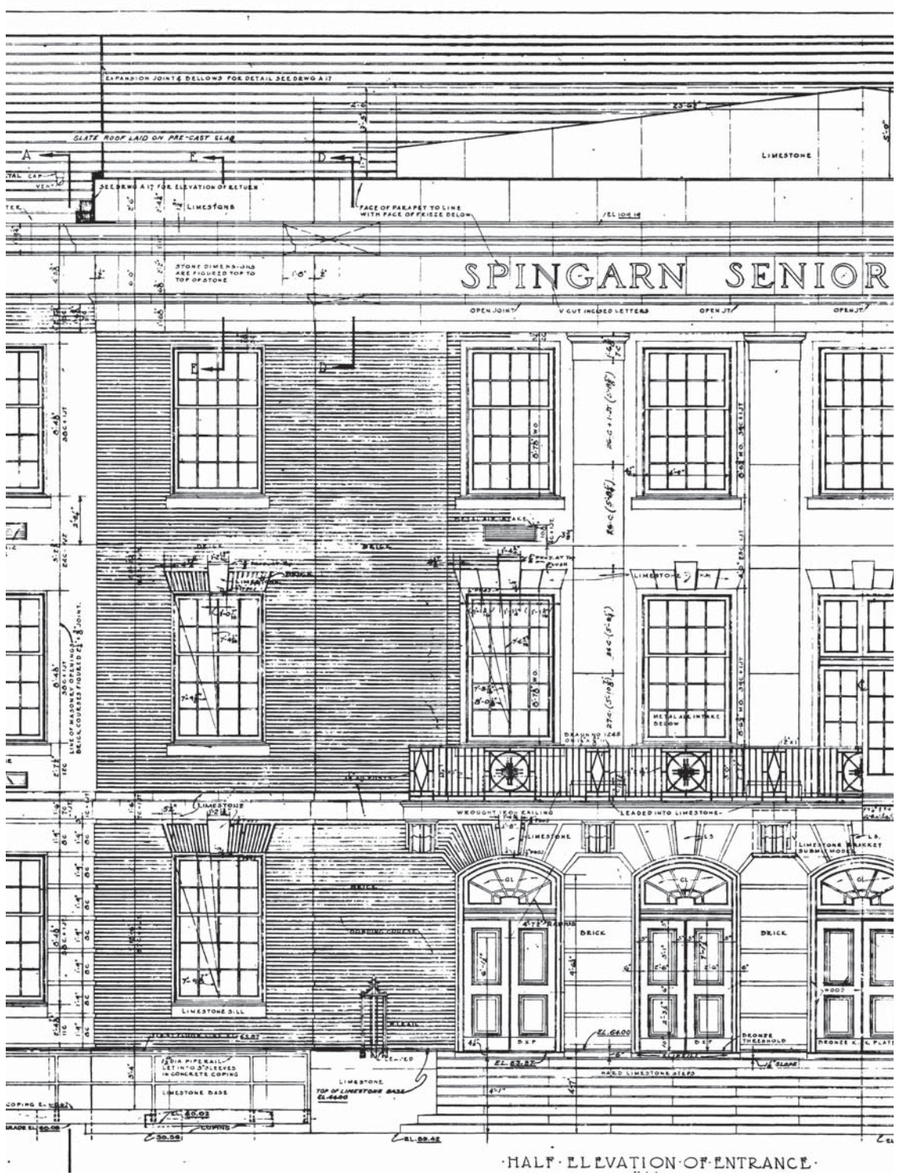

DC INFRASTRUCTURE ACADEMY

DCIA AT SPINGARN

2500 Benning Road NE

Washington, DC 20002

DCAM-22-AE-0007

Concept Design Submission

Submittal Date
01/05/2023

Prepared for:

The Department of General Services in conjunction with the DC Infrastructure Academy

District of Columbia Infrastructure Academy at Spingarn

Submission to:

U.S. Commission of Fine Arts

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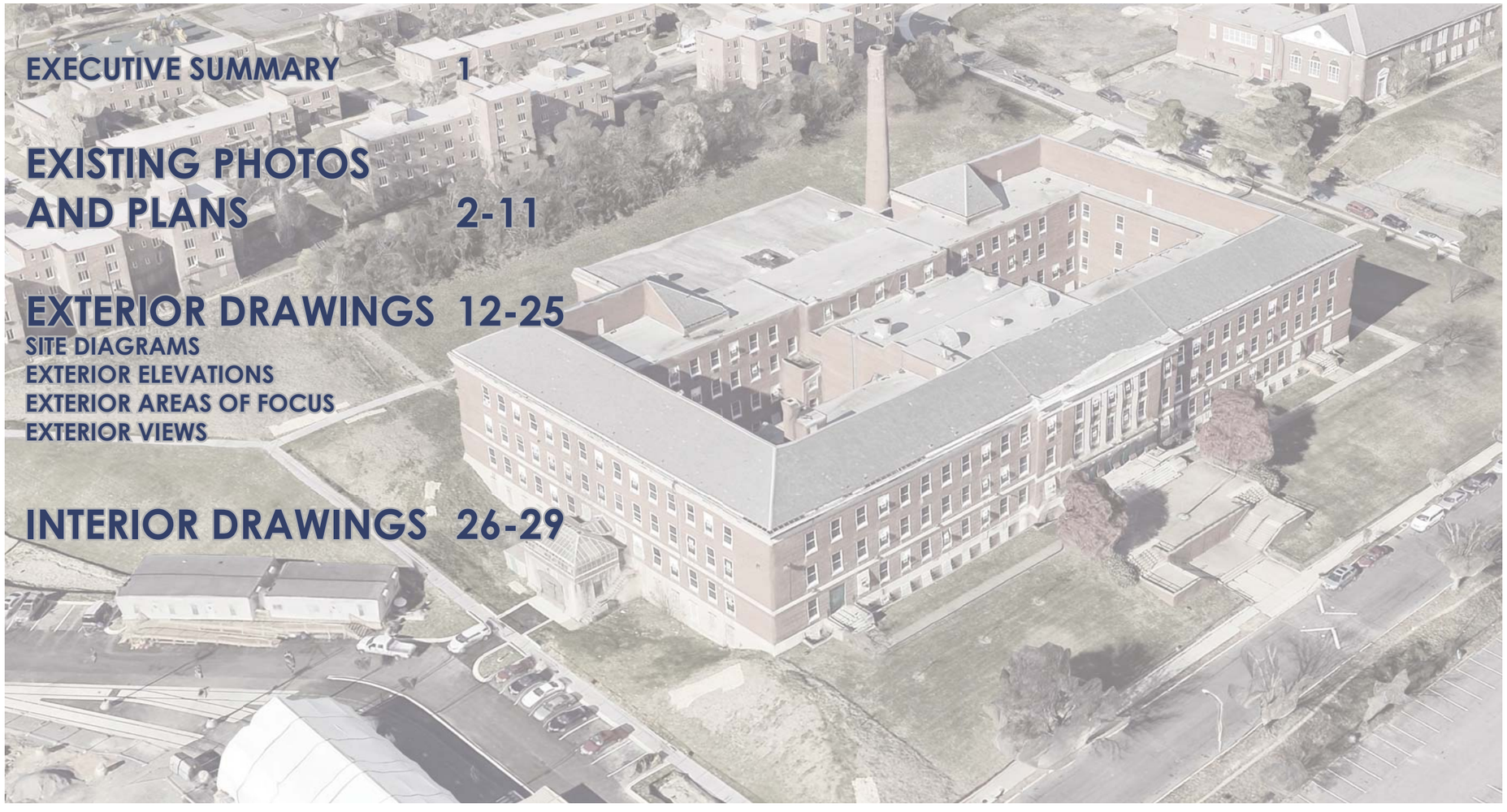


EXECUTIVE SUMMARY

Introduction
The DC Department of General Services and Department of Parks and Recreation have established a proposed project to rehabilitate and adaptively reuse a portion of the Spingarn High School to house the DC Infrastructure Academy (DCIA), an adult education program intended to provide job training and employment services for Washington DC residents. The proposed project includes renovation and modernization of 52,000 SF, approximately 1/3 of the existing 226,300 SF four-story building, for labs, classrooms, administrative space, and specialized training space for DCIA's program.

Existing Conditions
Spingarn High School is situated on 8.71 acres on a hill overlooking Langston Golf Course and the Anacostia Stream Valley below. Spingarn HS is part of a larger complex of public-school buildings occupying an extensive site consisting of 27.25 acres of land, collectively referred to as Education Hill, or the Hilltop Campus. It is formally part of the historic district designated "Young, Brown, Phelps and Spingarn Educational Campus Historic District."

The existing Spingarn High School building is a four story, neoclassical red brick building with limestone architectural and elements. The structure is a concrete frame structure with concrete and steel roof.

Spingarn High School closed at the end on the 2012-2013 school year and has been vacant and shuttered, since then. In the intervening years, the building has been subject to looting and vandalism. In its current state, large roof openings, once covered by rooftop equipment, and damaged and missing windows have left the building open to the environment for an extended period, causing significant water and environmental damage.

DCIA Program
The DCIA infrastructure academy is planned to occupy three floors on the north side of the building and the north courtyard, the ground floor / lower level, first floor and second floor. The third floor will be stabilized with the remaining building, and is targeted as expansion space for DCIA as the program expands.

Classrooms and administrative space largely follow the structure of the existing single and double loaded corridors of the existing classroom wings. The exception is the ground floor, located in the former armory, and housing student intake offices, a student lounge, and a large multipurpose room with direct access to the north courtyard

Scope of Work
Interior Construction
The majority of the renovated space is located in the ground floor, first floor, and second floor on the north wing of the four-story building, The remaining space within the building is intended to be stabilized and converted to a cool dark shell for future tenant improvements. Spingarn's monumental core, and large assembly spaces; the auditorium, cafeteria, and gymnasium, are excluded from the DCIA space. Upgrades are limited to the building lobby, vestibule, and center corridor connecting the elevators to the first phase of occupied space

In the DCIA space, portions of the existing masonry walls and tile finish can be preserved and repaired; along with the terrazzo floor finish. Existing interior construction like buildings stair structure and finishes can be repaired and restored. The majority of the interior constructions will be new due to the deteriorated state of the building.

New construction includes the creation of an accessible street-level entrance from 26th street, and improvements to the boiler house to accommodate the autolab,, a specialty training lab for vehicle maintenance.

On the ground floor on the south west side of the building is intended to provide building services for DCIA and future tenants. There will be a new trash and recycling storage room and loading space, with an overhead door, dock leveler, shroud, and bumpers, with access to the combination freight and passenger elevator at the rear of the building. In addition, a dumpster enclosure in envisioned as a shared facility between Spingarn and the independent Car Barn facility to the south.

Exterior Stabilization
The architectural treatment of the building includes securing and stabilization of the overall building to a cool, dark, shell. In addition to sealing the roof openings and providing new roofing, open grills in the exterior brick wall will be infilled with brick. The building envelop will be upgraded, with the final design approach based on the results energy modeling and dewpoint analysis. Upgrades to the building enclosure include new energy efficient double hung windows, doors, and transoms, designed to match the proportions and details of the original 1950s windows and doors.

Facade
The exterior brick and limestone facades are not expected to need any significant reconstruction. It's expected that 50% of the brick joints and 100% of the stone will need to be repointed. Biological staining and graffiti will be removed using appropriate historic masonry cleaning practices. All vegetative growth in contact with the façade will be removed. A few isolated areas like the incinerator chimney and green house limestone walls will need to be rebuilt using masonry to match the existing size, color, and color variance. The fire damage on the south façade will be inspected and repaired as required.

Openings
Replacement of all exterior windows and doors is being pursued by the design and construction team. To enclose the building and meet the energy goals of the project, all windows and doors that are not original to the 1950's design would be replaced with new, modern, period correct windows. The bulk of the existing windows seen on the building now are economical replacement windows from the 1986 window renovation, and do not hold historic significance. The 1986 windows do not meet modern codes and retrofitting them to do so would not be practical.

The glass above the exterior doors is in various states of deterioration, some of it is completely missing. All locations that originally had transom glass in the 1950's design should be replaced with a period correct window assembly that meets the envelope energy performance requirements.

The wood surrounds and frames at the seven doors on the East façade will be restored / repaired as required and prepared to receive new, period correct, doors and overhead transom glass divided lites . This approach should also be applied for the entry door at the North West corner of the building.

Site Improvements
Site work includes expanded surface parking, landscaped stormwater management, and an enclosed training yard on the west side of the site. The training yard will be fenced and set into the hillside to reduce the visibility of the equipment yard from the residences to the west. The trees and planting on the west edge of the site will be supplemented to provide additional screening of the training yard enclosure. The site landscaping will maintain the formal lawns connecting the open spaces on the hilltop campus, and introduce plantings to anchor the building on the site without blocking views of the historic building

Extraneous abandoned equipment will be removed from the exterior walls sheds and miscellaneous site structures will be demolished and removed=

Street Level Entrance
A street level accessible entrance, approximately 1,650 SF, is proposed under the existing formal front terrace with a new glazed storefront entrance. The entrance will be located between the symmetrical stairs leading from the sidewalk to the terrace, set behind the existing brick wall supporting the terrace. The existing landing at the base of the terrace stairs will be lowered to the sidewalk level, and two additional risers will be added to the stairs leading from the sidewalk to the terrace. The new entrance will function as the main entrance for the building. It will provide a space for security and access control, and accessibility through the entire building via a new elevator system and reconfigured ramps on the ground level.

Spingarn was made accessible in the 1990s with the addition of a ramp leading from the north parking lot to the main entrance. The ramp is in disrepair, and will be removed, restoring symmetry to the neoclassical elevation

Boiler House Retrofit
The existing boiler house on the northwest side of the building will be renovated to house the auto lab, a 2,700 SF specialty training space for vehicle maintenance. The boiler house, a separate structure on the northwest side of the building, adjacent to the parking lot and existing driveway, was identified as an ideal location to be redeveloped for the WMATA auto lab. Conversion of the boiler house to the auto lab will involve demolishing the existing mezzanine structures, roof, and a portion of the north wall. A new floor slab will be constructed at the first floor level, to accommodate vehicles, and a new higher roof will be added to accommodate the vehicles and required clearances, allowing for north-facing clearstory glazing above the top of the existing masonry wall. A narrow portion of the roof over the tool storage and egress corridor near the back of the auto lab will be constructed with a lower roof height, to house a future cooling tower. Additionally, two ten feet garage doors are planned for the north wall, along with two man-doors. A new sloped roof provides for clearstory glazing and translucent panels above the existing brick walls on the north and west side of the building. The lower level of the boiler house is reserved of mechanical and electrical equipment.

Greenhouse Retrofit
The greenhouse steel structure will be repaired, and the slab will be water proofed, and detailed as an exterior terrace.

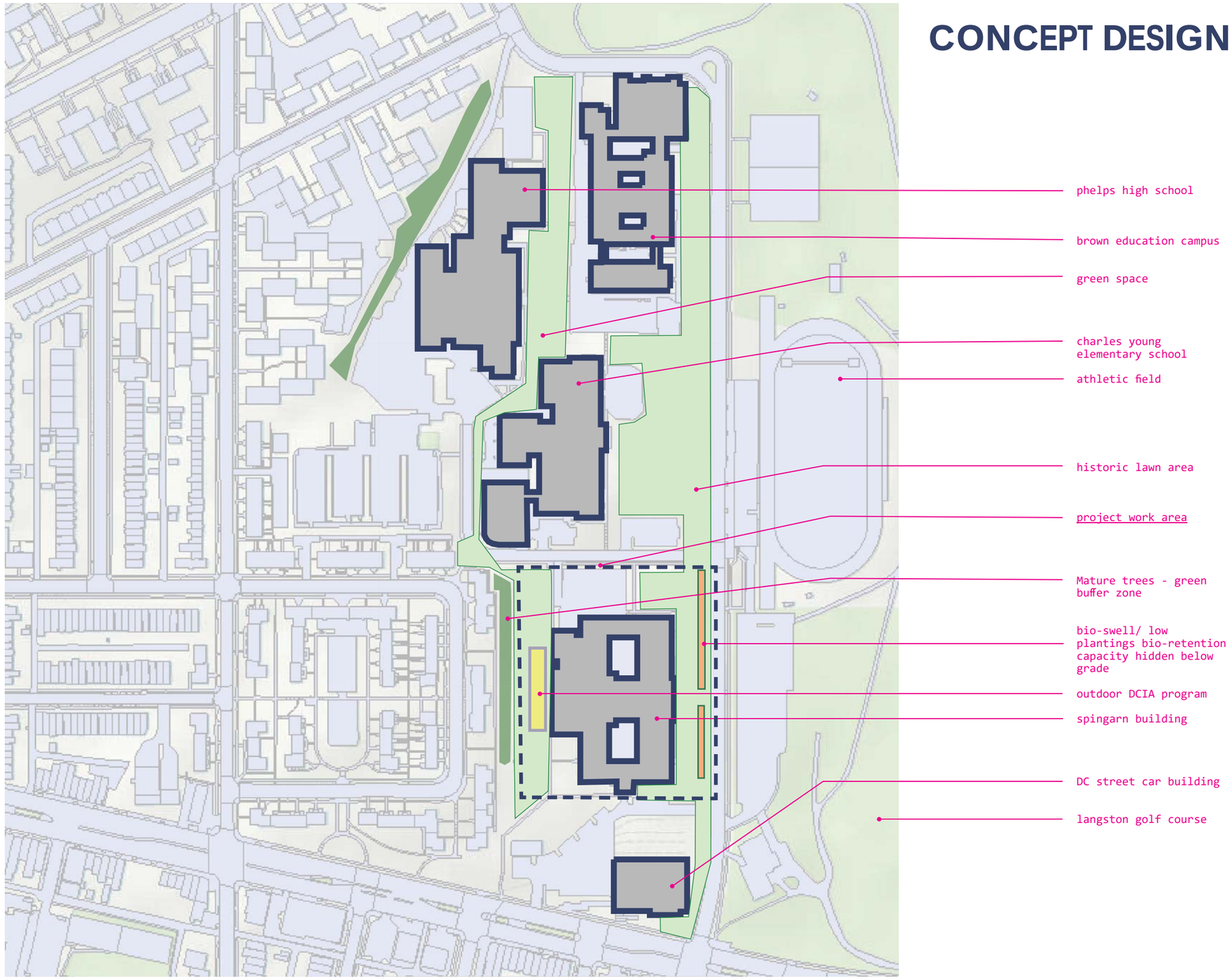
EXISTING PHOTOGRAPHS AND PLANS

EXTERIOR DRAWINGS

INTERIOR DRAWINGS

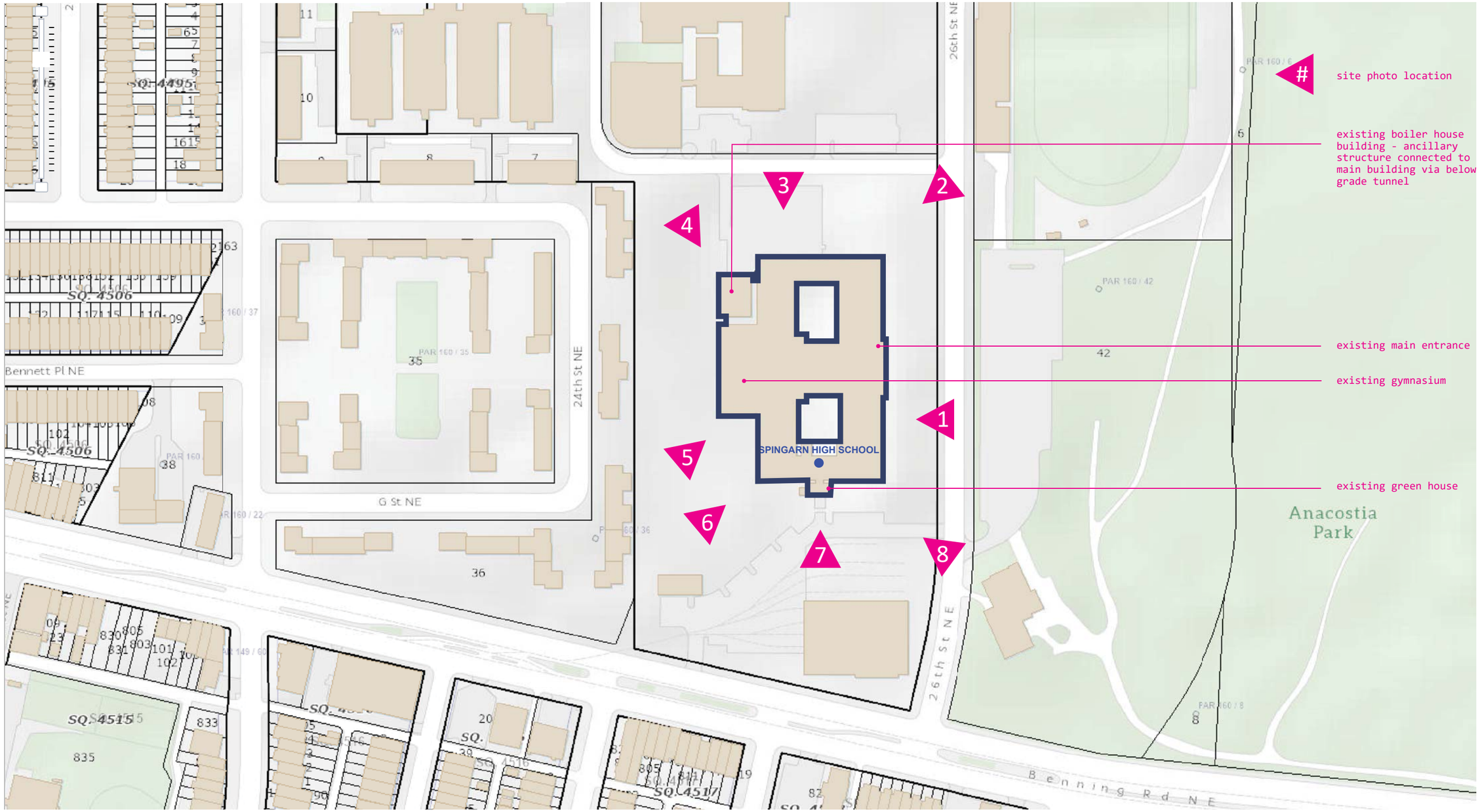
CONCEPT DESIGN

SITE DIAGRAMS
GREEN SPACE CONNECTIVITY



CONCEPT DESIGN

EXISTING PROPERTY MAP



2500 BENNING ROAD NE - FORMERLY SPINGARN HIGH SCHOOL

EXISTING PHOTOS

The Spingarn building has ample setbacks on all four sides of the building and is surrounded by lawn/ landscaping.

The exterior facade is primarily four stories of red face brick accentuated by limestone horizontal banding at grade, the second floor, and the roof-line. Limestone masonry clads the ground/ basement floor where it's visible due to the grade drop on the South. The facade is punctuated with rectangular double-hung windows with limestone sills .

view 1 - east facade - historic main entry >>

view 2 - north east facade - existing parking lot on right hand side >>

view 3 - north facade - existing parking lot >>

view 4 - north west facade- current main entry to building – boiler house with chimney>>

CONCEPT DESIGN

EXISTING PHOTOS

view 5 - west facade – gymnasium seen on the left-hand side >>

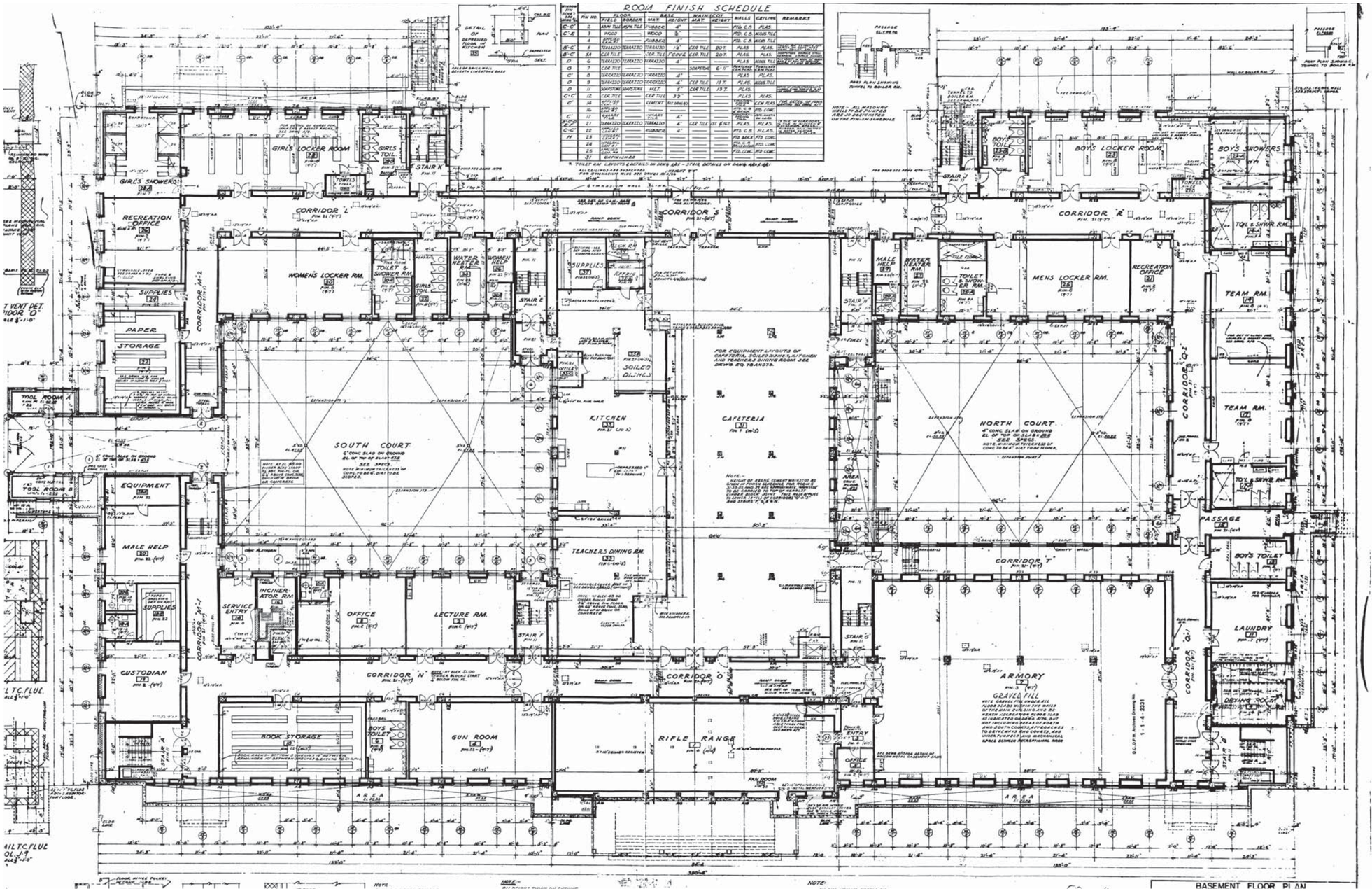
view 6 - south west facade – green house and vehicular portal entrance to inner courtyard seen on right-hand side >>

view 7 - south facade – green house structure located above vehicular portal entrance to inner courtyard >>

view 8 - south east facade – main entry seen on right-hand side >>

CONCEPT DESIGN

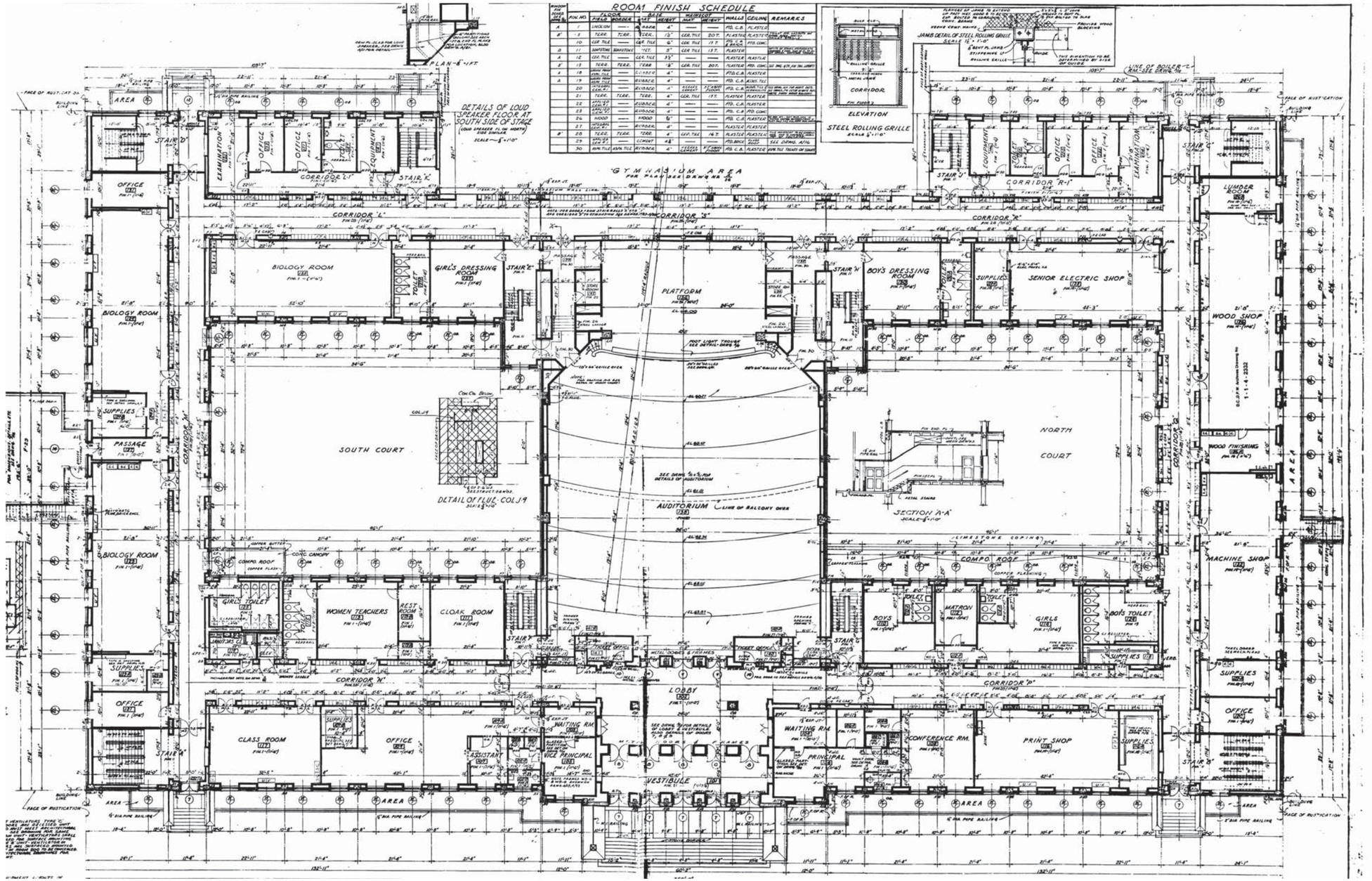
EXISTING DRAWINGS



EXISTING GROUND FLOOR PLAN

CONCEPT DESIGN

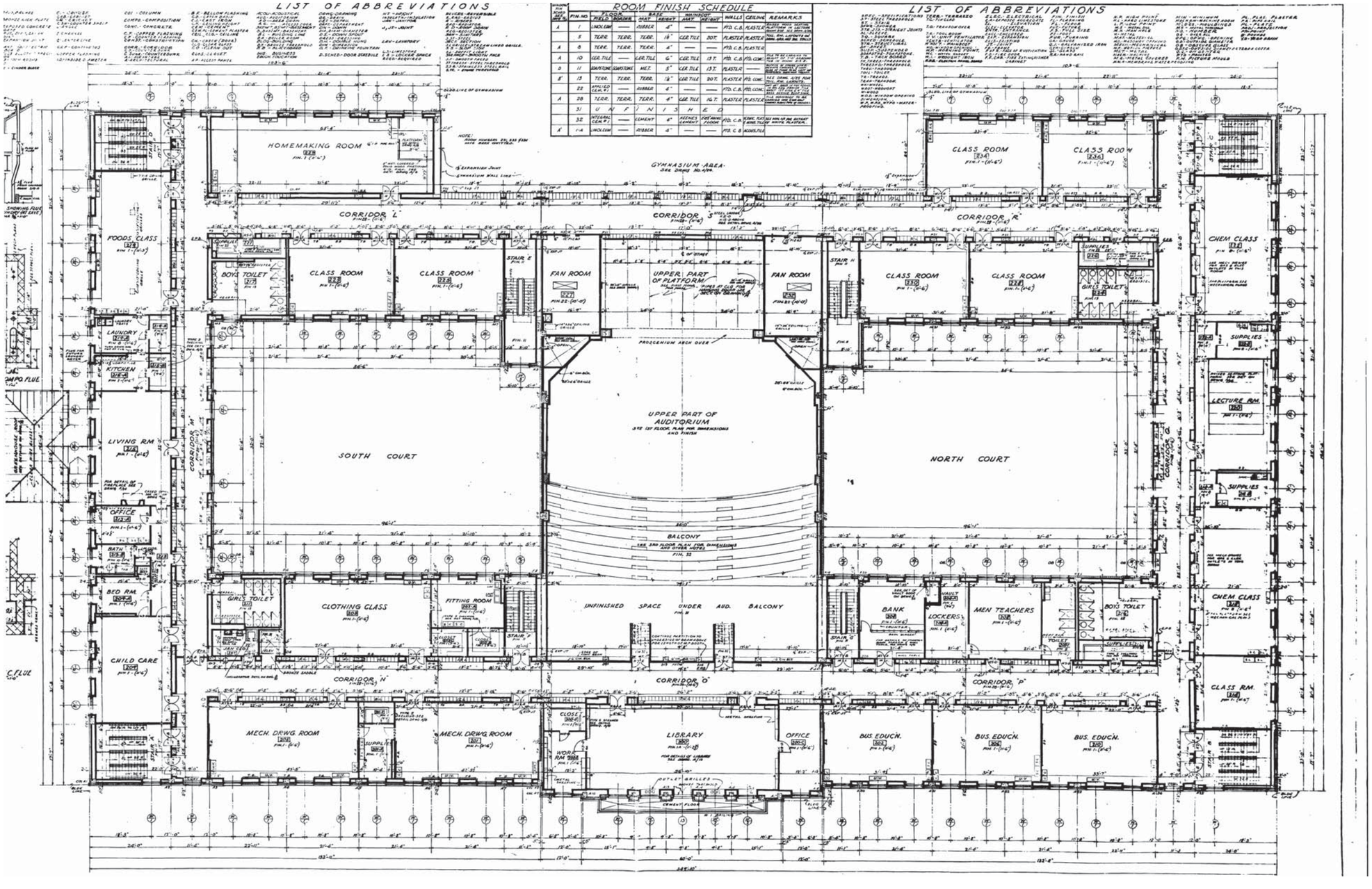
EXISTING DRAWINGS



EXISTING FIRST FLOOR PLAN

CONCEPT DESIGN

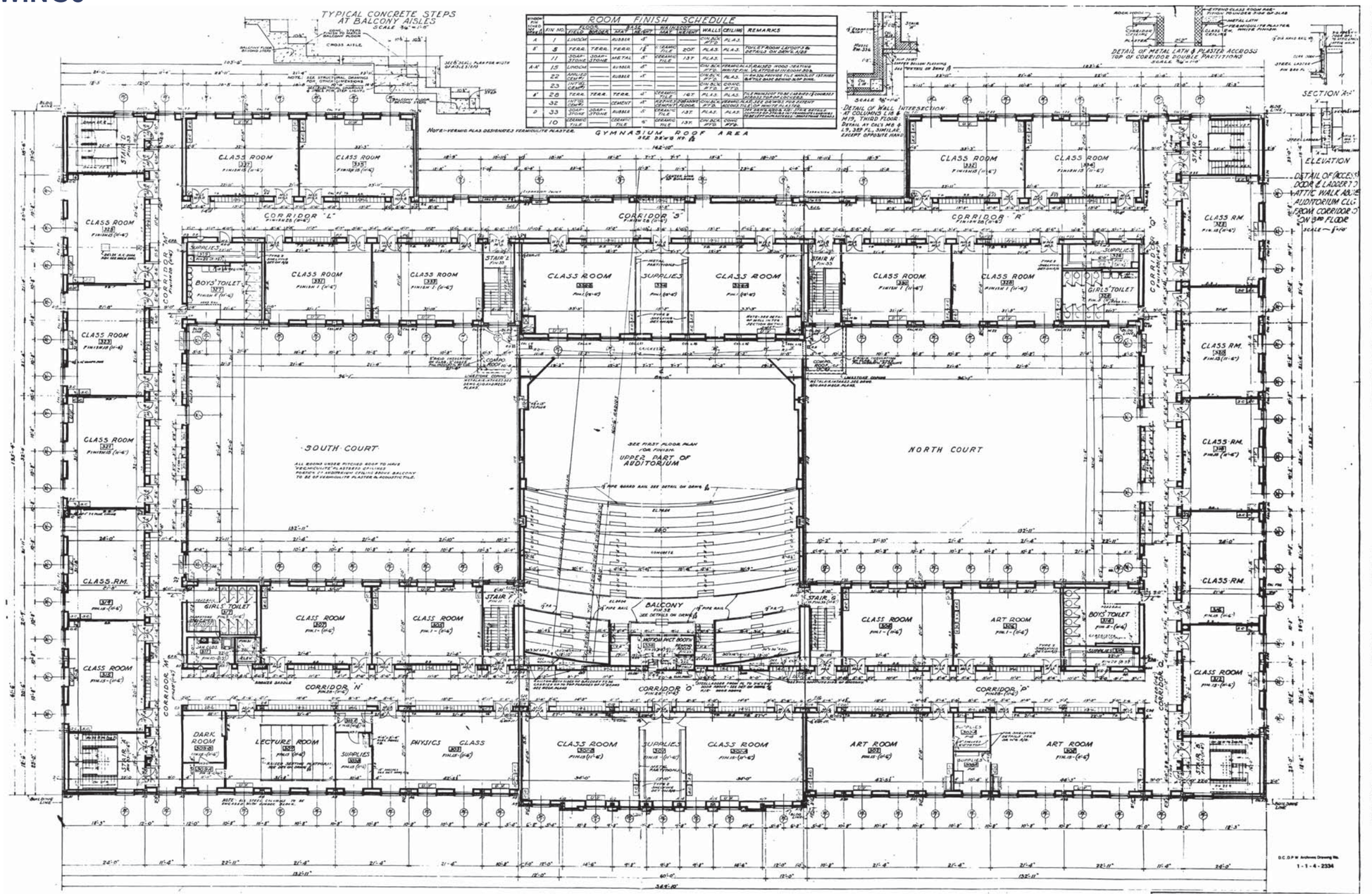
EXISTING DRAWINGS



EXISTING SECOND FLOOR PLAN

CONCEPT DESIGN

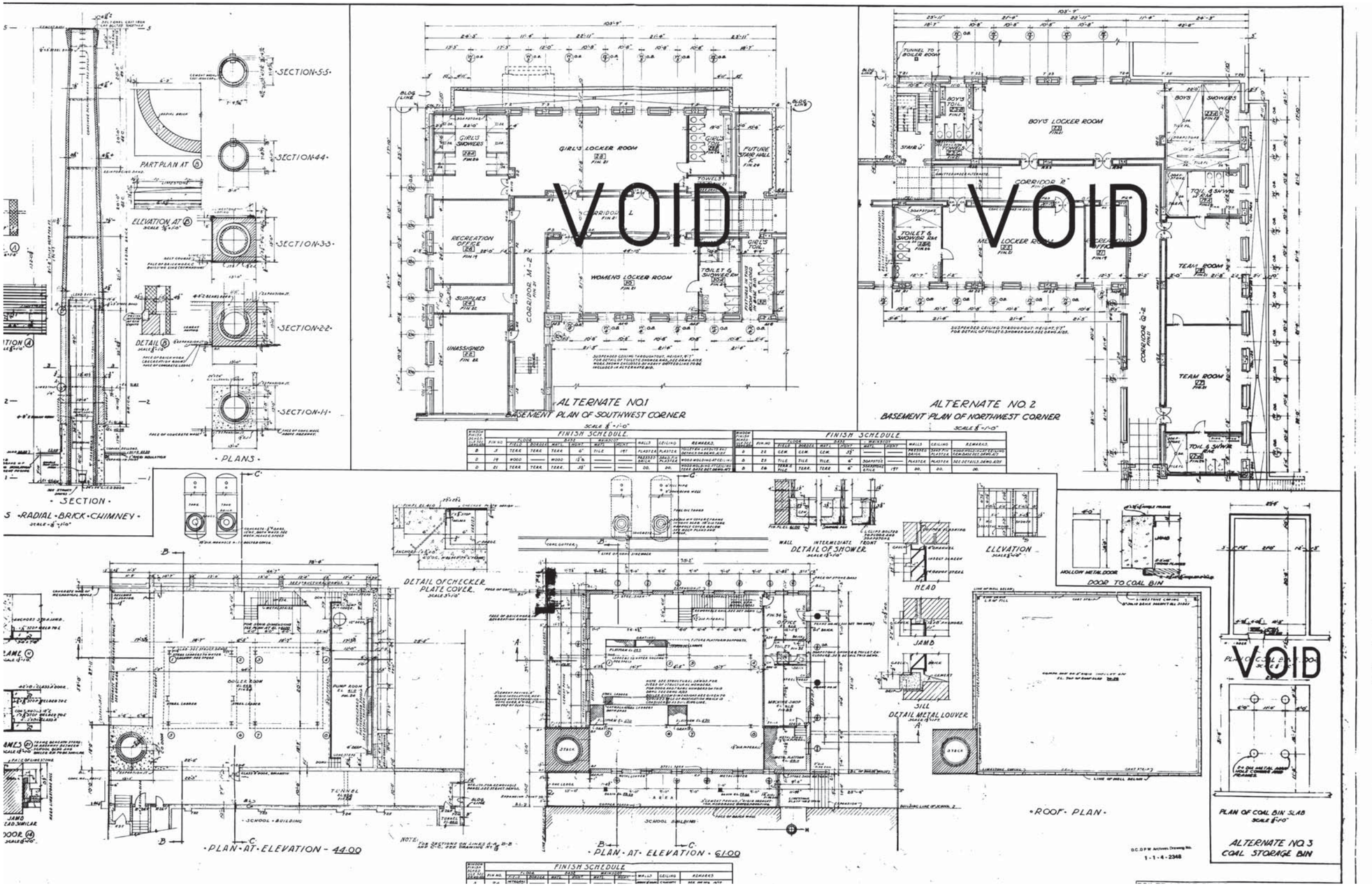
EXISTING DRAWINGS



EXISTING THIRD FLOOR PLAN

CONCEPT DESIGN

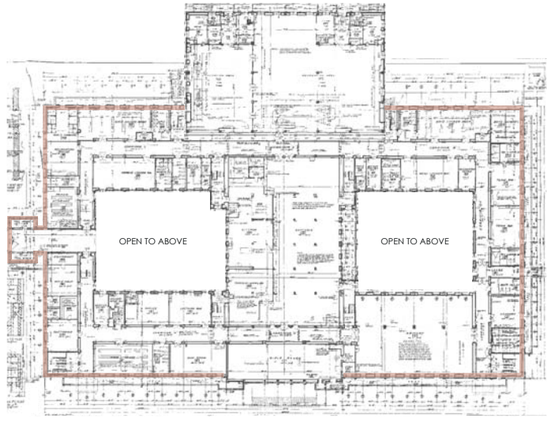
EXISTING DRAWINGS



EXISTING BOILER ROOM BUILDING (NW)

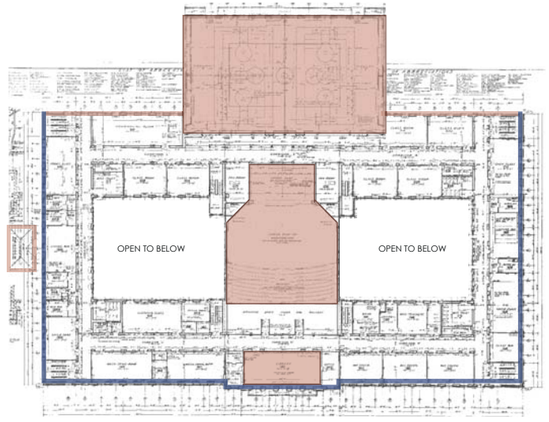
CONCEPT DESIGN

HISTORIC TREATMENT



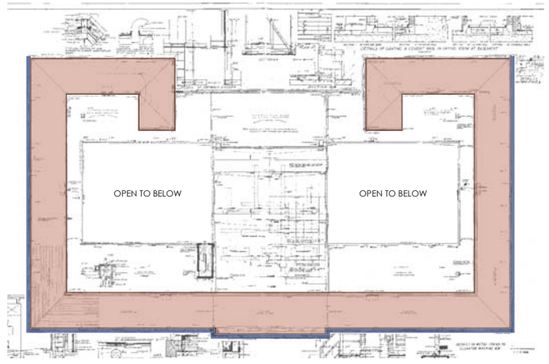
LEGEND
Rehabilitation Zone
Restoration Zone

GROUND FLOOR PLAN



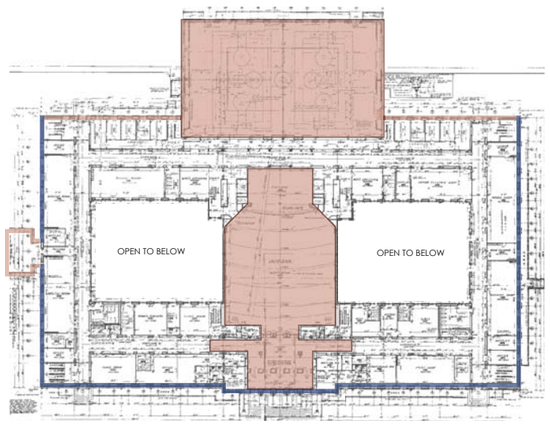
LEGEND
Rehabilitation Zone
Restoration Zone

SECOND FLOOR PLAN



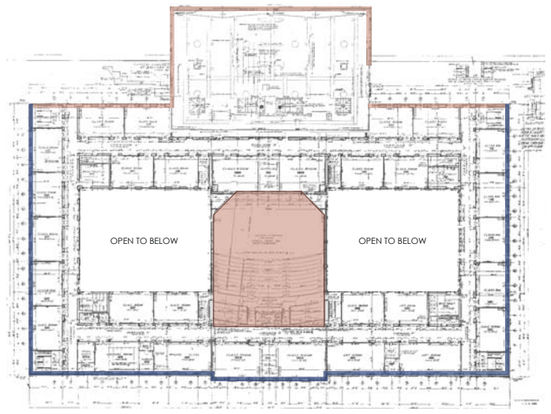
LEGEND
Rehabilitation Zone
Restoration Zone

ROOF PLAN



LEGEND
Rehabilitation Zone
Restoration Zone

FIRST FLOOR PLAN



LEGEND
Rehabilitation Zone
Restoration Zone

THIRD FLOOR PLAN

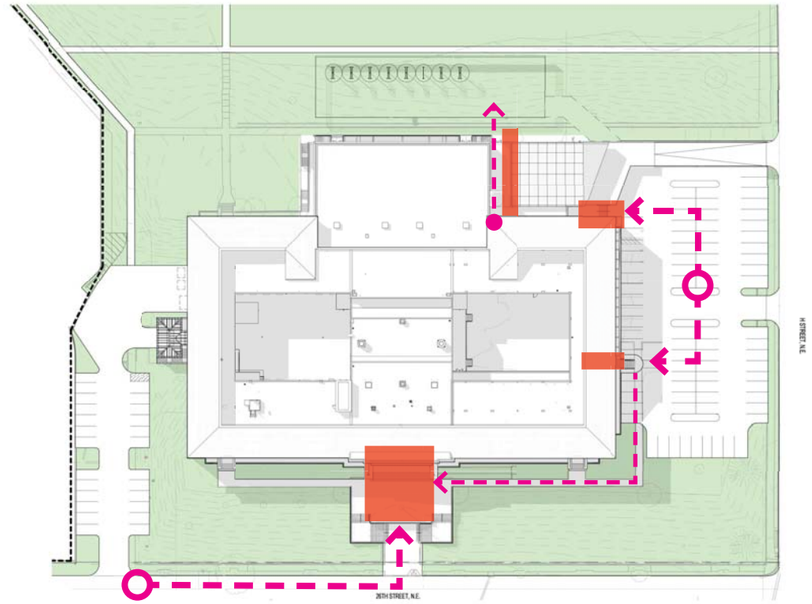
EXISTING PHOTOGRAPHS AND PLANS

EXTERIOR DRAWINGS

INTERIOR DRAWINGS

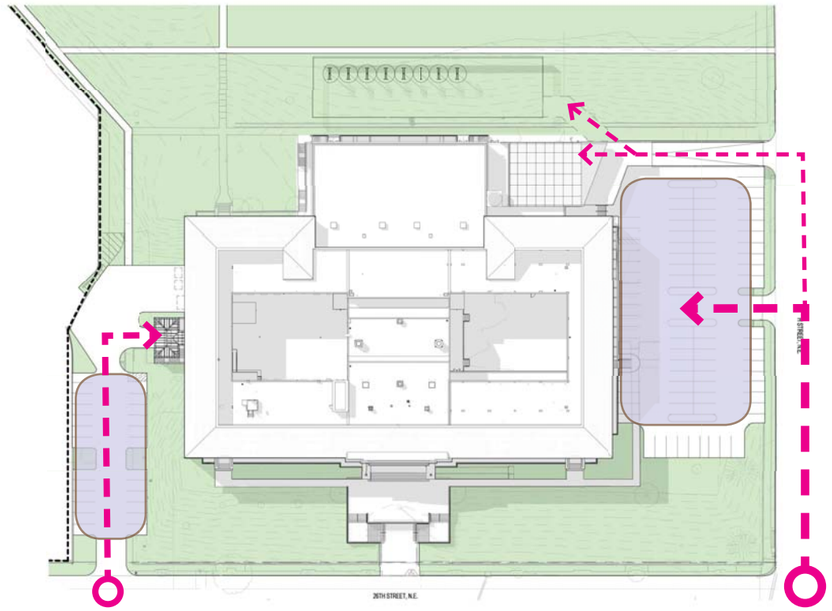
CONCEPT DESIGN

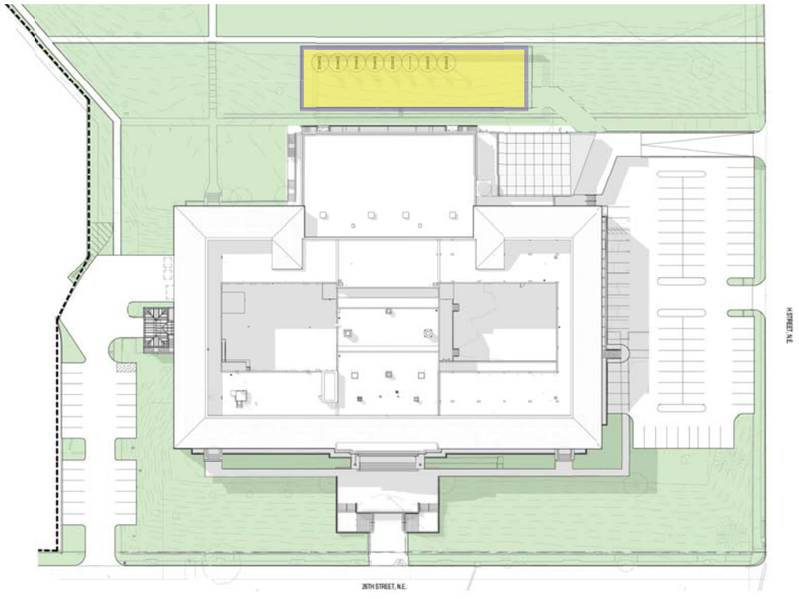
SITE DIAGRAMS



Pedestrian Access

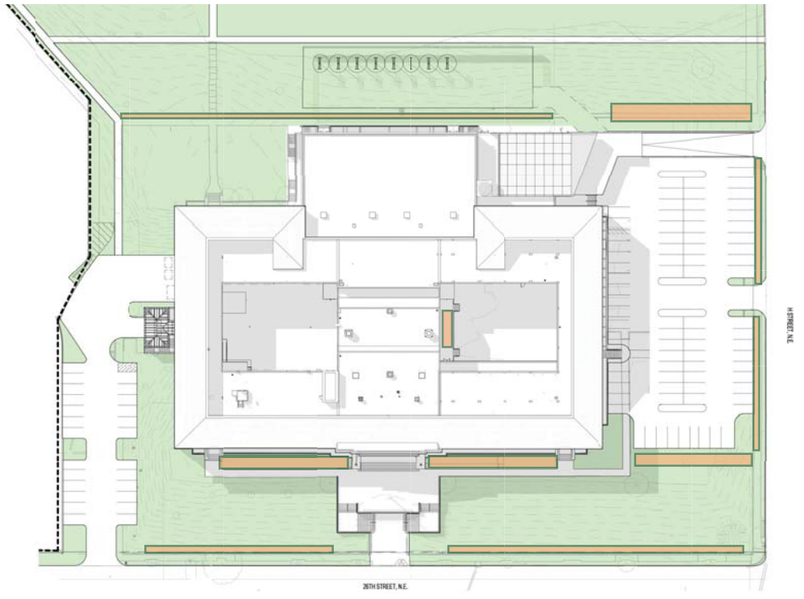
Surface Parking and Vehicular Access





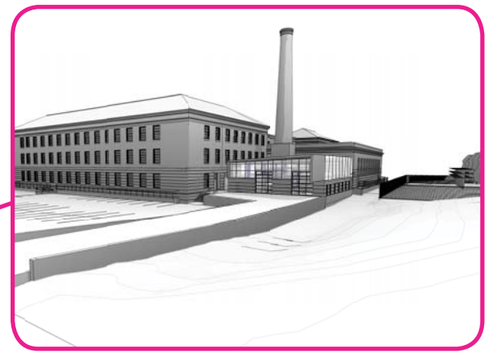
DCIA Outdoor Program Space

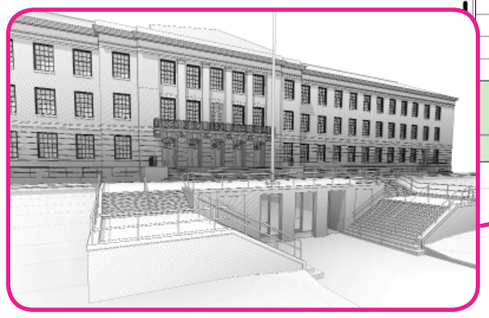
Storm Water Management/ Hardscape Areas



CONCEPT DESIGN

SITE PLAN

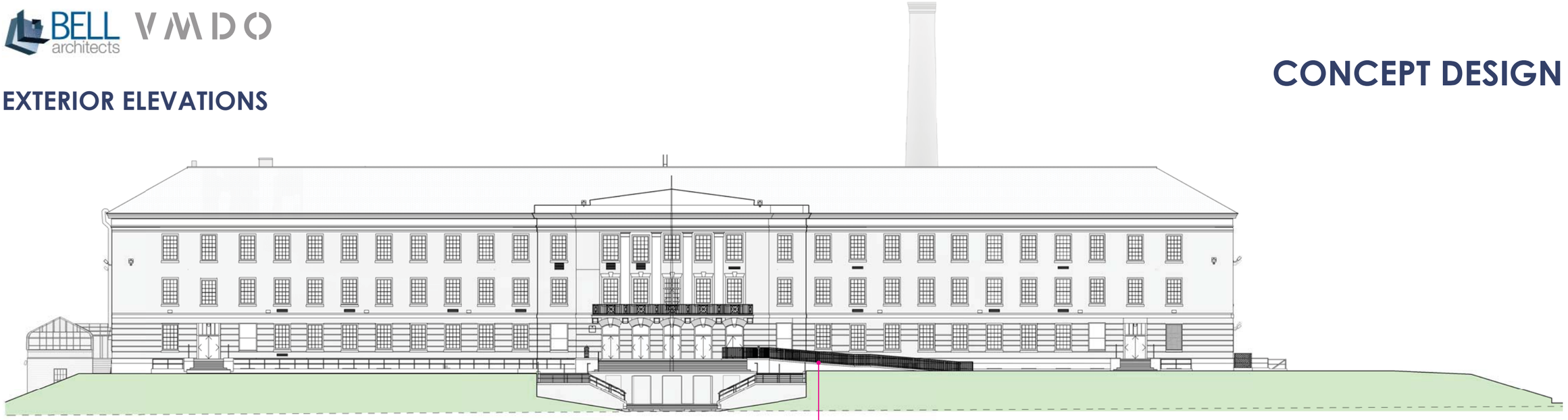




1. New Street Level Entrance
2. DCIA Parking
   North-75 spaces
   South-9 existing spaces
   18 new spaces proposed
3. New curb cut
4. Loading / Refuse zone
5. Outdoor Program Area
6. Dedicated AutoLab Vehicle Rampway
6.1 Loading Dock
7. Storm Water Management/ Landscape Zones

CONCEPT DESIGN

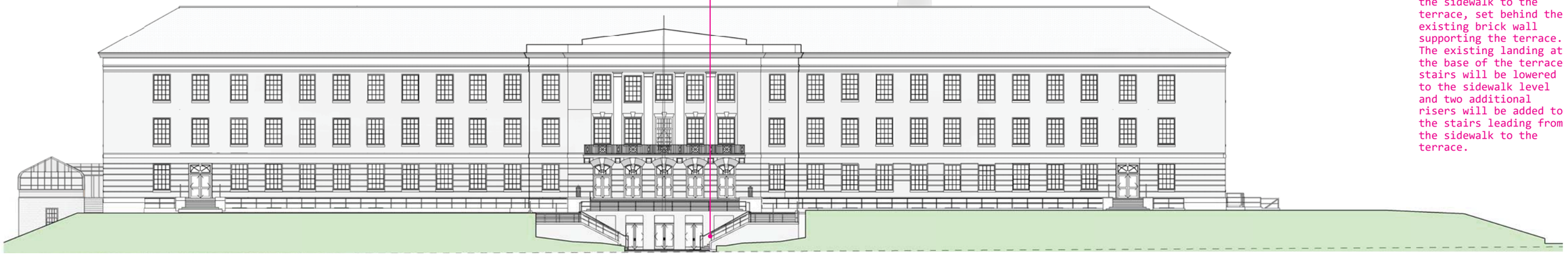
EXTERIOR ELEVATIONS



EXISTING EAST ELEVATION

Spingarn was made accessible in the 1990s with the addition of a ramp leading from the north parking lot to the main entrance. The ramp is in disrepair, and will be removed, restoring symmetry to the neoclassical elevation

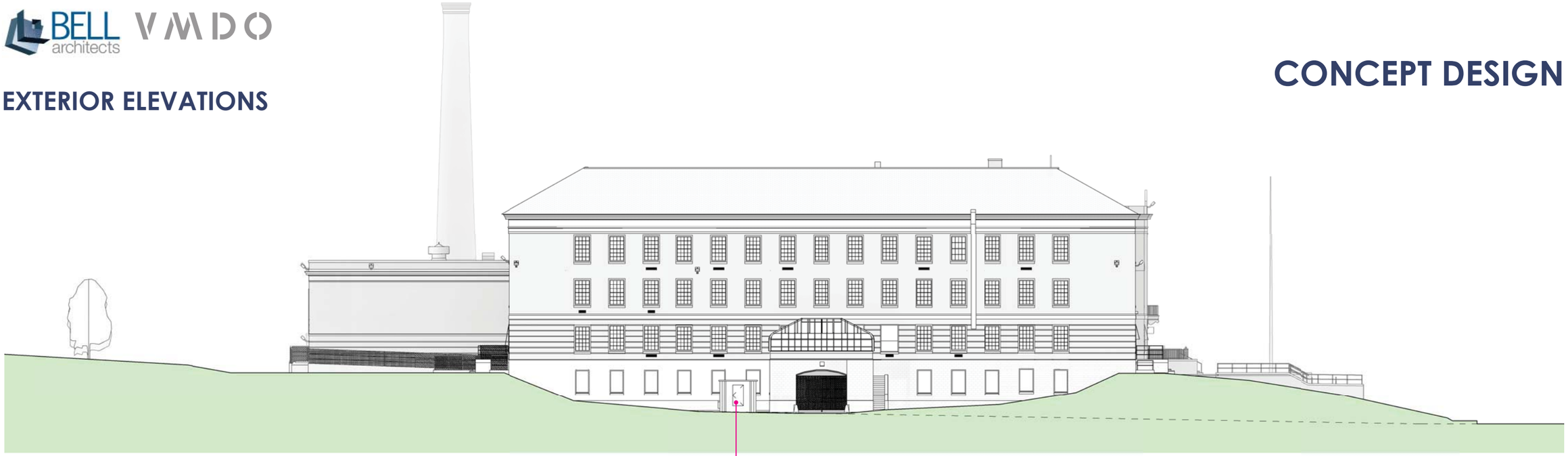
The main entrance will be located between the symmetrical stairs leading from the sidewalk to the terrace, set behind the existing brick wall supporting the terrace. The existing landing at the base of the terrace stairs will be lowered to the sidewalk level and two additional risers will be added to the stairs leading from the sidewalk to the terrace.



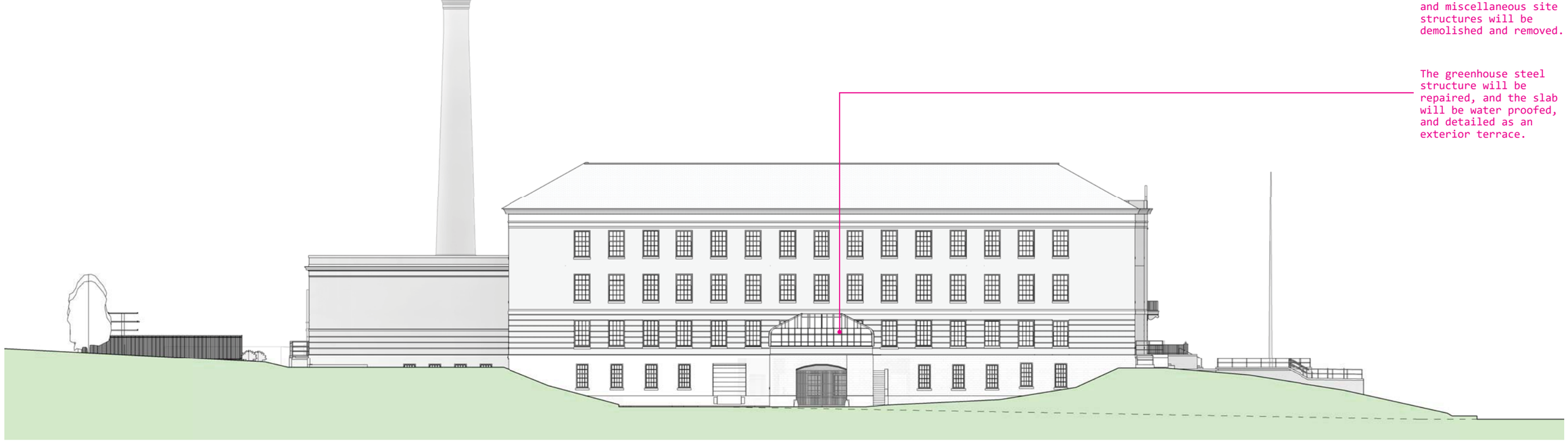
PROPOSED EAST ELEVATION

CONCEPT DESIGN

EXTERIOR ELEVATIONS



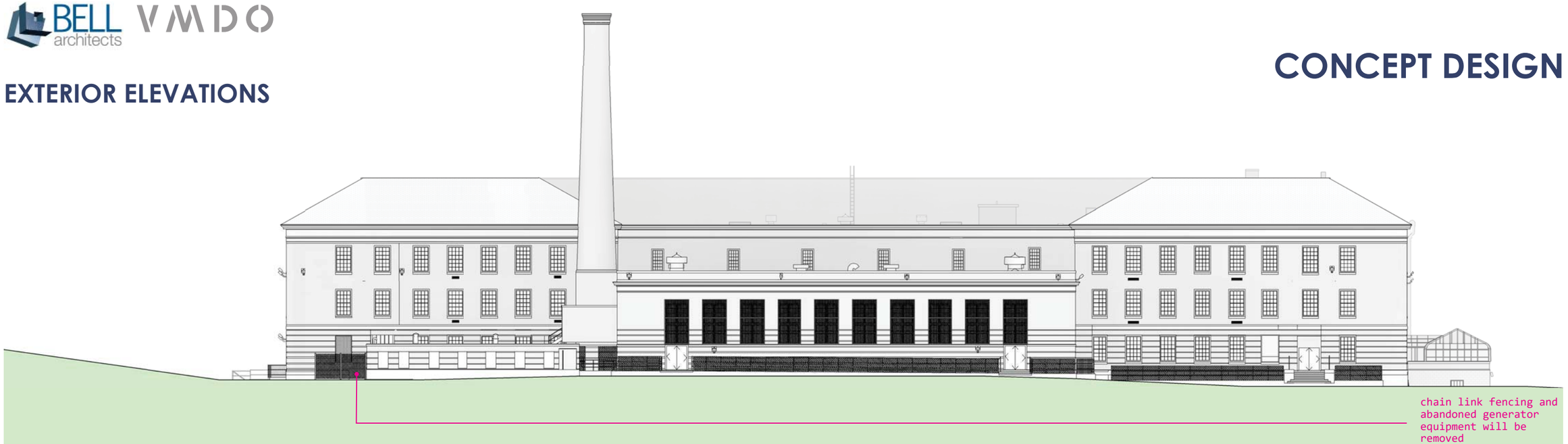
EXISTING SOUTH ELEVATION



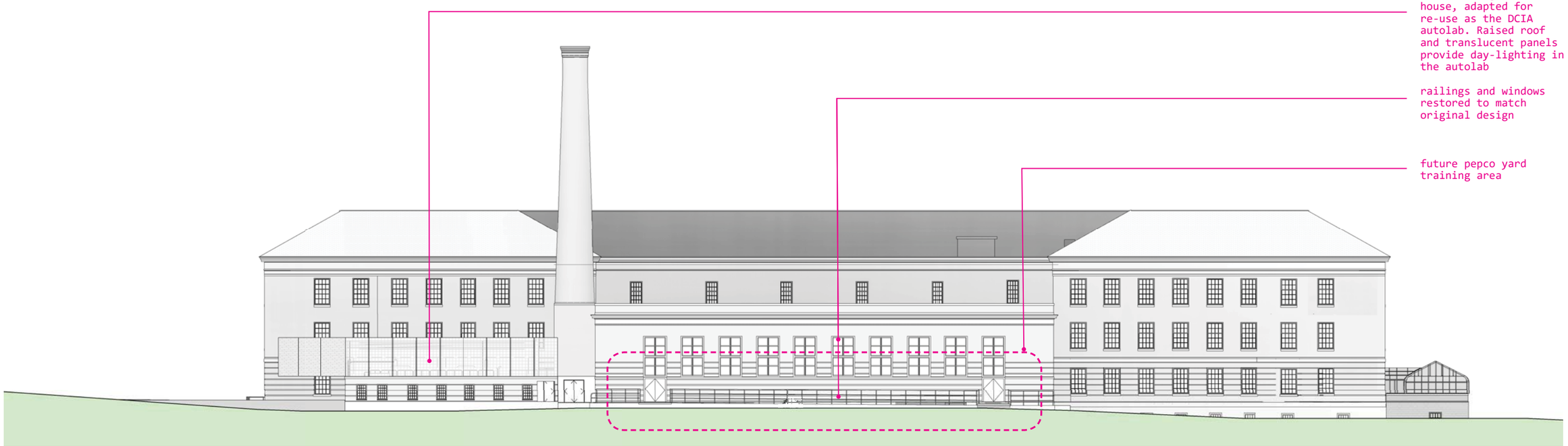
PROPOSED SOUTH ELEVATION

CONCEPT DESIGN

EXTERIOR ELEVATIONS



EXISTING WEST ELEVATION

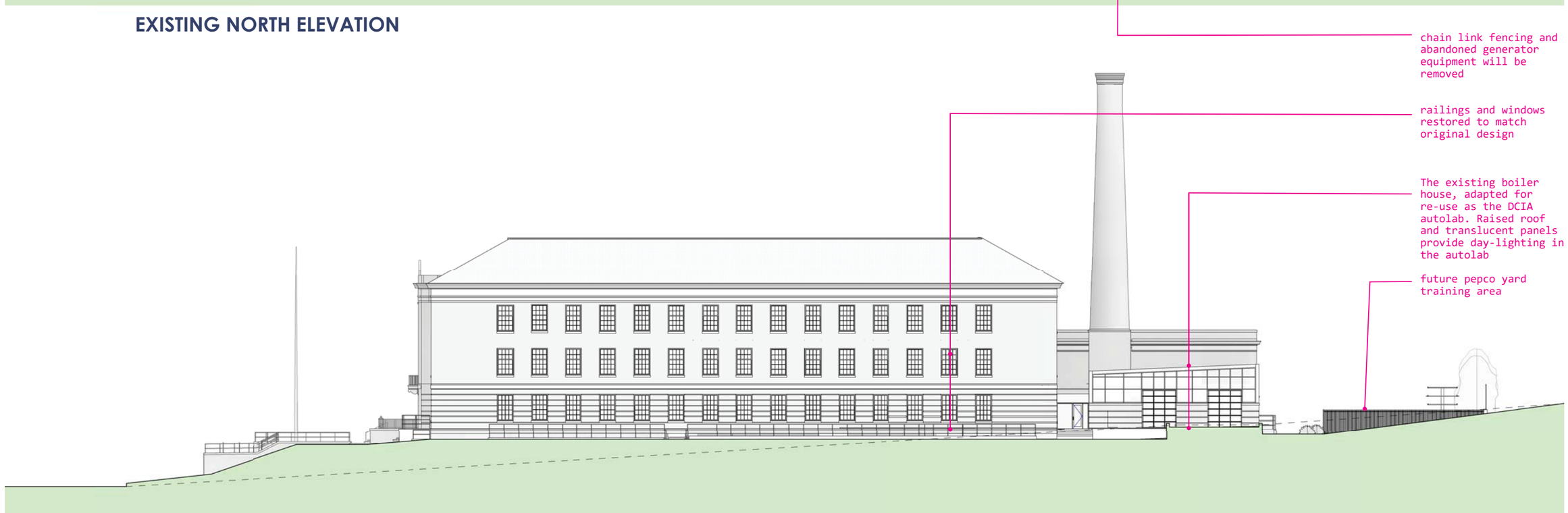


PROPOSED WEST ELEVATION

CONCEPT DESIGN

EXTERIOR ELEVATIONS

EXISTING NORTH ELEVATION



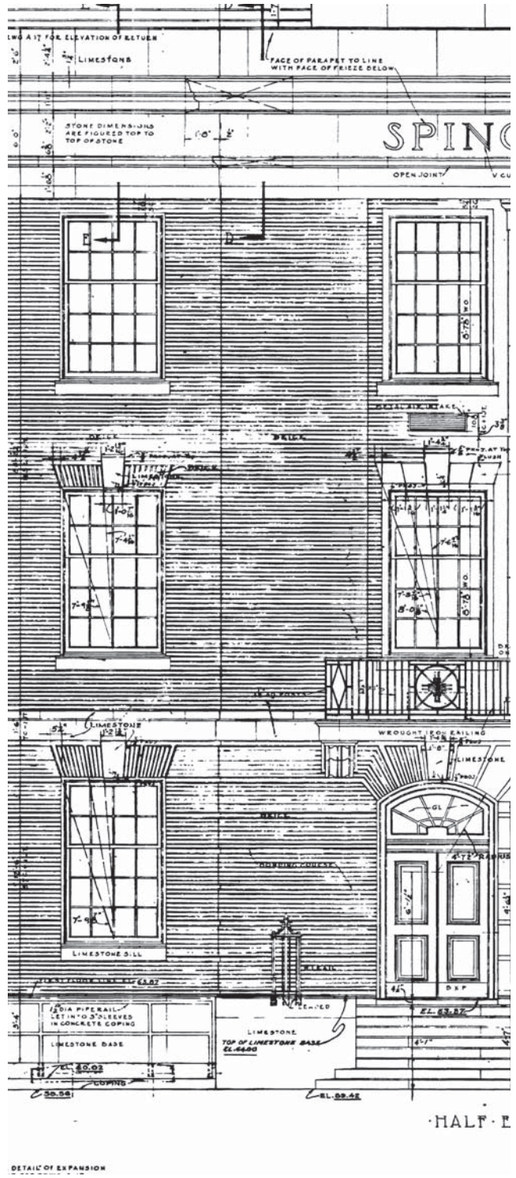
PROPOSED NORTH ELEVATION

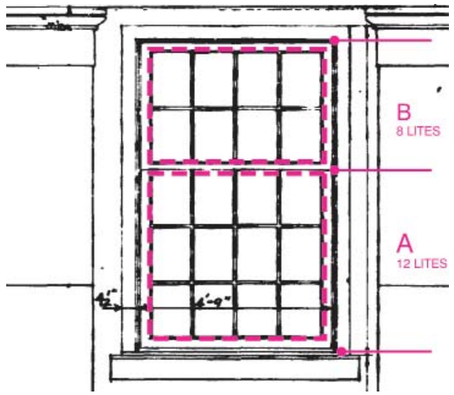
HISTORIC TREATMENT

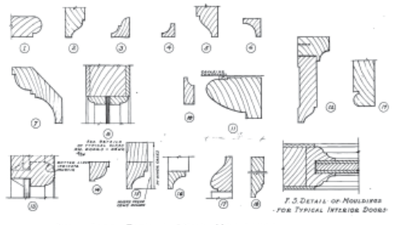
Exterior Windows
Original design: The majority of the 1950s original exterior windows were in-set rectangular, operable, double-hung (eight over twelve divided lite) windows. The frames, muntins, and trim, were all wood construction The masonry openings were framed out by a steel lintel and limestone sill. IThe original 1950s windows were replaced in the 1980s along with the majority of the surrounding wood trim.

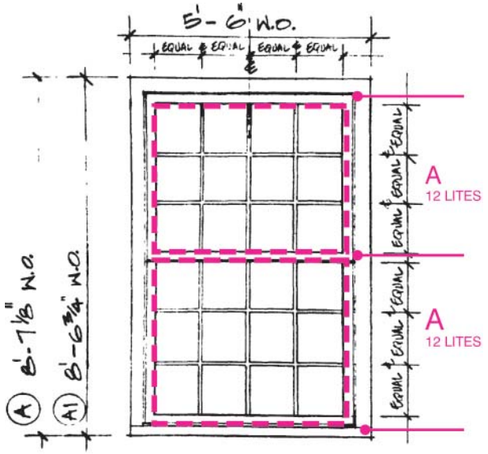
Current Condition
The current exterior windows are replacement windows, utilitarian in nature and do not match the original character and proportions of the existing 1950s window. They are similar in operation to the original windows but are constructed of aluminum profiles/frames. The original single glass pane has been replaced with a double-pane glazing unit made of 1/8 “clear glass (interior), 1/4” airspace and 3/16” lexan (exterior). Adhered to the exterior pane is a faux muntin grille to match the appearance of the originally divided lites. The 1980’s windows are surrounded by a profiled aluminum casing to appear like the original wood construction windows. It appears that the original wood trim was not removed during the 1980s window replacement and is still in-place, condition unknown, and now covered by the current aluminum trim.

Exterior Restoration
Part of the proposed exterior restoration includes replacement of the 1980’s windows with solid wood /aluminum clad, energy efficient, double hung, true divided lite, period correct windows to restore the design intent of the original 1950’s building .









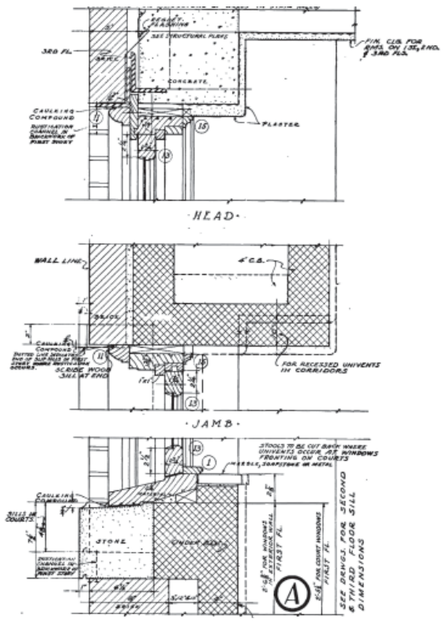
CONCEPT DESIGN

<<original window (1950)
-proportions emphasize verticality-
proportion b aligns with the transom glass above the doors creating unity across the facade as a whole

original window (1950)
section drawing showing profiled wood trim construction >>

<< original window (1950)
section drawing showing wood trim profiles

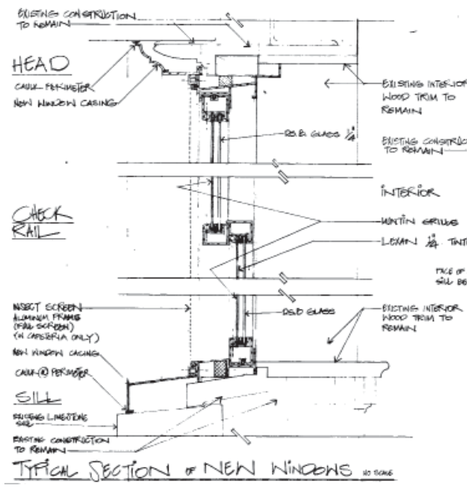
^ original windows(1950)



v replacement windows(1986)

<< current window (1986) - the altered proportions nullify the verticality of the windows - proportion b is out of alignment with the door head and transom glass breaking up the unity of the facade

current window (1986)
section drawing showing original wood trim covered with aluminum break metal - aluminum frame and trim is austere and lacks the character of the original design >>



HISTORIC TREATMENT

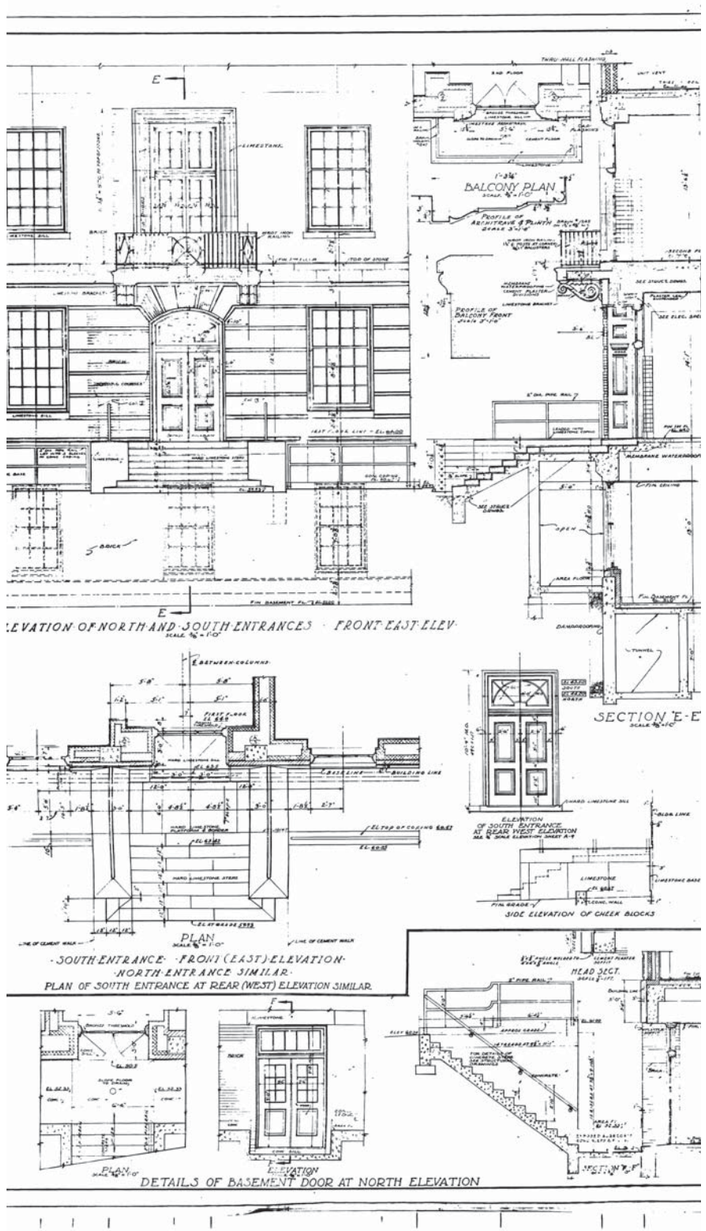
Exterior Doors

The 1950's exterior doors were originally all wood construction, the two-panel design had solid wood inlays surrounded by five-inch wood rails and stiles along with a ten-inch wood bottom rail. They were painted and supplied with bronze hardware. The door jambs, heads, and transoms were all painted wood and detailed to be similar in size and profile to the exterior window surrounds. The door sills vary between stone (hard limestone or soapstone marble) bronze and concrete based on the doors' location and function. The doors to the courtyards and areaways were similar but made use of a glass half lite (six divided lites) upper panel. All doors on the ground level and first floor had overhead divided lite transom glass and were either half-round or rectangular in style. The main building doors are set back approximately 18" from the exterior face, this recessed area is clad in wood, adorned with inset paneling and mouldings. These jamb extensions and soffits were designed to coordinate with the door ornamentation and brick bonding courses

The original wood doors have been replaced with temporary, flush, hollow metal doors, to keep the building secure. The original wood mouldings, jamb extensions, and soffits are still present in most locations.

Exterior Restoration

Part of the proposed exterior restoration includes replacement of the hollow metal doors with solid wood, energy efficient, period correct doors and frames to restore the design intent of the original 1950's building .

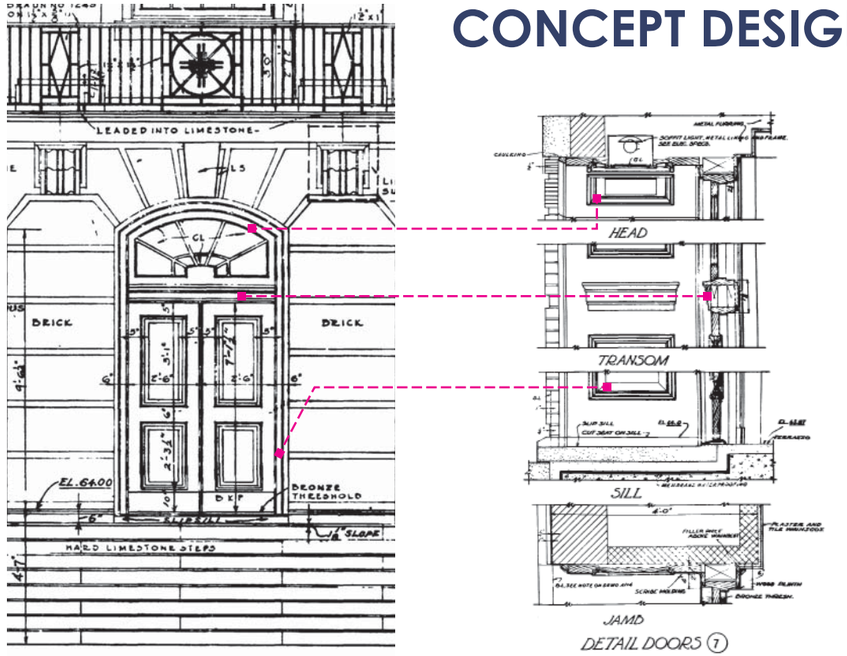


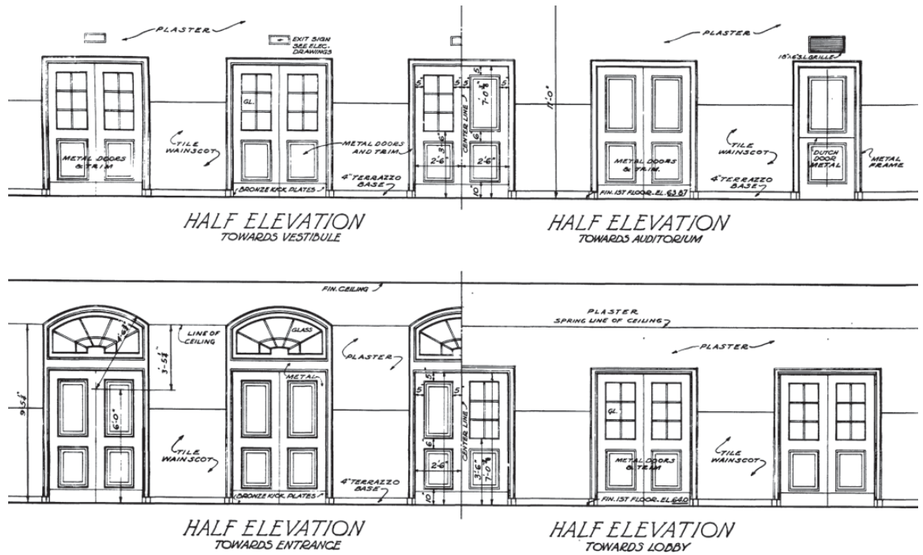
<< exterior entry door drawings from the original 1950's design

the wood trim and panels are detailed to align with the exterior masonry relief coursing and to match the inset panels of the wood doors>>

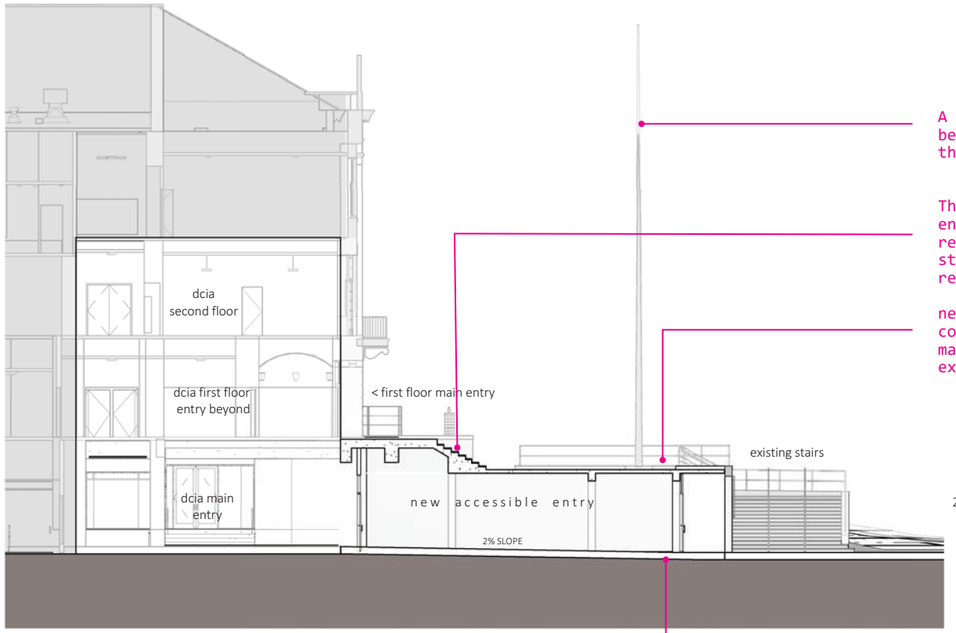
typical exterior door types from sheet a-18 of the original 1950s drawings >>

CONCEPT DESIGN





PROPOSED MAIN ENTRY



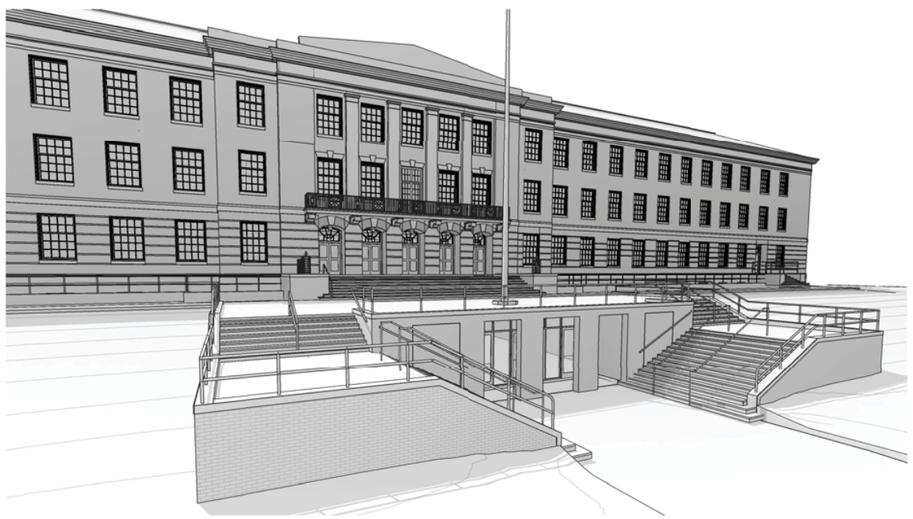
A new flagpole will be provided to match the existing pole

The terrace and entry stairs will be rebuilt. Existing stone treads will be repaired and reused.

new terrace construction to match elevation of existing

new concrete slab

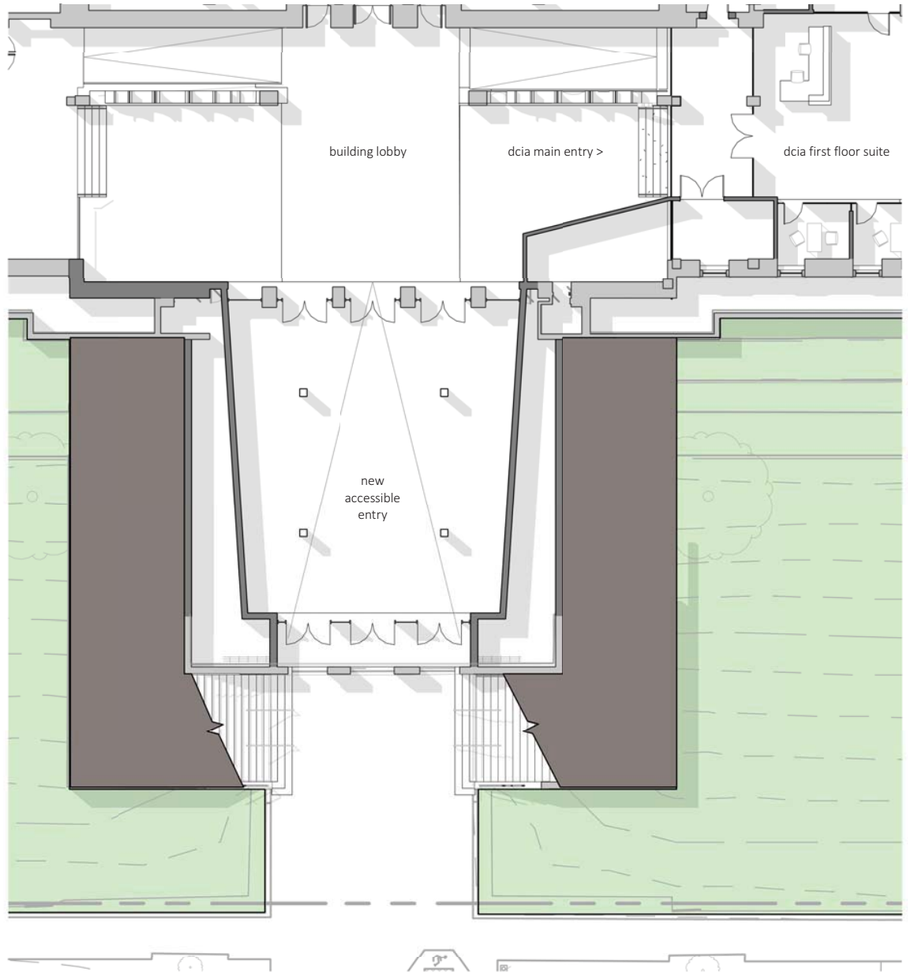
PARTIAL SECTION AT ENTRY



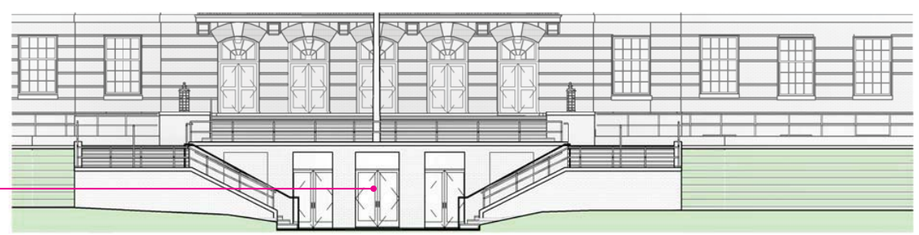
New Street-level entrance set behind the terrace site wall.

EAST VIEW OF MAIN ENTRY

CONCEPT DESIGN

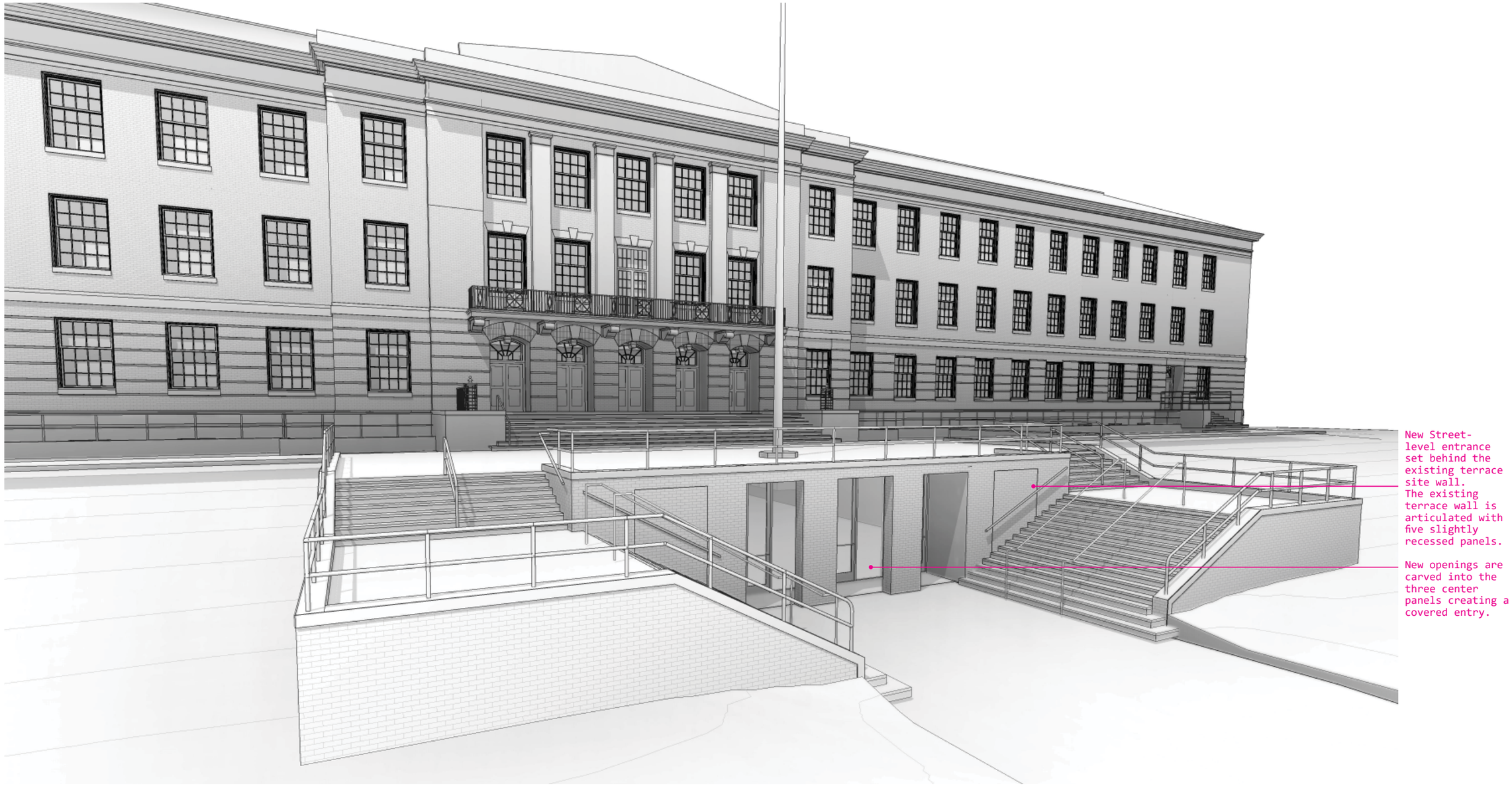


PARTIAL PLAN OF MAIN ENTRY OFF STREET LEVEL



ENTRY ELEVATION

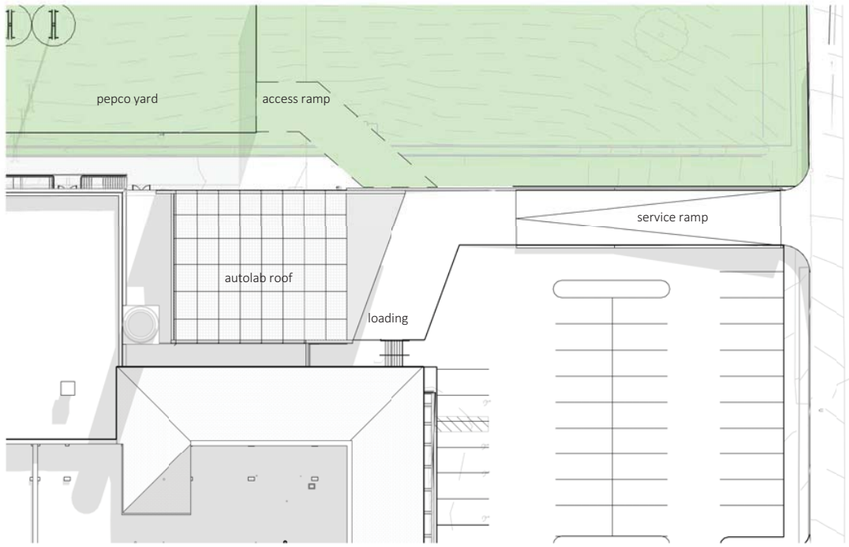
EXTERIOR VIEWS



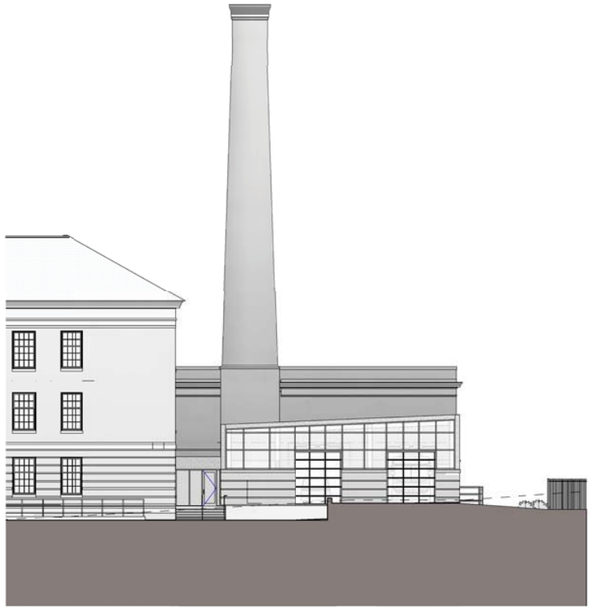
PROPOSED MAIN ENTRY

CONCEPT DESIGN

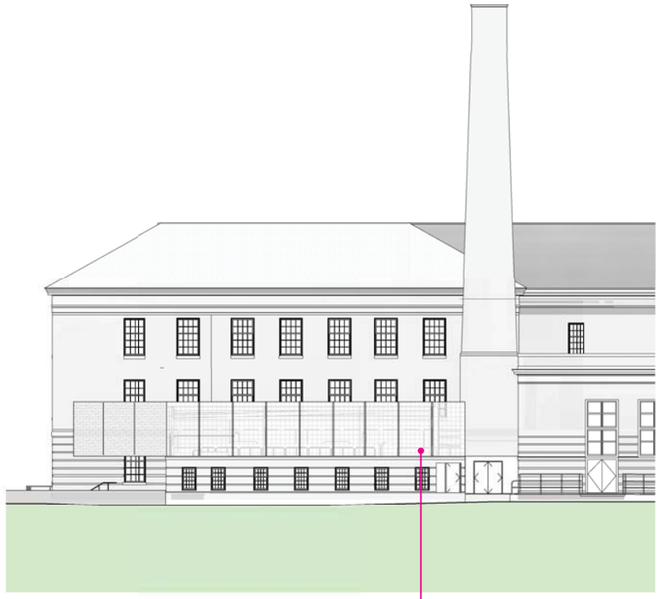
PROPOSED BOILERHOUSE RENOVATION



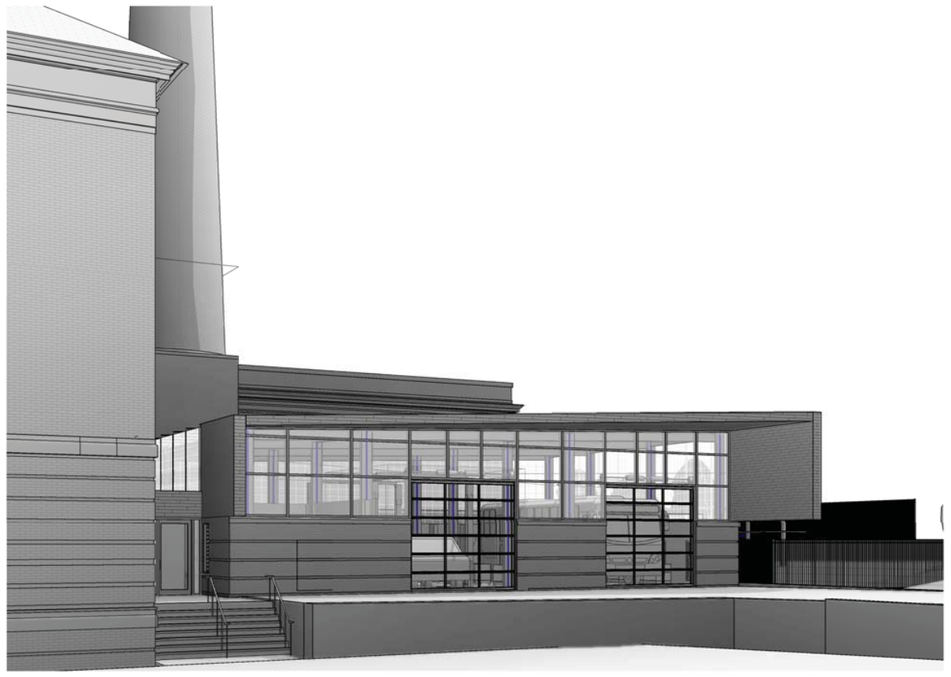
PARTIAL SITE PLAN



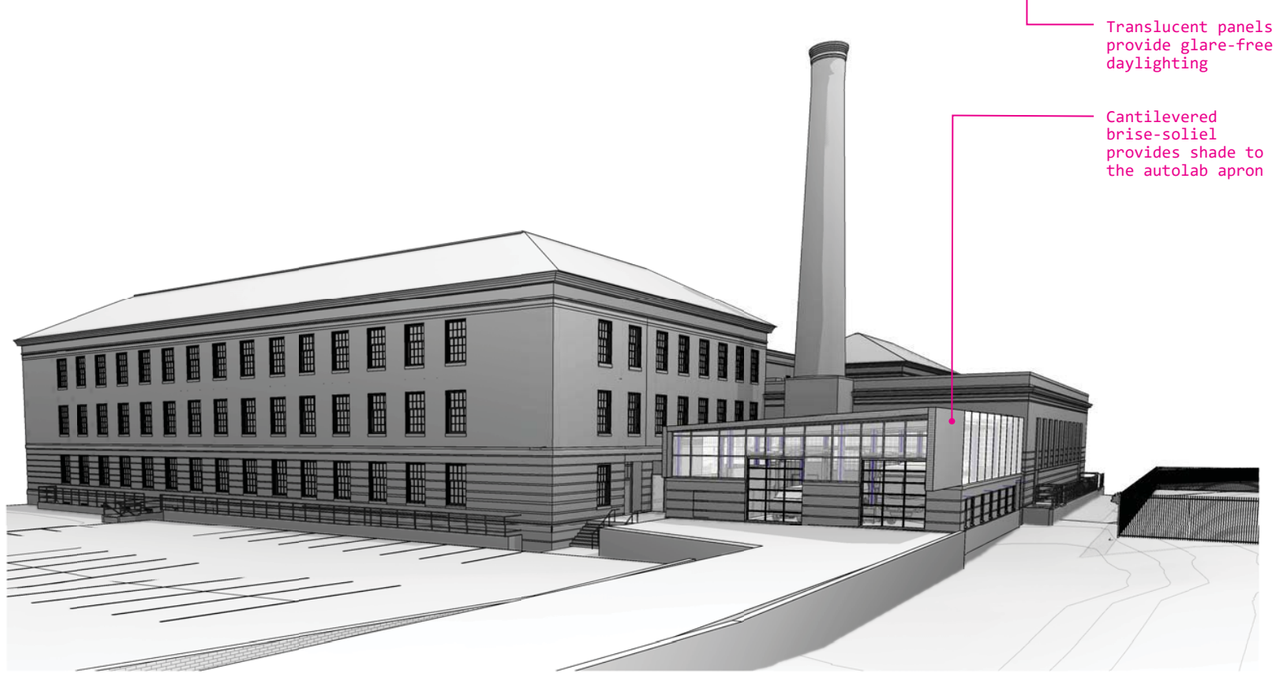
PARTIAL NORTH ELEVATION



PARTIAL WEST ELEVATION

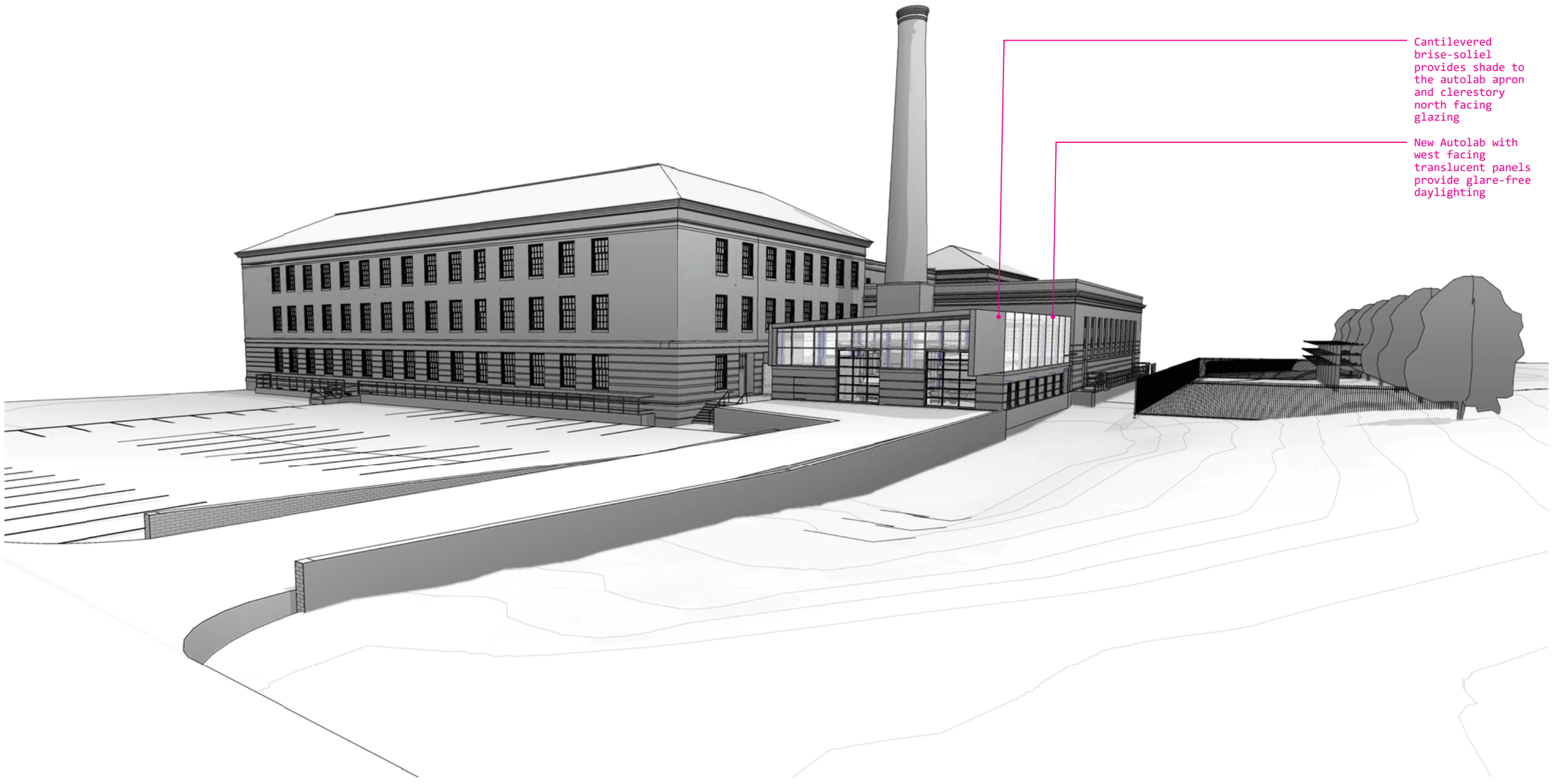


NE VIEW TO AUTOLAB



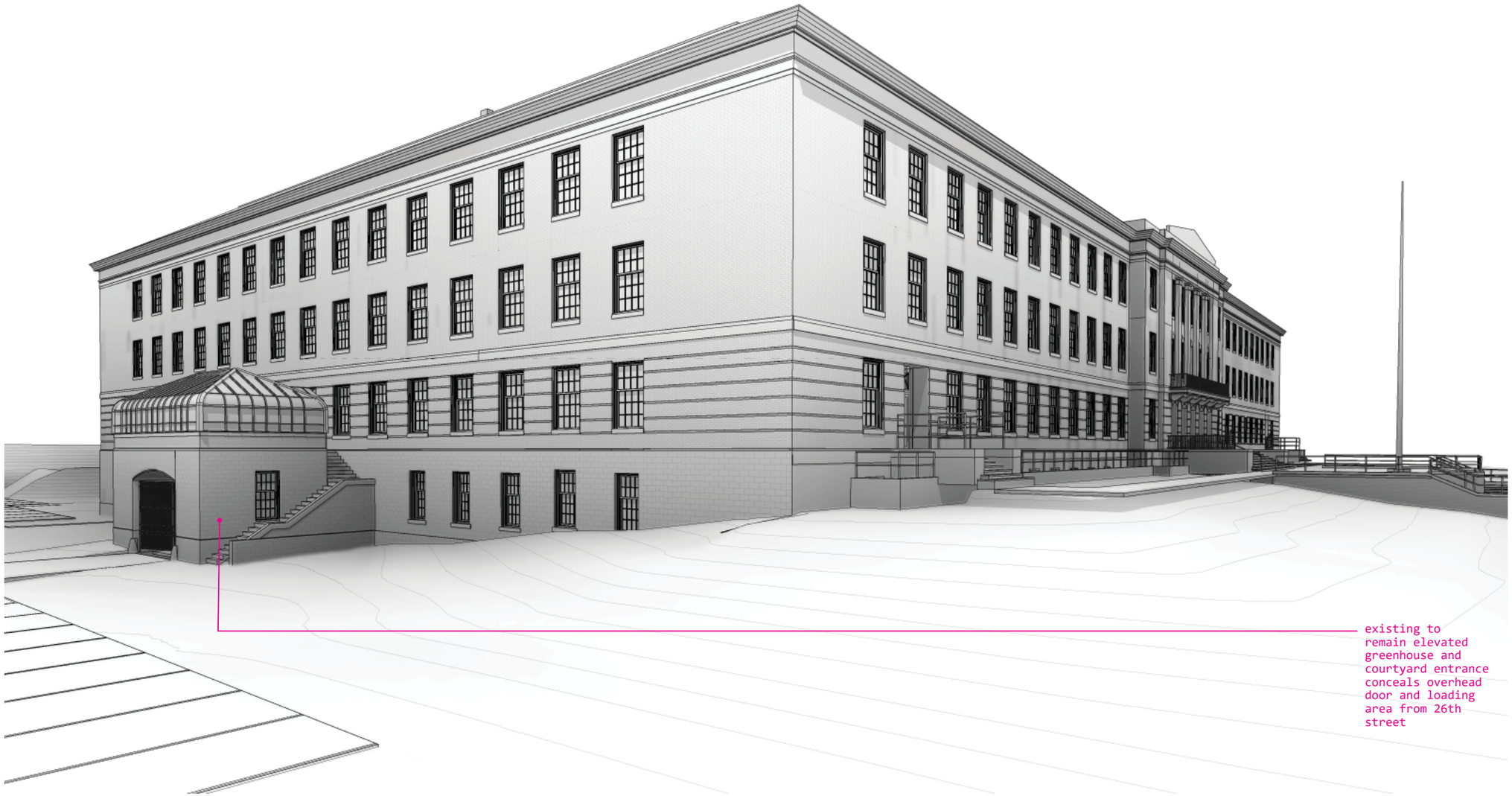
NW VIEW TO AUTO LAB

EXTERIOR VIEWS



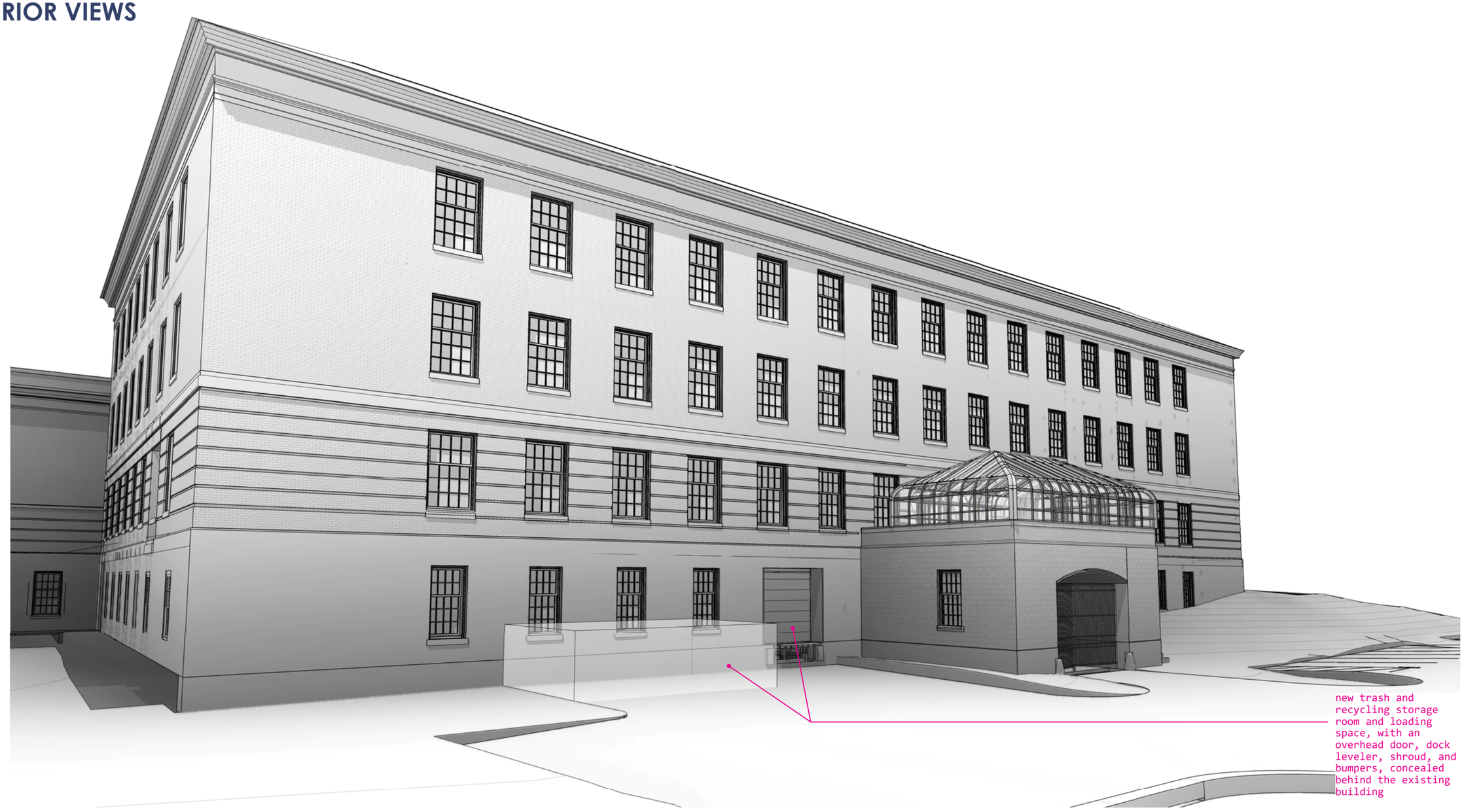
PROPOSED NORTH PARKING AREA and AUTOLAB

EXTERIOR VIEWS



PROPOSED SOUTH FACADE

EXTERIOR VIEWS



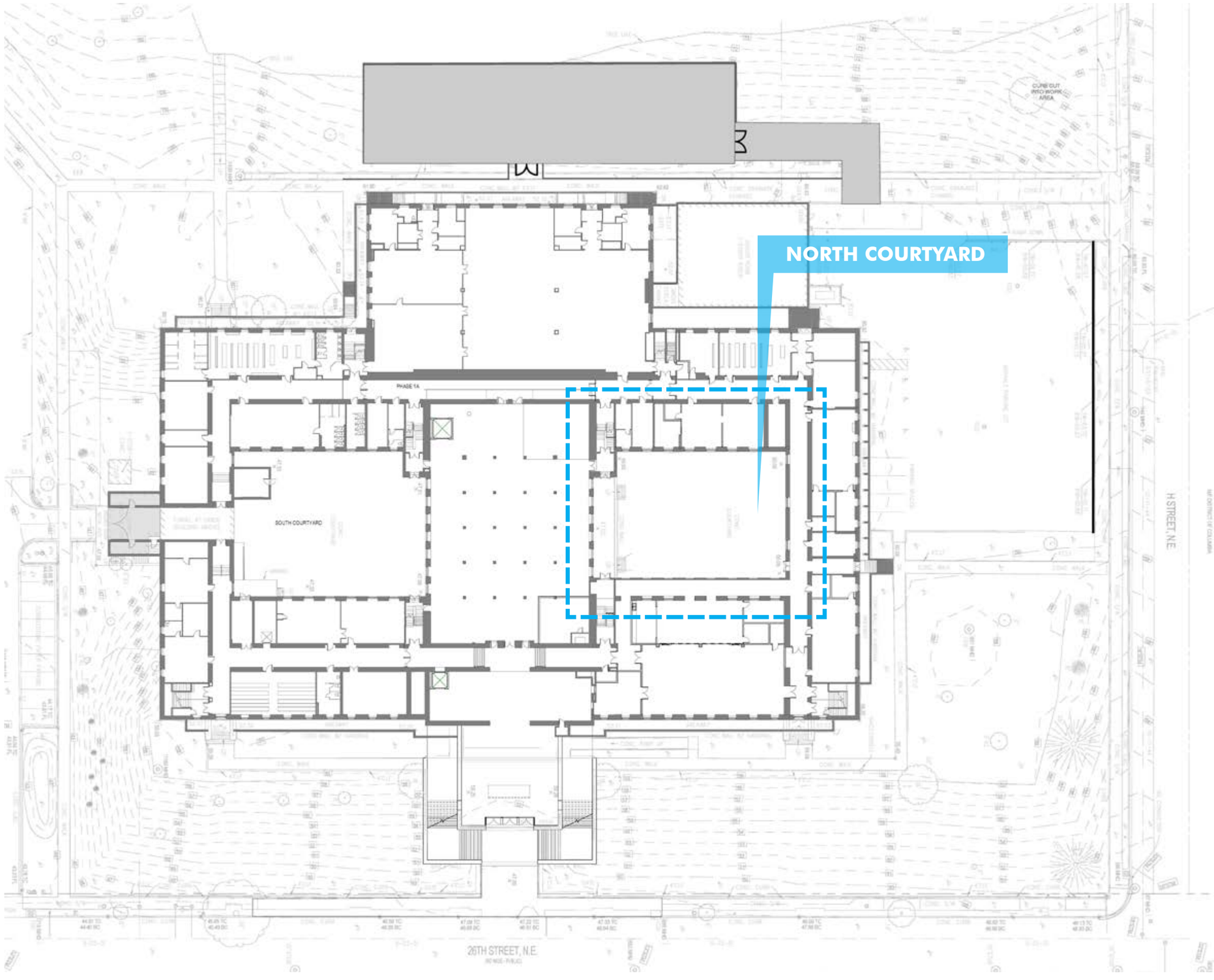
PROPOSED LOADING AND REFUSE/RECYCLING AREA

DCIA SPINGARN

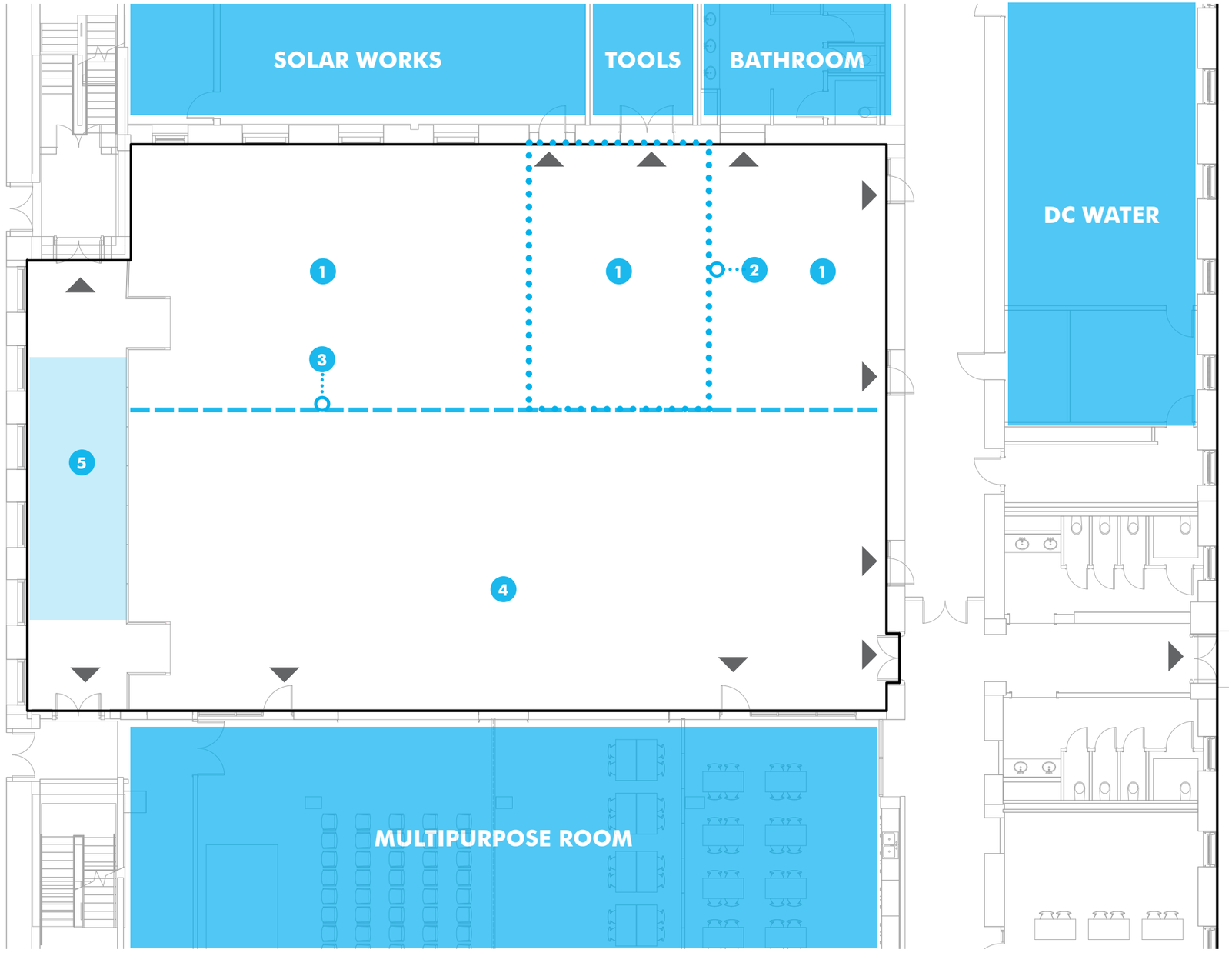
LANDSCAPE DESIGN CONCEPTS

NOV 18 2022

DCIA SPINGARN | SITE PLAN



NORTH COURTYARD | PROGRAM

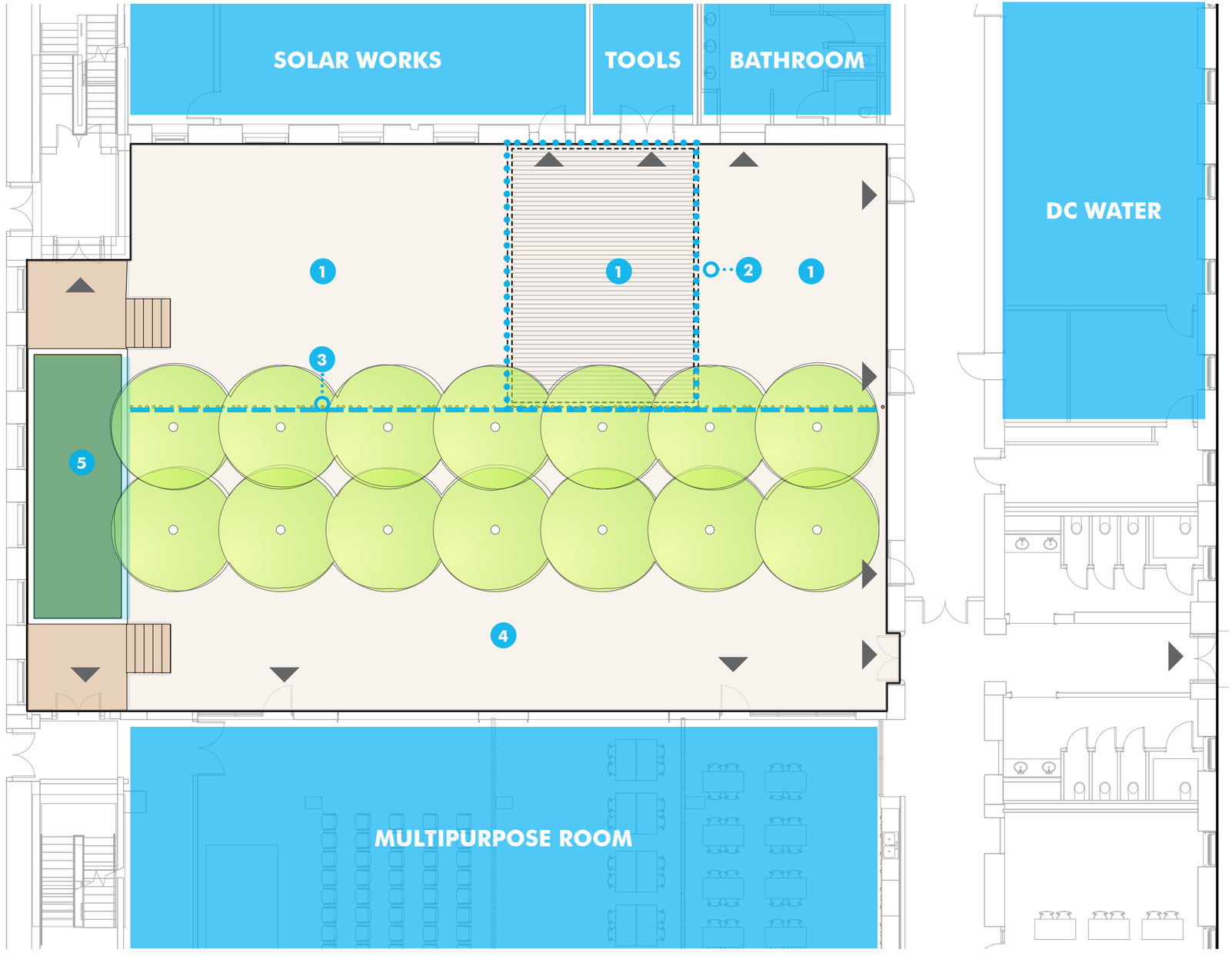


1| TEACHING + WORK SPACE
2| OVERHEAD CANOPY
3| DIVIDER
4| MULTI-PURPOSE STUDENT AMENITY & GATHERING SPACE
5| PLANTED AREA + STORMWATER MANAGEMENT

CIRCULATION

N

NORTH COURTYARD | PROGRAM



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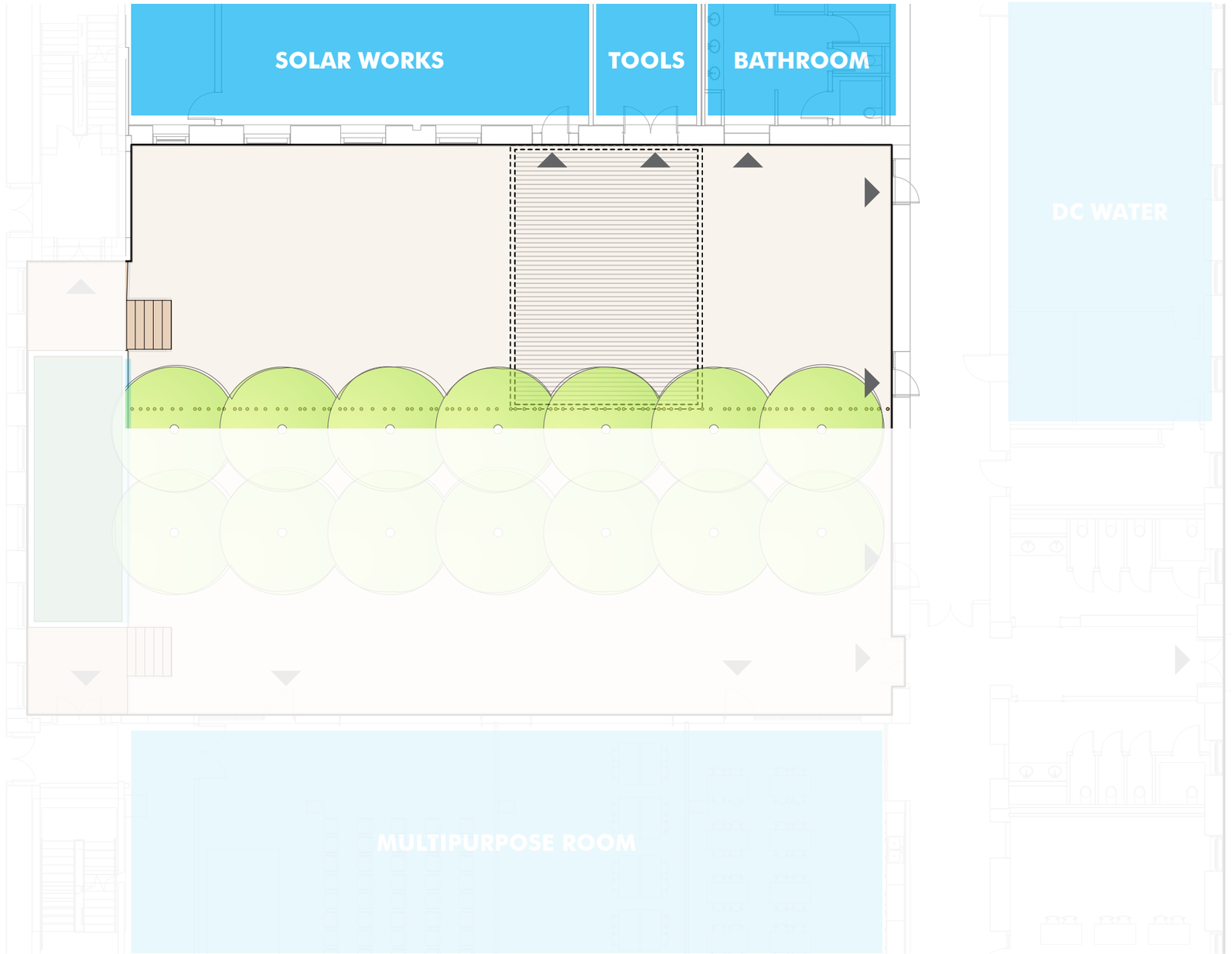
CIRCULATION

N

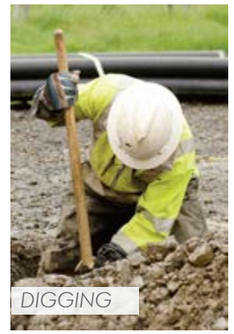
PRACTICAL & EDUCATIONAL

NORTH COURTYARD | WORK COURT




TEACHING

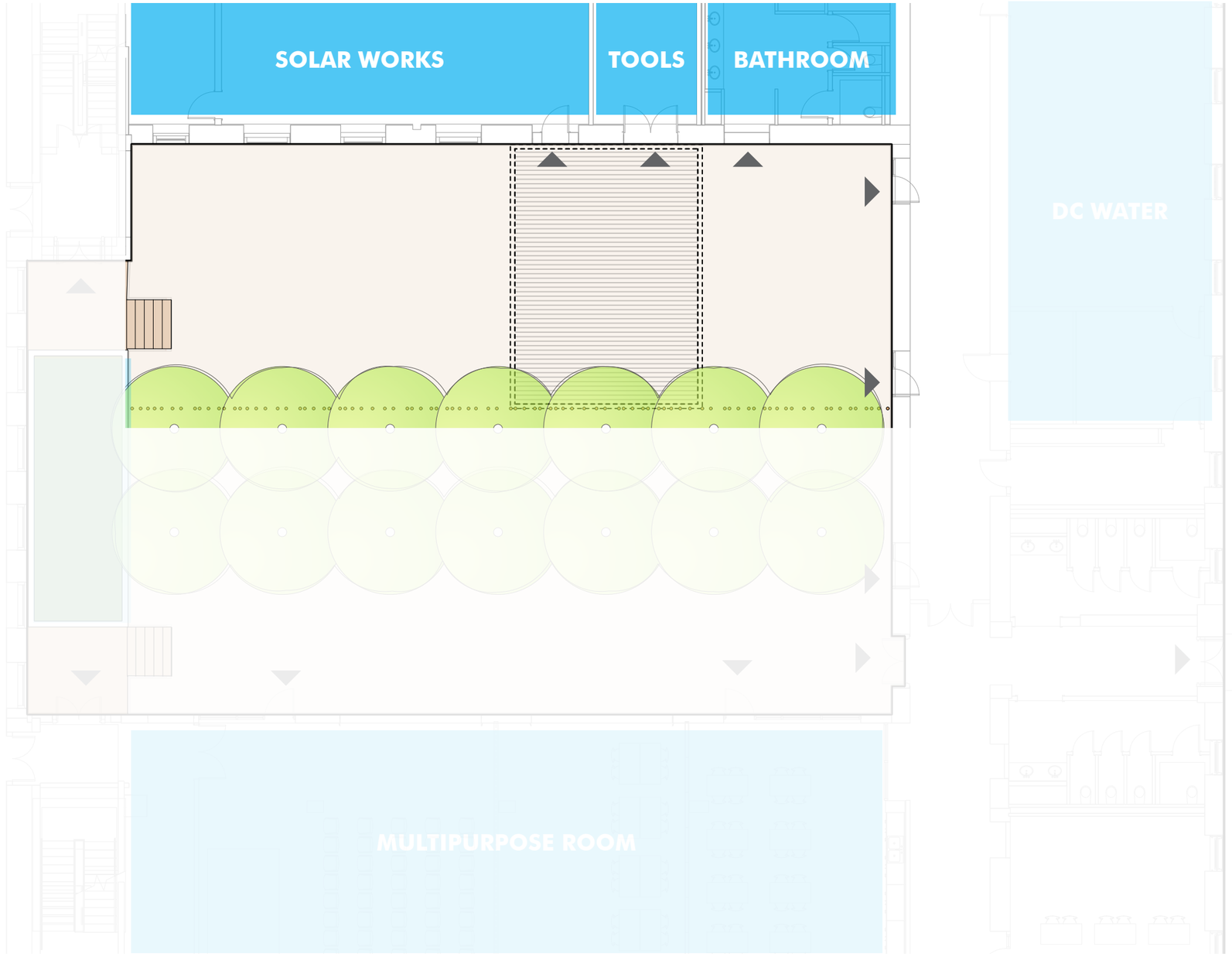

PRACTICING SOLAR


DIGGING

A SPACE FOR PRACTICING + TRAINING

CIRCULATION

NORTH COURTYARD | WORK COURT



TEACHING

PRACTICING SOLAR

DIGGING

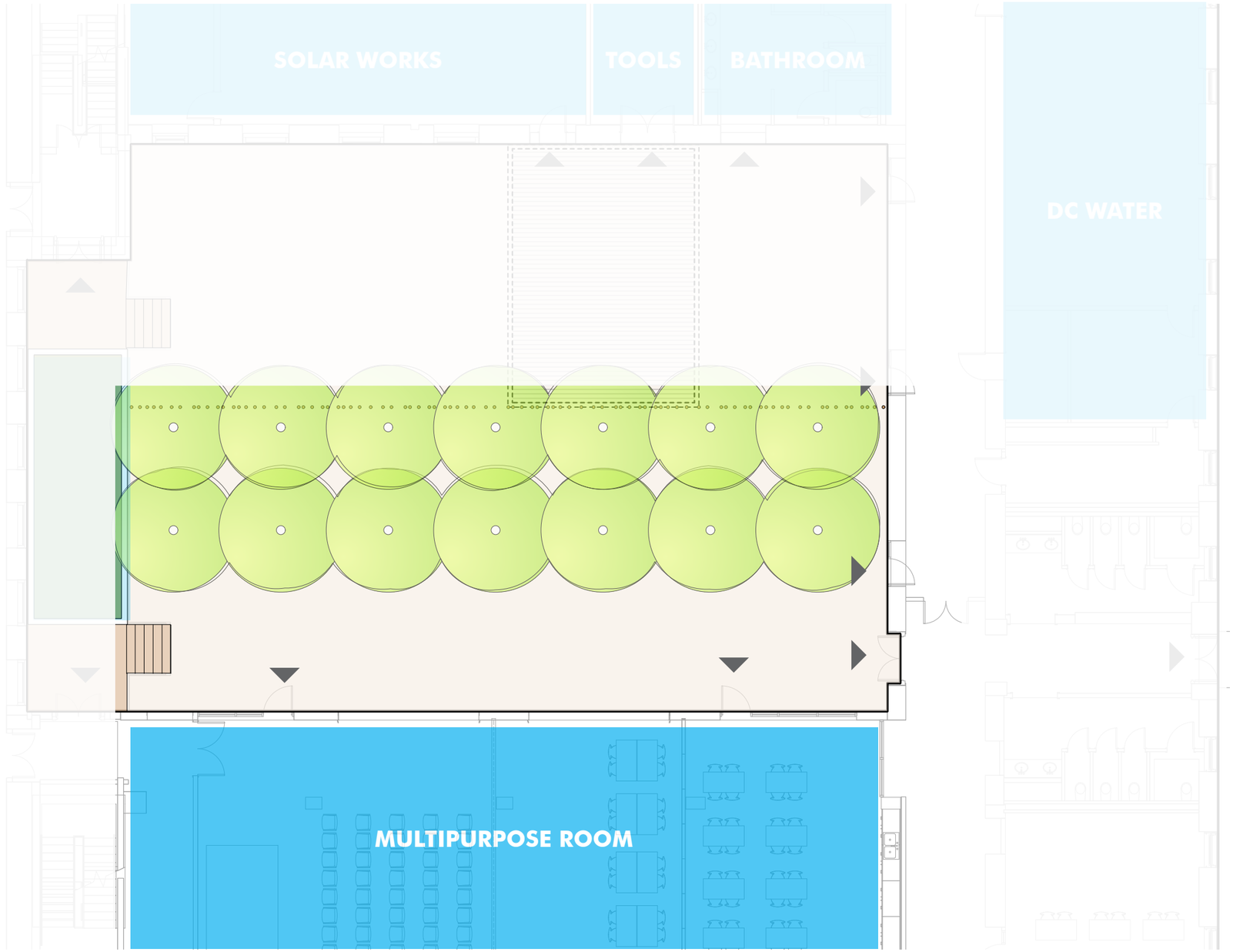
A SPACE FOR PRACTICING + TRAINING


SEATING


SHADE

CIRCULATION

NORTH COURTYARD | MULTI-PURPOSE STUDENT AMENITY & GATHERING SPACE




SOCIALIZING


EATING


CELEBRATING

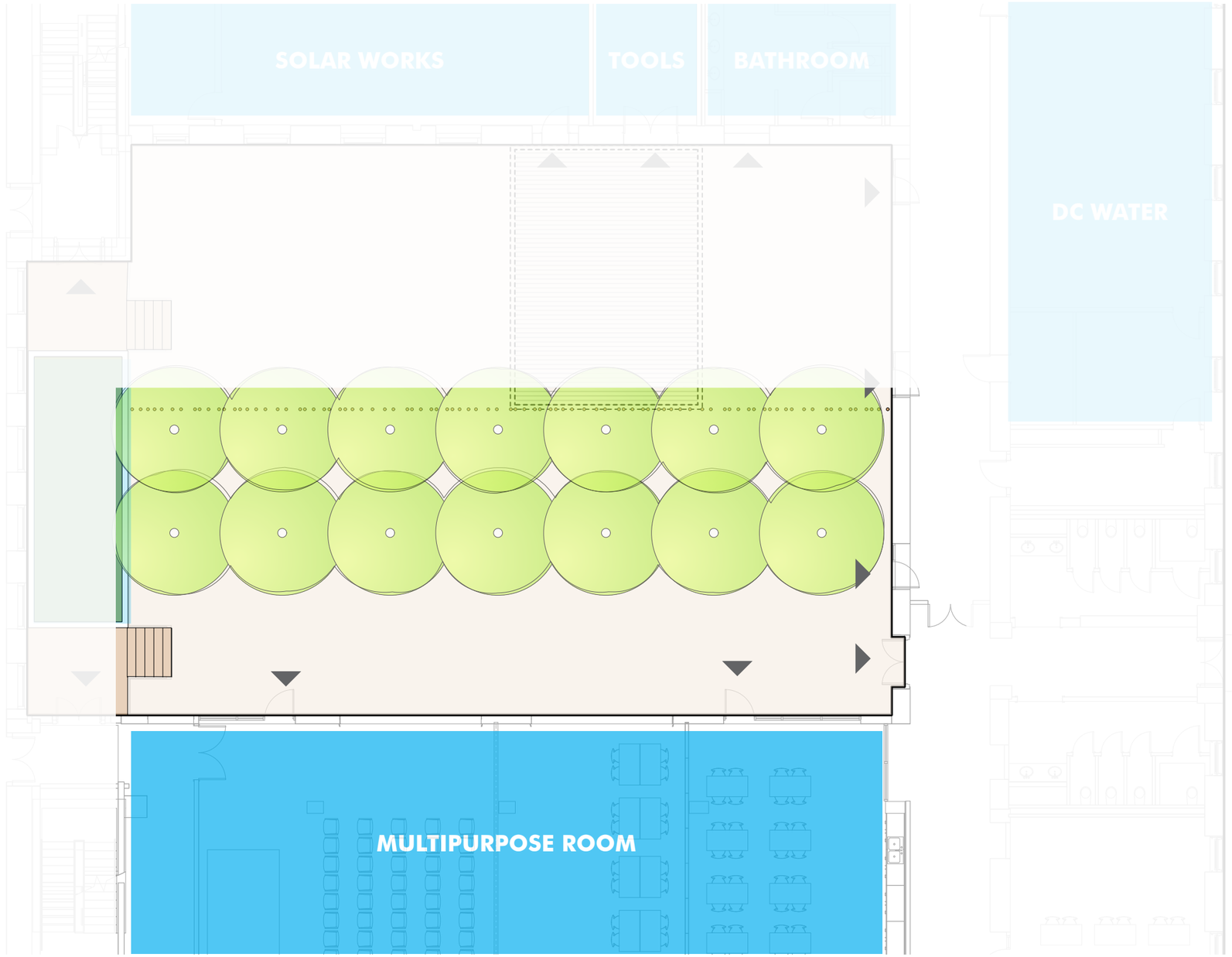

LEARNING

A SPACE FOR LEARNING + RELAXING

CIRCULATION

N

NORTH COURTYARD | MULTI-PURPOSE STUDENT AMENITY & GATHERING SPACE



SOCIALIZING

EATING

CELEBRATING

LEARNING

A SPACE FOR LEARNING + RELAXING

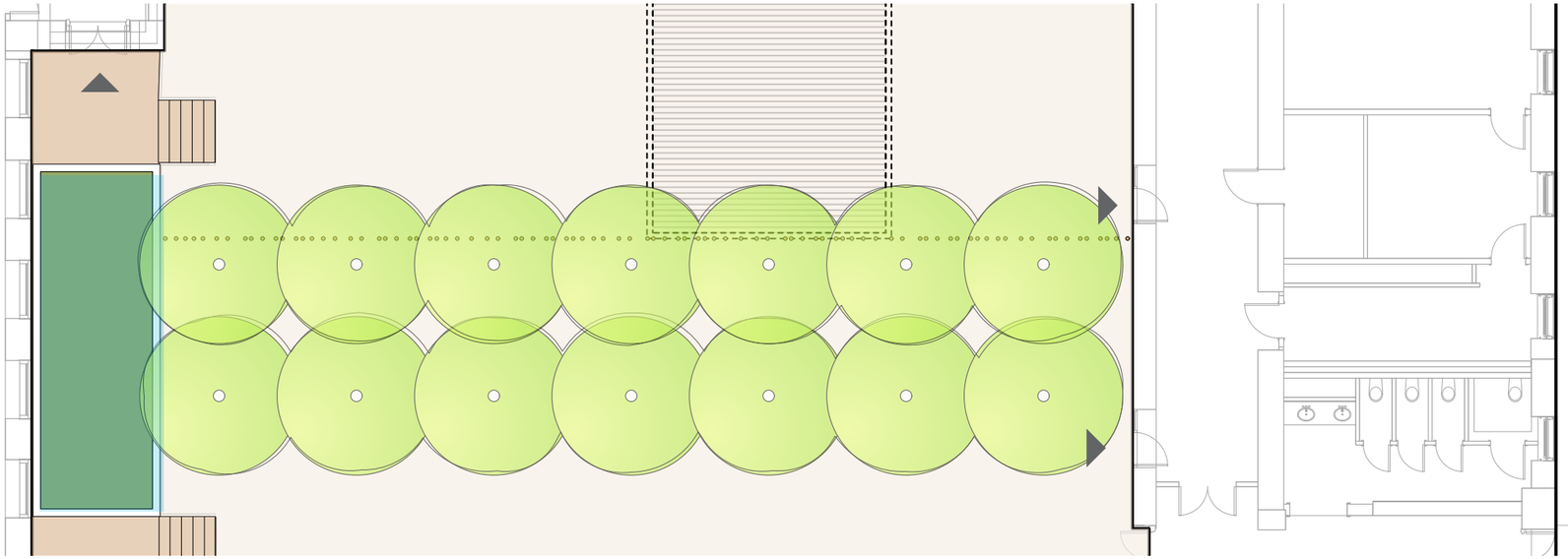

FLEX SEATING

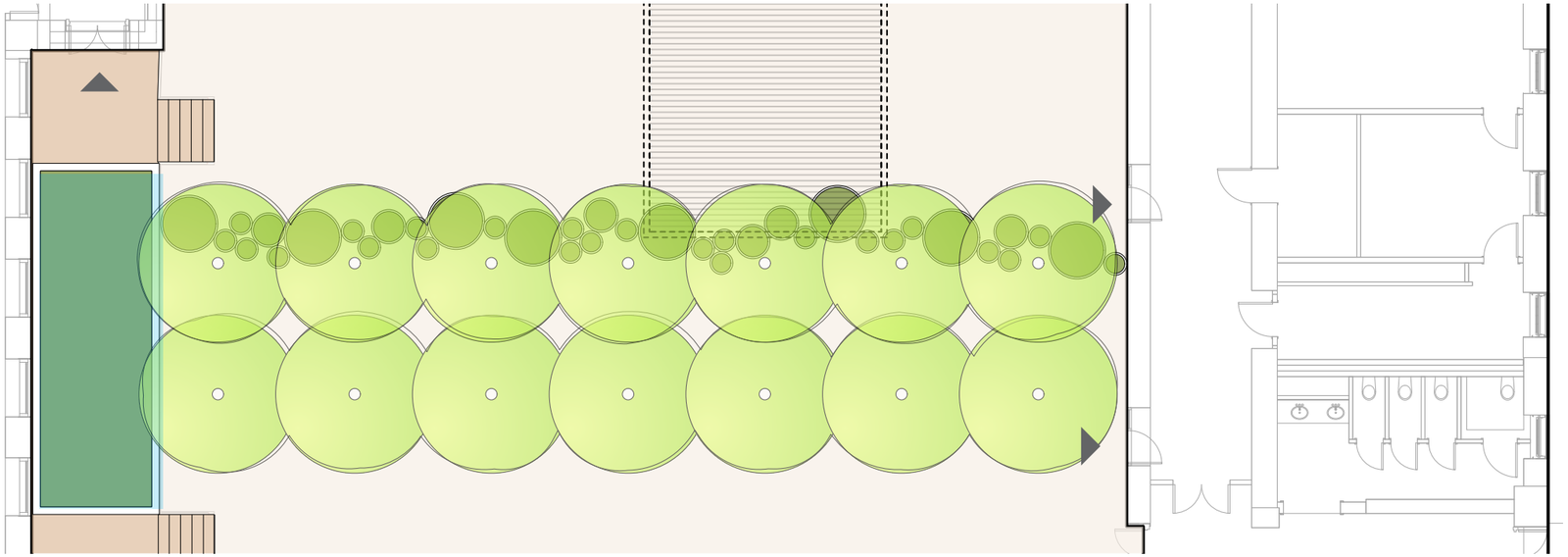

SHADE

CIRCULATION

N

NORTH COURTYARD | DIVIDER





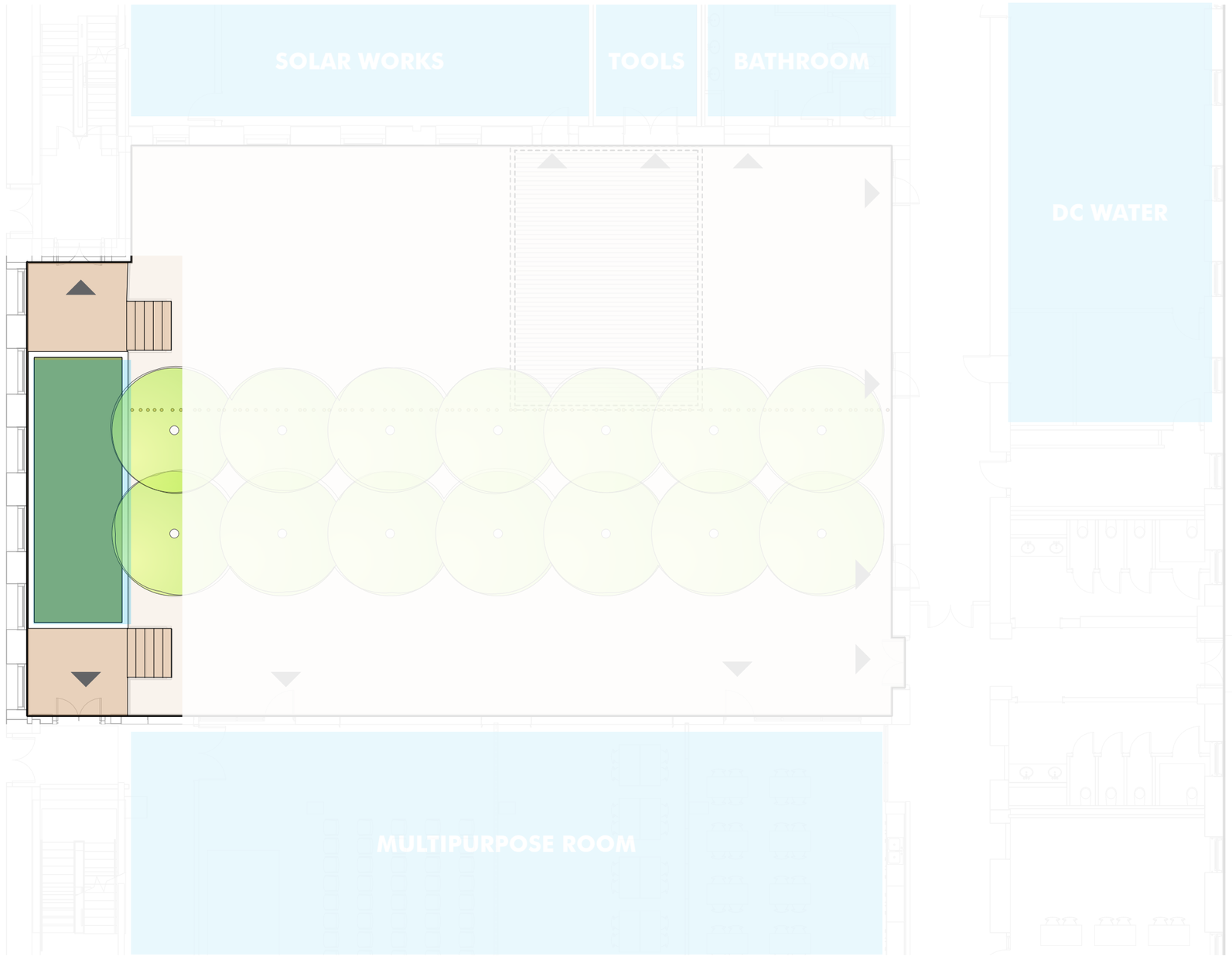
CIRCULATION

REBAR POSTS

SEPARATING SPACES + ENSURING SAFETY

PIPE PLANTERS

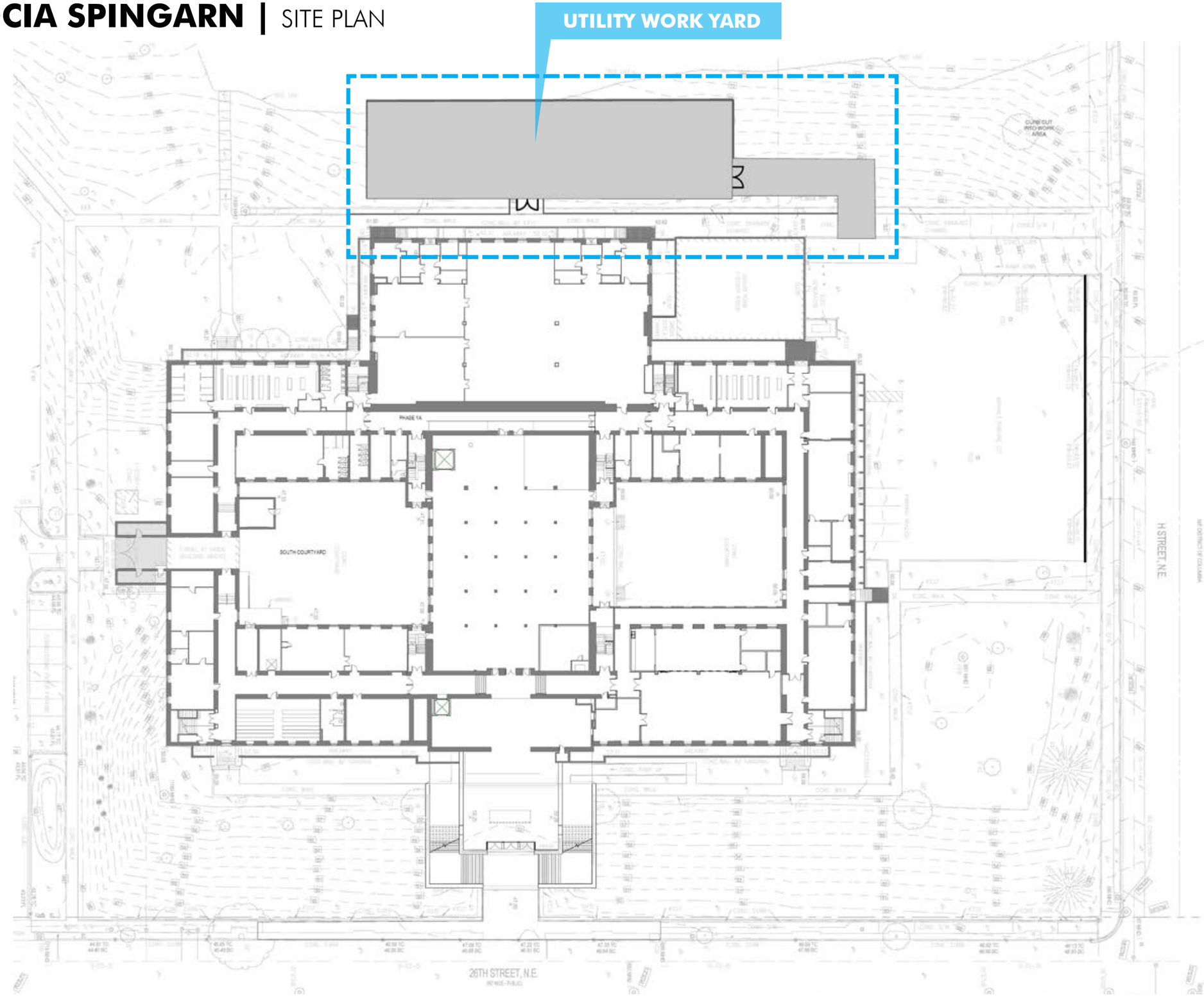
NORTH COURTYARD | STORMWATER MANAGEMENT



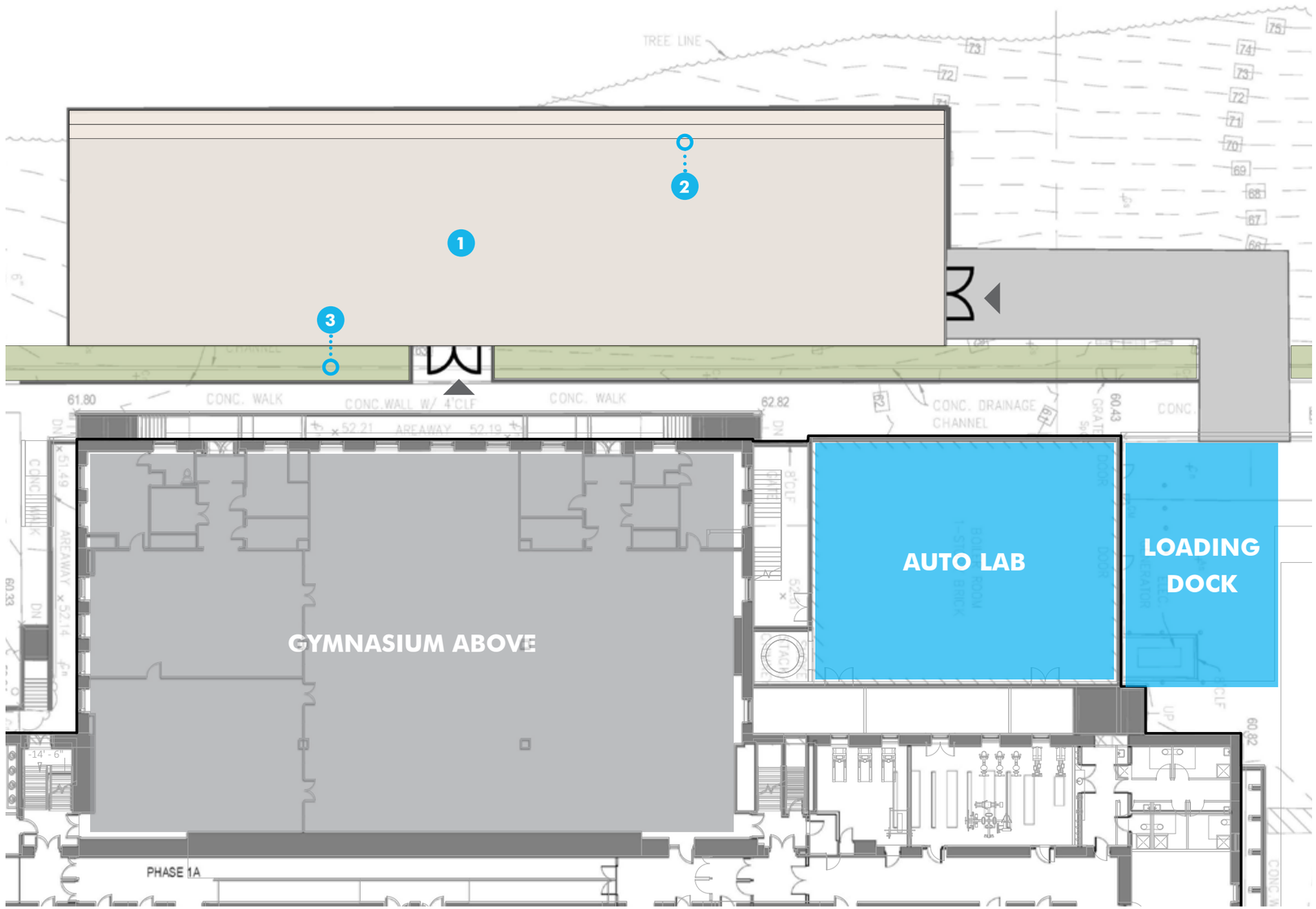
INSERTING PLANTS + SHOWCASING WATER

CIRCULATION

DCIA SPINGARN | SITE PLAN



UTILITY WORK YARD | PROGRAM



1| TEACHING + WORK SPACE
2| AMPHITHEATRE SEATING
3| STORMWATER MANAGEMENT

CIRCULATION

N

PRACTICAL & EDUCATIONAL

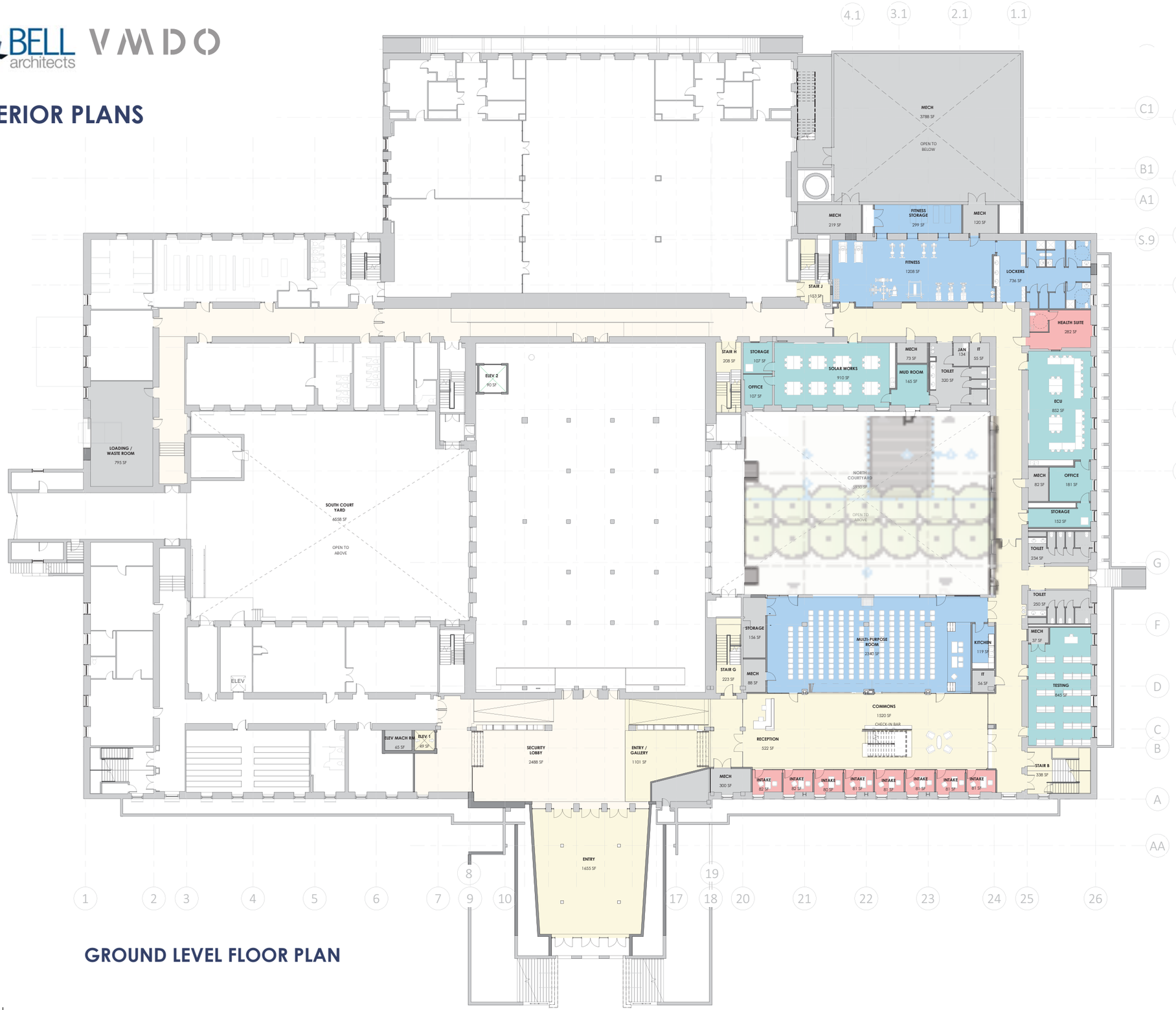
EXISTING PHOTOGRAPHS AND PLANS

EXTERIOR DRAWINGS

INTERIOR DRAWINGS

CONCEPT DESIGN

INTERIOR PLANS



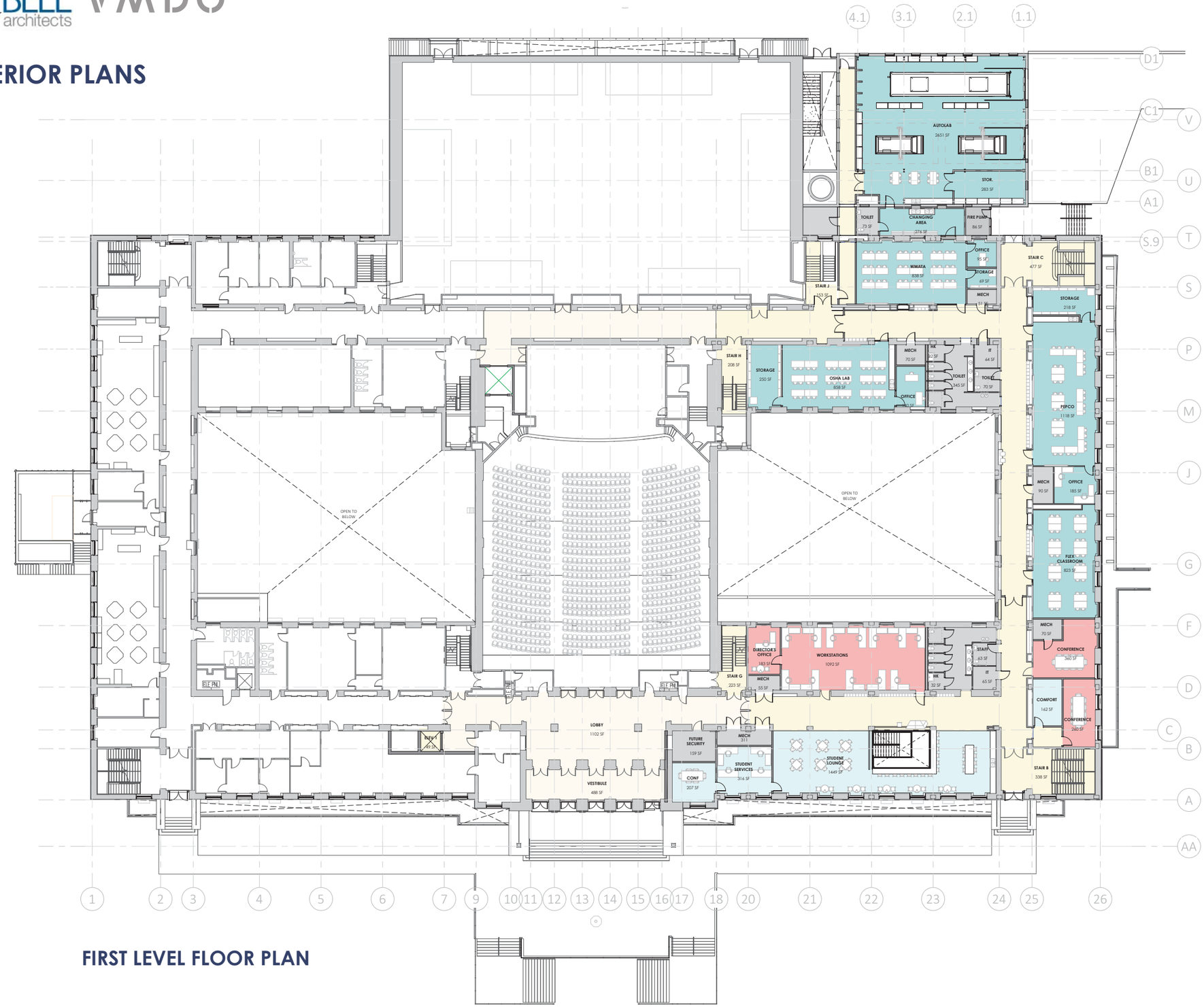
GROUND LEVEL FLOOR PLAN

- Base building /mech/support
- Circulation
- Instructional /training space
- Administration
- DCIA shared program
- Student support

Spingarns monumental core, and large assembly spaces; the cafeteria, and gymnasium, are excluded from the DCIA space. Upgrades are limited to the building lobby, vestibule, and center corridor connecting the elevators to the first phase of occupied space

BELL architects VMDO

INTERIOR PLANS



FIRST LEVEL FLOOR PLAN

CONCEPT DESIGN

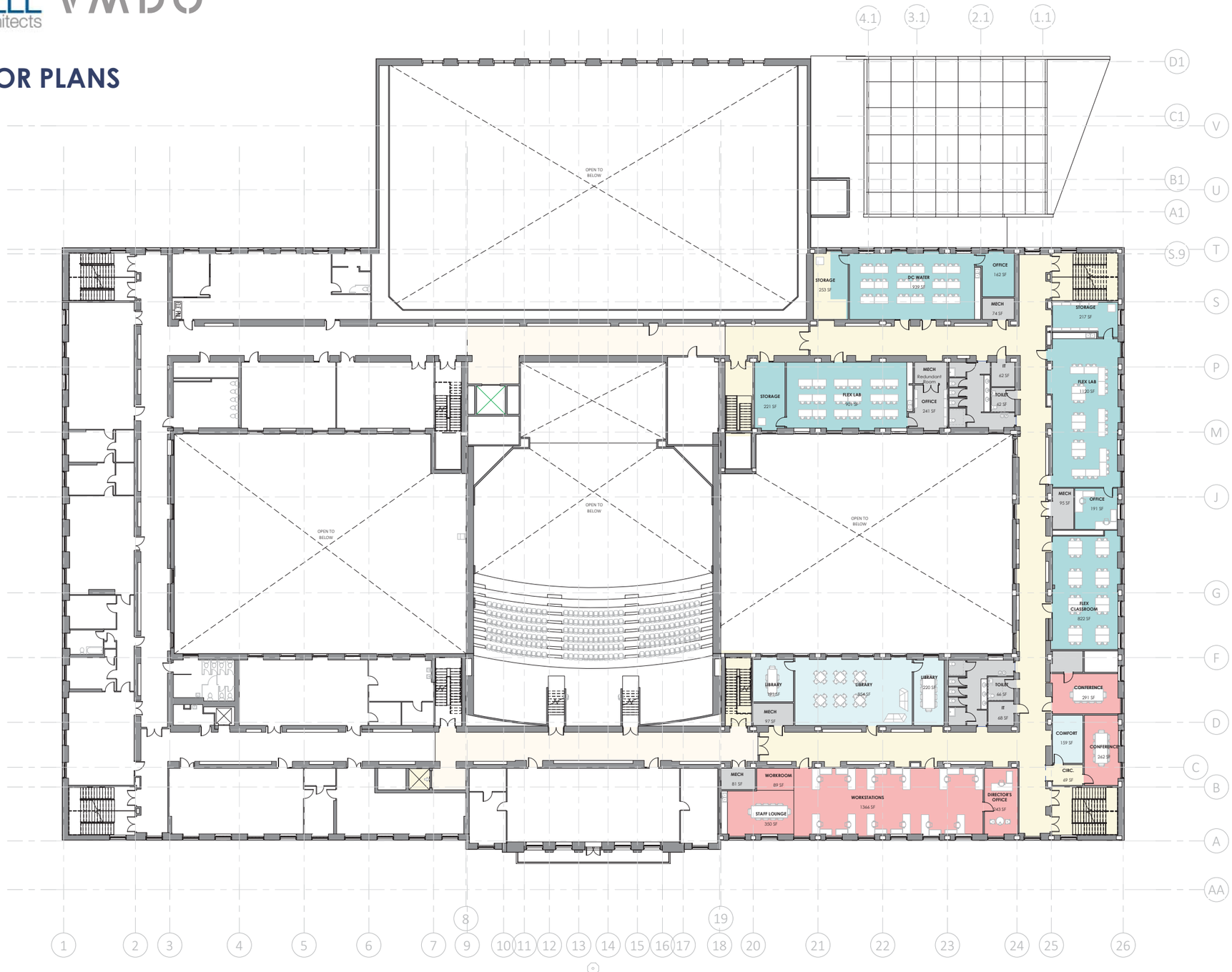
- Base building /mech/support
- Circulation
- Instructional /training space
- Administration
- DCIA shared program
- Student support

Spingarns monumental core, and large assembly spaces; the auditorium, and gymnasium, are excluded from the DCIA space. Upgrades are limited to the building lobby, vestibule, and center corridor connecting the elevators to the first phase of occupied space

INTERIOR PLANS

CONCEPT DESIGN

- Base building /mech/support
- Circulation
- Instructional /training space
- Administration
- DCIA shared program
- Student support



SECOND LEVEL FLOOR PLAN