing, the lower level (basement) at the library flooded, prompting new concerns about the water-tightness of the basement and its suitability for library use. A precursor to any future renovation or addition to the library will be the investigation and remediation of the basement

water infiltration issue.

To be able to provide what would be considered a “minimum” level of library service in comparison to its peers in New Jersey, this study investigated maximizing the square footage of the facility with additions to the building. Renovation work recommended includes basement waterproofing (and any related perimeter site drainage work), replacing the roof, and installing new energy efficient HVAC systems (with any required electrical upgrades). New interior finishes, new furnishings and equipment is also recommended to replace worn or out of date pieces.

Sensibly scaled and sensitively designed additions to the structure to fit into the residential neighborhood could be built to increase the total GSF of the library to 10,224SF. However, an addition to the front would require alteration of the memorial and flagpole, and an addition to west side would require removal of a recently dedicated “rain garden” that is also used as a teaching tool for sustainability. For these reasons, along with the parking problem, the consultant team recommends using the building for alternate purposes.

A new joint library at another location would allow Fanwood to adapt the library to another, more compatible use, such as offices. Relocating a department from the Municipal Complex to this space, if feasible, would open up possibilities in the complex for much needed expansion. Office use would have less traffic impact on the neighborhood, and a less extensive and less costly renovation could be considered without adding new space.

The following sections outline the building renovation and addition assumptions and infrastructure requirements that inform our Preliminary Project Cost Estimates for the Library's public vetting and future fundraising consultant's efforts.



FANWOOD MEMORIAL LIBRARY RENOVATION AND ADDITIONS

Section I – Project Description

Facility: Fanwood Memorial Library, Union County, New Jersey

The building is located in a residential zone in the center of Fanwood, near the Municipal Complex.

Project Description:

The project involves renovating the existing library to comply with current building and A.D.A. requirements, and building select additions to maximize the usable square footage for much needed expansion of library program space.

Section II – Scope of Work

The existing building is approximately 6,000 GSF divided equally on the first floor and lower level basement. According to IBC classification, the Use Group is “A-3 Assembly” and the Construction Type can be assumed to be “5-B Combustible.” The scope for the renovation and addition includes:

- Renovations to the existing 6,000 GSF structure, including the addition of an elevator, the replacement of the roof, new HVAC systems, and code and new A.D.A. compliant toilet facilities. New interior finishes, furniture, and fixtures to selectively replace old, worn and out of date pieces. Basement waterproofing and any related perimeter site drainage work is included.

- Additions totaling 4,224 GSF, divided equally between first floor and lower level basement areas. These three small structures would be designed to fit into the residential neighborhood are to be added on the west, south, and east facades of the existing structure.

Section III – Applicable Codes and Regulations

The project would be permitted by the Borough of Fanwood and would be required to comply with the New Jersey Uniform Construction Code (N.J.A.C. 5:23) which includes the following codes and regulations:

1. Building: 2006 International Building Code
2. Mechanical: 2006 International Mechanical Code
3. Electrical: 2008 National Electric Code with local amendments
4. Plumbing: 2006 National Standard Plumbing Code
5. Accessibility: Barrier Free Subcode and ANSI A117.1-2003
6. Renovation: Rehabilitation Subcode (N.J.A.C. 5:23-6)



Zoning : The parcel is within the R-150 residential zone; since it is owned by Fanwood there is no restriction for setbacks and maximum height. Therefore no variance is required if the project exceeds the limit above neighborhood restrictions, and off-street parking restrictions related to the use of the building do not apply.

Section IV – Site Access

1. Passenger Vehicular Access: A total of 14 parking spaces are located to the north of the site, opposite a row of houses on Forest Road.
2. Loading Dock Access: No dedicated loading area exists for the building, and deliveries are typically made through the front entrance.
3. Pedestrian Access: Pedestrian access is provided from all sides of the Library, from Tillotson and Forest Roads and North Avenue.
4. Parking Accessibility: One dedicated A.D.A. space exists

Section V – Site Development

1. Site preparation: Excavation for new addition foundations as well as perimeter excavation and shoring around the existing structure for remedial waterproofing of the basement.

2. Paving and Site Lighting: Renovated sitework if applicable assumes:
 - a. Entrance: Poured-in-place concrete.
 - b. Sidewalks: Poured in place concrete.
 - c. Curb & Gutter: Poured in place concrete.
 - d. Curb Cut for Handicapped Ramps: Cast-in-place concrete ramp with exposed aggregate finish.
 - e. Site Lighting: Township standard lighting and bollards.
3. Landscaping: Landscaping “repair” to occur in areas adjacent to new additions. Reconfiguration of memorial flagpole area, and potential relocation of the west rain garden, included.

Section VI – Structural Systems

Information provided primarily for additions:

1. Live Loading Design Criteria: Final load determinations would be provided by the Structural Engineer during subsequent phases of the project:

a. Stack Areas	150 psf
b. Roof	40 psf (min.)
c. Office	50 psf + 20 psf Partition Load
d. Lobbies, Stairs, Corridors	100 psf
e. Mechanical Rooms	150 psf

Design live loads can be reduced based on tributary area as permitted by the building code.

2. Substructure: (Foundations)

Cast-in-place concrete spread footings, foundation walls, retaining walls, and slab on grade.

3. Superstructure: (Floor Framing System)

Typical floor framing will consist of structural wood beams and girders with composite wood floor underlayment. Composite wood roof underlayment.

Lateral stability for wind and seismic loads will be provided by the floor, roof, and wall frames.

4. Concrete Strengths:

- a. 4,000 psi NW – Basement walls, grade beams, foundation walls
- b. 3,000 psi NW – Slab-on-grade
- c. 3,000 psi LW – Interior topping slabs
- d. 5,000 psi NW – Exterior topping slabs

All reinforcing will conform to ASTM A615, Grade 60.



Section VII – Shell (Exterior Enclosure)

1. Walls above Grade: Insulated wood stud wall construction with vapor barrier and exterior wood siding to match existing; interior face to be 5/8" painted gypsum board.
2. Windows: New and replacement windows: Insulated double hung window frame profiles to match existing or and to minimize sightline obstructions as determined by Architect.
3. Walls below Grade: Reinforced concrete walls with below grade waterproofing and vertical drainage and sub-drainage system around perimeter of building. Investigation and remediation of sub-grade wall waterproofing systems to be performed in this scope to stop and prevent flooding.
4. Roofing Systems: Roofing will consist of composite wood sheathing, building vapor barrier underlayment, and asphalt shingles.

Section VIII – Interiors

Typical wall construction will be metal stud framing with 5/8" gypsum board. Rated walls and noise control partitions will run to sheathing above. All other partitions will terminate 4" above the suspended ceiling. Typical doors will be transparent finish, solid core wood in transparent finish wood frames. Interior construction includes painted gypsum wallboard partitions, ceramic tile flooring, suspended acoustical tile ceilings; aluminum framed interior glazing at offices and sidelights with wood doors.

- a. Elevator Lobby area
 - 1) Floor: Carpet.
 - 2) Wall: Painted gypsum wallboard.
- b. Toilet Rooms:
 - 1) Floors: Ceramic Tile, 3 colors/patterns to be determined.
 - 2) Walls: Full height ceramic tile
 - 3) Ceiling: Painted gypsum wallboard ceilings.
 - 4) Toilet Partitions: Baked enamel, steel.
 - 5) Vanities and Countertops: 1-1/4" stone, polished finish.
 - 6) Accessories: Brushed stainless steel.
 - 7) Lighting: Recessed compact fluorescent fixtures.

- c. Library Areas:
- 1) Floors: Carpet.
 - 2) Walls: Walls to be painted gypsum board, eggshell finish.
 - 3) Ceiling: Combination of acoustical panel and painted gypsum board.
 - 4) Lighting: Specialty fluorescent with indirect/direct fixtures at stack areas
- d. Service Desk:
- 1) Floors: High quality carpet tile.
 - 2) Walls: painted gypsum board
 - 3) Ceiling: Suspended wood acoustical panels.
 - 4) Lighting: Cable hung fluorescent lighting
- e. Community/Presentation Room:
- 1) Floors: Carpet.
 - 2) Walls: Walls to be covered with tackable, fabric wrapped, acoustical panels; acoustic seal to be provided to underside of deck above. Wood base.
 - 3) Ceilings: multiple ceiling types including large scale acoustical ceiling panel with concealed grid system and painted gyp.bd.
 - 4) Lighting: Direct/indirect 2 x 2 fluorescent specialty fixtures with recessed incandescent wall washer type fixtures at fabric wrapped panels.
- f. Offices and staff areas:
- 1) Floors: Carpet.
 - 2) Walls: Painted, gypsum wallboard, and wood base.
 - 3) Ceilings: 2'-0" x 2'-0" acoustical ceiling panel with exposed grid system.
 - 4) Lighting: 2 x 2 fluorescent type fixtures.
 - 5) Accessories: Transparent finish wood casework with counters and upper cabinets.

Section X – Conveying Systems

Conveying systems include one 2500# hydraulic passenger elevator.

Section IX – Millwork and Furnishings

Circulation Desk: Custom designed veneered wood with stone countertops and transaction ledges.

End Panels: Custom designed wood end panels at the ends of each run of shelving.

Shelving Tops: Custom designed veneered wood with stone countertops and transaction ledges.

Section XI – Plumbing, Fire Protection, Mechanical, and Electrical Systems

Plumbing

Installation of the plumbing systems shall be per the New Jersey Uniform Construction Code (N.J.A.C. 5:23) and National Standard Plumbing Code 2006

Storm water foundation drainage systems with sump and pumps if required.

Plumbing fixtures will consist of wall hung water closets and urinals. Auto-flush valves will be provided for the urinals.

The water closets will be 1.6 gallon per flush units. The urinals shall be 1 gallon per flush units.

Lavatories will be counter mounted. Automatic faucets will be provided for the lavatories with one mixing valve per toilet room. Water coolers shall be a dual level style. A mop basin with pail hook, mop hangers and hose will be provided in a janitorial/housekeeping closet.

Domestic water piping shall be type "L" copper. All piping will be insulated with 1" fiberglass insulation.

All drain, waste and vent piping shall be cast iron. This is preferred over PVC due to sound control.

Fire Protection

The building will be protected as mandated by the New Jersey Uniform Construction Code (N.J.A.C. 5:23)

HVAC

The HVAC system will consist of a variable air volume system to serve most areas and a dedicated constant volume system for the community room.

A general exhaust system will ventilate the toilet rooms.

Pressure Relationships:

Space Area	Relationship to Adjacent
General Library	Neutral
Office, Conference Areas	Neutral
Toilet/Janitor Closet	Negative

Noise Criteria:

Office, Conference and Administrative Areas	NC 40
General Library	NC 35

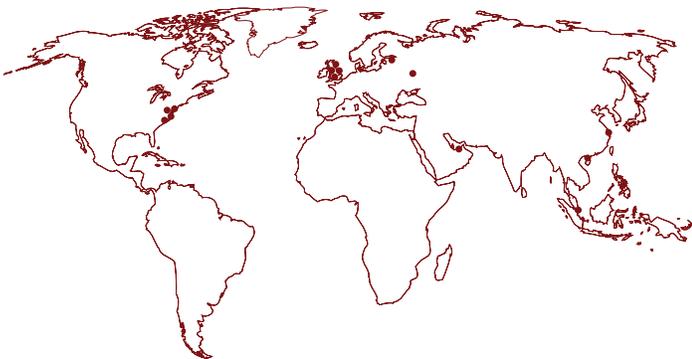
ELECTRICAL - POWER

Upgrades to the electrical service as required by code and to serve new HVAC unit.

Telephone/Data System

Upgrades to all telephone and data cabling as required.

Wireless network antenna system to be upgraded for the renovation.



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