CHESTERFIELD TOWNSHIP LIBRARY

SUGARBUSH ELEMENTARY STUDY

JANUARY 2024

QUINN EVANS

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REPORT SUMMARY

PURPOSE

The building currently serves two distinct purposes. The eastern section houses Sugrabush Elementary School, while the remainder is home to the Chesterfield Community Center. This study involves assessing the feasibility of relocating the Chesterfield Township Library to the eastern wing, replacing Sugarbush Elementary School. We aim to evaluate the advantages and disadvantages of integrating the library into an educational facility.

LIBRARY DESIGN REQUIREMENTS

Designing a library involves key principles to ensure a welcoming and functional space:

1. **Maximize Natural Light:**
   Incorporate ample windows and skylights to infuse the interior with natural light, fostering a bright and uplifting atmosphere conducive to reading and learning.
2. **Create a Sense of Arrival:**
   Craft an inviting entrance that welcomes visitors, setting the tone for exploration and discovery upon arrival.
3. **Mix Intimate Spaces with Longer Views Through:**
   Blend cozy nooks for quiet reading with open areas offering expansive vistas, creating a balanced environment that caters to both focused study and broader engagement.
4. **Showcase Resources:**
   Strategically position books, multimedia resources, and digital tools in easily accessible areas, encouraging patrons to explore and utilize the library's offerings.
5. **Variety of Seating and Areas to Study:**
   Provide diverse seating options, including individual study carrels, group study rooms, comfortable lounge areas, and collaborative workspaces, catering to different learning preferences and needs.
6. **Minimize Barrier and Control Signs:**
   Employ intuitive wayfinding techniques and design elements to guide patrons seamlessly through the space, reducing reliance on excessive signage and maintaining a clutter-free environment.
7. **Provide More Activity Spaces and Organized Events:**
   Integrate flexible activity spaces for workshops, presentations, and community events, fostering a vibrant hub for learning, creativity, and social interaction within the library.

By adhering to these design principles, libraries can create inclusive and dynamic environments that inspire exploration, facilitate learning, and cultivate a strong sense of community among patrons.

STUDY COMPARISON

In 2019, the Chesterfield Township Library underwent a preliminary study for a new build. The engagement and programming work from that effort was used as we looked at how the key needs identified could be included in a smaller size library within the existing school space. We advocate for library designs prioritizing safety and visibility, fostering flexible and inviting spaces with seamless transitions between programs. Our proposed design incorporates additional programs aimed at enhancing the Chesterfield Township Library experience, while ensuring functional space utilization, optimal visibility for safety, and a collaborative environment for both librarians and visitors.

DESCRIPTION

Sugarbush Elementary School is a single-story brick veneer building with a mix of aggregate concrete panel, brick, and metal accents on the parapet. The front facade maintains a uniform height level, adorned with short, narrow windows. Constructed with CMU walls for both the exterior and interior layout, the building has undergone several additions. These include one at the front north side and another at the back south side of the east wing. Bearing walls are strategically placed at the intersections of these additions and along corridor walls. Inside, classrooms feature eight-foot ceilings, while corridors boast nine-foot ceilings, with twelve-foot two inches height to bottom of deck.

ADVANTAGES

- *Sharing the building with the community center offers the library access to collaborative spaces like the gymnasium and cafetorium.*
- *The spacious layout accommodates the Chesterfield Township Library and its programs comfortably, providing ample room for librarians and visitors alike.*
- *Relocating to this larger space creates opportunities for additional programs and activities.*
- *The existing plumbing infrastructure in the elementary school presents convenient options for locating new library bathrooms.*
- *There's potential to expand pathways between the two separate structures, seamlessly connecting them into a unified space.*
- *Direct access from the new proposed library to the community center enhances convenience and encourages collaboration between the two facilities.*
- *Removing dropped ceilings allows for an increase in ceiling height to twelve feet two inches, enhancing the sense of openness and airiness within the building.*

DISADVANTAGES

- *The transition through tight and lengthy corridors from one structure to another within the school creates a division in the library space, hindering the creation of an open and interconnected environment.*
- *Corridors throughout the building serve as bearing walls, necessitating structural support if they are to be opened up.*
- *The existing ceilings are too low to comfortably accommodate large spaces.*
- *Insufficiently sized windows result in inadequate natural lighting within the interior spaces.*

DESIGN SOLUTIONS

- *Enhance visibility of library entrance both externally and internally.*
- *Establish seamless connections between building sides to ensure safety and supervision.*
- *Foster an open and inviting space conducive to community engagement.*
- *Elevate ceilings in specific areas to promote spaciousness and comfort.*
- *Increase natural lighting throughout to improve ambiance and reduce reliance on artificial lighting.*
- *Implement direct access pathways linking the library to the adjacent Community Center for enhanced accessibility and collaboration.*

REPORT SUMMARY

EXISTING CONDITIONS

Upon assessment, Sugarbush Elementary School is generally in good condition with no significant issues identified during our walkthrough. However, there are some cracked expansion joints in the brickwork causing tilting, deterioration of exterior HVAC vents requiring replacement, and cracks in the exposed aggregate concrete parapet panel. Overall, the brick itself is in satisfactory condition.

There is no evidence of leaking in the roof membrane; however, ponding occurs on the roof. It is recommended to add insulation and replace the roof membrane.

Overall, the mechanical systems are operational, however the equipment is in poor condition and has exceeded its useful service life. Additional maintenance is required yearly to keep equipment operational. The temperature control system in the east wing is pneumatic and is antiquated.

The electrical system is past the recommended lifespan. The condition of the conduit and feeders was observed to be, in most places, in good condition and could be selectively reused after testing for degradation. The panelboards, distribution panels, and transformers that primarily serve the proposed library will need to be replaced to accommodate the library conversion.

The existing lighting, emergency egress lighting, lighting controls, receptables, fire alarm, and exit signs need to be replaced due to age and incompatibility with the proposed layout.

Plumbing fixtures and piping appear to be original, operable, and in fair condition.

For detailed recommendations on mechanical, electrical, and plumbing systems, please refer to "Mechanical and Electrical Systems Due Diligence & Feasibility Report" by Peter Basso Associates.

CONCLUSION

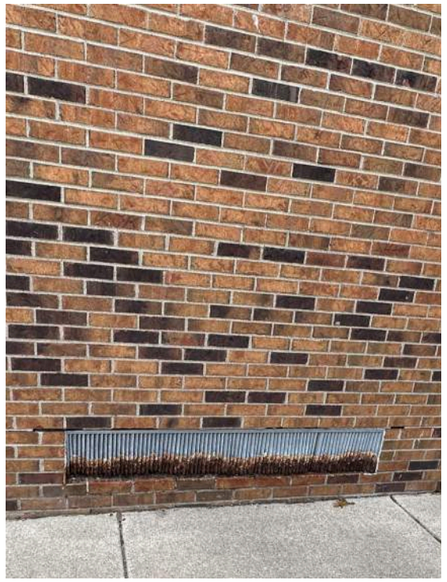
The transition of Sugarbush Elementary School into a library space presents challenges that can be overcome with strategic solutions. The relocation of the Chesterfield Township Library will bring in more opportunities for incorporating additional programs and updating the library to meet today's needs and trends. This transition not only allows for the expansion of services but also prompts the need to adapt to modern demands and preferences with more opportunities for visitors to collaborate in study rooms, access more activity spaces, and participate in organized events. This includes optimizing layout and volume through an additional concept design and cost estimating phase of work.

Moreover, an uplifted design of the facade is essential to distinguish the library side from the community center side, ensuring clear recognition of the library space within the larger building complex. Enhancements such as expanding windows, integrating skylights, selective roof raising, and removing dropped ceilings will enhance natural lighting and spatial functionality. Converting bearing walls into columns will further enhance flexibility and openness. Additionally, the site's ample size allows for future additions.

The roof membrane is recommended to to be replaced and insulation to be added. Building maintance items include selective masonry work in limited areas, roof replacement with sloped insulation for energy improvements and drainage, and replacement of aged parapet concrete.

A new mechanical system is recommended, the existing systems are not adaptable to accommodate a library conversion. The electrical systems are operational, however are past the recommended lifespan. Some equipments may need replacement and other can be converted to the library's needs. Plumbing fixtures and piping are operational and can be reused. The east wing, where the library is relocated is not provided with a fire suppression system.

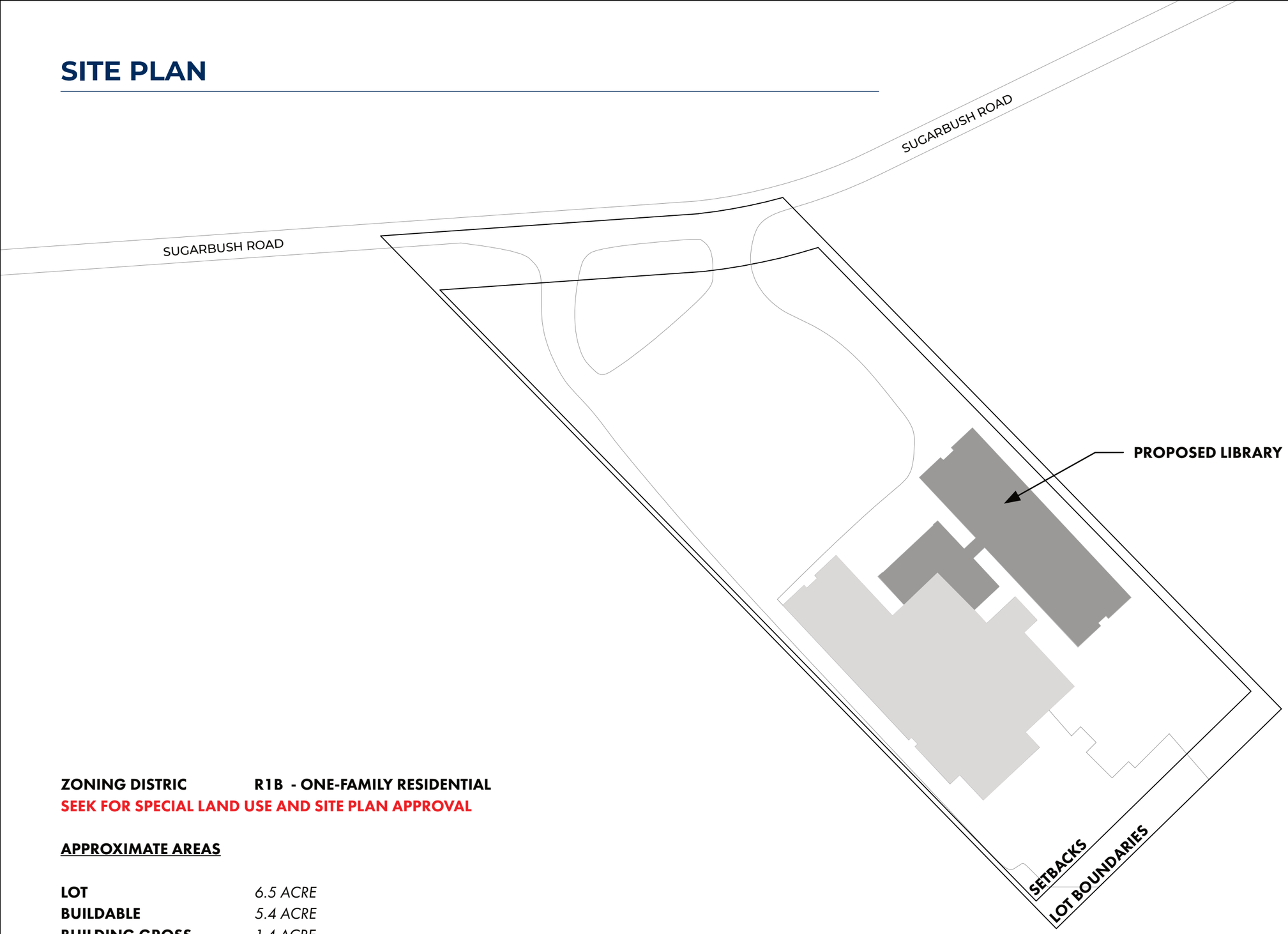
For detailed recommendations on mechanical, electrical, and plumbing systems, please refer to "Mechanical and Electrical Systems Due Diligence & Feasibility Report" by Peter Basso Associates.



SITE PLAN


SITE
ADDRESS
48400 SUGARBUSH ROAD,
NEW BALTIMORE, MI 48047
Ken Dupell Construction
Callens Rd
Sugarbush Rd
Alterations And
Custom Made Dresses
Anchor Bay Middle
School South
Lottivue Riverside
UAW
Sugarbush Rd
Sugarbush Rd
A-1 Vinyl Siding Co.Inc
Webber Paddle Pa
A. Naldrett
tary School
North Bay Marine
Captain Kernel
Propeller Basin Marina
Jefferson Ave
Anchor Bay Marina
Sun-Up Marina
Anchor
Bay Harbor
Dream Cruise Charter
Priority Quick Tax

SITE PLAN



ZONING DISTRIC **R1B - ONE-FAMILY RESIDENTIAL**

SEEK FOR SPECIAL LAND USE AND SITE PLAN APPROVAL

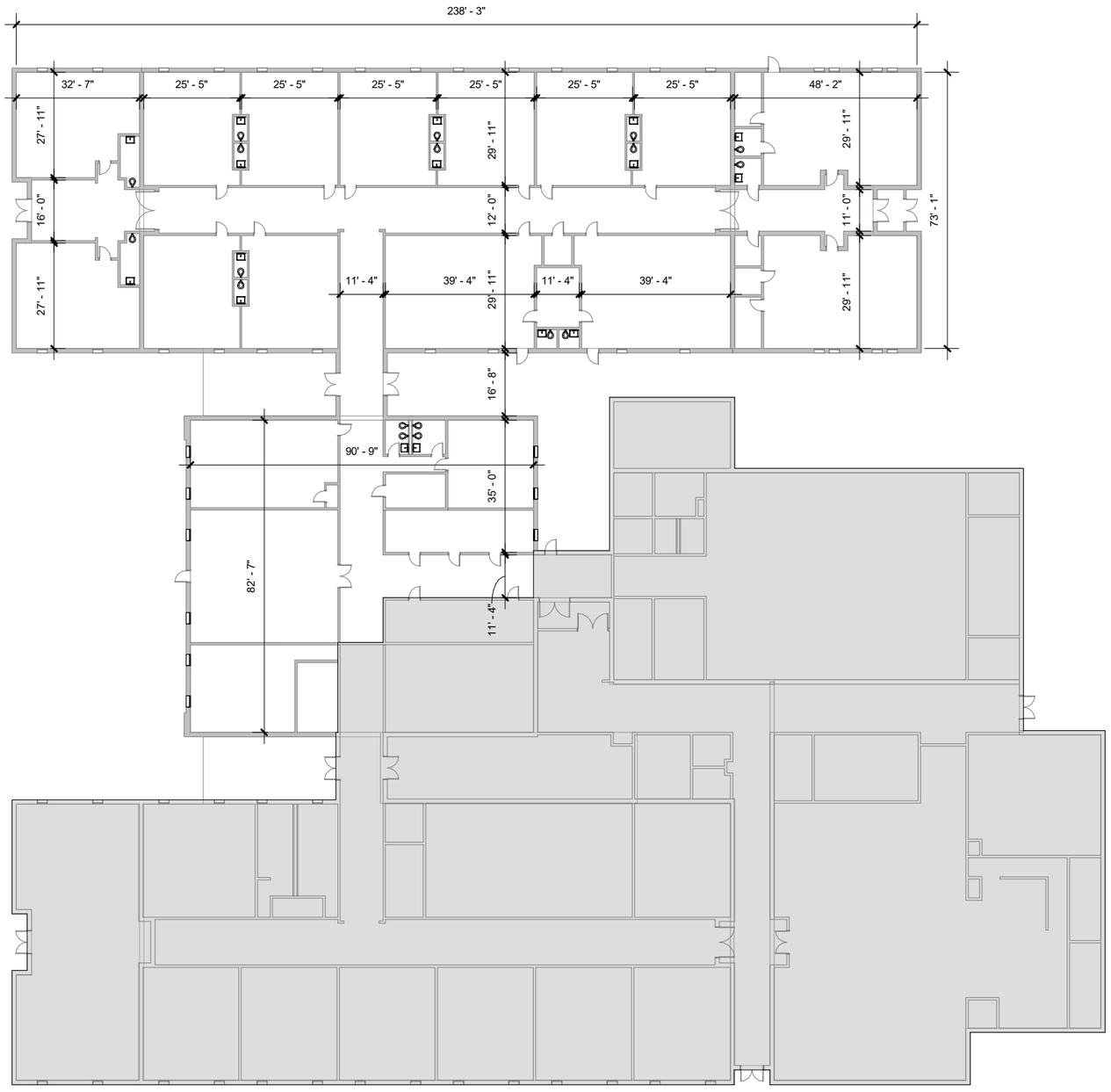
APPROXIMATE AREAS

LOT	*6.5 ACRE*
BUILDABLE	*5.4 ACRE*
BUILDING GROSS	*1.4 ACRE*

EXISTING FLOOR PLAN

SCALE: 1/32” = 1’-0”

LIBRARY GROSS AREA 24,000 SF

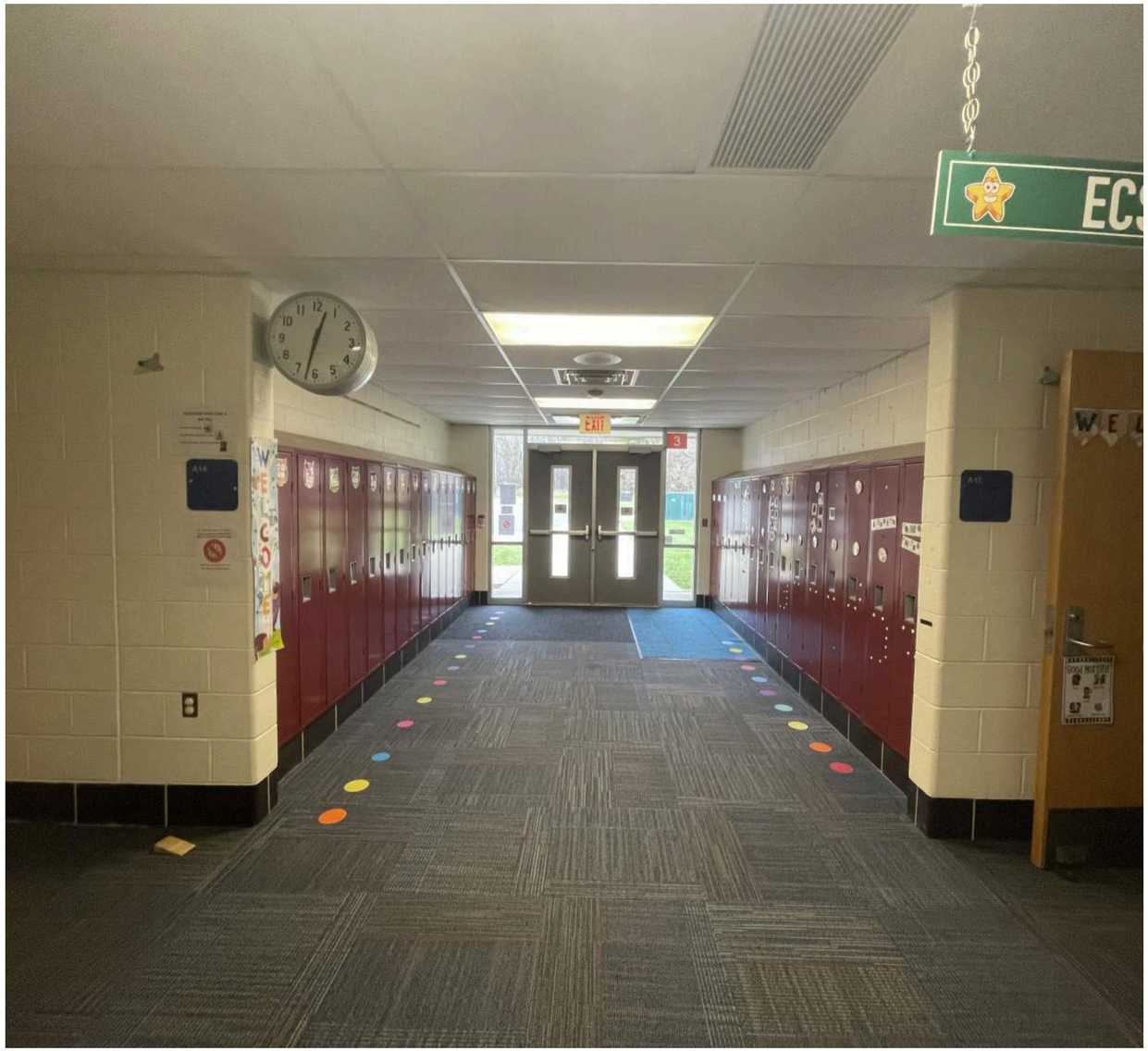


EXISTING USE *ELEMENTARY SCHOOL*

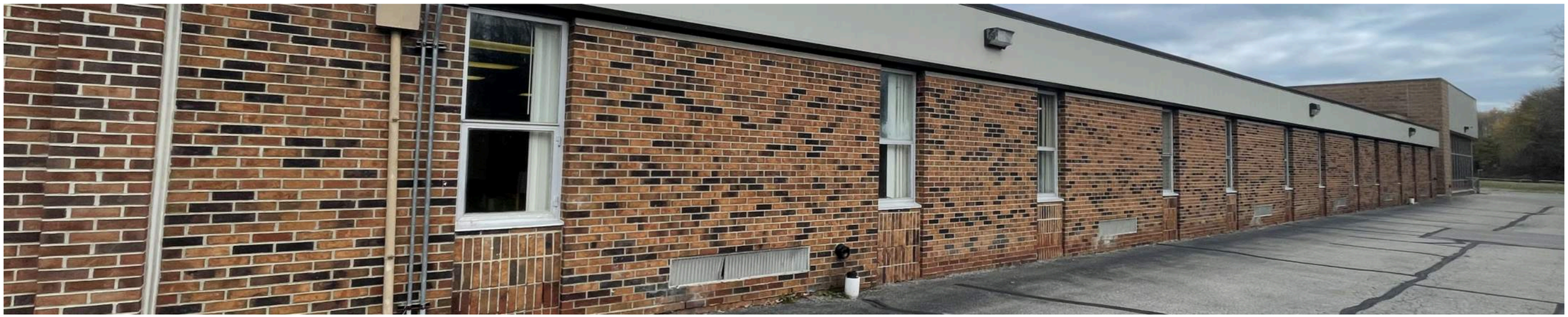
SPACE PLANNING TRANSITION REQUIRED FOR A LIBRARY USE

- *OPEN UP SPACE*
- *MAXIMISE NATURAL LIGHTING*
- *CREATE A SENSE OF ARRIVAL*

EXISTING INTERIOR IMAGES



EXISTING INTERIOR IMAGES



PROGRAMMING ANALYSIS

PROGRAM	ADDITIONAL PROGRAM	EXISTING	PROPOSED NEW BUILDING 2019	SUGARBUSH ELEMENTARY STUDY OPTION 1	SUGARBUSH ELEMENTARY STUDY OPTION 2
STAFF AREA		**4275**	**6198**	**4,253**	**4865**
CIRCULATION DESK	MAIN ENTRY		300	190	250
REFERENCE DESK		480		180	180
	STAFF WORKSPACE	2995	3,153	3,133	3,450
FRIENDS (FOL)		800	500	750	985
	PATRON SERVICES		745		
	LOBBY/ PRE-FUNCTION		1,500		
ADULT		**4,099**	**9,820**	**6530**	**9250**
ADULT COLLECTION		2,775	3,780	4630	7,540
	ADULT SEATING		OPEN SEATING	↑	↑
	COLLECTION (OTHER)		180		
	HISTORY DISPLAY		100	600	550
READING AREA	QUIET READING	624	640	↑	↑
MEETING ROOM	CONFERENCE ROOM	700	600	600	500
	COMMUNITY MEETING ROOM		2,000	*	*
	MEDIA CREATION		(1) 120		
	STUDY ROOMS (2 PEOPLE)		(6) 480	(3) 260	(3) 240
	STUDY ROOMS (4 PEOPLE)		(4) 480	(2) 260	(2) 240
	STUDY ROOMS (6 PEOPLE)		(2) 480	(1) 180	(1) 180
	STUDY NOOKS (4 PEOPLE)		(4) 480		
	TUTORING		(4) 480		
TEEN/ TWEEN		**351**	**450**	**1310**	**1780**
TEEN COLLECTION		351	450	720	1,200
	TEEN OPEN SEATING		OPEN SEATING	↑	↑
	TWEEN COLLECTION			590	580
	TWEEN OPEN SEATING			↑	↑
YOUTH		**1,726**	**4,040**	**2,900**	**2880**
YOUTH COLLECTION	CHILDREN'S COLLECTION	1,080	2,340	2,000	1,440
YOUTH SEATING		646	OPEN SEATING	↑	↑
	CHILDREN'S PROGRAMMING		700	500	720
	STORY TIME		300	400	720
	YOUTH PROGRAMMING		700		
OTHER		**1678**	**4440**	**4874**	**3,424**
	PROGRAMMING ACTIVITY ROOM		1,200	2,554	1,450
	KITCHENETTE SERVERY		100	↑	↑
BUDDY'S MAKERSPACE	MAKER CRAFTER SPACE	910	500	900	820
	CASUAL CAFE SEATING		400	1,000	650
	OPEN SEATING		1,280		
COMPUTER ACCESS		768	(24) 960	(10) 420	(12) 504
TOTAL PROGRAM SQUARE FOOTAGE		**12,129**	**24,948**	**19,867**	**22,199**
TOTAL BUILDING GROSS		**20,385**	**36,745**	**24,000**	**24,500**

* INCLUDED IN SHARED USE OF GYM AND CAFETORIUM
↑ ITEMS WITH ARROWS ARE PROVIDED IN THE TOTAL ABOVE

DESIGN SCHEME

PROPOSED ENTRIES

OPTION 2

OPTION 1

DESIGN SCHEME

OPTION 1

DESIGN SCHEME

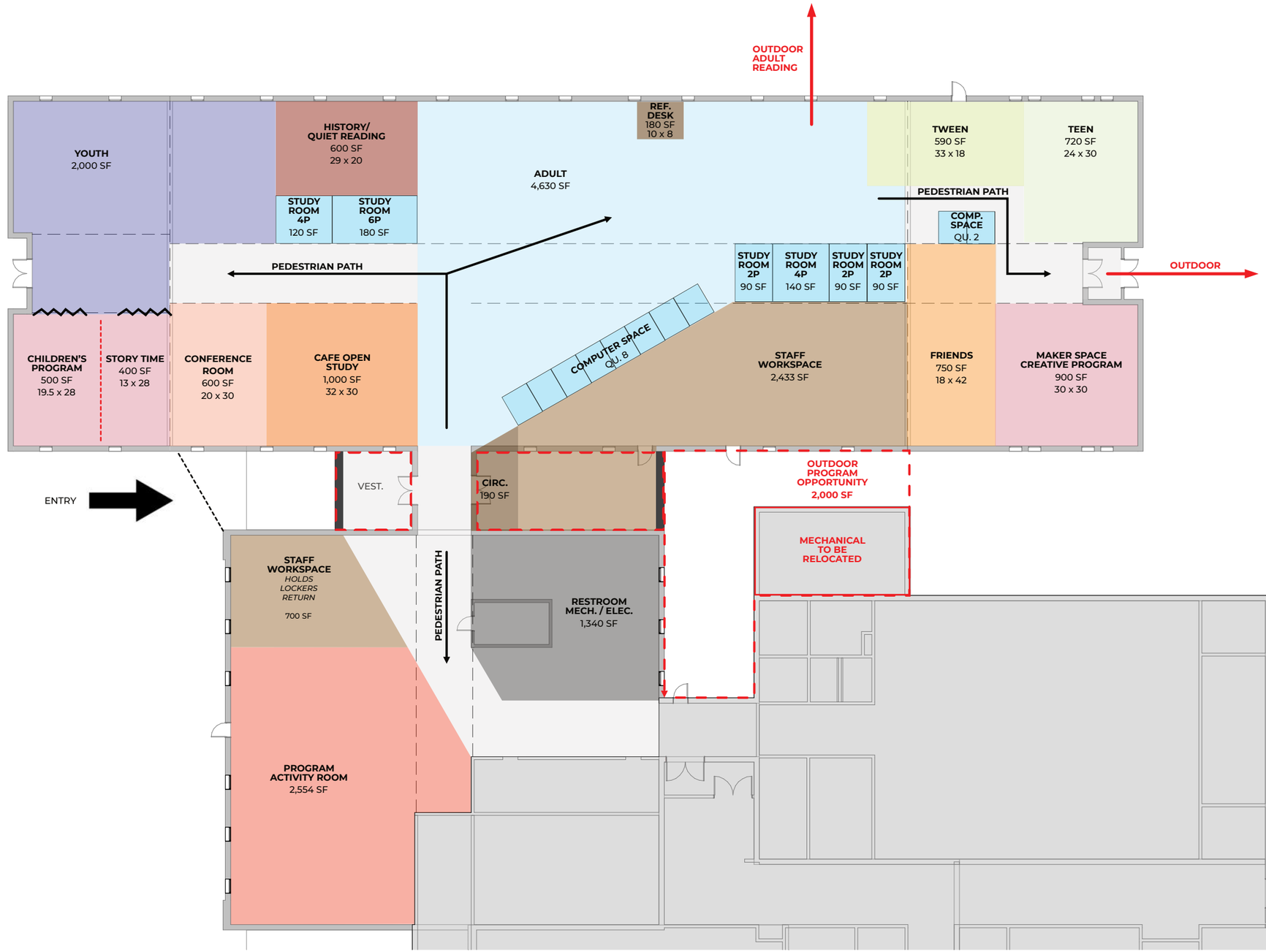
OPTION 1

DESIGN SCHEME

OPTION 1

SCALE: 3/64” = 1’-0”

LIBRARY GROSS AREA 23,978 SF
(INCLUDING 663 SF ADDITION)



PEDESTRIAN PATH

OPEN WHEN NOT IN USE

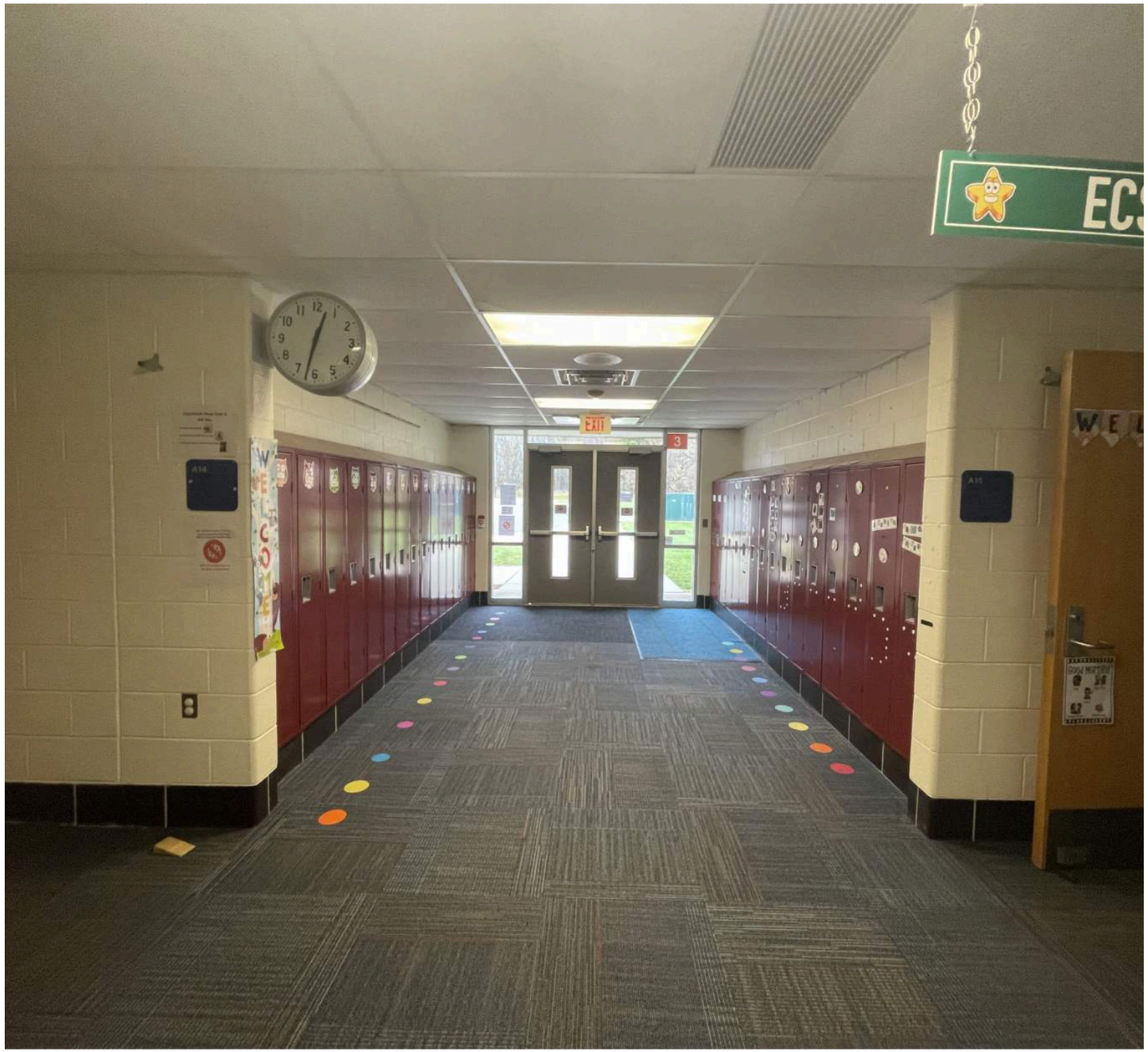
PROPOSED EXPANSION

DESIGN SCHEME

OPTION 2

DESIGN SCHEME

OPTION 2

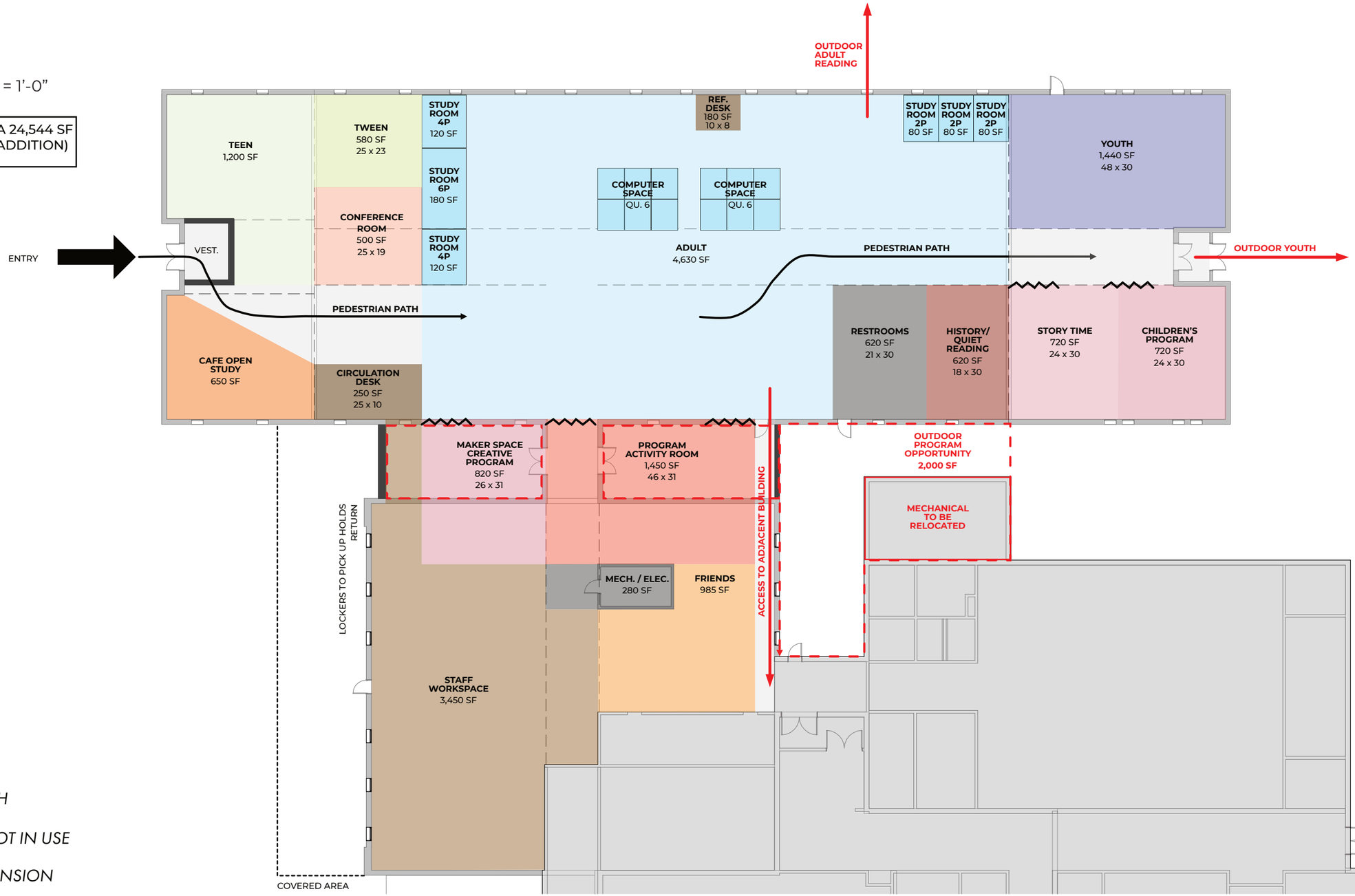


DESIGN SCHEME

OPTION 2

SCALE: 3/64” = 1’-0”

LIBRARY GROSS AREA 24,544 SF
(INCLUDING 1,229 SF ADDITION)

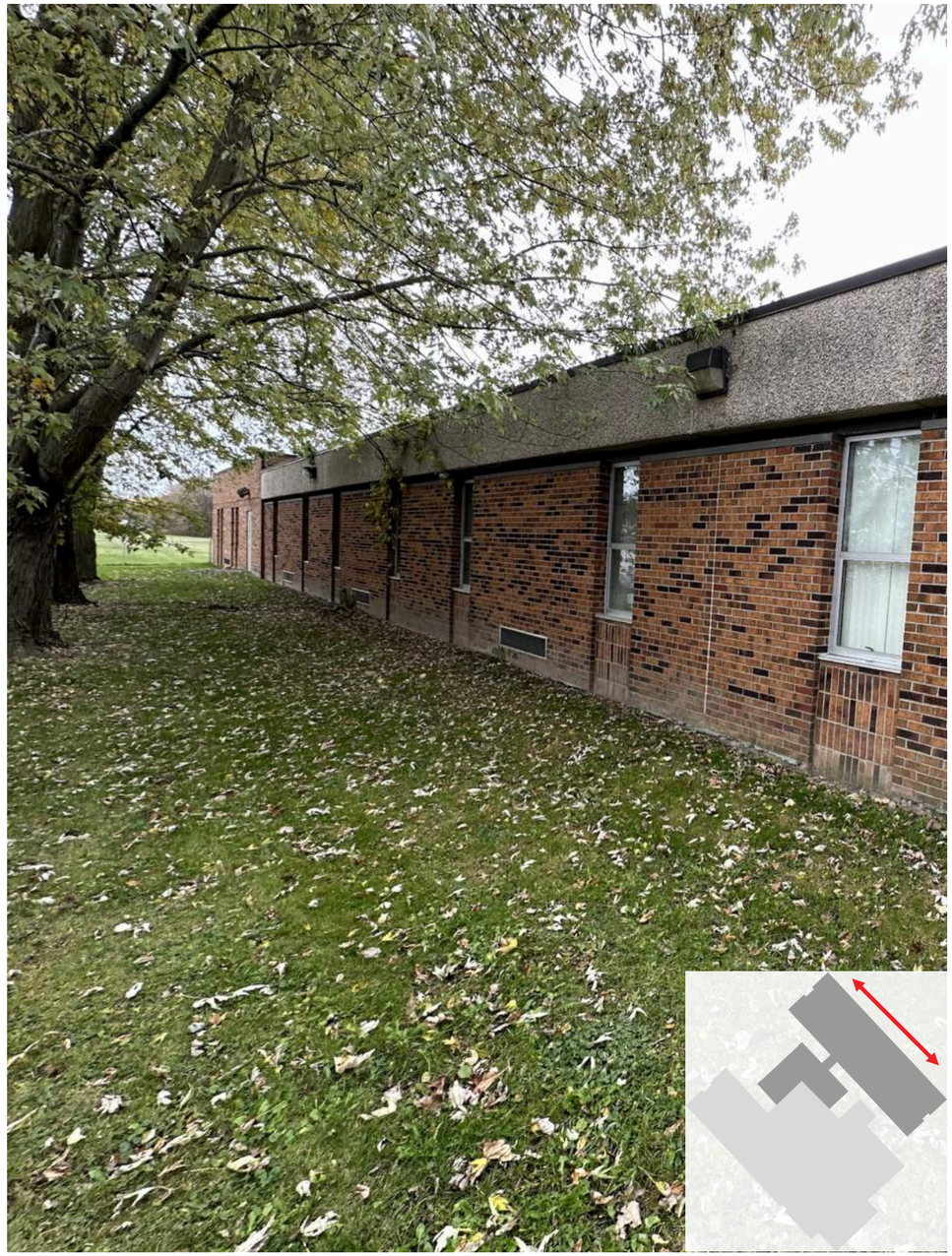


PEDESTRIAN PATH

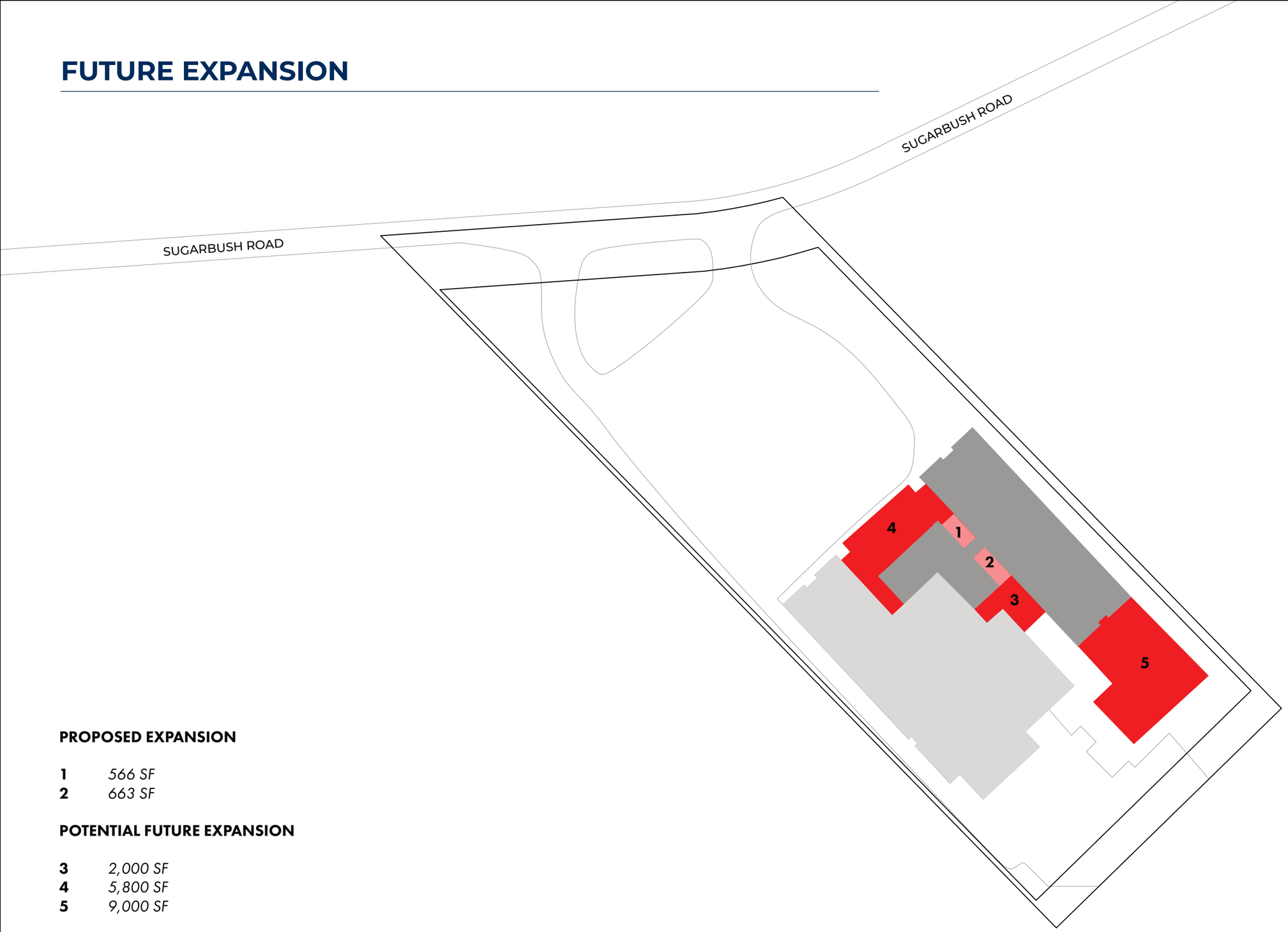
OPEN WHEN NOT IN USE

PROPOSED EXPANSION

PROPOSED OUTDOOR ACTIVITIES



FUTURE EXPANSION



PROPOSED EXPANSION

1 *566 SF*
2 *663 SF*

POTENTIAL FUTURE EXPANSION

3 *2,000 SF*
4 *5,800 SF*
5 *9,000 SF*

FUTURE EXPANSION

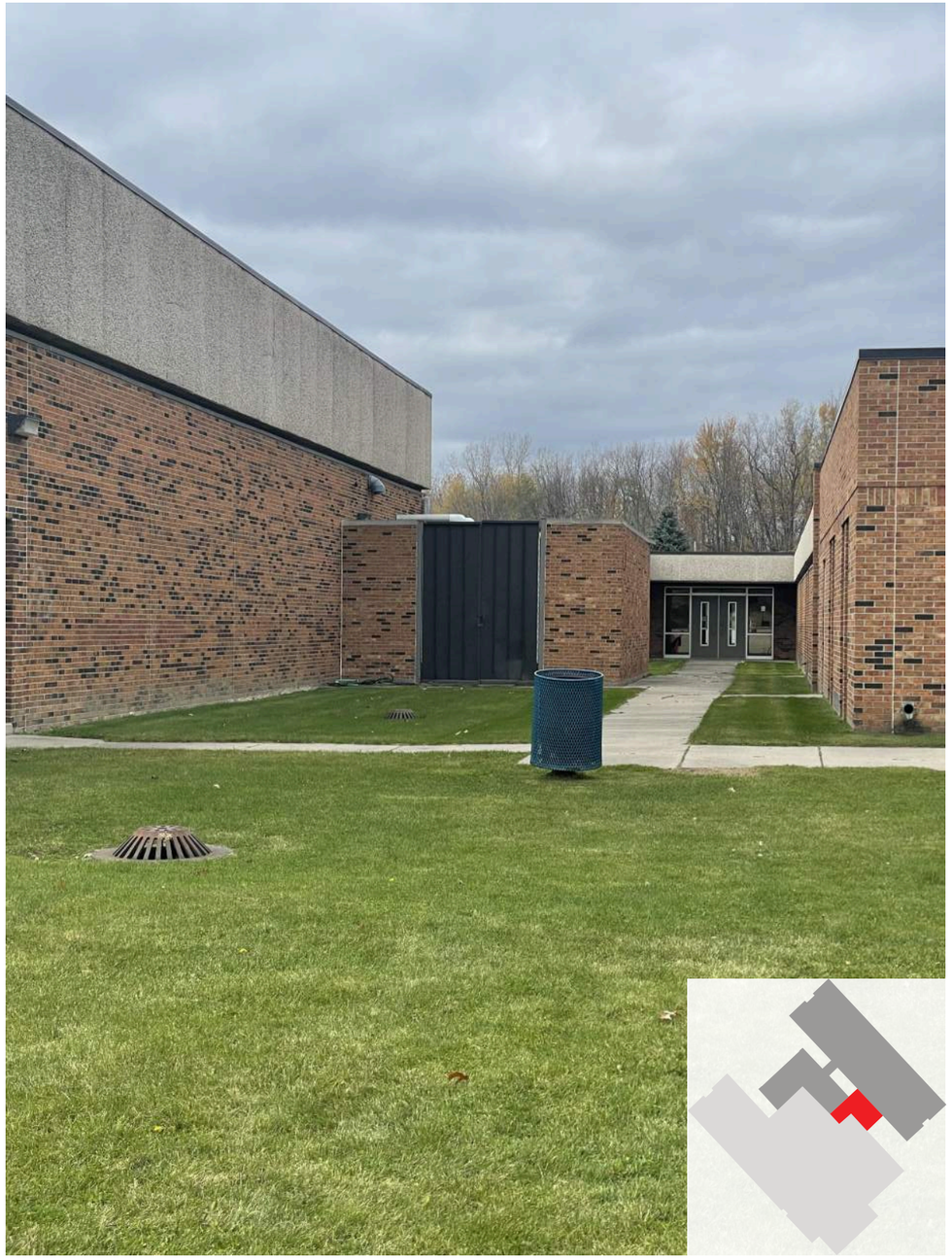
1 *566 SF*

2 *663 SF*

FUTURE EXPANSION

4 *5,800 SF*

FUTURE EXPANSION



3 *2,000 SF*

5 *9,000 SF*

FUTURE EXPANSION

3 *2,000 SF*

2 *663 SF*
3 *2,000 SF*

BUILDING ELEVATION

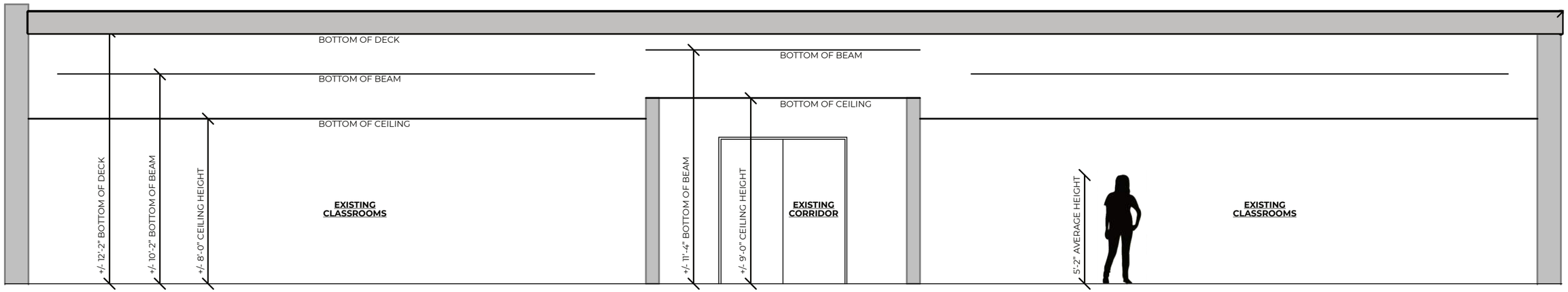
EXISTING EXTERIOR FACADE

BUILDING ELEVATION

EXISTING INTERIOR CEILING HEIGHT

BUILDING ELEVATION

EXISTING INTERIOR CEILING HEIGHT



CHOICES FOR ELEVATING CEILING HEIGHT:

1. **ELEVATE ROOF IN SPECIFIC ZONES:**
   - Increase the height of the roof in targeted areas.
2. **INSTALLATION OF SKYLIGHTS TO CURRENT ROOF STRUCTURE:**
   - Integrate skylights into the existing roof structure.
3. **CEILING OPENING:**
   - Remove the current dropped ceiling, exposing the structure and mechanical elements, for a more open and spacious feel.

COST OPINION

Chesterfield District Library
Sugarbush Elementary Reuse
Concept Cost Opinion
December 2023

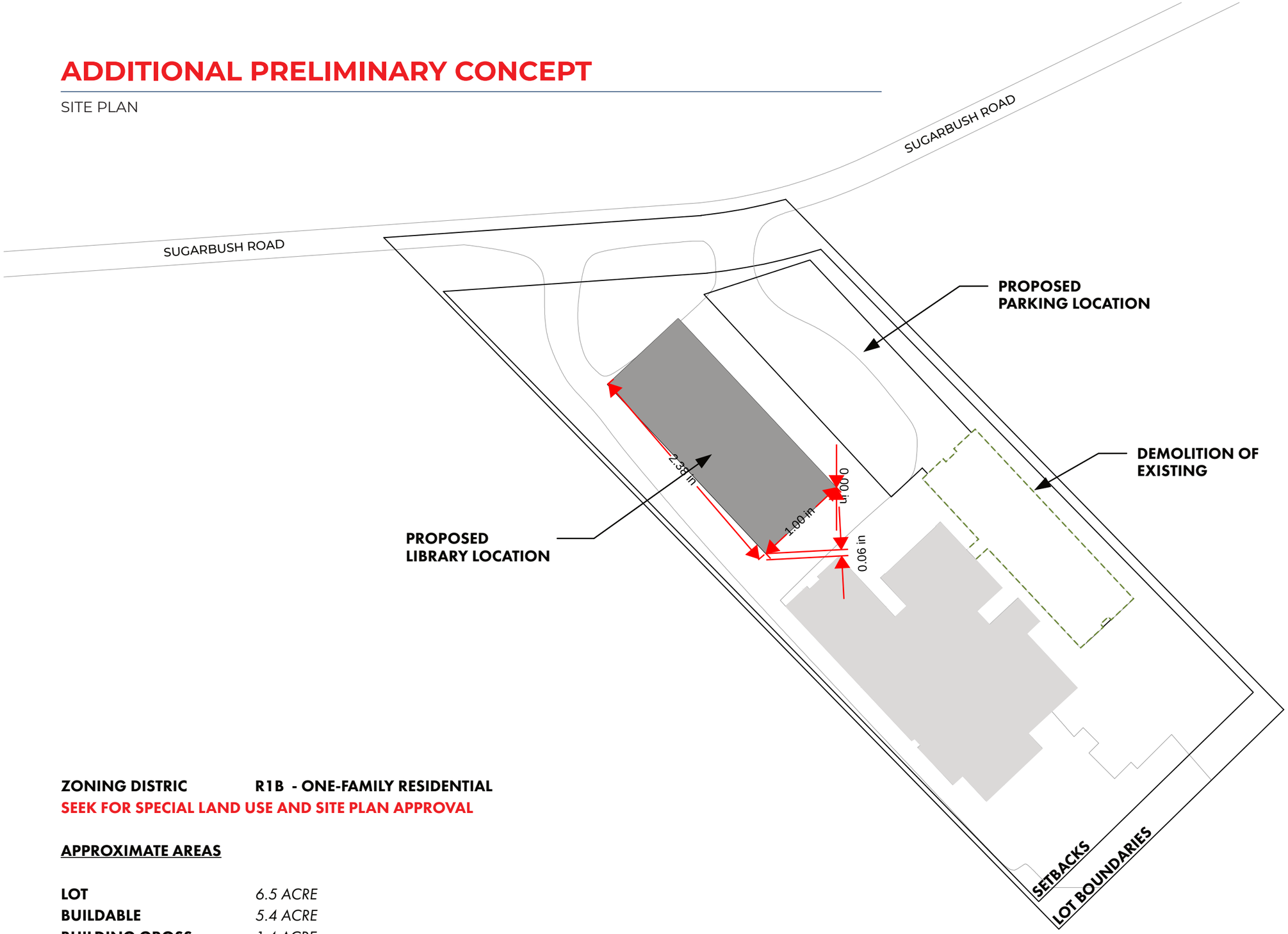
Cost Opinion Summary & Budgeted Costs

	quantity	unit	cost/unit	total cost	
Construction Costs					$7,749,500
Construction					
Sitework		allow		$100,000	
Building Renovation	24,000	SF	140	$3,360,000	
Addition	1,000	SF	345	$345,000	
MEP	24,000	SF	135	$3,240,000	
Construction Cost Subtotal				**$7,045,000**	
Preconstruction Contingencies					
Market Escalation assumes 2025 Construction			10%	$704,500	
Contingency Subtotal				**$704,500**	
Contingency					$774,950
Owners Contingency			10%		
Professional Service Fees					$852,445
A/E fees			10%		
Survey					
Geotech					
Furnishings					$962,500
Design			10%	$87,500	
Shelving					
Furniture	25,000	SF	35	$875,000	
Equipment					
Technology					$0
A/V					
Security					
Moving Cost					$80,000
Owner Other Costs					$0
Plan review					
Permit					
Total Estimated Budget					$10,419,395

Total Project Cost per Square Foot	$417
Total Construction per Square Foot (Building and Site)	$310

ADDITIONAL PRELIMINARY CONCEPT

SITE PLAN



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