



CFA SUBMISSION | 03. SEPTEMBER. 2020

DPR ARBORETUM REC CENTER



ARBORETUM RECREATION CENTER
RENOVATION + ADDITION

Adjacent to the US National Arboretum, the Arboretum Recreation Center serves a growing community in NE DC. The existing field house was determined to be eligible for the national registrar of historic places, as it is associated with DC’s effort to develop recreational facilities during the late 1960’s and is one of the best examples of Park Service Modern design of Miss 66 period applied to DC’s recreation facilities. The most notable feature is the roof profile, which references the US Arboretum.

The existing recreation center offered only one main room for the community’s use. An addition to the existing structure is required in order to accommodate the community’s growing needs and program uses. The program will include a half gym, community room, technology lounge and fitness area.

The main project goals are to keep the existing historic structure as much as possible as it is, especially concerning the roof profile; provide a clear entrance; and create simple volumes for the added program that will compliment and enhance the existing structure.

July 13, 2020

U. S. Commission of Fine Arts
401 F Street NW, Suite 312
Washington, DC 20001
ATTN: Mr. Thomas Luebke

Reference: **Arboretum Community Center Review**
 2412 Rand Place, NE

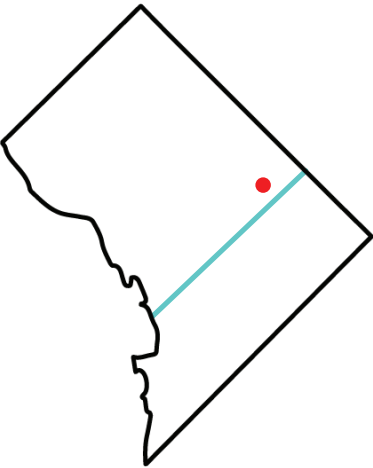
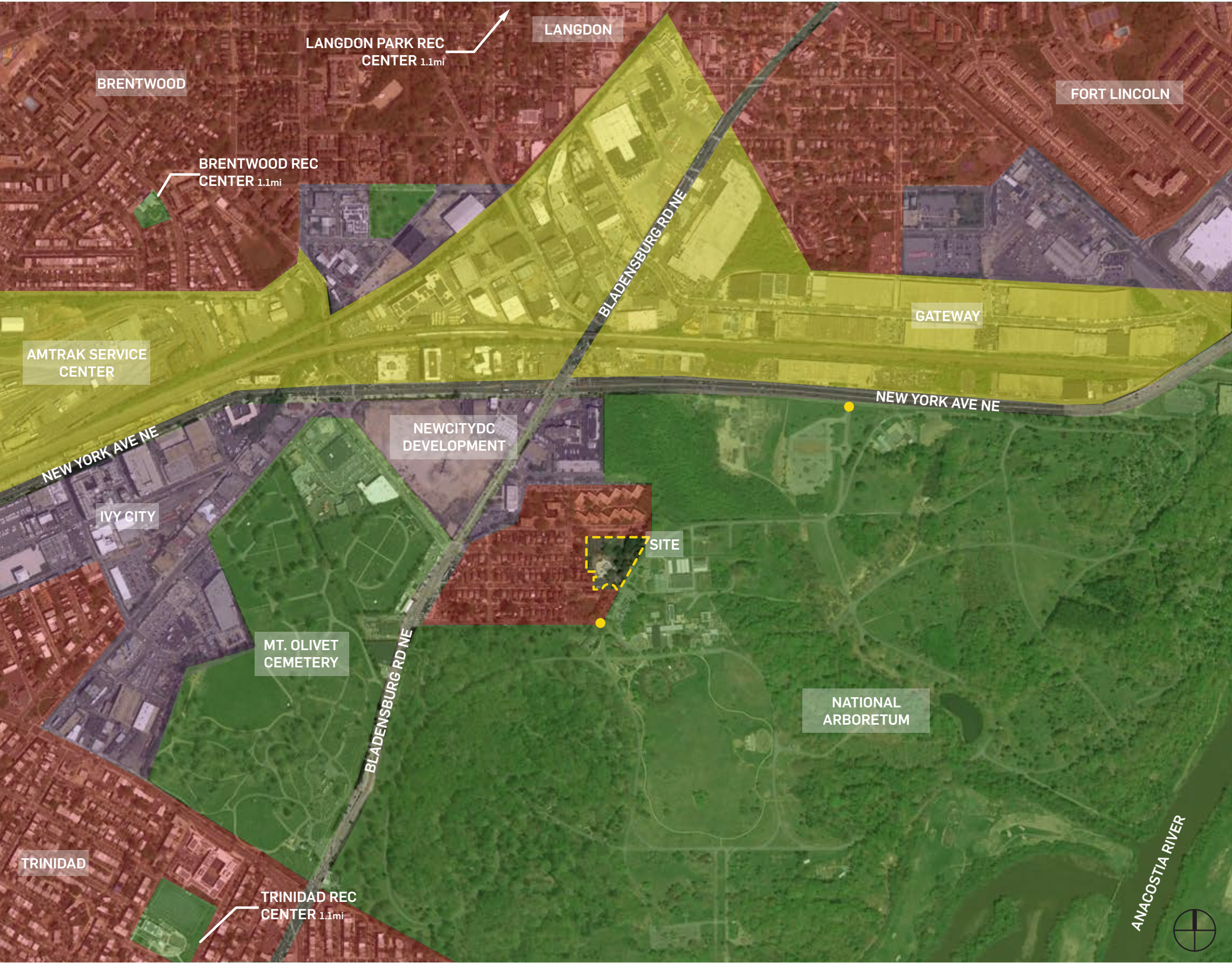
Dear Mr. Luebke,

The District of Columbia Department of General Services (DGS) is pleased to present the Arboretum Community Center project to be constructed at 2412 Rand Place, NE for review by the commission.

If you have any questions or required further information please contact Michael Etherton of DGS Capital Construction Services (202) 421-4977 or Michael.etherton@dc.gov or Marisa King with ISTUDIO Architects at (202) 758-2037 or mking@istudioarchitects.com. We appreciate your assistance with this project and look forward to your review.

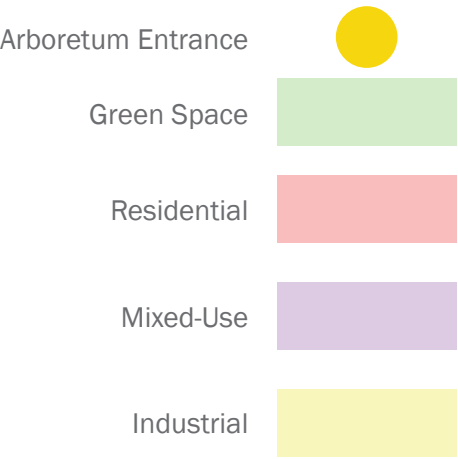
Best Regards,

Cassidy Mullen
Executive Program Manager
Capital Construction Services Division
1250 U Street, NW
Washington, DC 20009
Office: (202) 671-2629
Mobile: (202) 769-6791
Email: cassidy.mullen@dc.gov

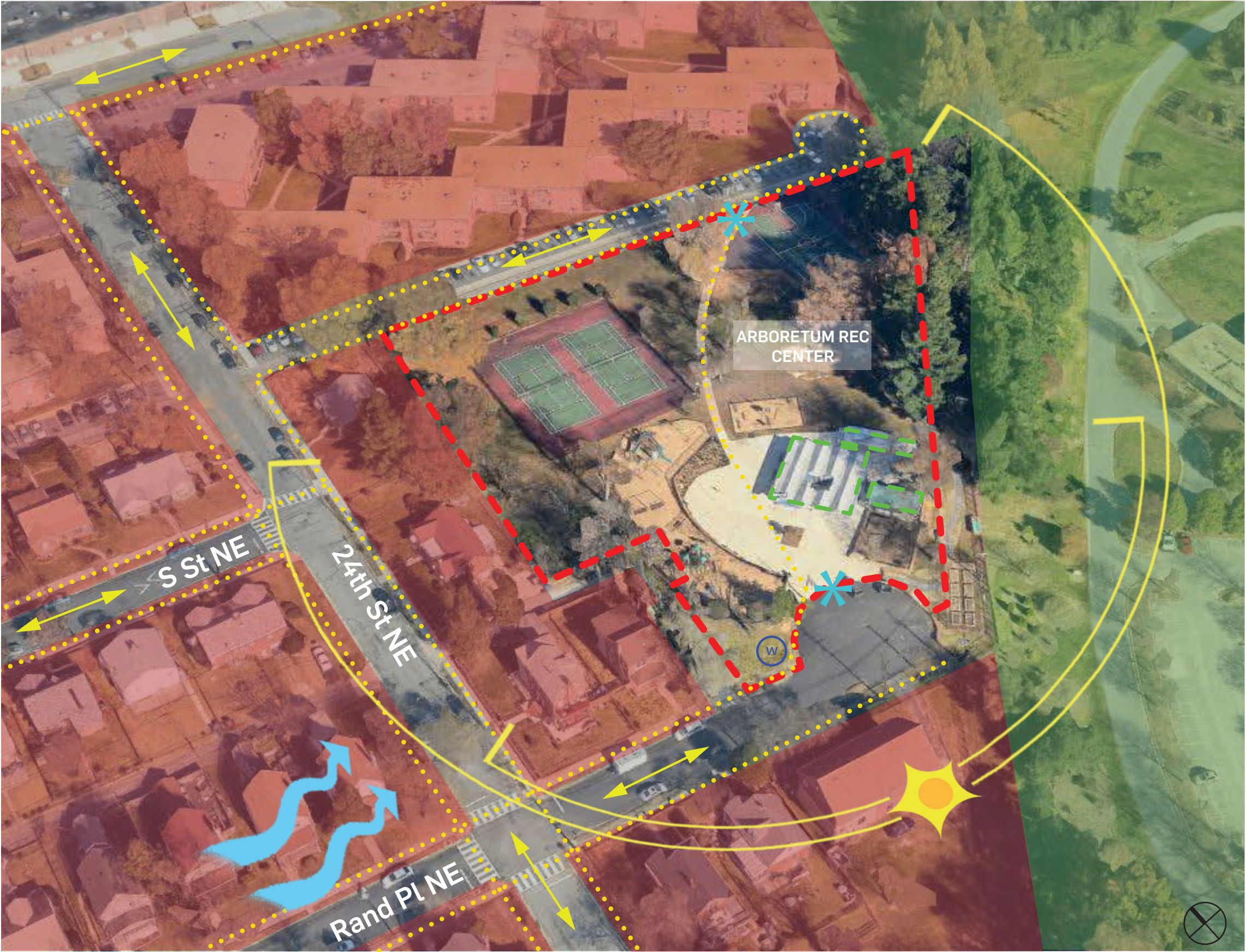


The Arboretum Recreation Center is a unique site. The community is surrounded by the national arboretum on the south and east, an industrial landscape to the north and an area of new development immediately adjacent to the north west.

This makes the existing community somewhat isolated from other residential areas and more reliant on the community rec center which is currently not sufficient to meet their needs. The major development coming to the area puts further pressure on the center and makes this expansion even more necessary.



EXISTING SITE | Neighborhood Analysis



Zoning Analysis

Zone	R-1-B	
Area	109,068 SF	
Lot occupancy	Existing 2%	Limit <40%
Building height	16' - 0"	<40' - 0"
Building footprint	1,400 SF	<43,627 SF
FAR	0.03	<1.2
GAR		>0.3

The existing Arboretum Recreation Center site receives a good amount of sunlight throughout the day, mainly from the south east. There are a few stands of mature trees which offer shade to picnic areas and the basketball court. The current community gardens are actually not within the property line and therefore cannot be modified. There is one main path through the site between the two entries, the main one on Rand Pl and the secondary on the dead end alley to the north. There is a water meter located at the south west corner of the site.

- Existing Entrance 
- Water Meter 
- Prevailing Winds 
- Site Outline 
- Building Outline 
- Pedestrian Pathway 
- Road Direction 
- Green Space 
- Residential 

EXISTING SITE | Site Analysis



Existing Site

The existing Arboretum Recreation Center site contains a small 1400 sft indoor field house, consisting of a crowded office and storage, restrooms and small multipurpose space with a pantry kitchen that is insufficient to meet the needs of the community.

Exterior amenities include a tennis court in good condition and basketball court that dips slightly to the northeast. There is also a large playground and small outdoor exercise area as well as a community garden and outdoor kitchen with pavilion.

Attempts at specific sustainable practices have already been made by the community at the center and should be continued and improved upon with the new design. Water retention and rain gardens have been implemented on the site as well as a green wall that is no longer functional.

There is also a greenhouse on site that was not built properly and is coming apart at the seams. The community would like a new greenhouse in a new location for better access to daylight and year round planting.



EXISTING SITE | Site Plan



Arboretum Recreation Center



Pantry kitchen

The Building

Images from existing recreation center. The building's key design feature is a zigzag roof which references that of the Arboretum Visitor Center. This building has been marked as a historic resource and will require HPO coordination throughout the architectural process.

The building otherwise consists of low ceilings, wood and cinder block construction with exposed duct work. The restrooms were recently renovated and are ADA accessible from the interior.



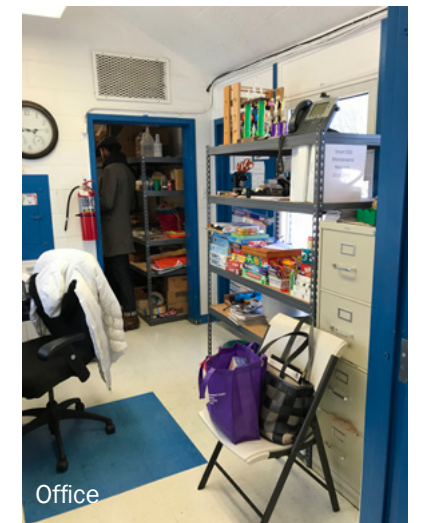
Office



Multipurpose room



Multipurpose room



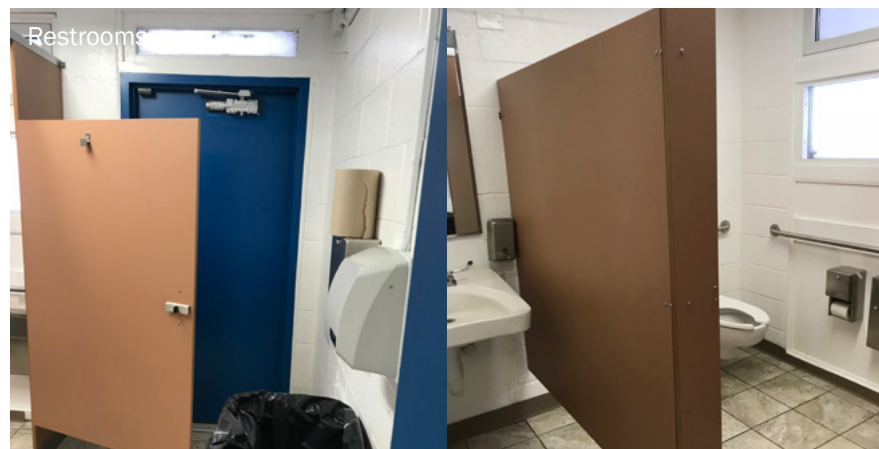
Office



Multipurpose room



Faceted ceiling



Restrooms

EXISTING SITE | Current Conditions



Field & tennis courts



Basketball court



Picnic area

The Site

These existing site photos show the current on site amenities. The outdoor kitchen under the pavilion is propane fueled. There is no existing gas line to the recreation center. Playground equipment seems to be in overall good condition.



Teaching kitchen pavilion & fenced garden



Playground



Playground



Picnic area looking toward rec center



Greenhouse



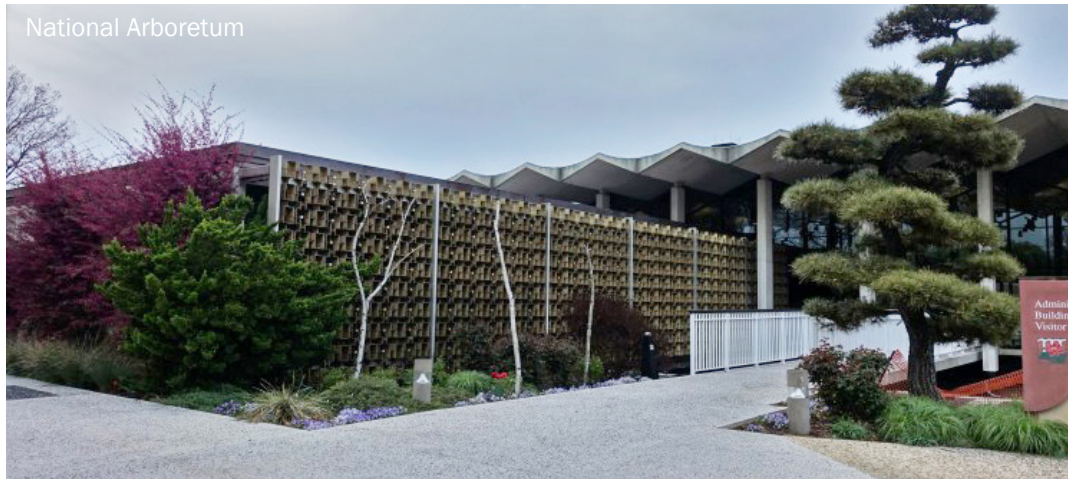
Pavilion with water retention



Community garden

EXISTING SITE | Current Conditions

National Arboretum



Rand Pl. from cul-de-sac

The Neighborhood

The rec center's immediate surroundings consist primarily of single family homes with a walk up garden-style multi family residence to the north.

The adjacent Arboretum Visitor's Center features a prominent zig-zag roof and pavilion canopy as well as custom metal screen for control of natural daylight.



National Arboretum



Surrounding neighborhood



Surrounding neighborhood



Surrounding neighborhood

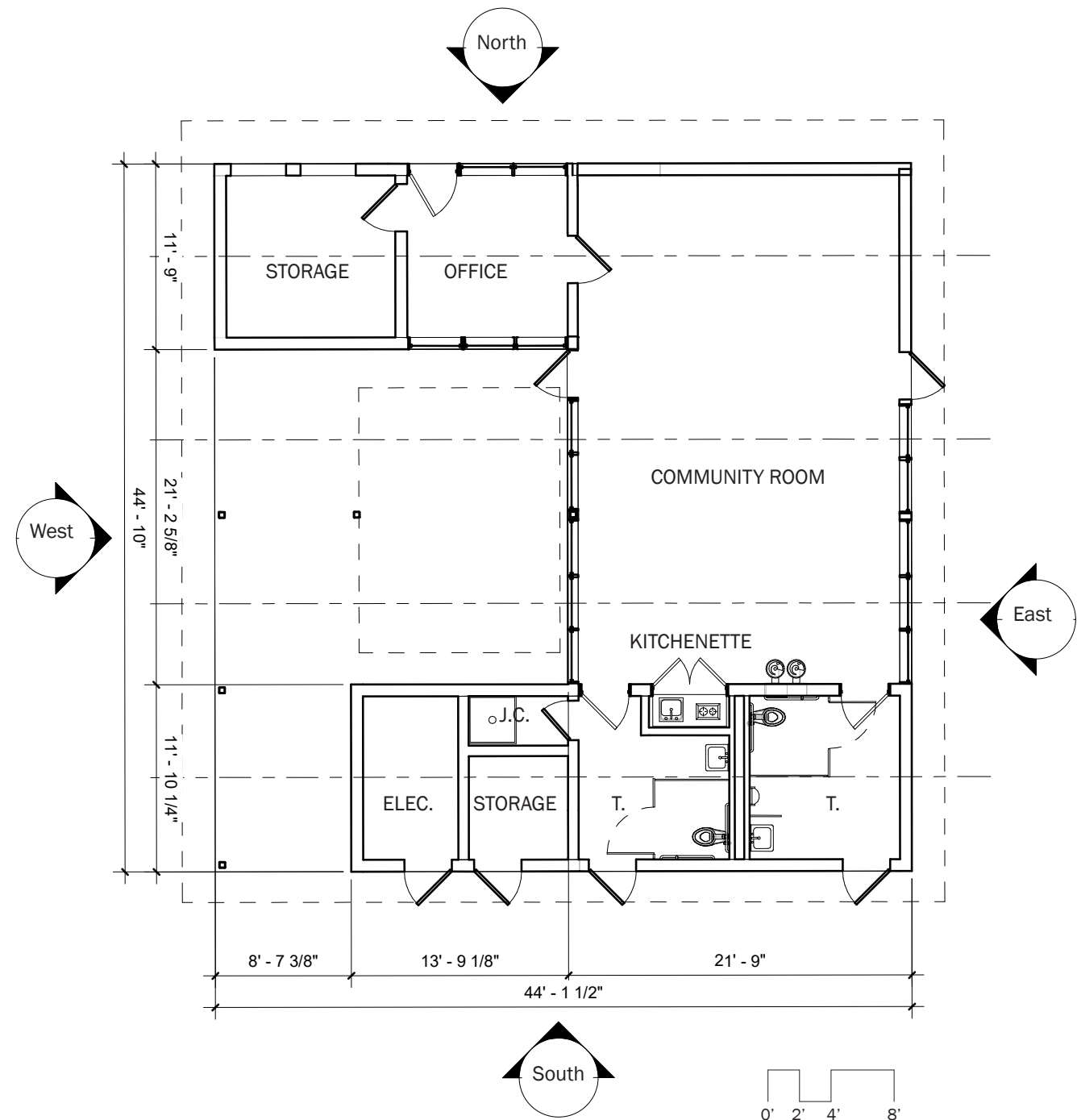
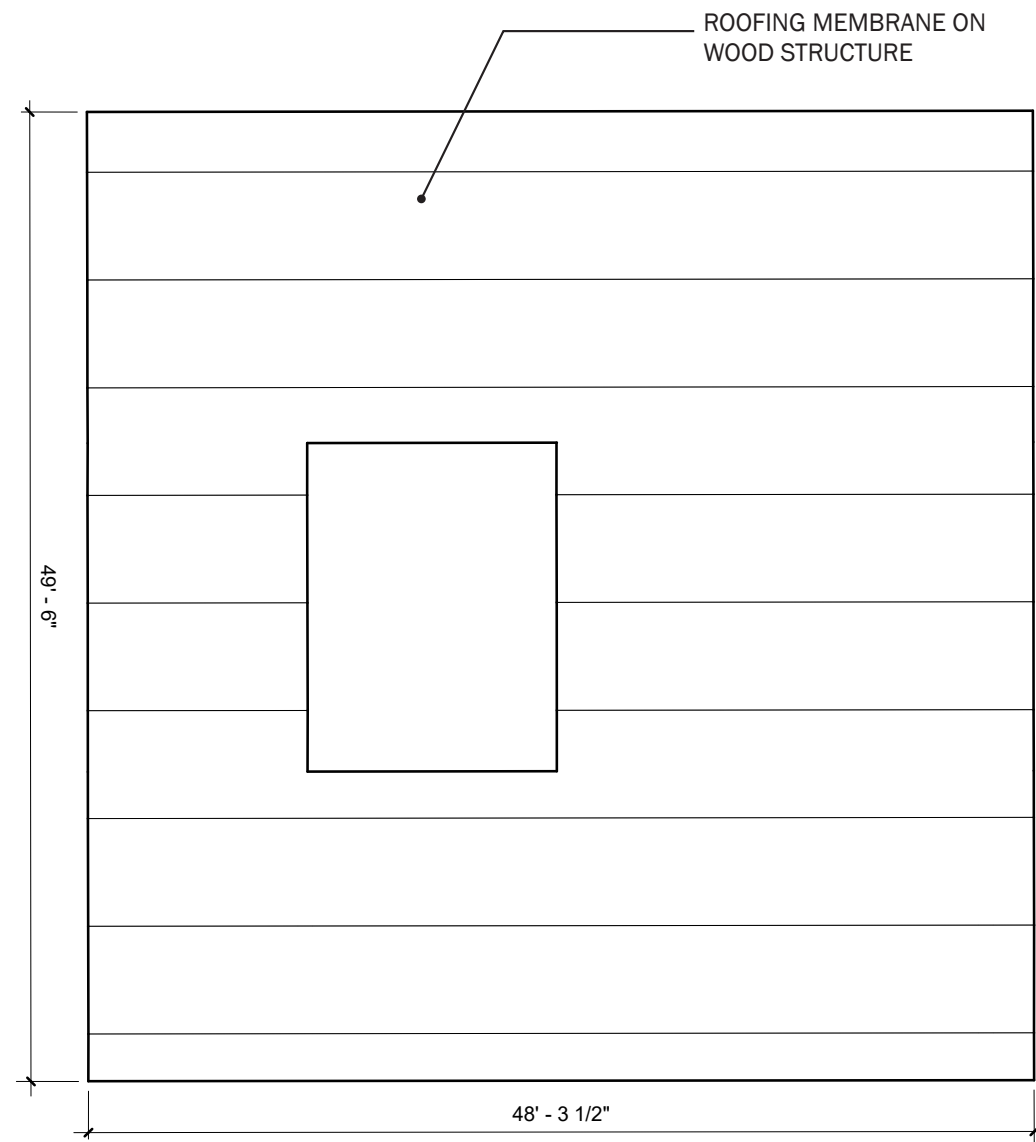


Surrounding neighborhood



National Arboretum

EXISTING SITE | Surrounding Area

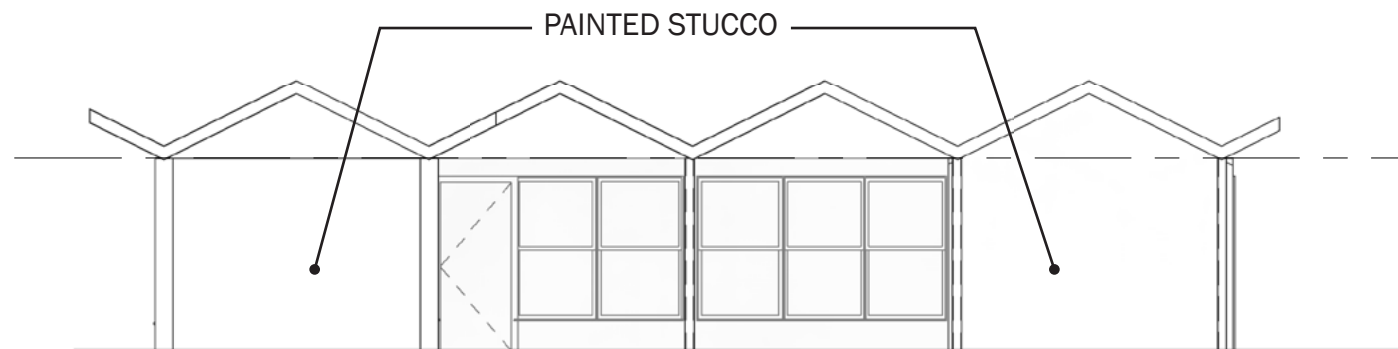


A Determination of Historic Eligibility was performed in coordination with the DC Office of Historic Preservation. It was determined that the existing building meets the criteria outlined below and is historical eligible.

National Register of Historic Places *		
Criteria	Contributing Factor	Project Significance
(A) Event	Associated with significantly contributing events to broad patterns of American history	Association with DC's effort to develop recreational facilities during the late 1960's
(C) Design / Construction	Embodies distinctive features of a type, period or method of construction possessing high artistic value	One of the best examples of Park Service Modern design of Mission 66 period applied to DC's recreation facilities

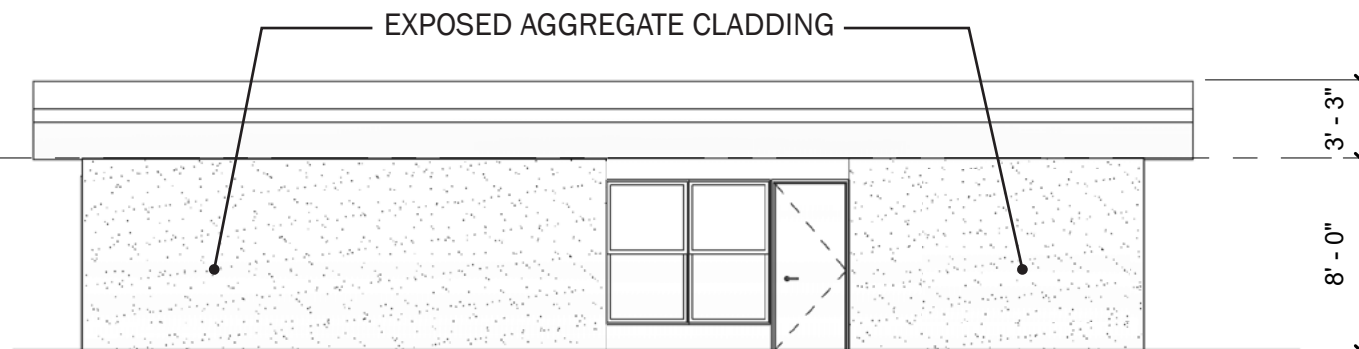
D.C. Inventory of Historic Sites**		
Criteria	Contributing Factor	Project Significance
(B) History	Associated with historical periods, movements, groups and achievements	Example of Mission 66 program's efforts to modernize and improve the Districts recreation system
(D) Architecture and Urbanism	Distinguishing features of architectural styles, building types or construction methods	Embodies the distinguishing characteristics of Park Service Modern
(E) Artistry	High artistic or aesthetic values contributing to heritage or appearance	One of the finest examples of Park Service Modern

EXISTING BUILDING | Roof & Floor Plan



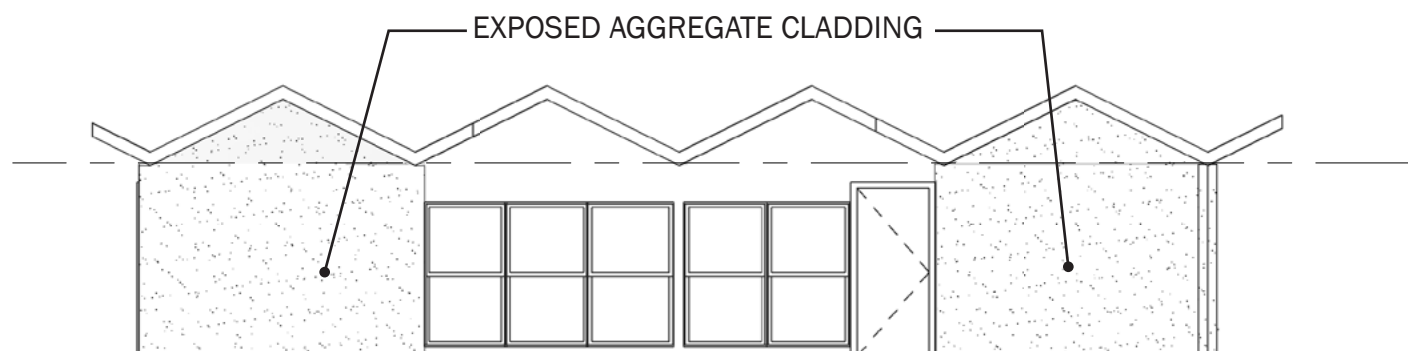
EXISTING ELEVATION - WEST

1/8" = 1'-0"



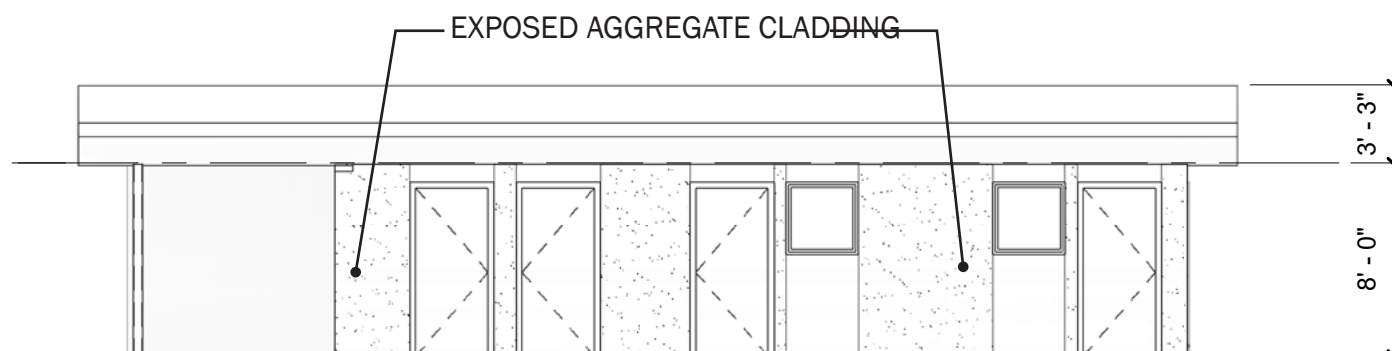
EXISTING ELEVATION - NORTH

1/8" = 1'-0"



EXISTING ELEVATION - EAST

1/8" = 1'-0"



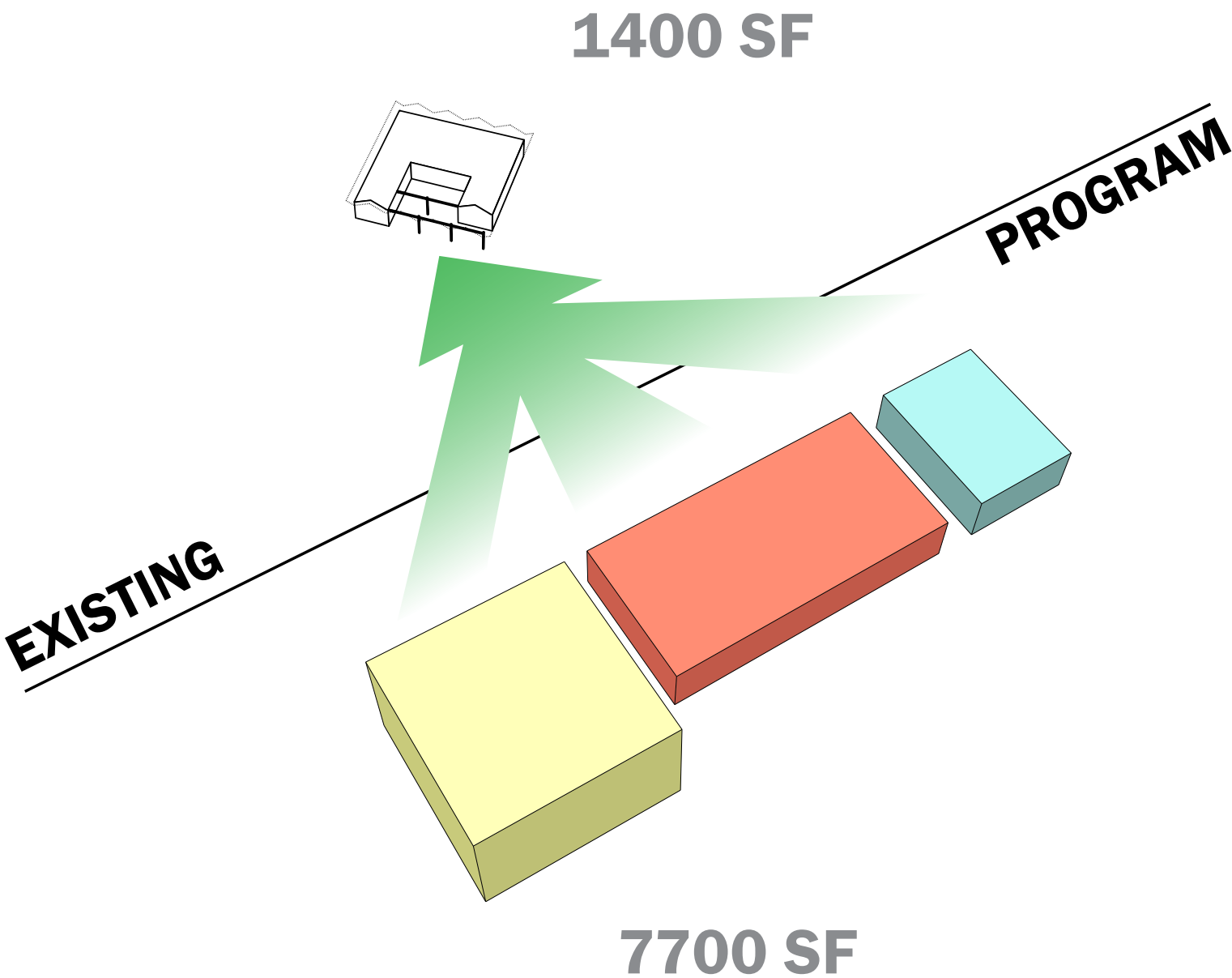
EXISTING ELEVATION - SOUTH

1/8" = 1'-0"

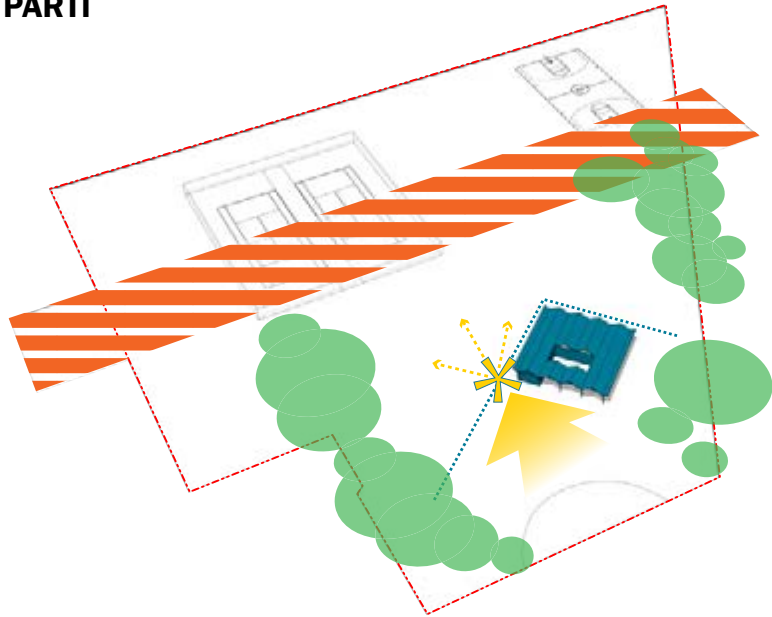
EXISTING BUILDING | Elevations

ROOM NAME	SF	# OF VOTES	USES
COMMUNITY	1243	7	MULTI-PURPOSE
		6	READING ROOM
		4	MUSIC
		3	TEEN / GAME
		2	CLASSROOM
FITNESS	658	13	FORMAL FITNESS
		10	BOXING
SOFT PLAY	152	7	SENSORY PLAY
TECH LOUNGE	345	6	COMPUTER
		4	LOUNGE
		4	SENIOR
1/2 GYM	3446	2	SPORTS + FITNESS
OFFICE	142		REQUIRED
RECEPTION/LOUNGE	226		REQUIRED
IT	72		REQUIRED
RESTROOMS	319		REQUIRED
CIRCULATION	928		REQUIRED
MECH/STORAGE	196		REQUIRED
NET SQUARE FOOTAGE	7727		

The program needs of the community far exceed the available square footage of the existing recreation center.

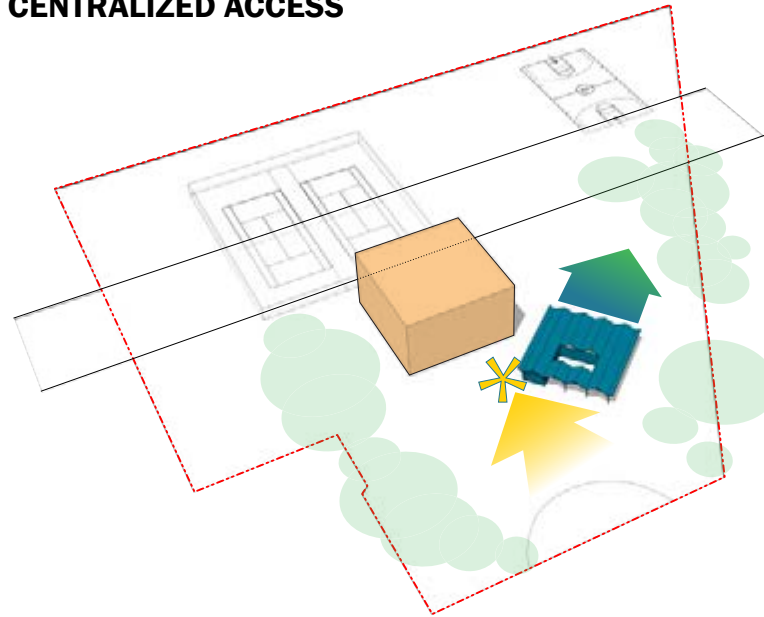


PARTI



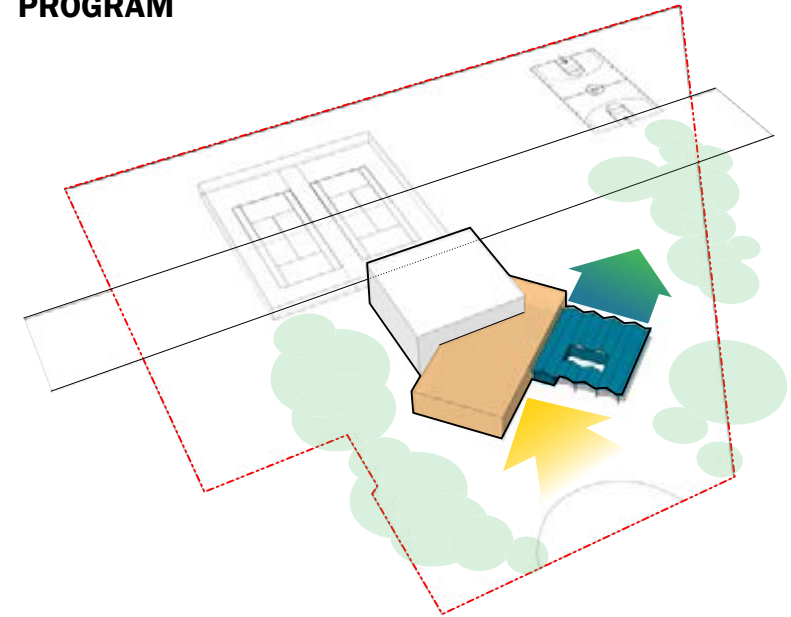
Existing conditions inform the Partii. These include site access, the existing structure, mature trees and an easement that runs through the center fo the site.

CENTRALIZED ACCESS



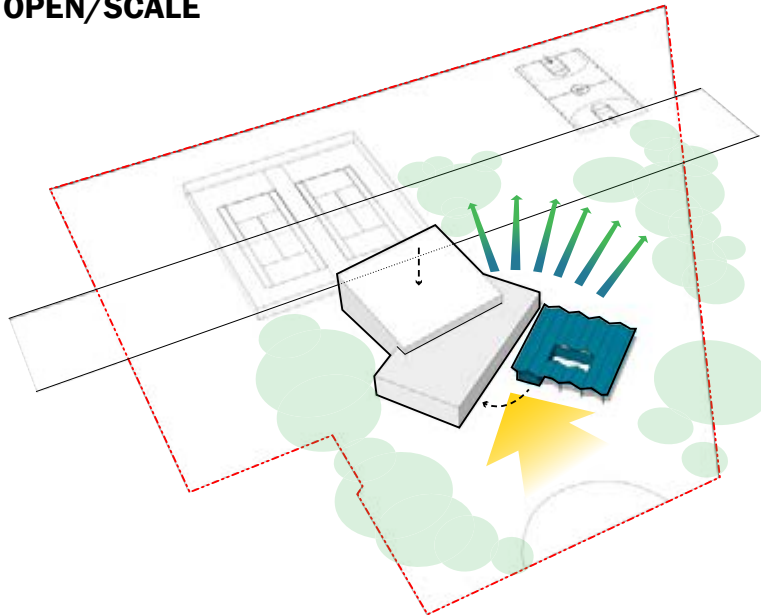
The half gym is located outside of all critical root zones and the existing easement. It if oriented for optimal daylighting and centralized access from the site entry.

PROGRAM



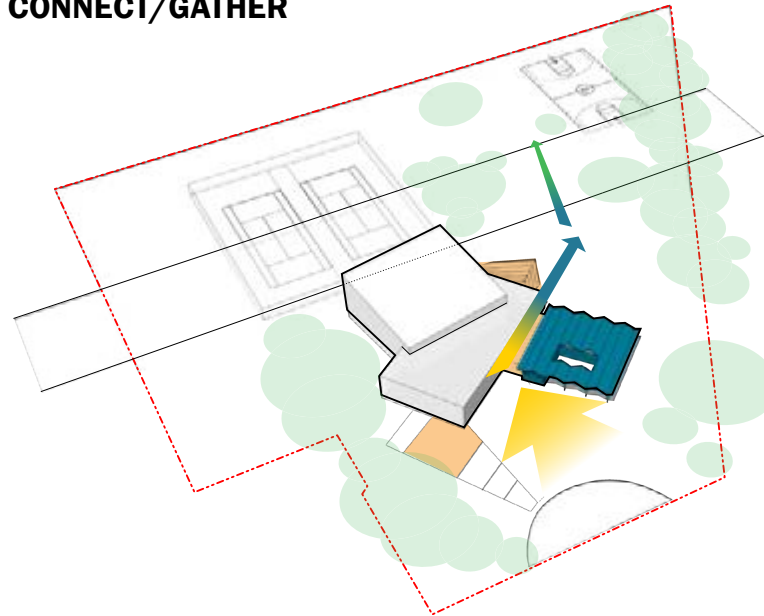
Additional square footage is needed to accomodate the program. This bar building becomes a connector for the existing structure and the half gym.

OPEN/SCALE



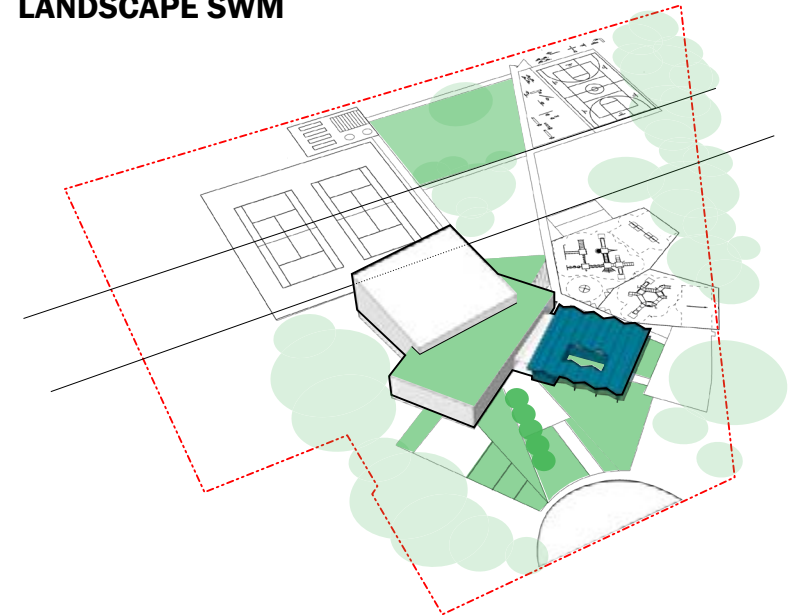
The half gym is sunken into the earth and the bar building is angled outward to compliment, and not crowd, the existing structure.

CONNECT/GATHER



Landscaping and pathways are used to connect activities throughout the site

LANDSCAPE SWM



Stormwater management and site plantings are integrated into the building and the project site

Powell Elementary



Precedent Description

For this project we are looking towards precedents that are open and welcoming, provide natural light to interiors and shaded pathways and pavilions to exteriors.

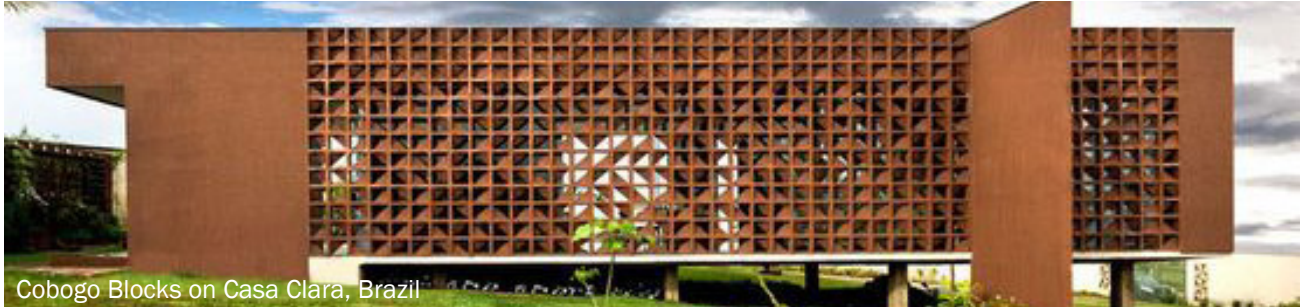
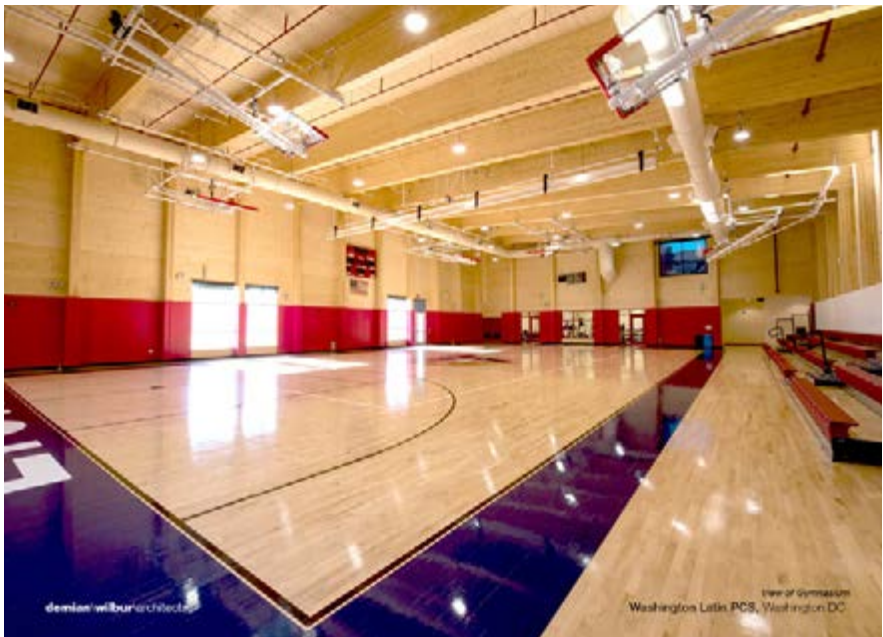
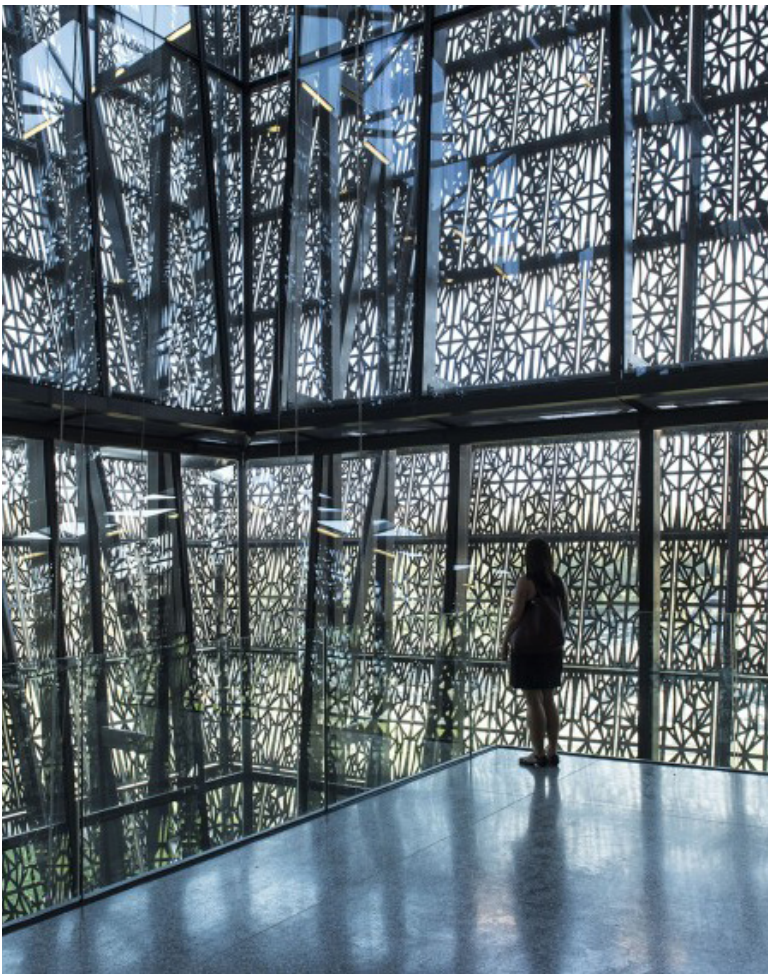
Sculpted hardscapes for various uses and green space and roofs for bioretention as well as recreation. Transparency for the interaction of some programs is essential while more private spaces can be created when necessary. Sustainable design, flexibility and useability are key to the new Arboretum Recreation Center.

The intent is to keep the building materials simple so the building compliments and enhances the existing historic filed house. This includes fiber cement panels, glazing and translucent panels. A screen at the main entrance has been designed to ensure that the existing filed house remains the focal point of the design and to highlight the building entrance.

National Arboretum Visitor's Center



Stoddart Elementary



Cobogo Blocks on Casa Clara, Brazil



The Pterodactyl - Culver City



Anacostia Public Library - Washington DC



Oslo Opera House



Het Anker Community Centre - Netherlands



Marvin Gaye Recreation Center - Washington DC



Hall of Waterfront City - Shanghai



Seattle Olympic Sculpture Garden



Antony Multisports Complex - Paris



ADDITION + RENOVATION | Precedents

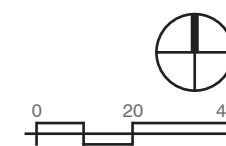


-----> CIRCULATION

* ENTRY/EXIT

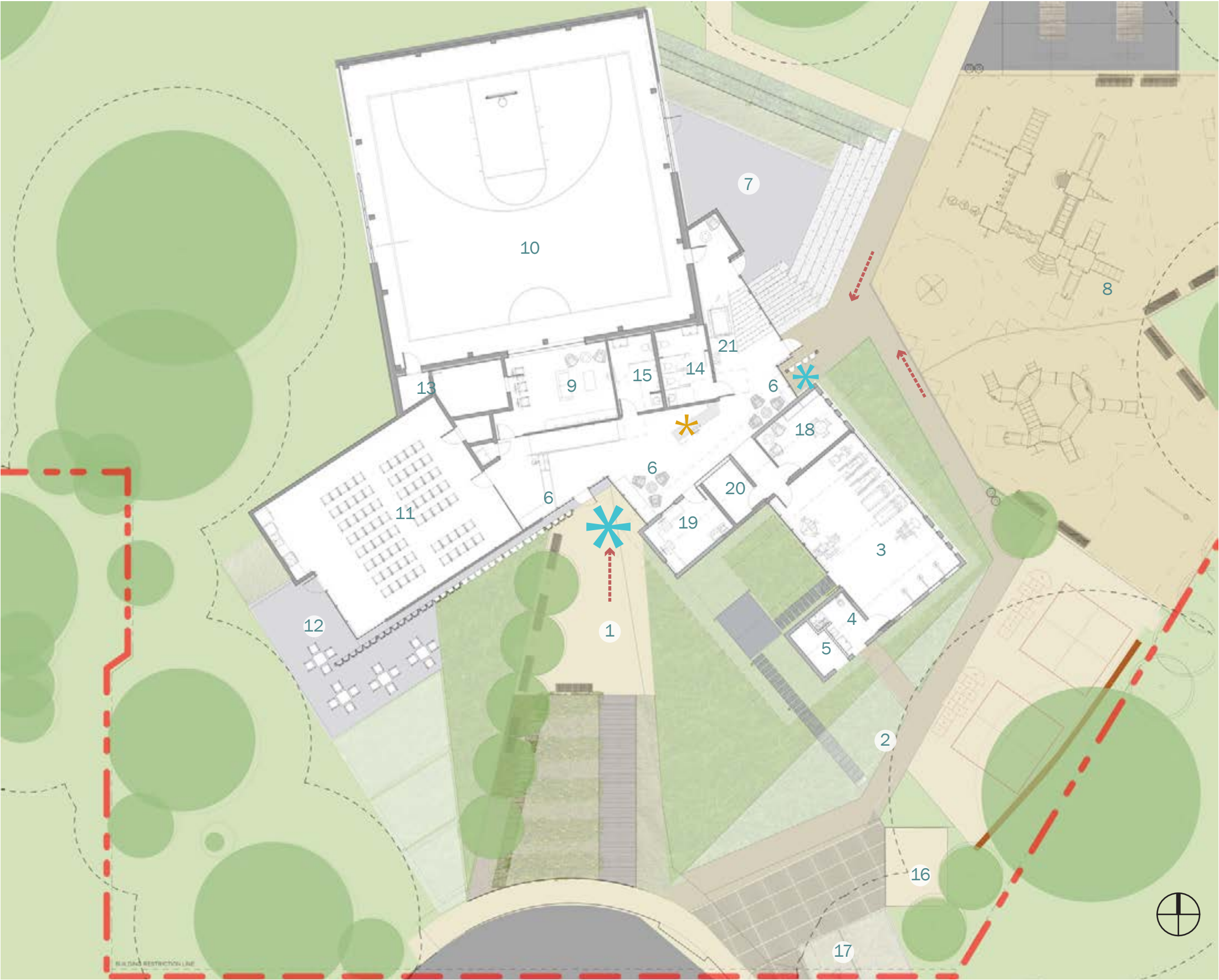
SITE PLAN KEYNOTES


- 1 EXISTING HISTORIC BUILDING
- 2 SOLAR ROOF
- 2A MECHANICAL UNDERNEATH SOLAR ROOF
- 3 EXISTING TENNIS COURTS
- 4 POTENTIAL GREENHOUSE
- 5 EXTENSIVE LOW PROFILE GREEN ROOF/SWM
- 6 COMMUNITY GARDENS
- 7 AMPHITHEATER
- 8 RELOCATED PLAYGROUND
- 9 RELOCATED FITNESS
- 10 EXISTING BASKETBALL COURT
- 11 TRASH ENCLOSURE
- 12 COMMUNITY PATIO
- 13 POTENTIAL PARKING
- 14 STORM WATER MANAGEMENT
- 15 HARDSCAPE PLAY
- 16 FIRE TRUCK ACCESS LANE
- 17 PAPER STREET EASEMENT



ADDITION + RENOVATION | Site Plan

SCALE 1:40



-  RECEPTION
-  CIRCULATION
-  ENTRY/EXIT

SITE PLAN KEYNOTES	
1	ENTRY PLAZA
2	FIRE TRUCK ACCESS LANE
3	FITNESS ROOM
4	RESTROOM WITH SHOWER
5	ELECTRICAL ROOM
6	BREAKOUT AREA
7	AMPHITHEATER
8	RELOCATED PLAYGROUND
9	TECH LOUNGE
10	HALF GYM
11	COMMUNITY ROOM
12	COMMUNITY PATIO
13	UTILITIES
14	WOMEN'S WC
15	MEN'S WC
16	TRASH ENCLOSURE
17	POTENTIAL PARKING
18	SOFT PLAY ROOM
19	OFFICE
20	IT ROOM
21	LIFT

ADDITION + RENOVATION | Floor Plan
N.T.S.

TREES



QUERCUS PHELLOS



BETULA NIGRA 'HERITAGE'



ILEX GLABRA 'SHAMROCK'



PRUNUS LAUROCERASUS 'OTTO LUYKEN'



NASSELLA TENUISSIMA



SPOROBOLUS HETEROLEPIS 'TARA'



ULMUS AMERICANA 'JEFFERSON'



HYDRANGEA QUERCIFOLIA



ASCLEPIAS TUBEROSA



RHUS AROMATICA 'GRO-LOW'



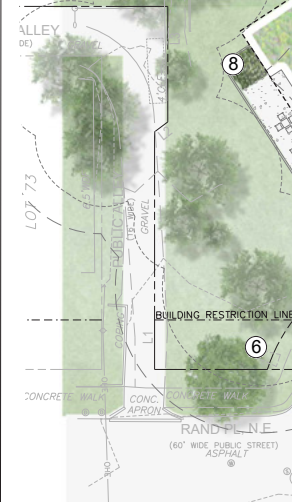
ITEA VIRGINICA 'LITTLE HENRY'



COREOPSIS VERTICILLATA 'ZAGREB'



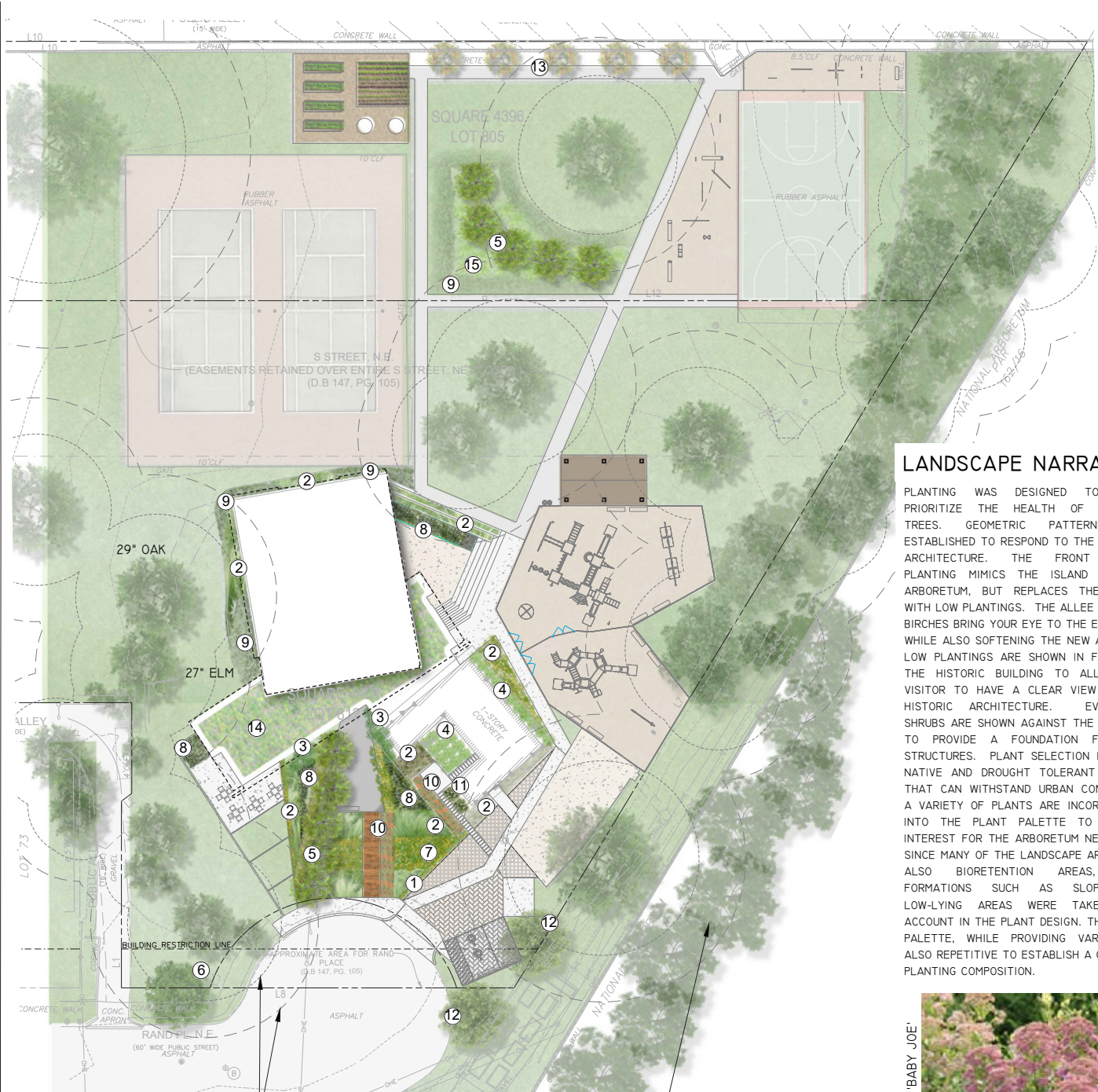
PRUNUS AVIUM 'STELLA'



14 GREEN ROOF



SEDUM MATS WITH ALLIUM AND NASSELLA PLUGS AT 3'-4' O.C.



TREE PROTECTION ZONES, TYP.
AT 1' RADIUS PER 1" DIAMETER
AND 1.5' RADIUS PER 1" DIAMETER

COORDINATE EVERGREEN SCREENING
PLANTING WITH ARBORETUM
TO BLEND IN WITH EXISTING
EVERGREEN SCREENING

SCALE: 1"=20'

LANDSCAPE NARRATIVE:

PLANTING WAS DESIGNED TO FIRST PRIORITIZE THE HEALTH OF EXISTING TREES. GEOMETRIC PATTERNS ARE ESTABLISHED TO RESPOND TO THE BUILDING ARCHITECTURE. THE FRONT PLAZA PLANTING MIMICS THE ISLAND AT THE ARBORETUM, BUT REPLACES THE WATER WITH LOW PLANTINGS. THE ALLEE OF RIVER BIRCHES BRING YOUR EYE TO THE ENTRANCE WHILE ALSO SOFTENING THE NEW ADDITION. LOW PLANTINGS ARE SHOWN IN FRONT OF THE HISTORIC BUILDING TO ALLOW THE VISITOR TO HAVE A CLEAR VIEW OF THE HISTORIC ARCHITECTURE. EVERGREEN SHRUBS ARE SHOWN AGAINST THE BUILDING TO PROVIDE A FOUNDATION FOR THE STRUCTURES. PLANT SELECTION INCLUDES NATIVE AND DROUGHT TOLERANT SPECIES THAT CAN WITHSTAND URBAN CONDITIONS. A VARIETY OF PLANTS ARE INCORPORATED INTO THE PLANT PALETTE TO PROVIDE INTEREST FOR THE ARBORETUM NEIGHBORS. SINCE MANY OF THE LANDSCAPE AREAS ARE ALSO BIORETENTION AREAS, LAND FORMATIONS SUCH AS SLOPE AND LOW-LYING AREAS WERE TAKEN INTO ACCOUNT IN THE PLANT DESIGN. THE PLANT PALETTE, WHILE PROVIDING VARIETY, IS ALSO REPETITIVE TO ESTABLISH A COHESIVE PLANTING COMPOSITION.



EUPATORIUM 'BABY JOE'



SPOROBOLUS HETEROLEPIS 'TARA'



SOLIDAGO RUGOSA 'FIREWORKS'



NASSELLA TENUISSIMA



SCHIZ. SCOPARIUM 'OVATION'



RUDBECKIA HIRTA

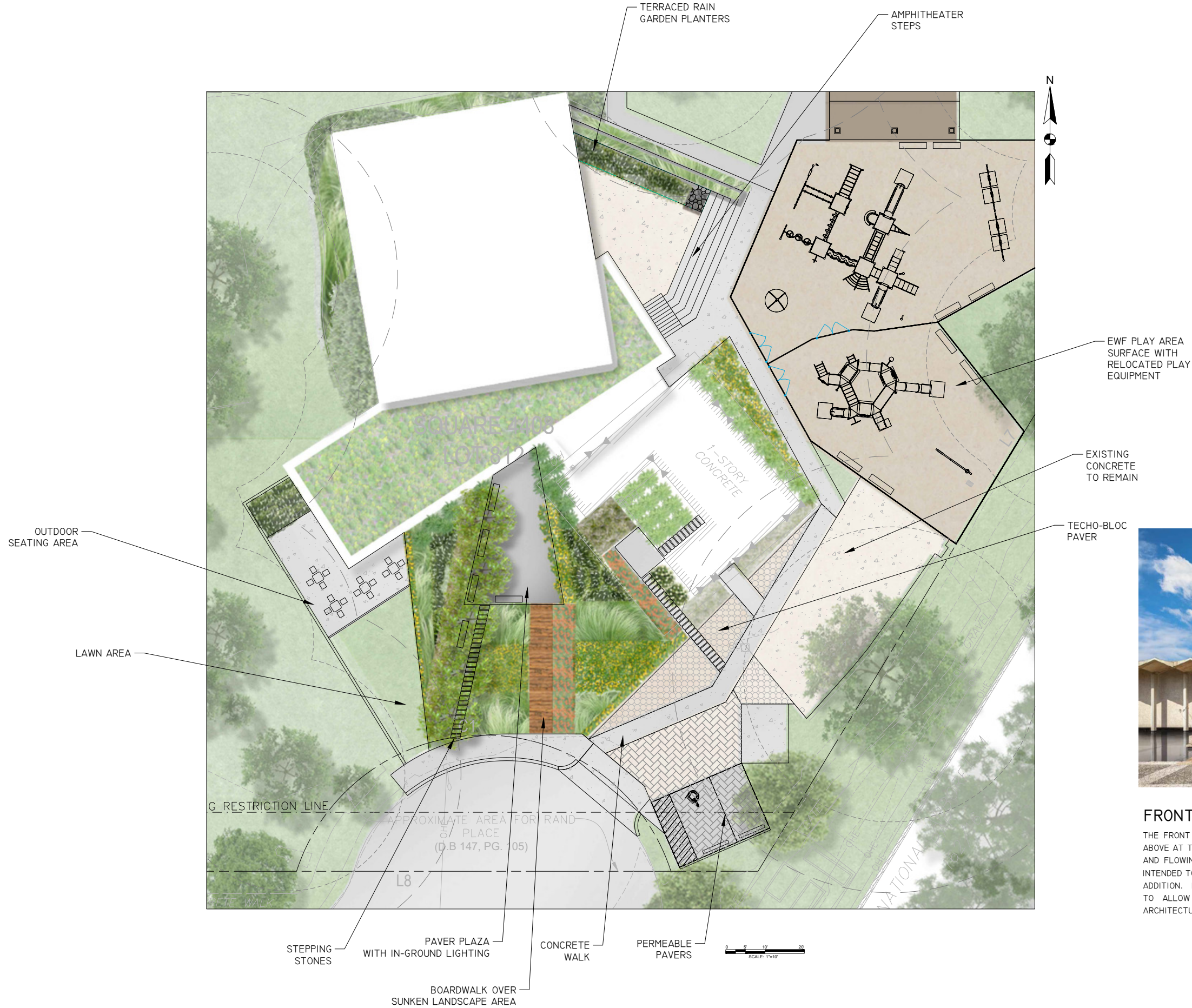


ITEA VIRGINICA 'LITTLE HENRY'



ECHINACEA PURPUREA

15 BIORETENTION PLANTS



FRONT PLAZA LANDSCAPE NARRATIVE:

THE FRONT PLAZA LANDSCAPE IS INTENDED TO MIMIC THE ISLAND PICTURED ABOVE AT THE NATIONAL ARBORETUM, REPLACING THE WATER WITH LOW SOFT AND FLOWING GRASSES AND PERENNIALS. THE ALLEE OF RIVER BIRCHES IS INTENDED TO DIRECT YOUR EYE TO THE ENTRANCE WHILE SOFTENING THE NEW ADDITION. LOW PLANTINGS ARE SHOWN IN FRONT OF THE HISTORIC BUILDING TO ALLOW THE VISITOR TO HAVE A CLEAR VIEW OF THE HISTORIC ARCHITECTURE. SEE FULL NARRATIVE AND PLANT SPECIES ON SHEET L105.

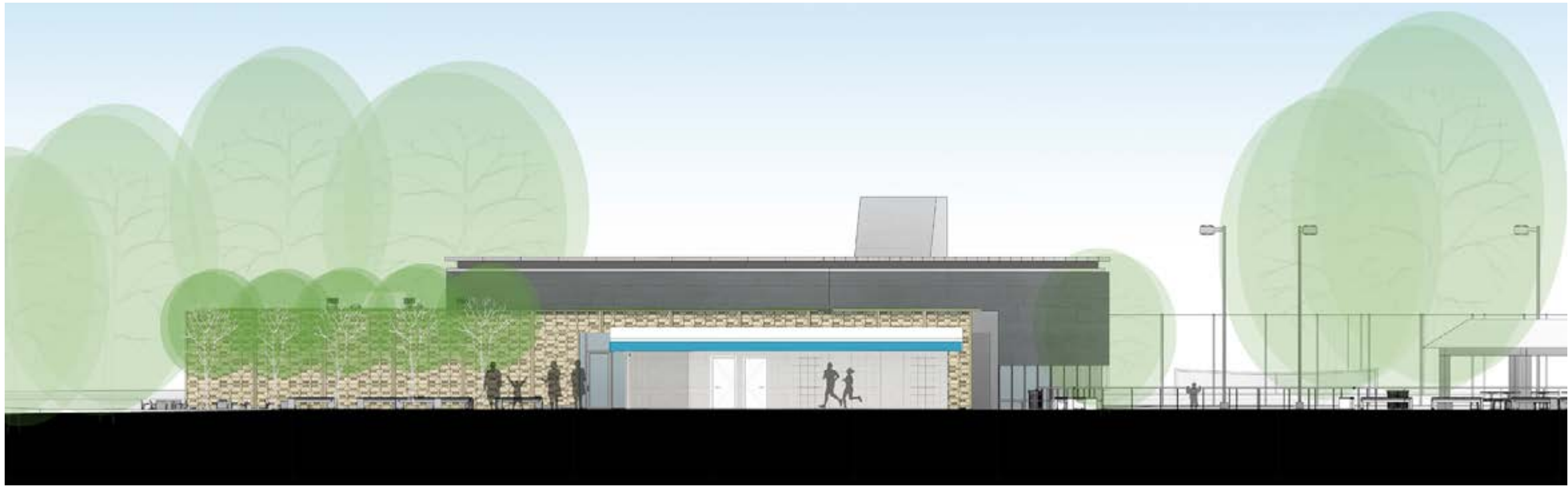
ADDITION + RENOVATION | Enlarged Planting Plan at Entry Plaza



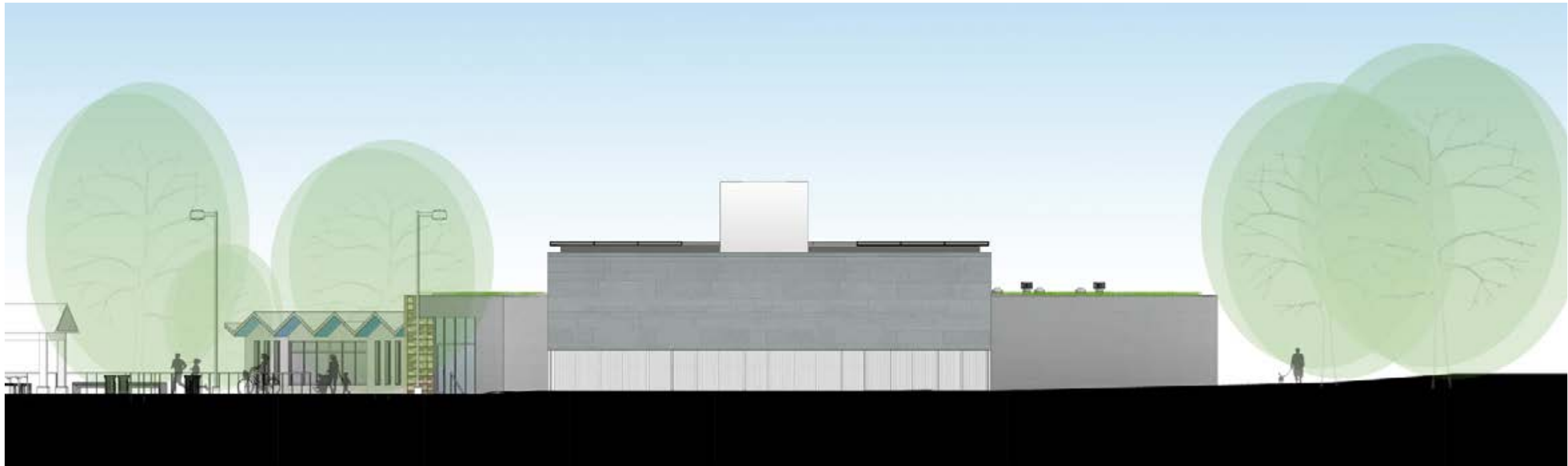
South West Elevation



North East Elevation

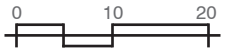


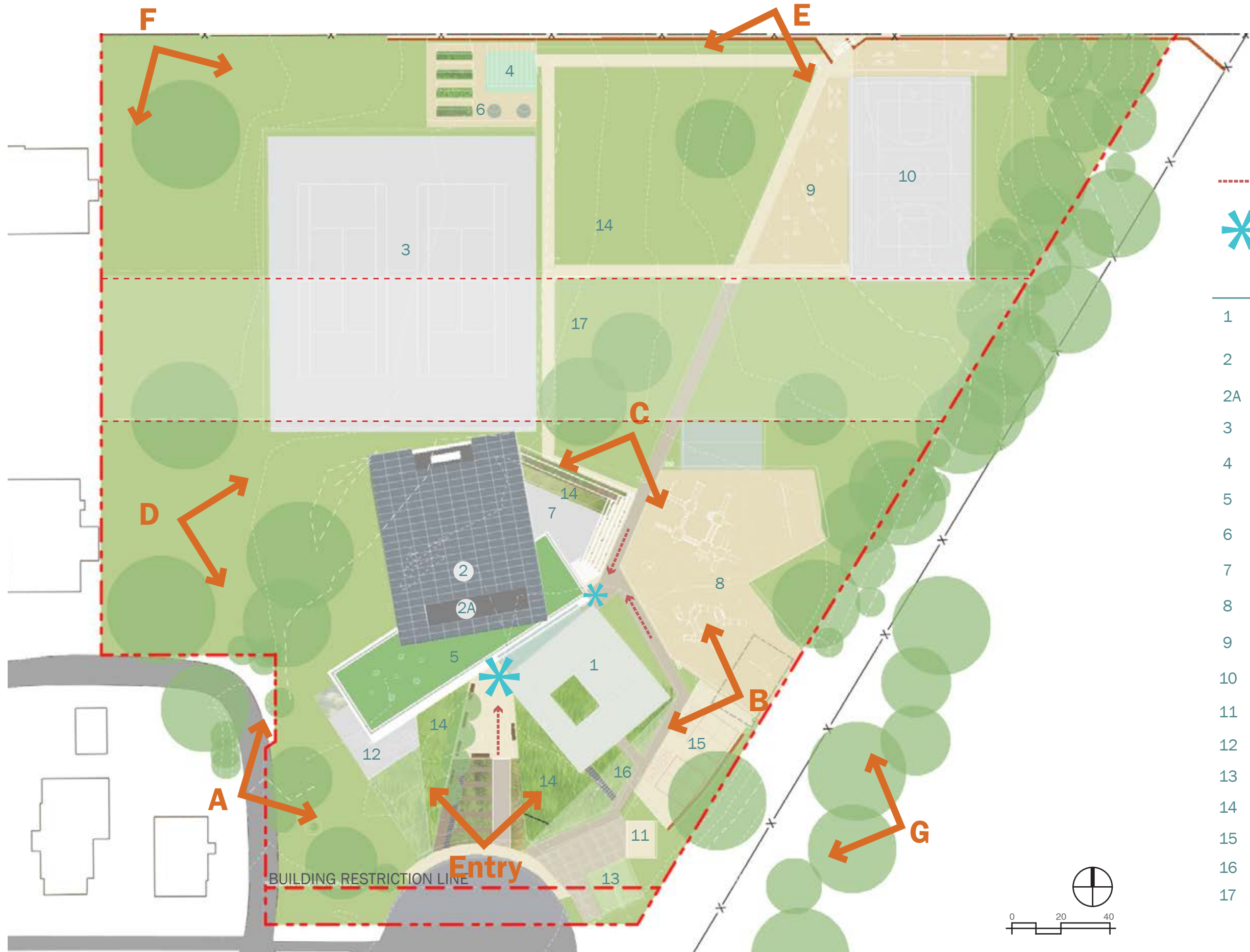
South East Elevation



North West Elevation

ADDITION + RENOVATION | Elevations
 SCALE 1/16" = 1'



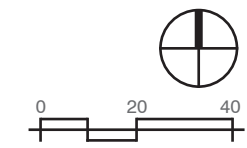


-----> CIRCULATION

* ENTRY/EXIT

SITE PLAN KEYNOTES

- 1 EXISTING HISTORIC BUILDING
- 2 SOLAR ROOF
- 2A MECHANICAL BELOW SOLAR ROOF
- 3 EXISTING TENNIS COURTS
- 4 POTENTIAL GREENHOUSE
- 5 LOW PROFILE EXTENSIVE GREEN ROOF/SWM
- 6 COMMUNITY GARDENS
- 7 AMPHITHEATER
- 8 RELOCATED PLAYGROUND
- 9 RELOCATED FITNESS
- 10 EXISTING BASKETBALL COURT
- 11 TRASH ENCLOSURE
- 12 COMMUNITY PATIO
- 13 POTENTIAL PARKING
- 14 STORM WATER MANAGEMENT
- 15 HARDSCAPE PLAY
- 16 FIRE TRUCK ACCESS LANE
- 17 PAPER STREET EASEMENT



ADDITION + RENOVATION | Site Plan View Key
SCALE 1:40



OPTION 1 SCREEN
LANDSCAPED TREES TURNED OFF FOR CLARITY



ENTRANCE VIEW WITH LANDSCAPED TREES

ADDITION + RENOVATION | Entry View
NOT TO SCALE

The design focused on creating an early sequence that celebrates the existing historic field house, highlights the entrance and provides a landscaped entry. Users enter along a boardwalk surrounded by flowing grasses and wildflowers, that help to soften the addition and highlight existing field house.

The screen wall serves as another screen for the addition, so that the existing field house remains the prominent element from the entrance. while also reducing solar heat gain and glare into the new addition. There are various options for the screen wall, with three options being presented on this page and the following page. All of the options intend to provide a perforated material that will allow light and visual connection from certain angles, while still creating a visual separation between the existing structure and the new addition.

OPTION 1:
This option explores creating a trapezoidal “unit” that can then be rotated and mirrored to create a randomized pattern throughout. Perforated metal panel “units” would be mounted to a steel sub-structure that sits outboard of the addition.



OPTION 2:

Option 2 uses an angled perforated louver to create a simplified screen that expresses the horizontality of the screen and draws the eye towards the entrance and existing field house. The zigzag pattern uses the same angles of the existing roof, at a significantly smaller scale and in a different material in order to compliment, but not compete with the notable roof.



OPTION 3:

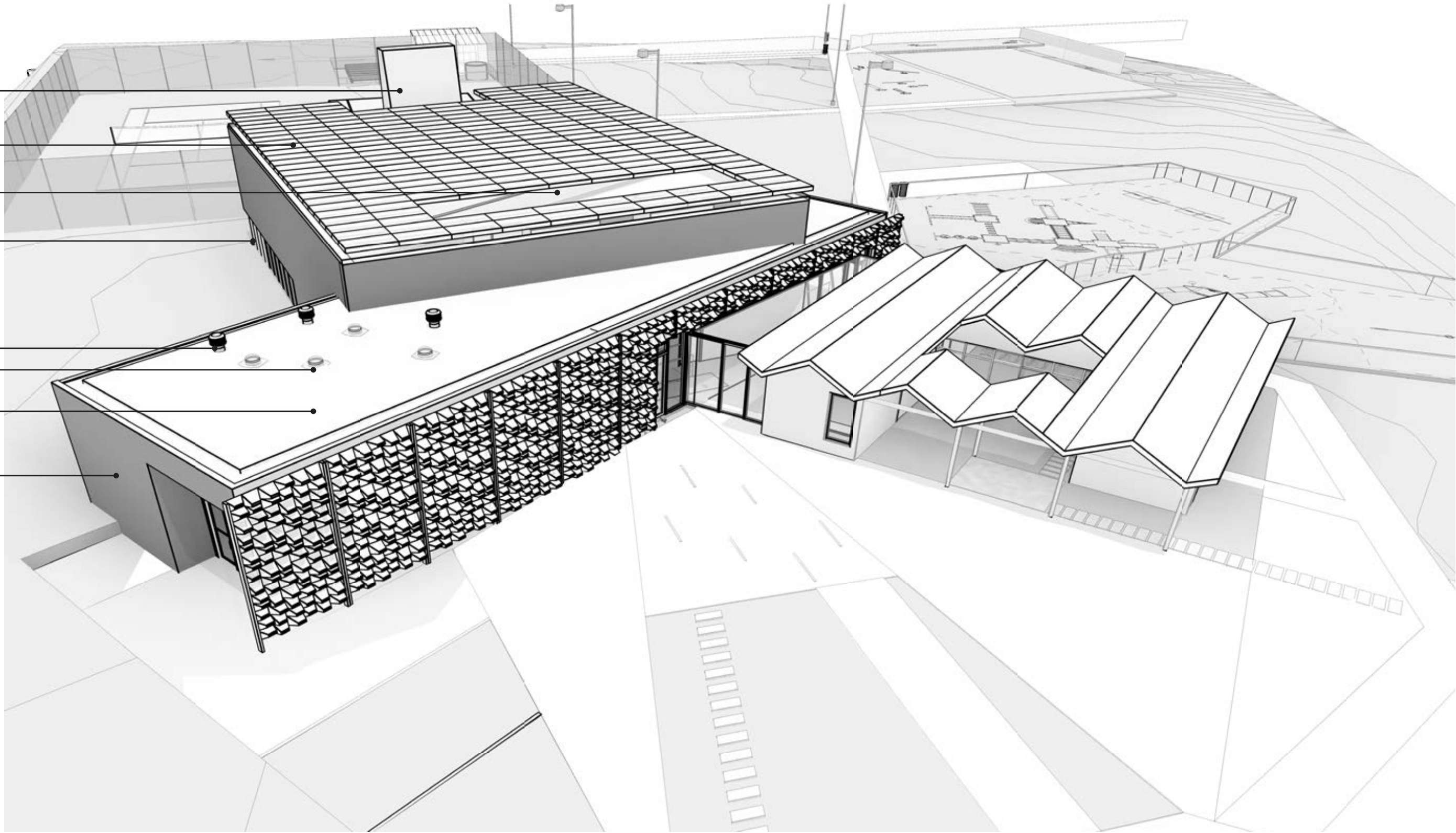
Option 3 uses a perforated fin to create a simple, understated screen. The fins are angled to screen the users view as they first approach from Rand Pl. As the viewer gets closer to the entry, views through the fins offer glimpses of the community room, technology lounge and lobby. The angle of the fins references the angle of the existing zigzag roof.

ADDITION + RENOVATION | Alternate Screen Options

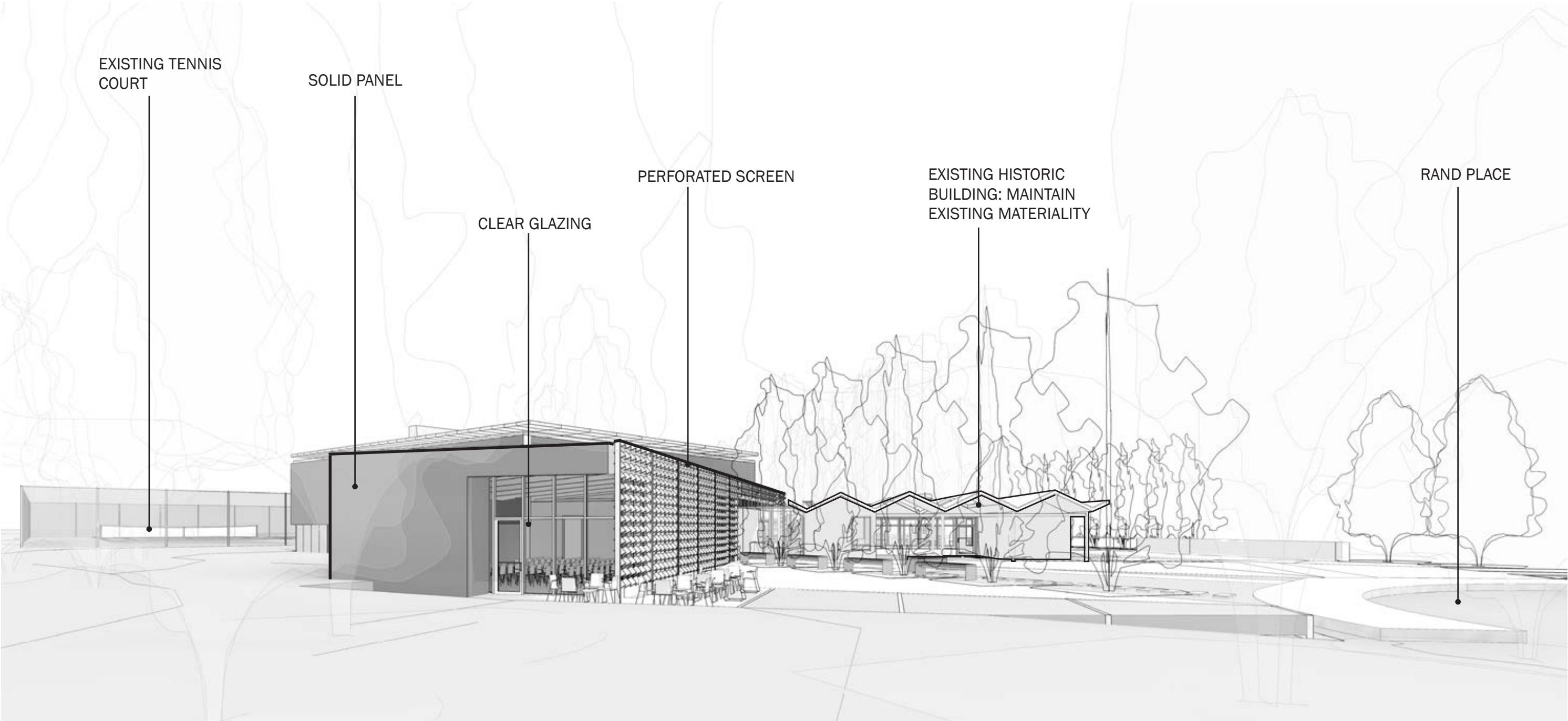
NOT TO SCALE

SOLAR
CHIMNEY
PHOTOVOLTAIC
PANELS
HVAC
UNDERNEATH
TRANSLUCENT
PANELS

VENTILATION
SOLAR TUBE
GREEN ROOF
SOLID PANEL

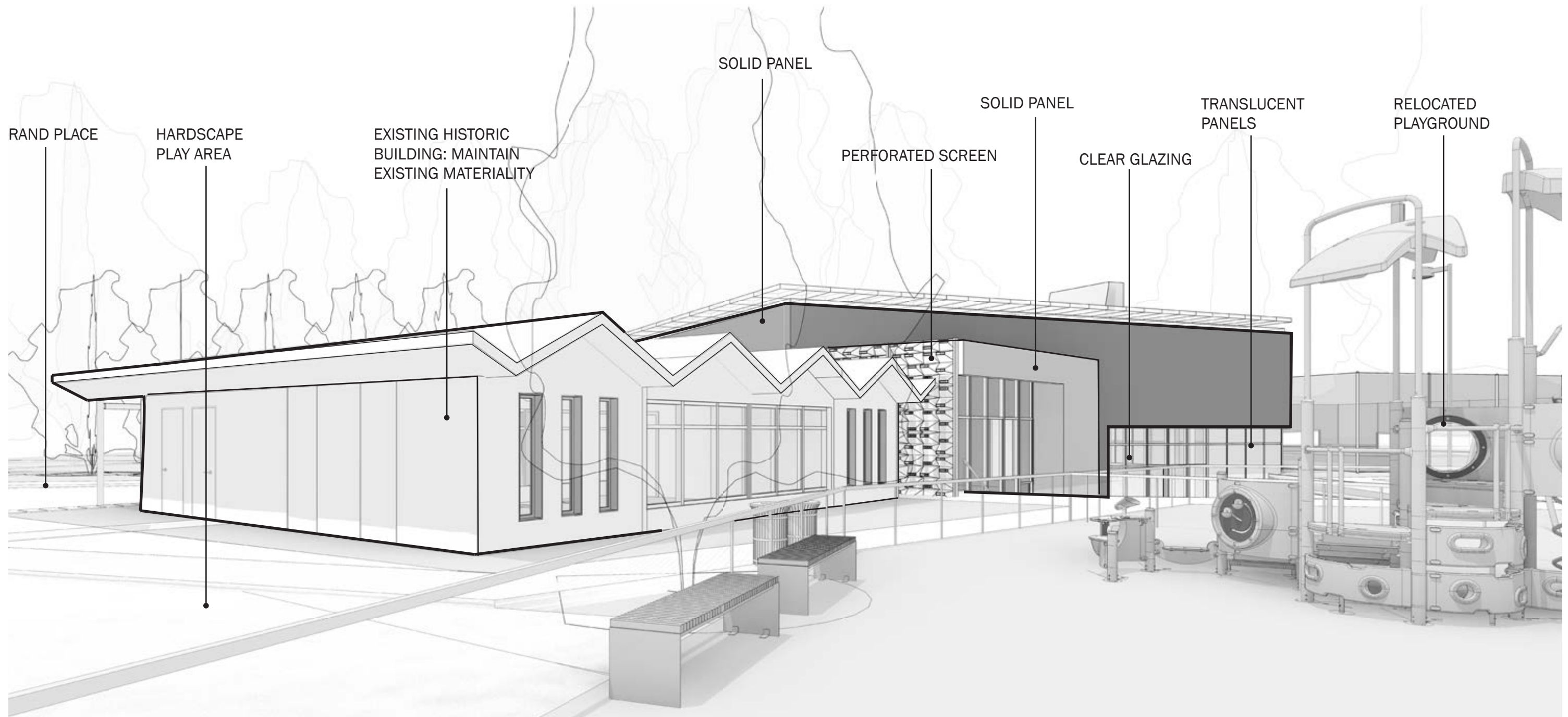


ADDITION + RENOVATION | Bird's Eye View
NOT TO SCALE



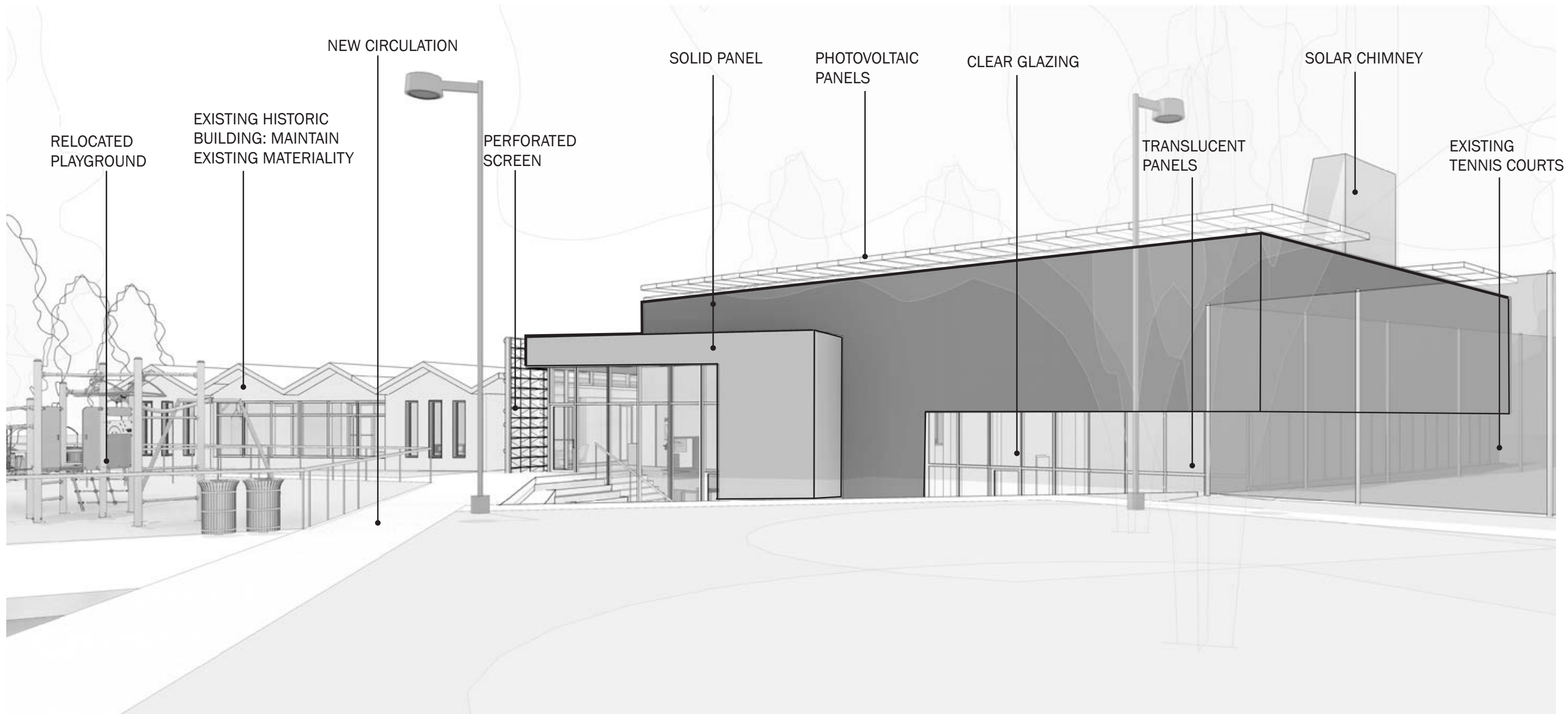
ADDITION + RENOVATION | A - Community Room

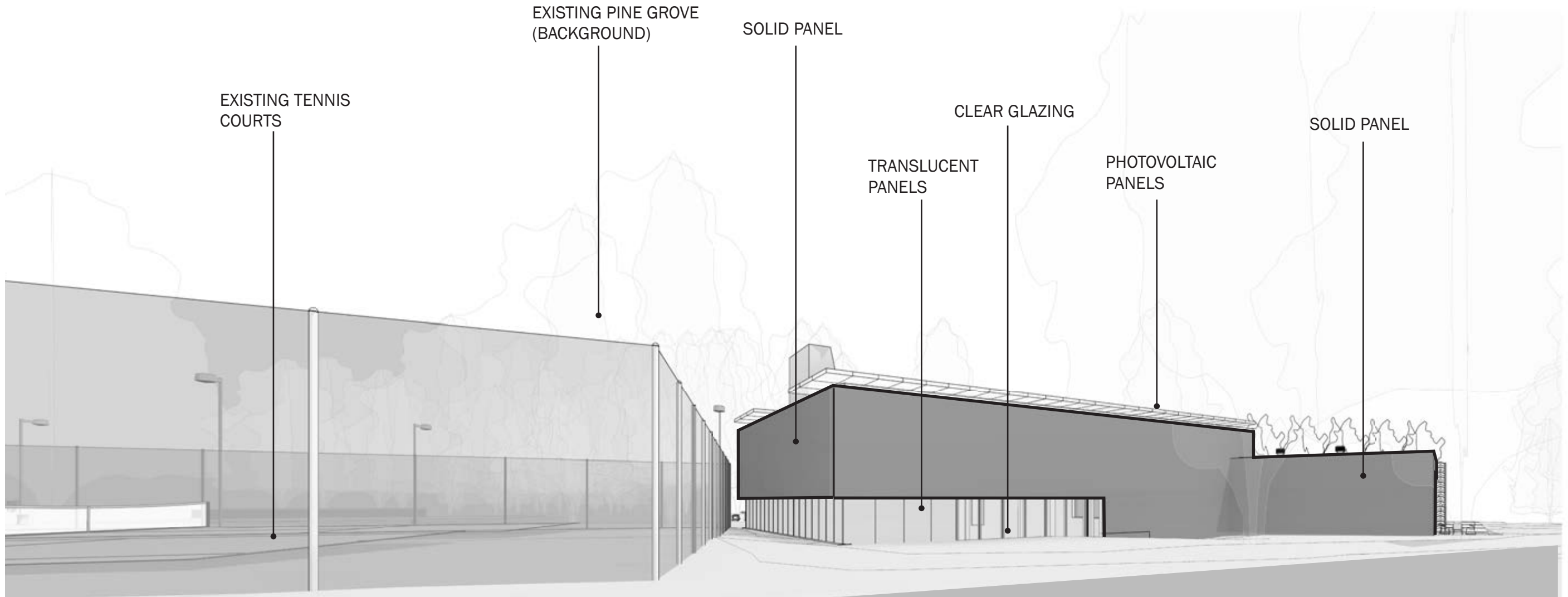
NOT TO SCALE



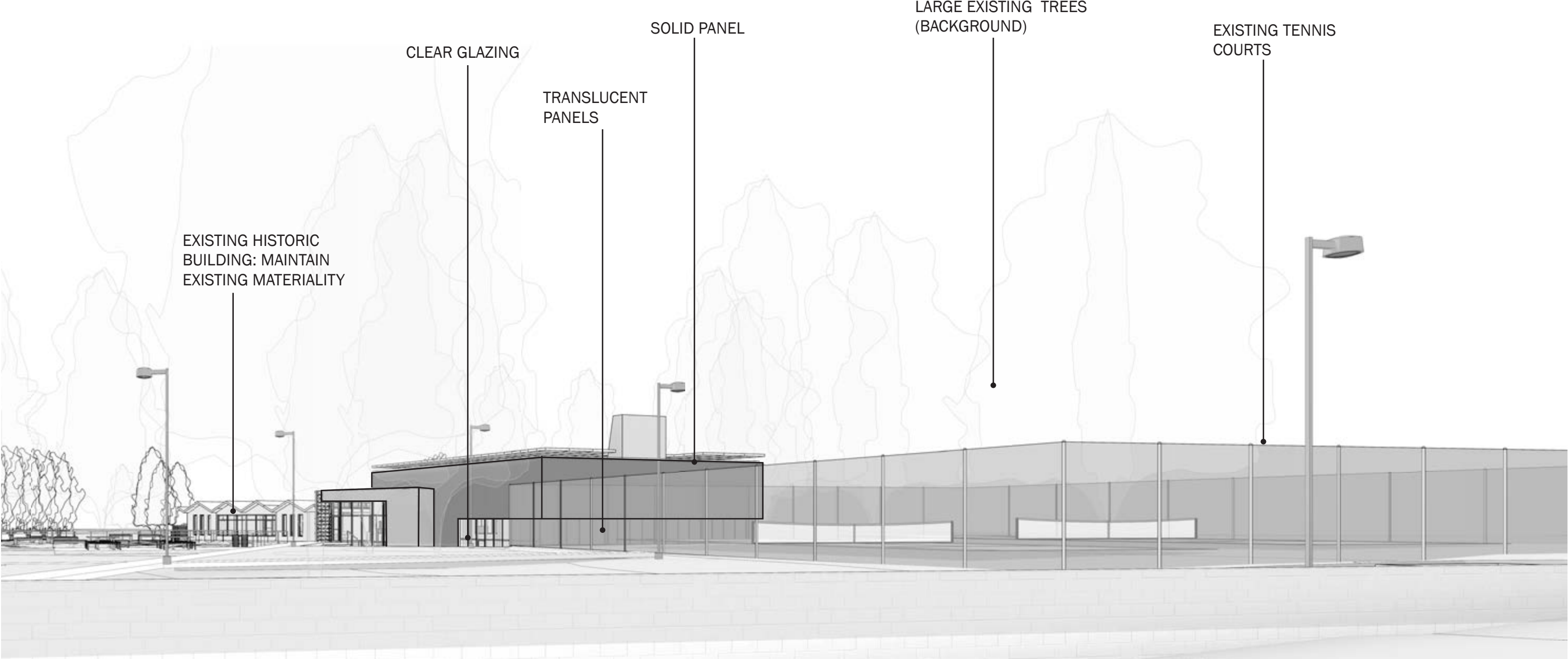
ADDITION + RENOVATION | B - From Playground

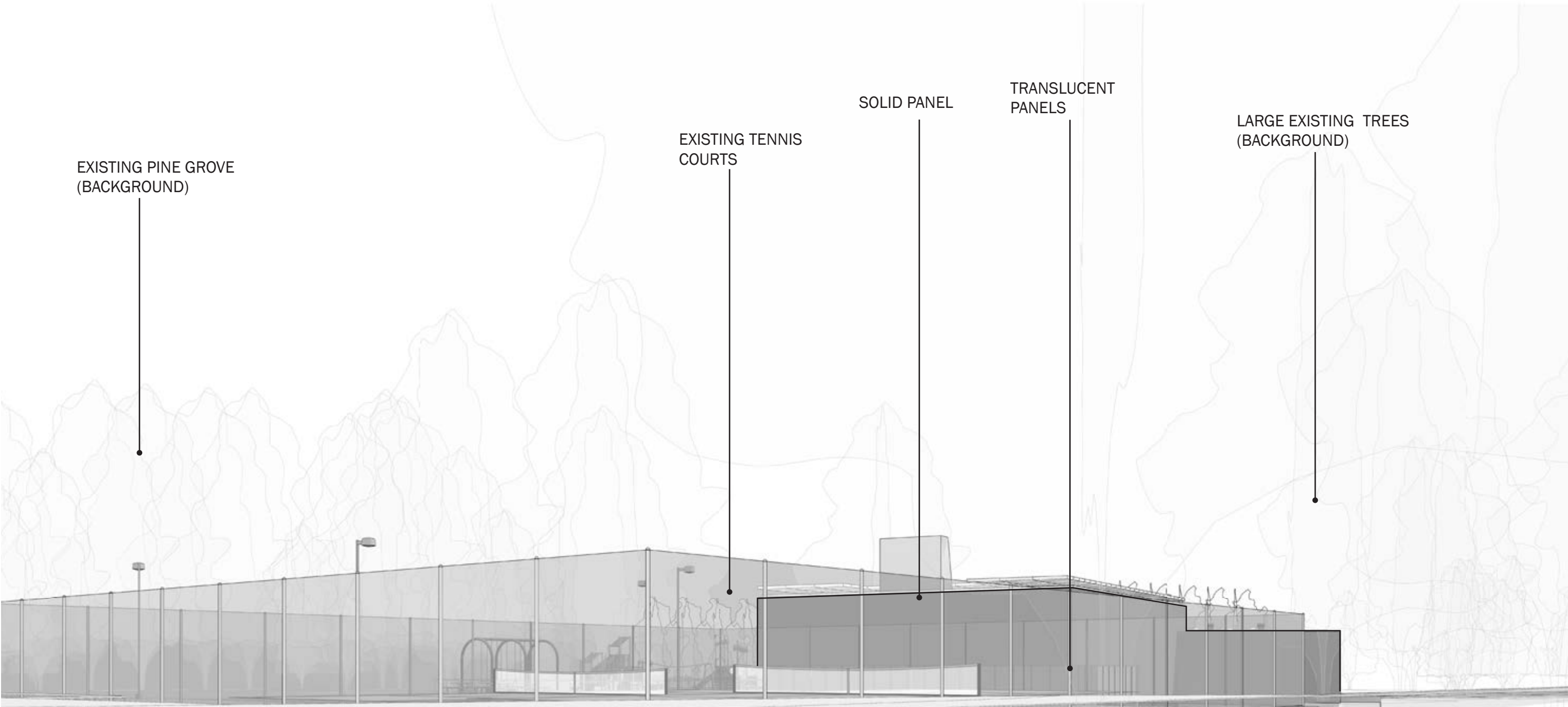
NOT TO SCALE



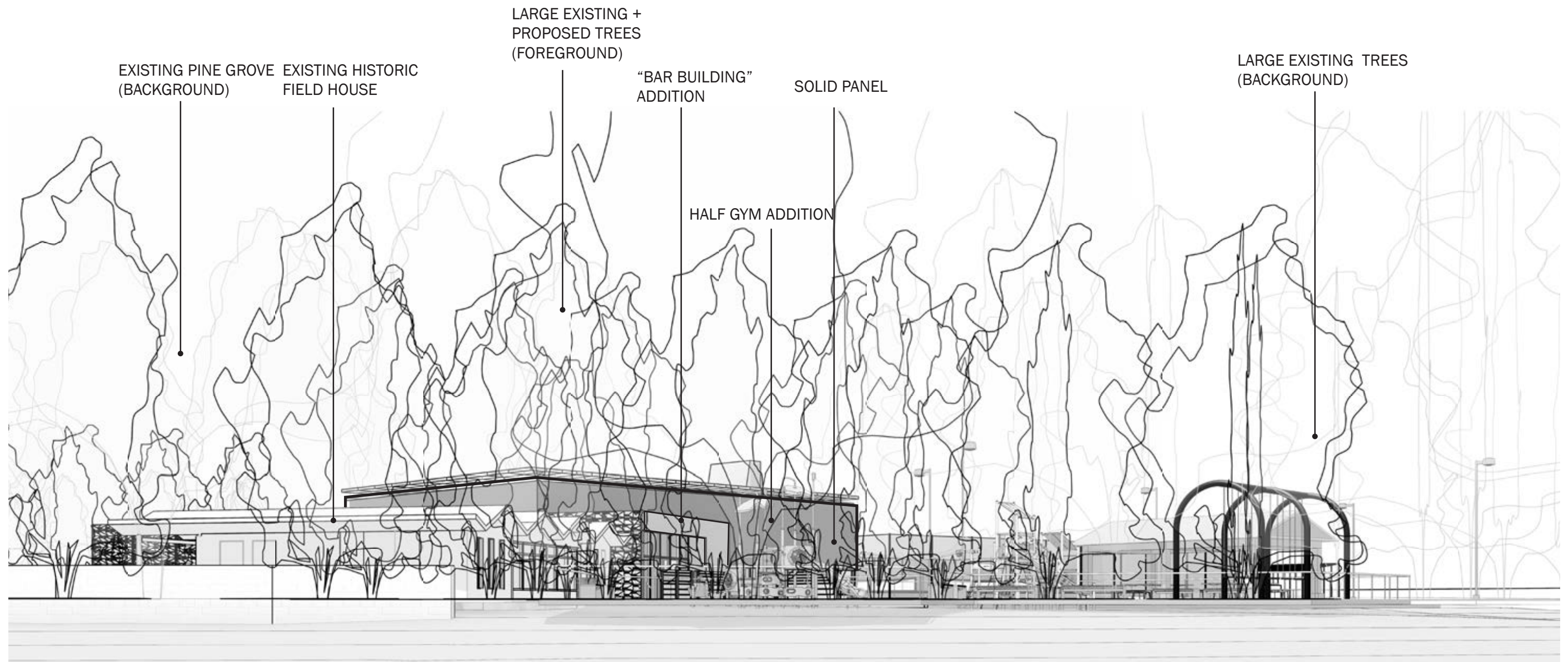


ADDITION + RENOVATION | D - From Side Towards Gym
NOT TO SCALE





ADDITION + RENOVATION | F - From Park
NOT TO SCALE



The recreation center abuts the US National Arboretum on the south east side of the property. There is currently an existing grove of mature trees along the property line that will be maintained for privacy. The design team and client agency plan to work with Arboretum to explore the possibility of planting more trees along the property line as additional screening. Due to the existing conditions and the location of the property line, these trees would need to be located on the National Arboretum's property.



Existing View from Adjacent Parking Lot

ADDITION + RENOVATION | G - From Arboretum

NOT TO SCALE