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FREDERICK COUNTY WESTSIDE LIBRARY FEASIBILITY STUDY KEY FINDINGS

501 McCAIN DRIVE,
FREDERICK, MD

Prepared for
Frederick County, MD



FREDERICK
COUNTY
**PUBLIC
LIBRARIES**

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PROJECT OVERVIEW

Frederick County embarked on a feasibility study and concept plan for a future 15,000 SF library to serve the West and North side of Frederick City, an area currently served by two bookmobile stops (Hillcrest and Waverley). The construction budget is currently \$6.3 million. The project was a collaboration between the City of Frederick and Frederick County. A Memorandum of Understanding (MOU) between jurisdictions was initiated for the desired land use. The identified site is 4.15 acres, currently a park, which includes playground facilities, a baseball field, paved court, brick restroom facility and picnic facilities

The process for analysis of site feasibility for Frederick County Public Library's (FPCL) new Westside Branch at 501 McCain Drive consisted of two main phases: Phase I, which included site survey, data collection, and programmatic analysis; Phase II, which included future conceptual recommendations for a 15,000sf branch library on the site. These concepts accounted for a variety of conceptual, programmatic and climate factors.

The analysis phase of this project started with conducting research on the site being considered for the new branch library. This effort compiled climate data, surrounding demography, topography, vegetation, drainage, utilities, parking, archeological, geotechnical, and traffic information. Additionally, the scope of this project included developing a tentative program for the library interior and identifying potential for connectivity to the exterior. After initial site and program information compilation was completed, the project team met with relevant county and library stakeholders to discuss and review program and project goals and assess suitability of site location.

The concept analysis phase of the project determined if the selected site is feasible for meeting the needs identified within the tentative program.

Based on the findings of the site study, the project team developed four (4) conceptual design options for the layout of the site. Conceptual designs were illustrated using diagrammatic floor plans and other exhibits necessary to adequately convey design concepts. Such concepts "should be creative and should, to the greatest extent practicable, minimize construction costs."

SITE ANALYSIS

501 McCain Drive is set on the western side of Frederick, MD, in between two elementary schools: Butterfly Ridge and Hillcrest, respectively. The neighborhood surrounding the site is considered an underserved area by the city and county. The city/county boundary lies to the near south of the site, and the possibility of rural patronage should be considered. The area is not particularly pedestrian friendly, and the region as a whole is very car dependent, but does have close proximity to a number of amenities. North of the site is the Golden Mile, a cluster of local shops and businesses off Route 40, which has the potential for design synergies. While the site in consideration does remove a park from the city, it is well-situated near other, larger park amenities. Most notable of these is Westside Regional Park, which lies directly to the southeast of the site and is currently being redeveloped. There are also several neighborhood parks nearby that are of similar size to the McCain site.

The site at McCain Drive is well situated for both pedestrian and vehicular traffic. The site is located less than a quarter mile from a bus stop that is serviced by two separate routes. Between these two routes, the site can access the 3 main business districts in Frederick: downtown, the Golden Mile, and the Francis Scott Key Mall. For vehicular traffic, the site is situated between Route 40, Route 15, I-70 and I-270, providing connectivity to the county and larger regional resources. As mentioned, the site is also walkable to two elementary schools and a large regional park. Beyond these amenities, the site is surrounded by residential neighborhoods, which might allude to a higher rate of pedestrian patronage from the surrounding community.

DEMOGRAPHIC

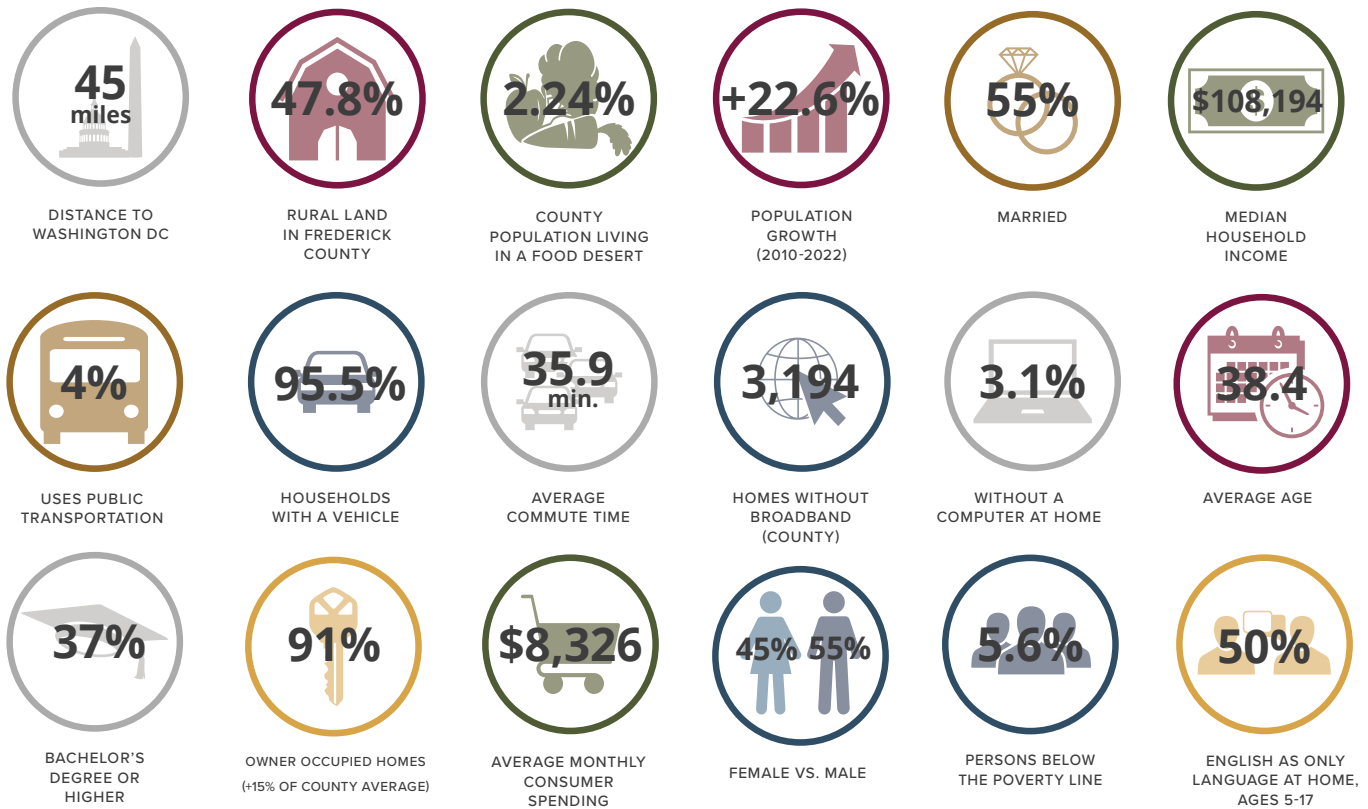


IMAGE 23. DEMOGRAPHIC INFORMATION FOR RESIDENTS IN CENSUS TRACTS 7505.05 AND 7505.06, AND FREDERICK COUNTY, WHERE APPLICABLE.

SPACE REQUIREMENTS

Emphasis was made during meetings and a charrette for the need to provide outdoor spaces conducive to family and community involvement.

A Reading Garden adjacent to the Library Services, and a Programmed Lawn adjacent to Library Services and the Meeting Room are suggested to promote community involvement, to come together to learn about the environment through gardening programs.

Some of the propose activities are:

- Raised beds for vegetables
- Seed sharing programs
- Readings about botany, seeds, plant caring

CONCEPT DEVELOPMENT

Public Showcase

Design efficient, climate conscious site and building layout that enables the building to serve as a showcase for the library system.

Activate the Site as a Public Space

Minimize tree clearance where possible.

Design the site to accommodate outdoor programming and "park-like" design.

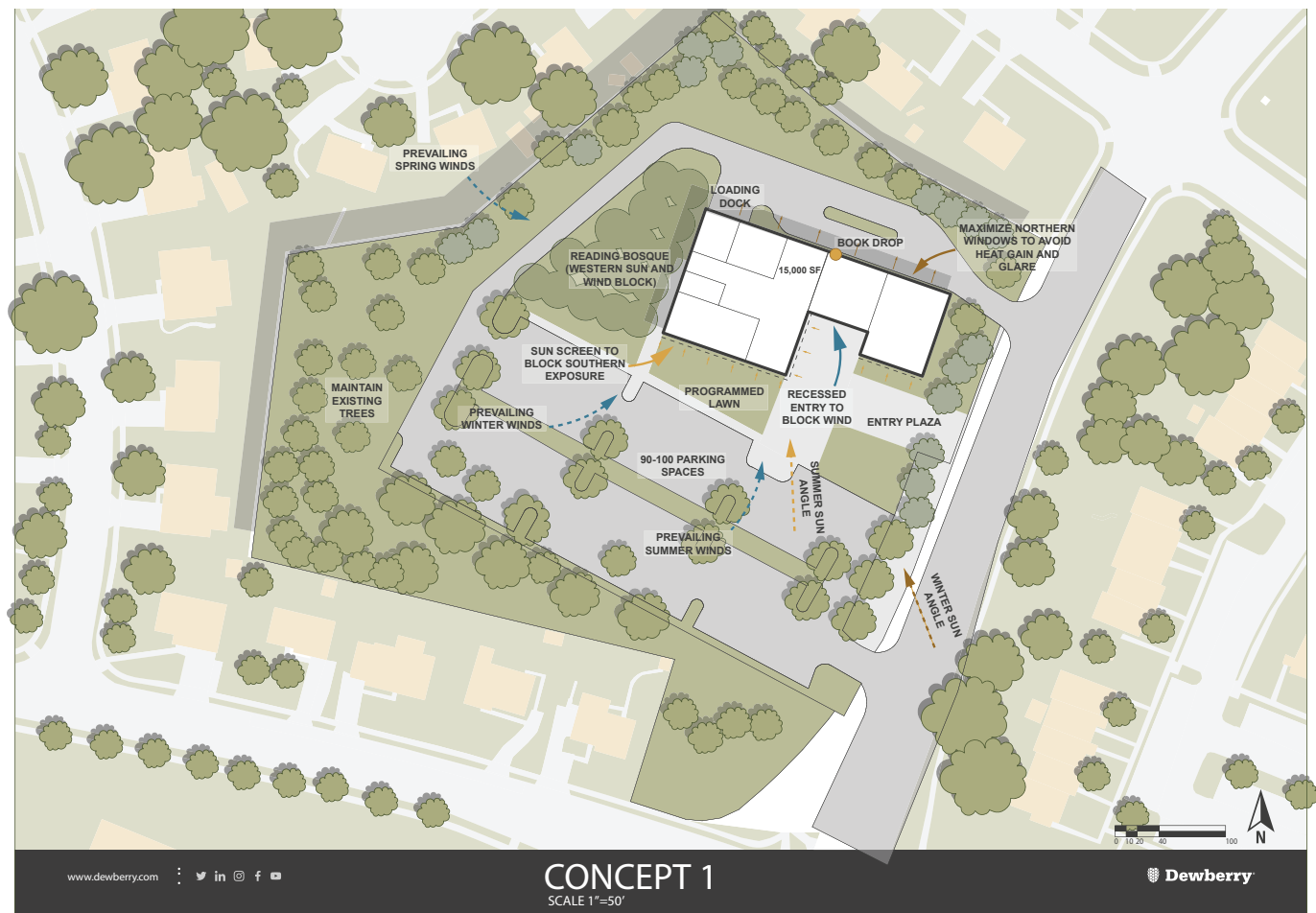
Maintain Buffers from Residences

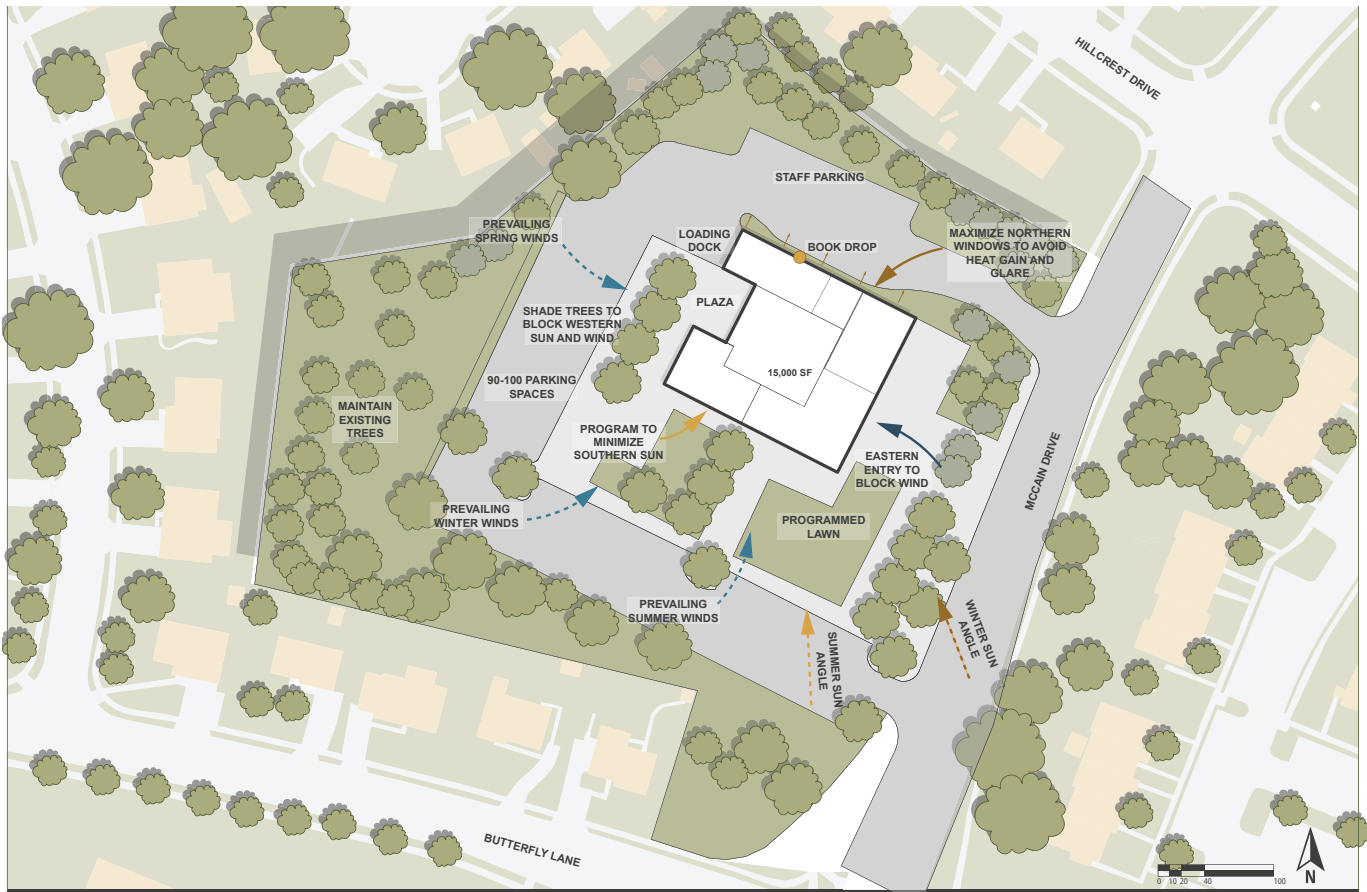
Site the building and parking to minimize noise pollution and sight lines into adjacent residential properties.

Minimize Traffic Congestion

Site the building and parking in a way that does not add to congestion from hillcrest and butterfly ridge elementary schools.

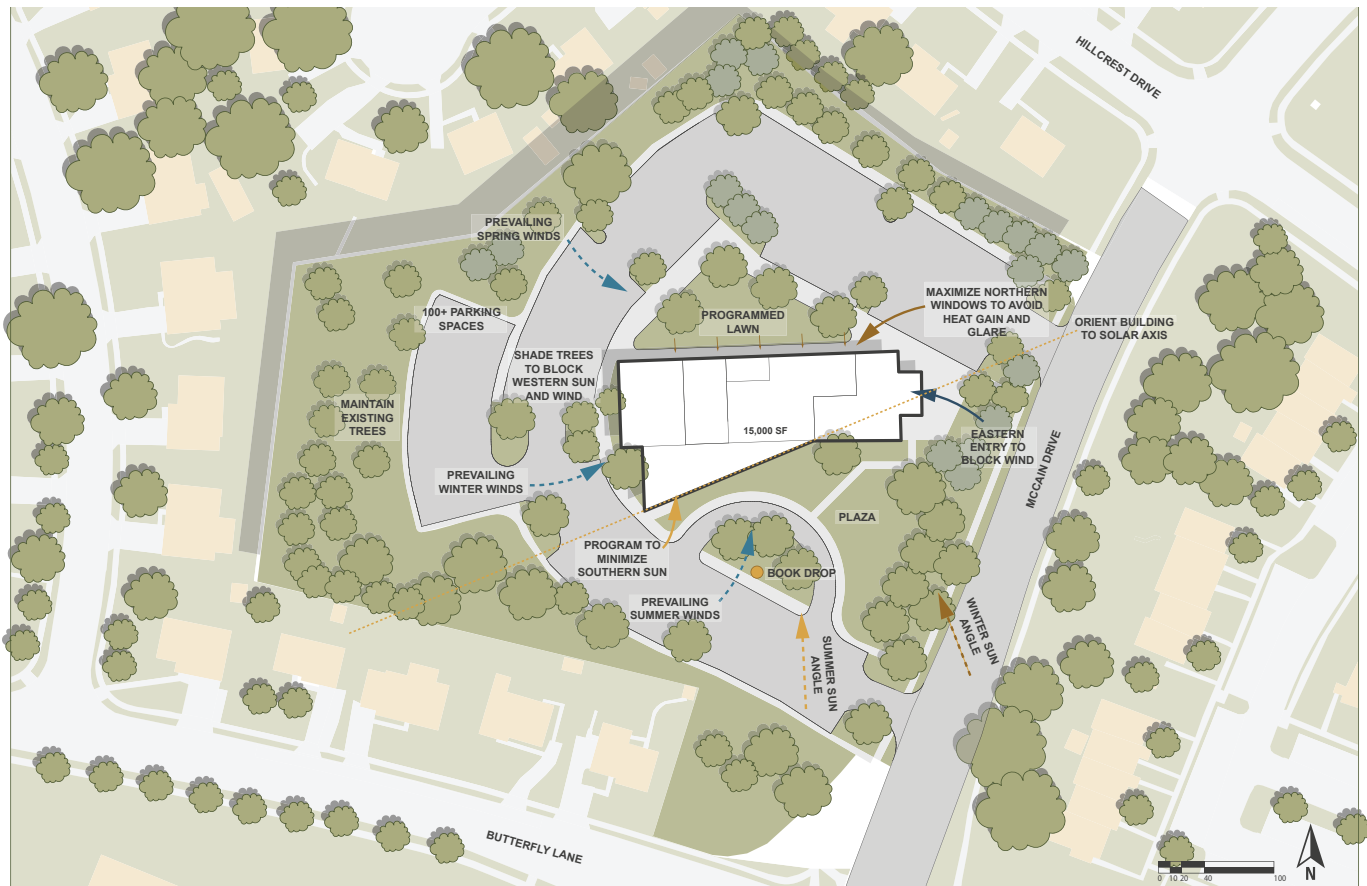
Concept Development





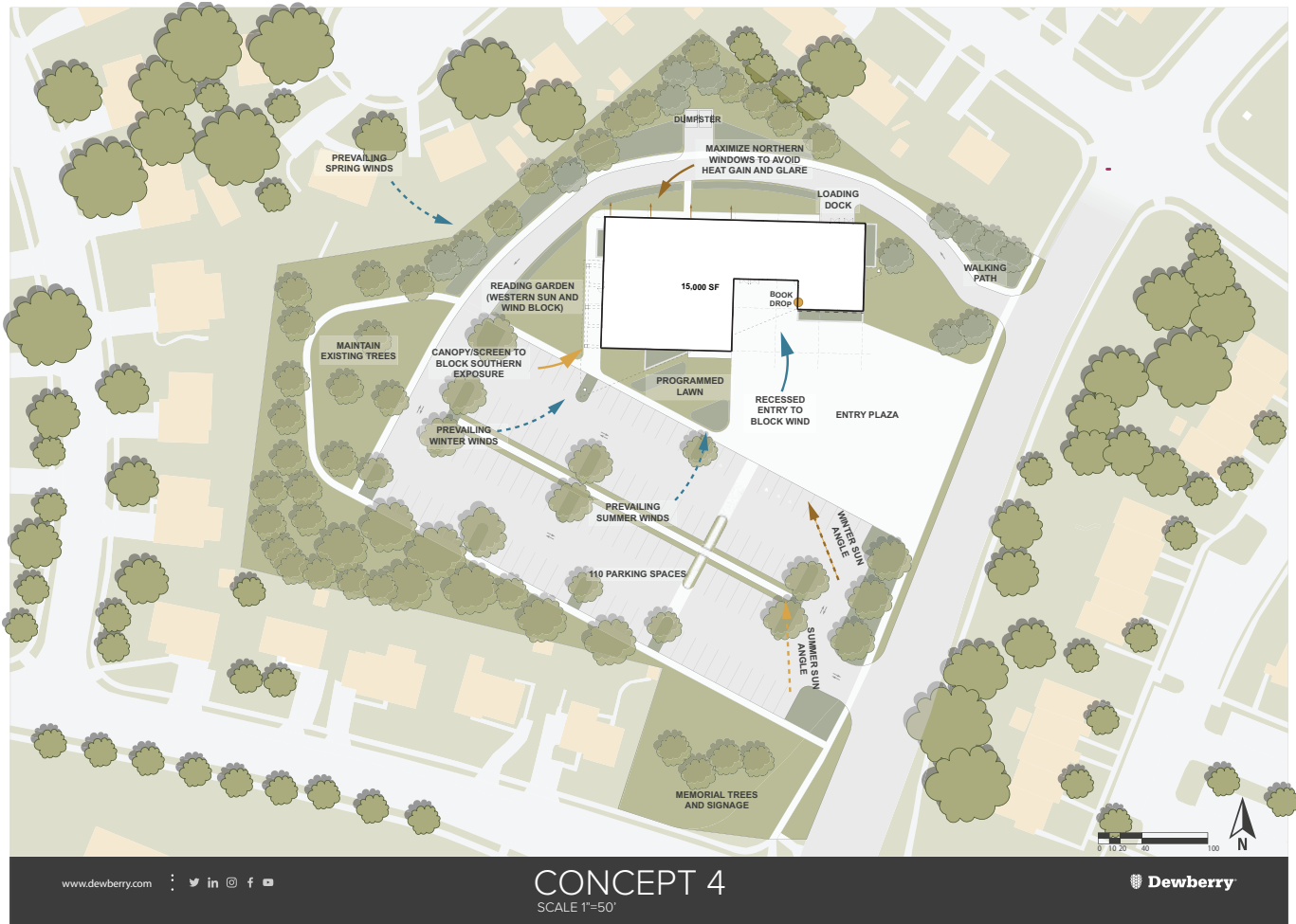
CONCEPT 2

SCALE 1"=50'



CONCEPT 3

SCALE 1"=50'



Primary Features

- Maintains 100+ parking space requirement
- Maintains most high quality trees on site
- Creates entry plaza condition
- Reactivates site as public park-like space, with walking trails and outdoor seating areas for library patrons and general public
- Creates clear showcase visible from intersection
- Recessed entry draws in patrons to an intimate entry
- Triangular canopy creates architectural interest while shielding building from climate conditions
- Pedestrian book drop adjacent to staff area

KEY FINDINGS AND RECOMMENDATIONS

Key Findings

- 1. Site Conditions:** Generally, the site appears to be a feasible location for the program outlined for a new branch library. Projected parking needs and building conditions were able to fit on the site with flexibility for multiple site layouts. Ensuring adequate drainage with the underlying soil condition and maintaining existing trees where possible are the two main site elements that will need to be further studied during the design and construction of the library.
- 2. Programmatic Needs:** The program of the branch library can be accommodated within a 15,000sf footprint, and a thinner, linear profile that maximizes future flexibility. Programming would especially cater to the needs of youth services and bilingual or ESL patrons. The program is fairly typical of branch libraries of this size, but there were several noted features FCPL staff mentioned. Among these are a desire for wifi connectivity with flexible seating options and a synergy between youth programming and the meeting room space. The building would benefit from locating collections and seating on the northern side of the building and more stagnant programming, like support spaces and the meeting room, on the southern side of the building where possible. Condensation of collections areas would provide circulatory efficiency for library staff to service patrons. A loading zone would be necessary for the function of the branch.
- 3. Traffic:** The Traffic Group, Inc prepared a Due Diligence Traffic Impact Analysis to determine the impact the proposed library would have in the adjacent road system. The Traffic Group found that traffic volume for the site is at acceptable levels and based on the final concept designed for this study, are projected to remain within acceptable levels of service during peak periods.
- 4. Archaeology:** The Commonwealth Heritage Group conducted an archaeological assessment desktop Phase IA review of the proposed site. Based on their report, the site is not anticipated to have significant archaeological potential. An additional Phase IB review is recommended further into project development to fulfill the Maryland Historical Trust (MHT). Because there is a low archaeological potential, it is likely that a Phase IB survey would not identify any archaeological sites.
- 5. Geotechnical:** While a preliminary Geotechnical report was generated for this study and Groundwater and Highly Plastic Clay and Elastic Silt soils were not encountered, additional subsurface exploration will be required, as outlined in the Preliminary Geotechnical

KEY FINDINGS AND RECOMMENDATIONS

Recommendations

1. Analysis and Preferred Concept

The study team created a number of concept options, exploring both site and building strategies. The team's preferred concept sites a building with a thinner, linear profile on the northwestern side of the site with two rows of double-sided perpendicular parking to the south. This siting allows for the maximum maintenance of existing vegetation while also mitigating noise pollution and activity to northern neighborhood. An access road only for deliveries would wrap the northern side of the building, while the southeastern side of the building site would be activated as a public plaza space. This building location allows for a variety of outdoor programming typologies to surround the building to be enjoyed by patrons and adjacent neighborhood families.

The proposed building is single-story. Ideally, connectivity to outdoor landscaped program space, such as Reading Garden, programmed lawn activities and a walk path around the site with connection to neighborhood side walks, would be built into the site and building design to provide activities not only for the young but also for adults; this provides a place where the entire family can enjoy age appropriate and group related activities in spite of climate and/or weather conditions.

Ideally, when siting and designing the building, a narrow, linear building parti oriented on the east-west axis would maximize passive design strategies that improve building performance. A southern entry with a buffer from the west blends public interfacing with wind mitigation. Finally, incorporating canopies and screens on the southern and western facades while congregating seating and collections to the northern side of the building would best accommodate solar considerations.

2. Site and Infrastructure Improvements

- **Topography, Drainage, and Stormwater Management:** While the site's flat slope is beneficial for satisfying universal accessibility requirements and minimizing grading costs, the flat slope may make achieving positive drainage challenging. However, this challenge is not likely onerous, since bioretention is likely to be utilized and the project's programming includes significant impervious area that must first be addressed with Environmental Site Design (ESD) techniques like bioretention, infiltration trenches, bioswales, and the like (per the Maryland Department of the Environment's stormwater management regulations). The greater challenge is the flat slope that drains across the greatest length of the site, leading to a single outfall at the easement on the north side of the site and, ultimately, the curb inlet along Hillcrest Drive. Specifically, the depth of the existing storm system may make it difficult to gain enough slope on the pipe for positive drainage from a typical ESD facility. Final solutions will require confirmation of the curb inlet outfall elevation and downstream capacity, and investigation of the limitations within the storm drainage easement across the private lot. If the slope is not sufficient, potential solutions may include bringing in fill to slightly elevate the southern area of the site and/or pitching more of the site toward McCain Drive.

- **Vegetation:** The predominance of existing High Value trees are evergreen and provide visual screening for the immediately adjacent homes that back to the site, making them desirable to maintain. Since they do not provide full visual screening, requiring supplemental planting is advised. If so, care should be taken within the trees' root zones to not adversely impact the health of existing trees. Compared to newly planted trees, Medium and Low Value trees will cost more to maintain and yield far less satisfying results for either visual screening or shade value.

Site planting in addition to evergreen screening along the periphery should also include shade tree planting associated with the parking per the Landscape Standards, City of Frederick Land Management Code. Plant materials and locations should also bear in mind optimizing site safety and security.

Bioretention plant species should be carefully chosen to endure the extreme fluctuations inherent to the facilities and differing from landscape planting that has more consistent conditions. The high porosity of the soil and lack of irrigation mean that plants must endure quick changes at extreme ranges—from temporarily flooded to extremely dry.

Landscape planting associated with the Entry Plaza and Reading Garden should be low maintenance species that are hardy in relation to pedestrian traffic; and should be closely spaced to make an immediate impact and to minimize invasive/volunteer species colonization (and their attendant maintenance demands).

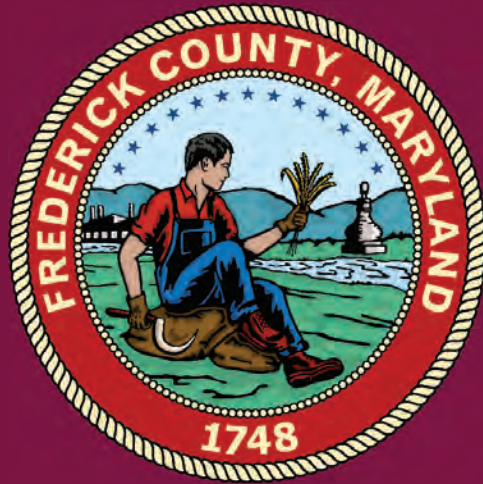
- **Parking:** The site is of an adequate size to accommodate the project's parking requirements, and the project should try to minimize loss of parallel parking spaces on McCain Drive. However, it should not do so at the expense of providing adequate vehicular ingress/egress to the project, pedestrian safety/visibility, and driveway widths wide enough for garbage pickup and emergency medical service vehicles.
- **Utilities:** Additional data is needed to confirm the availability and capacity of the existing facilities to meet the project's power, potable water, telecommunications, electrical, and stormwater piping needs.

CONCLUSION

This feasibility study highlights the suitability of 501 McCain Drive for a new 15,000 SF branch library on the western side of Frederick, MD while maintaining critical spatial and conceptual priorities. By implementing the recommended strategies for siting, building design, and programming, Frederick County will create a library environment that fosters adaptability, creativity, and efficiency for a historically under-served neighborhood. This site and accompanying conceptual plan will not only support the Library's immediate requirements, but also position them to create a cultural landmark within the community that supports long-term growth and success.



FREDERICK COUNTY PUBLIC LIBRARIES



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