a typological oxymoron

ASSAD ABBOUD

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Assad Abboud

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Master of Architecture in

Architecture

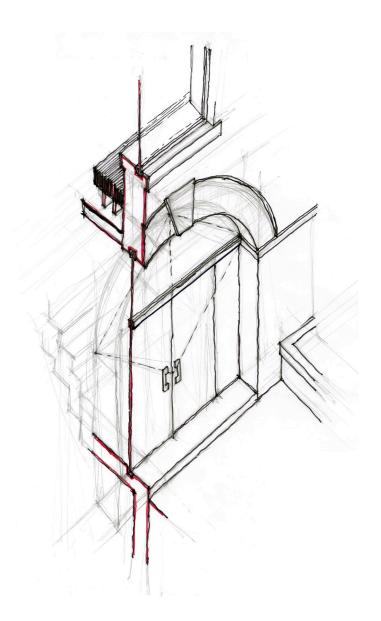
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a typological oxymoron

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A B S T R A C T

A cluster of buildings does not a campus make.

Places of learning have long sought-out cohesive spaces that foster a sense of community and encourage an immersive life of academia. The suburban campus model, with a centric configuration, has been a successful model that has withstood the test of time. Urban campuses knitted into the urban fabric have also had success in fostering the same sense of community, but more so as part of the larger city, and using the urban context as a lab for teaching. But what makes the campuses we love successful? And how can we apply those principles to set up younger campuses for future success?

This thesis tackles these questions, and attempts to understand what differentiates a mere collection of buildings from a true campus. Applied to the Washington Alexandria Architecture Center, these borrowed ideas can start to inform the design of a new campus that bridges the gap between traditional suburban campuses and organic urban campuses. Rather than providing a series of definitive answers, the thesis provides a series of principles on how to create a cohesive design that doesn't compromise the true nature of an urban campus. The proposed design is but one of many possible solutions.

As humans, we seem to have a desire to classify the world into categories. Oftentimes, however, the most beautiful things come from the tension of the unclassified. They come from the gray areas between typologies. The process of this thesis became inherently contradictory at times. It was developed in a way in which the particular conditions of the existing buildings on the site, and their character in the urban setting, were allowed to contaminate the clarity of the suburban campus typology, and as such, become an oxymoron.

a typological oxymoron

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GENERAL AUDIENCE ABSTRACT

This thesis examines urban campuses, and explores the design principles that make them successful. By comparing the layouts and designs of suburban campus models with those of school in urban conditions, one can begin to learn what ideas from either typology can be used to create a successful campus within an urban or semi-urban condition, like Old Town Alexandria. By using the Washington Alexandria Architecture Center as an example, the project develops a design proposal that would grow the current campus from a couple of buildings to a real successful urban campus, that has the potential to grow beyond its confined singular city block.

D E D I C A T I O N

For Hillary, whose unwavering love and support know absolutely no bounds

viii ix

C O N T E N T S

The 1001 Building

The Housing Building

The Auditorium Building

x xi



WHAT MAKES A SUCCESSFUL URBAN CAMPUS?

What can we learn from successful campuses & how can we apply it successfully to an urban campus without compromising the true nature of its urban contextuality?

THESIS MAP

a guide to the thought process

URBAN SCALE

urban fabric & city connections

consistent attitude towards acquiring buildings, or growing the campus by designing new structures

CAMPUS SCALE

buildings & urban thresholds

consistent attitude towards treating the edges of the campus relative to the urban fabric, and the relationship of buildings to one another within the campus

ARCHITECTURAL SCALE

design & typology

consistent attitude towards detail and materiality when it comes to new buildings and adaptive re-use

xii xiii

URBAN SCALE

urban fabric & city connections

consistent attitude towards acquiring buildings, or growing the campus by designing new structures

- centralized notion (quad space) vs. linear growth of campus
- campus can grow linearly, and sparsely, as long as there is a centralized notion
- achieving a certain density with access to outdoor space
- phasing with future growth integrated into the design

THE URBAN CAMPUS MODEL

an exploration in typology

Campuses in urban settings are as varied, if not more, than non-urban campus models. A look at urban campuses can reveal a lot about how they function. From this exploration, one can glean what aspects make the campuses successful, and which of those do not contribute to their flourishing.

Out of a multitude of urban campuses, four were selected to be explored in more depth; New York University in New York, NY, Columbia University in New York, NY, George Washington University in Washington, DC, and Georgia Tech Square in Atlanta, Georgia. Those were selected to have a variety of different urban conditions, handled differently by the design approach.

New York University is an example of a campus that is deeply embedded into the urban fabric. While part of it is organized around Washington Square Park, it does not disrupt the urban grid and has allowed for an organic type of growth when it comes to the acquisition or construction of campus buildings.

What is intriguing in this particular campus is that there is no architectural consistency. The campus is the epitome of what one would imagine an urban campus to be, with an agglomeration of varied styles, sizes and functions, all sprinkled within the city and adjacent to non-affiliated buildings. Signage is frequently used as an identifier to indicate university buildings.



https://www.google.com/maps

NEW YORK UNIVERSITY

Campus Setting: Urban

Location: New York, NY - lower Manhattan

Campus Type: Open, urban

Type of Institution: private, undergraduate and graduate Main campus

Identifying characteristics:

- Open campus with buildings sprinkled across city blocks
- $\bullet \qquad \hbox{Completely integrated into urban fabric}$
- $\bullet \qquad \text{Varied buildings with signage as unifying aspect}\\$



https://www.google.com/maps

COLUMBIA UNIVERSITY

Campus Setting: Urban

Location: New York, NY - upper west side/Morningside Heights

Campus Type: Enclosed, gated campus

Type of Institution: private university, undergraduate and graduate

Main campus

Identifying characteristics:

- Gated campus
- Homogenous buildings
- · Typical college quad layout
- Completely removed from the urban fabric

Columbia University was selected as another campus. While it is also located in New York City, it becomes clear that the layout of the campus is quite different from the organic model of New York University.

"In 1897, the university moved from Forty-ninth Street and Madison Avenue, where it had stood for forty years, to its present location on Morningside Heights at 116th Street and Broadway. Seth Low, the president of the University at the time of the move, sought to create an academic village in a more spacious setting. Charles Follen McKim of the architectural firm of McKim, Mead, and White modeled the new campus after the Athenian agora. The Columbia campus comprises the largest single collection of McKim, Mead & White buildings in existence."

-History | Columbia University in the City of New York.

Columbia's campus somewhat respects the grid of the city; however, by walling the campus off and providing a symmetrical plan centered around vast outdoor quad-like spaces, consistent with the suburban campus model, it diregards the city and almost turns its back on it. This an immensely different approach from the

one New York University takes. While there are some buildings at Columbia that are embedded within the city fabric, the main spaces that have historically formed the campus are really bound by the gated walls, and create sort of a haven within the bustling city of New York.

What is interesting is that even though both approaches to campus design could not be more different, a day spent at either reveals the importance of not only outdoor space and places of activity, but also the general feeling of hierarchy and the feeling that there is a central part of campus that people flock to, providing a sense of arrival and establishment.



https://www.google.com/maps

GEORGE WASHINGTON UNIVERSITY

Campus Setting: Urban Location: Washington, DC - Foggy Bottom Campus Type: Open, but concentrated Type of Institution: private university

Identifying characteristics:

- middle of spectrum between NYU and Columbia
- urban and integrated into city but maintains a sense of unified campus
- Parts of campus feel unified and more typical of a college campus, while others are totally integrated into the urban fabric

The George Washington University Campus falls While this model of acquisition and growth is somewhere in the middle of the spectrum between NYU not atypical of a college campus, it becomes clear and Columbia. The campus feels urban and integrated that the development of GWU's campus was into the city, but maintains a sense of unity and uniformity. somewhat different from a college like Columbia. Parts of it feel more typical of a suburban college campus,

Stylistically, the buildings are architecturally varied and are a true representation of the diversity of architectural styles you may find in an urban college campus.

while others are totally integrated into the urban fabric.

"The early growth of the University at Foggy Bottom was quite exceptional. Buildings, rented for the first year, were purchased by the University. The existing dwellings were remodeled into classrooms... By the 1930s, the University was well established in the Foggy Bottom area. The city was growing and the institution had become a true urban university. During this time, another major reorganization took place in the curriculum of the University."

- A Brief History of GW.

Finally, the Georgia Institute of Technology's new Tech Square is brought up as an example as it is a contemporary take on establishing a campus center in a pre-existing urban area. It is an example of the integration of commercial design, like offices and retail, with the university being the majority tenant in most of these office space.

"John Portman & Associates is designing the facility in order to achieve the primary goal of bringing research and commercialization together... Technology Square is a two-blocklong complex of five four- to six-story buildings on eight acres (3.2 hectares) in the Midtown neighborhood of Atlanta developed by the Georgia Institute of Technology (Georgia Tech). Although the structures maintain an outward focus on Midtown's major streets (West Peachtree and Fifth streets, NW), the project also includes inner plazas and courtyards.

- Laura Diamond



https://www.google.com/maps

GEORGIA INSTITUTE OF TECHNOLOGY TECH SQUARE

Campus Setting: Semi-Urban Location: Atlanta, GA Campus Type: Open, integrated into city fabric Type of Institution: public university Main campus branch, removed from main campus

- tied to the city in a lot of ways
- not a typical "campus"

Identifying characteristics:

a map example to show the relative scale of WAAC campus relative to the other campuses researched



https://www.google.com/maps

WHAT MAKES A COLLECTION OF BUILDINGS A CAMPUS?

a study in phasing, growth and campus formation



SITE SELECTION

The Washington Alexandria Architecture Center, also known as the WAAC, is a branch of Virginia Polytechnic Institute, and is the perfect laboratory for exploring a growing and ever-changing campus design.

"The college established the WAAC in 1980 with a straightforward mission: To offer upper-level architecture students an opportunity to study in an urban location for a year away from the home campus. Since then, this off-campus program - once housed in rented space above a drugstore in Old Town Alexandria - has grown, expanding in both content and complexity. The WAAC is constantly under construction," (Piedmont-Palladino) says the current Director of the WAAC, Susan Piedmont-Palladino.

The WAAC is a strong example of a campus that is situated in an urban condition and has the potential of becoming a larger urban campus. It is already associated with a number of smaller buildings, and the proposal can begin to guide the way in which these buildings can begin to grow and transform within the city.

Two approaches that are explored are the 'Centralized Approach' and the 'Linear Approach'. The Linear Approach explores the possibility of growing the campus along Prince Street, taking on cues from the already existing buildings along Prince that are part of the WAAC. The Centralized Approach, on the other hand, focuses on developing the center of the campus to create a strong heart for the campus which has the potential for growth.



CURRENT WAAC AFFILIATED BUILDINGS, 2018



LINEAR EXPLORATIONS

washington-alexandria architecture center

Taking cues from the already existing patterns within the city, the exploration capitalizes on the existing patterns of movement and growth.

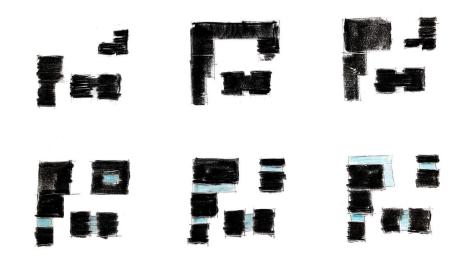
Through various studies of the walking experiences to and from current WAAC buildings, one begins to understand how the order and rigidity of the trees on King Street, as opposed to the haphazardness of those on Prince Street, can create a more ceremonial and intentional spine. Through these explorations, one also come to appreciate the transitional thresholds that Old Town houses create. This all provides inspiration to create an intentional design for the alley, and open

spaces that draw people into the campus. Through that emerges the idea of porches and porch culture. I enjoy having that connectivity to the urban fabric, and I really wanted to maintain that intrigue and mystery of discovering the WAAC buildings while still connecting to the fabric and community in more subtle ways.

Studying the street conditions and thinking about strategies that can guide the growth is important, but after careful consideration, deemed not invasive enough as a sustainable solution.







configuration charcoal sketches

CAMPUS SCALE

buildings & urban thresholds

consistent attitude towards treating the edges of the campus relative to the urban fabric, and the relationship of buildings to one another within the campus

- an urban face and a campus face
- delineation between public and private, with transitional threshold spaces
- clear visual display of circulation and inner working of buildings
- edge transitions between inside and outside consistent with the urban context
- visual access, putting the building functions on display
- consistent dominant relationships between each building to their respective outdoor spaces



INITIAL SITE EXPLORATIONS

contextual thresholds & site diagramming

DESIGN DIRECTIVES

- 1. Create a strong sense of campus while maintaning integration into urban fabric
- $2. \ {\it Take} \ advantage \ of porch culture \ and \ create \ upper \ level \ connections$
- 3. Take advantage of existing connections/paths/alleyways, while enhancing the pedestrian experience
- 4. Create spaces that invite the public to interact with the WAAC in various ways



FORMING THE CENTER

building massings & the in-between

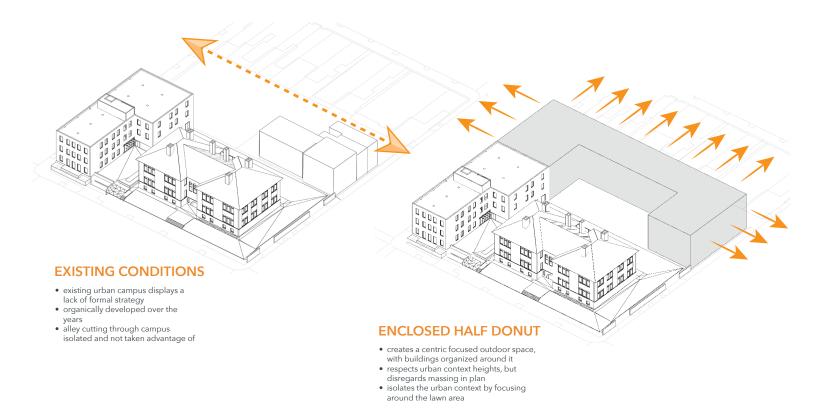
While the linear explorations are useful in their own right, there is a desire to create a project that is more invasive and really shakes up the infrastructure in order to set up the campus for success. The desire is *not* to come up with a menu or a toolkit as to how one could grow a campus. It is about a specific solution to the problem at hand. Each campus is its own unique problem, and rather than trying to solve all the different problems and generalizing, the desire is to come up with a proposal that is specific and unique, but that responds to design principles that are more universal and that can be applied to other campuses and urban conditions.

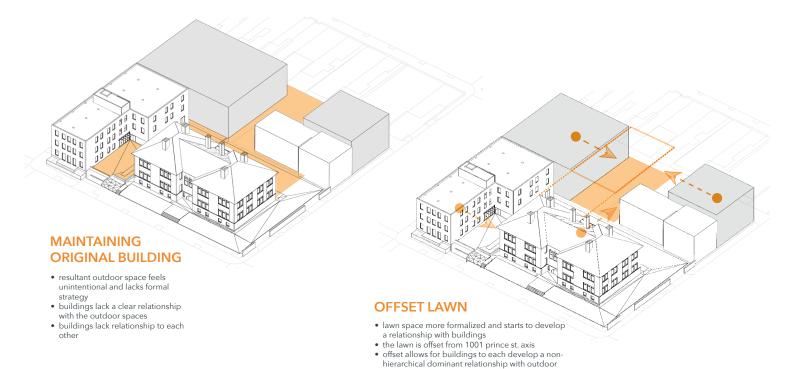
As such, the proposal focuses on the direct 1001 block and suggest ideas for future phases and expansions. The existing block houses 1001, the original WAAC

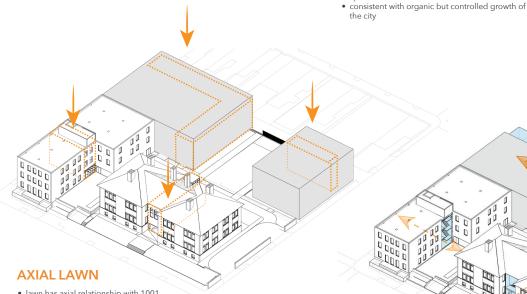
building, 1021, which houses SPIA, a row of retail townhouses along King Street, and three infill buildings along Patrick Street.

Learning from the research conducted on campus precedents, a number of configurations were explored for the 1001 block, as shown in the diagrams below. The important points to emerge from that exploration are:

- a clear delineation between the city and the campus, but multiple connections and entry points
- establishing a lineant hierarchy that allows for adaptation and change
- dominant relationships between each of the buildings and their respective outdoor areas
- ample outdoor space
- two front faces that allow for visual connections



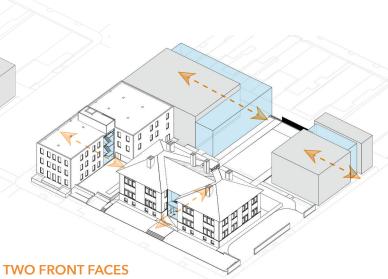




- lawn has axial relationship with 1001
- each building still has direct and
- dominant relationship to outdoor space

 alley activated by positioning of building
- and outdoor space

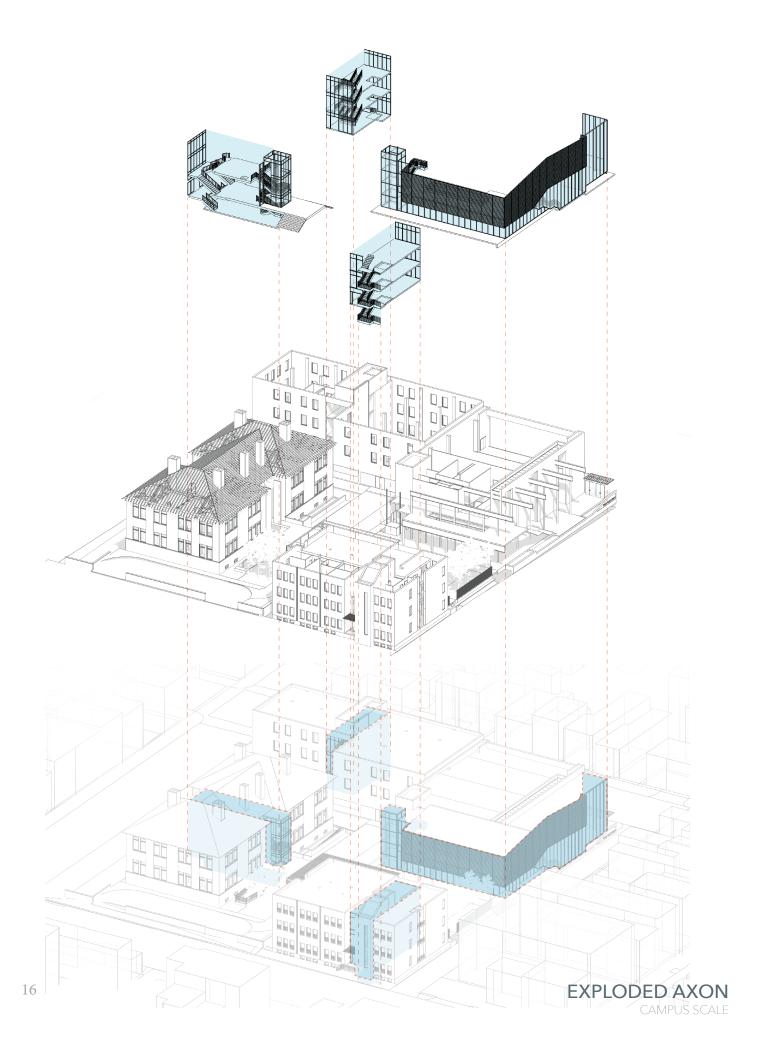
 buildings still feel like they have a front to the city and back to the campus



• public space of each building provides two fronts

- connects the city to the campus while maintaining a clear seperation
 • visual connection established, describing clearly
- the diagram of the campus and providing the public with a look into the inner workings of the

DIAGRAM



TWO FRONT FACES

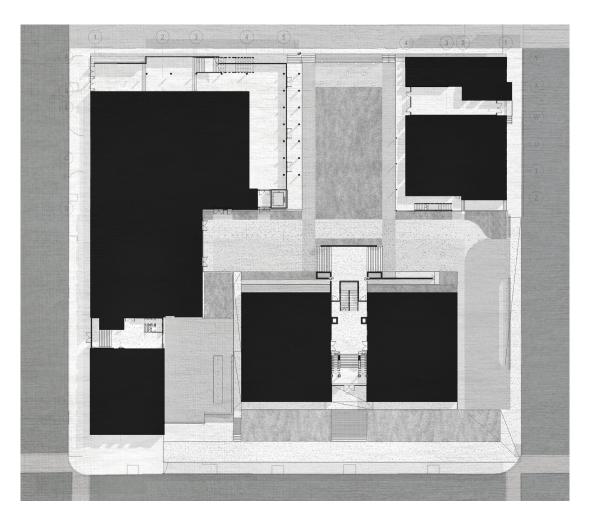
the public inside & the public outside

The success of the project becomes predicated on the success of this notion, and how it is handled in the preexisting buildings and the new proposed structures.

The Nolli diagram below and exploded axon highlight these zones that become the public areas in each of the campus buildings. The idea is that the presence of these thru spaces not only activates the buildings, but also establishes a visual and physical connection between the city and the campus.

These areas are expected to become the hub and heart of each of the buildings, putting on display the functions within.

Within these public zones will typically be the main circulation of the building. This is done not only to enhance the user experience within the buildings and encourage continuous activity, but also to connect the buildings to the city and provide continuous reference to the campus; a reminder that as a student or faculty member, you are always part of a larger community, both the academic and the urban.







consistent attitude towards detail and materiality when it comes to new builds and adaptive re-use

- maintaining integrity of materials
- reflective of era built
- architecture reflective of program
- respects context while establishing own identity
- buildings allow for future adaptability
- in the case of an architecture school, building reveals how the structure works as a demonstration of material being taught
- consistency across buildings, in attitude, but not necessarily in aesthetic and style

Creating stylistic consistency across campus buildings is one way to make it appear cohesive. For an urban campus, however, there may be other ways to establish consistency. One of those ways is to establish an approach that speaks to that consistency, without necessarily using the same materials, style or architectural language.

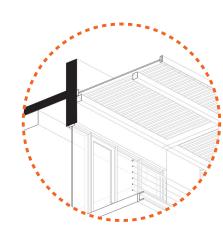
The approach proposed in this project is to have an honest and authentic attitude towards the use of materials, to reveal and expose architectural connections, and to create buildings that don't copy the style of a previous era, but rather reveal the contemporary function and use of the building. "In the search for the authentic over the image, the actual materials and systems of assembly, the process of construction, become the aesthetic. I want to make objects which expose their cause, buildings which are perceptual process. I like to think of construction as growth. Not an idealized form, but the actual performing of the work made precious. I think less about architecture as art, and visual, than architecture as cooking, and haptic. I make buildings by the gathering and assembly of ingredients. The plan is the recipe."

-Stanley Saitowitz

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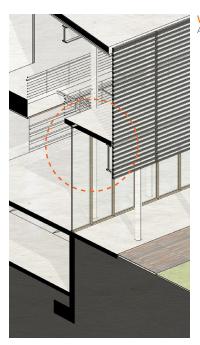


WALL SECTION HOUSING BUILDING

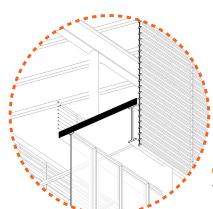


BRICK ON CONCRETE

 the method of construction will be revealed through exposing the concrete, exposing the steel lintels holding the brick up, and revealing the fasteners in the steel connections



WALL SECTION
AUDITORIUM BUILDING

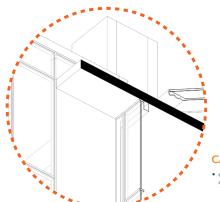


CURTAIN WALL SYSTEMS

 the structure holding up the curtain wall systems will be revealed and show-cased.



WALL SECTION 1001 PRINCE ST.



CAST IN PLACE CONCRETE

 exposed cast in place concrete will be used as a structural load bearing material



THE ARCHITECTURE

the campus design

The design proposal is about giving the WAAC a new identity and transparency that connects WAAC students to the community and showcases the work we do to the public. That said, there is something intriguing about the WAAC's current mysterious discoverable nature, which this design attempts to maintain. This project is also about understanding the intimacy and voyeurism that Old Town's urban fabric maintains through its density, and it tries to replicate that through designing different typologies of transitional threshold spaces, both indoor and outdoor.

My project is a proposal for two buildings added to the campus, and additions to the two existing buildings on the block. The Auditorium building will provide a space for larger lectures and performances, and allows the community to rent out the space for difference events. The housing portion extends the capacity for receiving more students from different disciplines, and allows for privacy and separation for older graduate students with families and visiting professors. Finally, the new studio building interfaces directly with King street, and creates pinup spaces that are open and visible on King street, while providing ample open spaces that give more opportunities for outdoor learning.

The project creates a more localized campus that is reminiscent of a typical suburban campus with ample open space, while maintaining a level of porosity and connectedness to the city that encourages the public to intermingle with WAAC students and faculty.



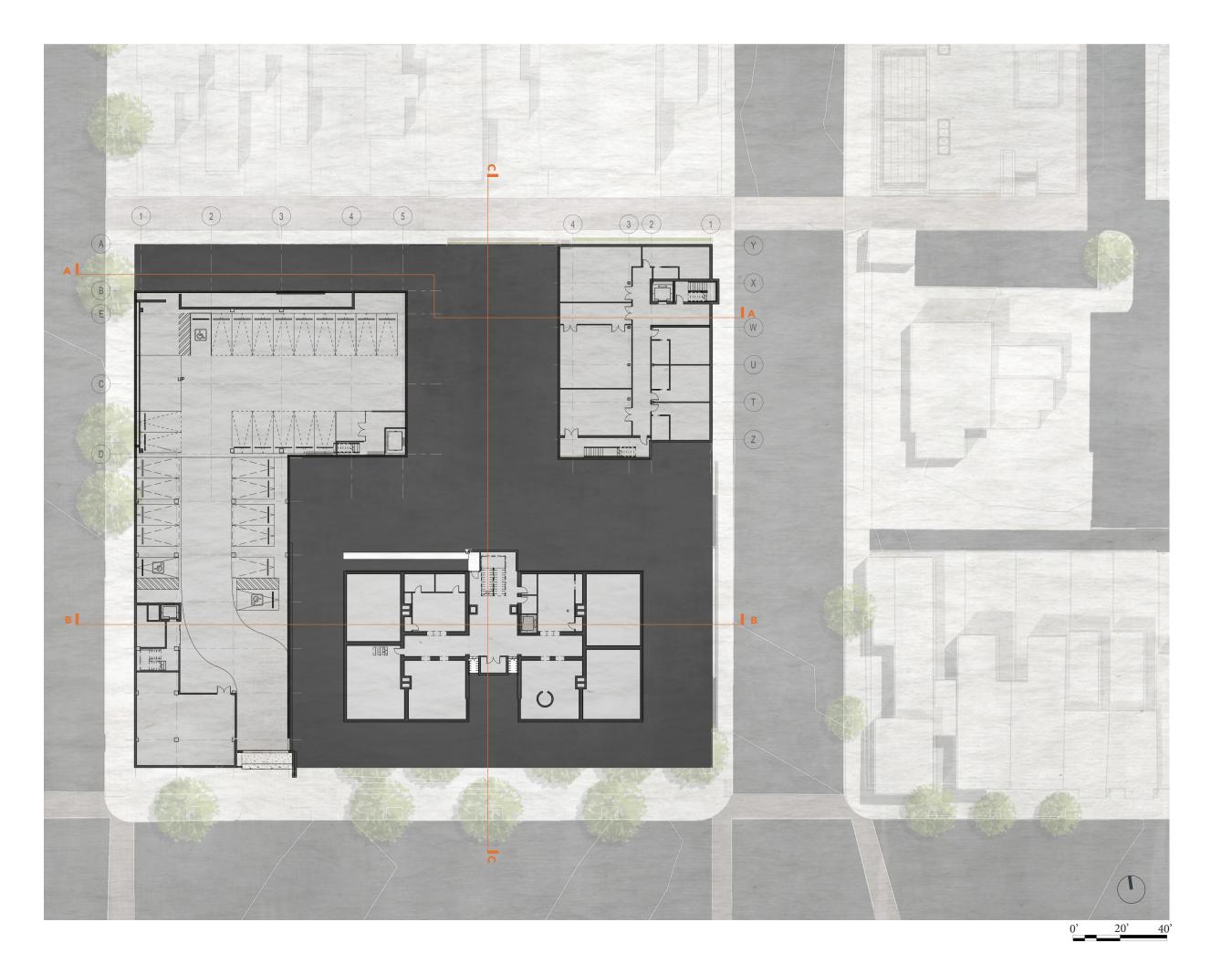


SITE PLAN

GROUND 28



SITE PLAN

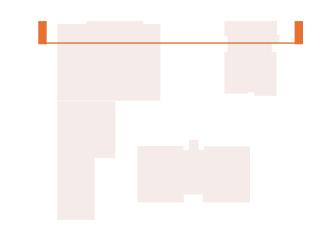


SITE PLAN LOWER FLOOR

SITE SECTION AA AUDITORIUM - HOUSING

This section through the main outdoor area and through the public zones of the auditorium and housing buildings attempts to describe the scale and sectional relationships between the inside and the outside, as well as between the campus and the city beyond. A screen and a birch tree grove provide a sense of separation which delineates the private from the public. Also, in the spirit of a traditional campus, there are

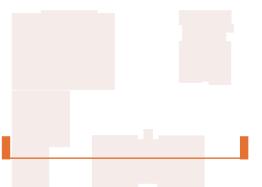
transitional covered zones. However, dissimilar to a symmetrical design, the spaces are different and respond more directly to the building functions and style, rather than an unforgiving imposition of symmetry, which traditional campus designs may have boasted.







AUDITORIUM **ALLEY APPROACH**

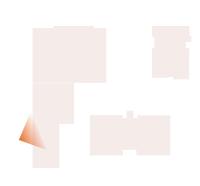


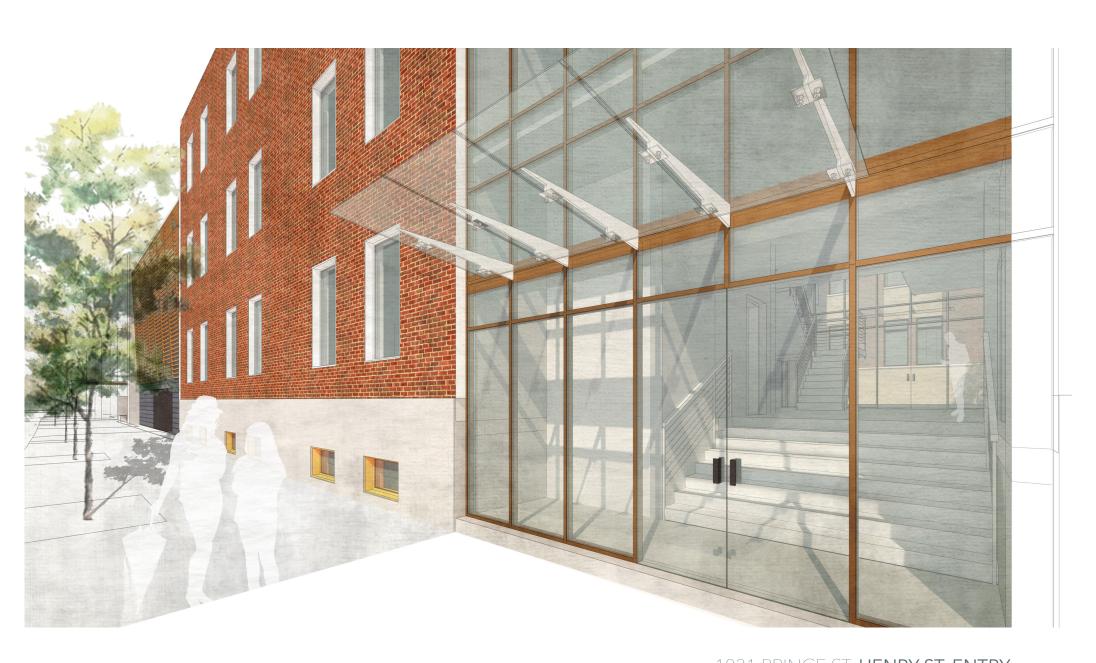
SITE SECTION BB

1021 PRINCE ST. - 1001 PRINCE ST

This site section attempts to describe the relationship between the two existing buildings on site, their relationships to the street, and to showcase the public space insertions within those buildings that connect the inside with the outside. The figure on page 40 shows in perspective the relationship between Henry street and the campus, and the effect that opening up that lobby has on connecting the city to the internal outdoor areas of the campus. A visual connection is established and starts to showcase the school while maintaining a sense of privacy and physical separation.







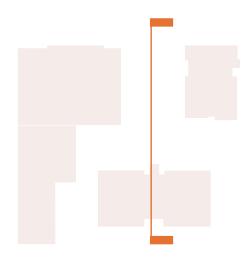
1021 PRINCE ST. **HENRY ST. ENTRY**

SITE SECTION CC

1001 PRINCE S

The final site section describes the relationship between Prince street and the back alleyway. The grade change is quite vast across this section, but it truly shows how the grade change can really start to not only describe the vertical relationship and establishing a hierarchy, but also can start to visually connect these spaces together and create sight lines that enhance the experience.

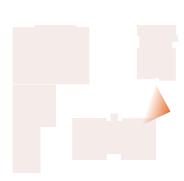
The figure on the following page begins to show how setting up those buildings to have direct relationships with their outdoor areas can start to create an interesting and dynamic weaving of spaces, where each of them have a dominant relationship to the adjacent building but that still work together hierarchically.







THE WORK YARD



The project creates a more localized campus that is reminiscent of a typical suburban campus with ample open space, while mainting a level of porosity and connectedness to the city that encourages the public to intermingle with WAAC students and faculty.



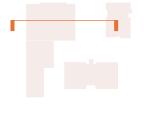
1001 PRINCE ST. PATRICK ST. APPROACH



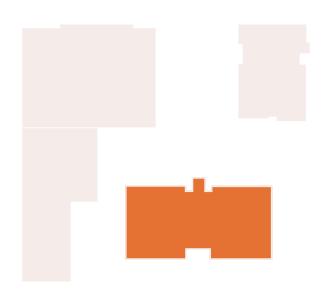


SECTION PERSPECTIVE 1001 PRINCE ST. - LAWN





SECTION PERSPECTIVE
AUDITORIUM



THE 1001 BUILDING

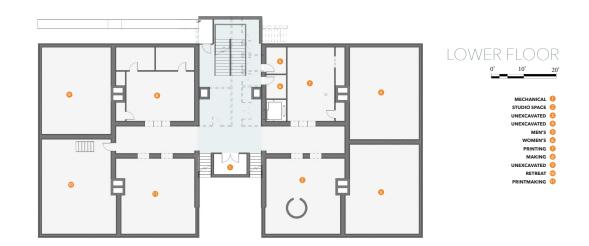
the meeting of old & new

The 1001 building has been the cornerstone of the WAAC for decades now. It is the heart of the campus and a true emblem of the learning that happens within.

As the Office of Historic Alexandria describes, the building was first constructed to serve as a school. "Students first used the Lee School for Girls in June 1909 for their commencement with classes beginning there the following fall. The school was later known as the Lee School when it became coeducational. It closed for several years in the 1950s and when it reopened in the fall of 1957, it was called the Prince Street School. By the late 1960s, it was used for vocational and special education classes before being permanently closed by Alexandria City Public Schools in the mid 1970s. The City of Alexandria later sold the building and throughout most of the 1980s it was home to the National Conservative Foundation before Virginia Tech acquired it in 1989. Today, it is the Washington-Alexandria Architecture Center for Virginia Techs College of Architecture and Urban Studies." (Bertsch & Lance)

The design changes proposed to this building include, first and foremost, making it universally accessible, by providing an elevator, and ramps into and out of the building. The focus of the design changes is on the public entry zone, which is intended to become an open space with vertical circulation overlooking the Lawn of the campus.



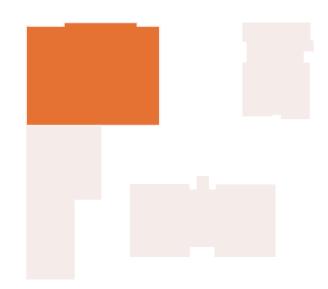






1001 PRINCE ST. **NORTH ENTRY**





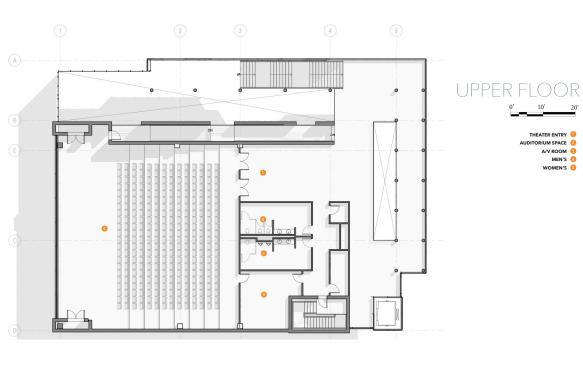
THE AUDITORIUM BUILDING

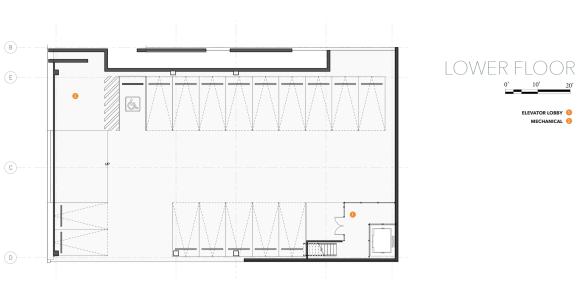
connecting the school to the city

The Auditorium building is proposed as a shared building with the community of Alexandria. Currently, the Washington Alexandria Architecture Center houses its larger forums at the Lyceum on North Washington street. The Lyceum also houses the Museum of the City of Alexandria.

This particular site was chosen for this building because of its location on the busier Henry street. Taking advantage of its adjacency to the Alley, as well the existing curb cut, it seemed like the appropriate choice. It is also adjacent to the 1021 building, which has a semi subterranean parking garage. The design takes advantage of the garage and proposes extending it to allow for more parking spaces.

The main auditorium space makes up most of the building, and is suspended in the center. The open and light-filled lobby wraps around the perimeter and terminates in a cafe, with access to the Lawn. The design intention here is to expose the public zones of the building to the city, so that people walking by can get a glimpse of the banners hanging, announcing events to take place in the building, giving the school better exposure to the public.











AUDITORIUM BUILDING FROM HENRY ST.



VIEW FROM ALLEY **LOOKING SOUTH**





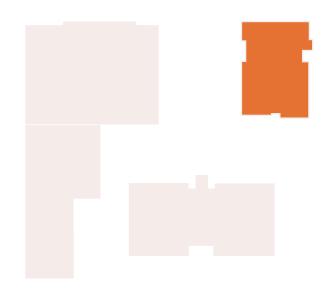
AUDITORIUM LOBBY





AUDITORIUM CAFE





THE HOUSING BUILDING

a new model for campus living

The Housing building is proposed as an alternative to the existing WAAC housing located in "The Gallery" space one block south. It aims to create a contemporary housing option that is more private and apartment-like, catering to older graduate students and visiting professors.

The units proposed are 300 SF units that are self-sufficient, all of which have access to either small balconies or communal outdoor spaces. Each floor also has common space that defines the "public zone" of the building, which provides a visual cue that connects the city to the interior of the campus.

Architecturally, the material choices and style are consistent with the ideals set forth in the research portion of this thesis. The building materials are used and detailed truthfully and authentically. The building is reflective of the era in which it's built, however respects the surrounding buildings in terms of materiality and scale. Finally, and most importantly, every move in the building is intended to reveal how those detail connections came to be, and in turn, reflecting the fact that it is in fact a school for teaching architecture.









HOUSING BUILDING FROM PATRICK ST.

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