2023 AIA|DC Chapter Design Awards

Project Title: Thurston Hall Renovation

Location: Washington, DC

Date of Completion: 08/2022

Project Statement (150 words max):

As the largest first-year residence hall at The George Washington University, Thurston Hall is the first impression that many students receive of GW. Driving concepts for its renovation were 1) to connect students to GW's urban setting, 2) to enhance the student experience, and 3) to support student health and well-being.

The client set out to de-densify the building in order to provide more places for learning and gathering. Except for window replacements and masonry repointing, the historic exterior remained largely unchanged. The interior, however, was gutted and carved to reorient common spaces to the new central courtyard, providing natural light and views to all primary gathering spaces. Residents are greeted with an open and inviting entry along F street that flows into the terraced and sunlit courtyard space. The basement was transformed into a new dining commons, while a new rooftop lounge provides extensive views of the city skyline.

Design Narrative: How does this project address Design for Integration, Wellbeing, and Discovery? (150 words max)

The main idea was to create a new "heart" for the building. The ambitious design removes four floors of the south central portion of the existing Thurston Hall. This bold move transforms a formerly inaccessible lightwell into an inhabitable, light-filled courtyard that fosters the development of a vibrant, engaged, and inclusive community. Outdoor terraces cascade down to the entry level from the south. New residential lounges and study spaces face onto the courtyard, amplifying light penetration and creating visual connections between floors. All of these strategies—daylighting, visual connections, gathering spaces, views of nature—reduce occupant stress, anxiety, and feelings of social isolation, which are major health risk factors for today's undergraduates. Design strategies for health are reinforced through material selections, attention to project acoustics, and a relentless focus on indoor air quality. Measured CO2 levels in occupied rooms dropped from 2500ppm before renovation to well below 1000ppm afterward.

Community Engagement: How does this project address Design for Equitable Communities and Economy? (150 words max)

Given its location in a historic district, and its long and colorful history as a first-year residence hall for GWU, preserving Thurston Hall and adapting it to accommodate the next generation was important to both the community and alumni.

Within the building, the design centered inclusion. All-gender bathrooms at the residence floors provide privacy while still fostering that communal experience that is so important for the freshman experience. The range of common spaces now available to residents –from the courtyard and terraces to the dining hall to

community kitchens to conference rooms to study nooks—allow for different engagement levels and study preferences.

Sustainability and Resilience: How does this project address Design for Ecosystems, Water, Energy, Resources, and Change? (150 words max)

The project reuses 75% of the existing building's structure and enclosure, significantly reducing the embodied carbon of the project, and its urban location reduces the transportation energy typically associated with its occupants. A 45,000 gallon cistern captures rainwater for reuse in courtyard irrigation and toilet flushing. The roof contains both a vegetated portion and a photovoltaic array. Native plantings and efficient fixtures and equipment throughout reduce overall water demand.

Inside, water source heat pumps with low-GWP refrigerants provide heating and cooling while a dedicated outdoor air system with enthalpy wheel and filtration maintains the project's high standards for exemplary indoor air quality. Even when reusing existing boilers, the project was able to achieve a low energy use intensity compared to its LEED baseline energy model. The project is still completing its LEED Construction submission but is tracking high Gold/low Platinum achievement under version 4.0/4.1 of the building standard.

Would you like this project to be considered for a Jury Citation in any of the following categories? (For more information on the 10 Measures from the Framework for Design Excellence, please click here.)

☐ Integration

☐ Equitable Communities

☐ Ecosystems

☐ Water

☐ Economy

☐ Energy

☒ Well-being

☐ Resources

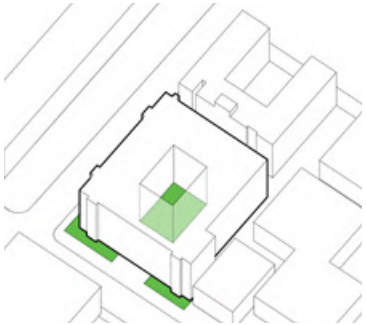
☐ Change

☐ Discovery

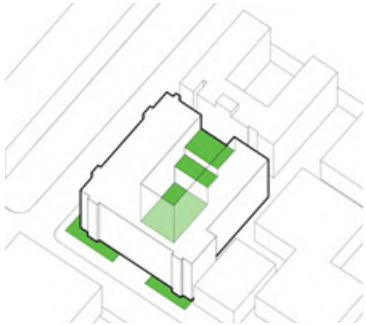
Thurston Hall Renovation
The George Washington University

Concept Diagram

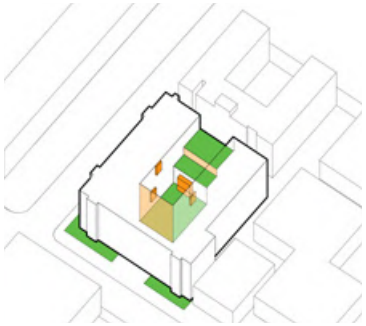
> The main design move involved carving out existing square footage from the South side of the building in order to **expand access to light** and create vibrant community spaces in a central courtyard.



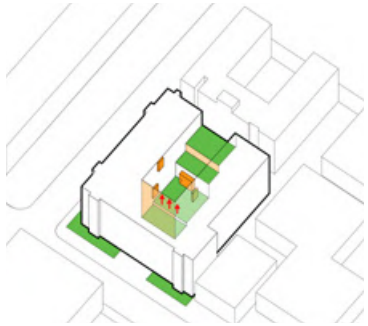
1 **Existing**



2 **Carve**



3 **Lantern**



4 **“Big Room”**

Building Section

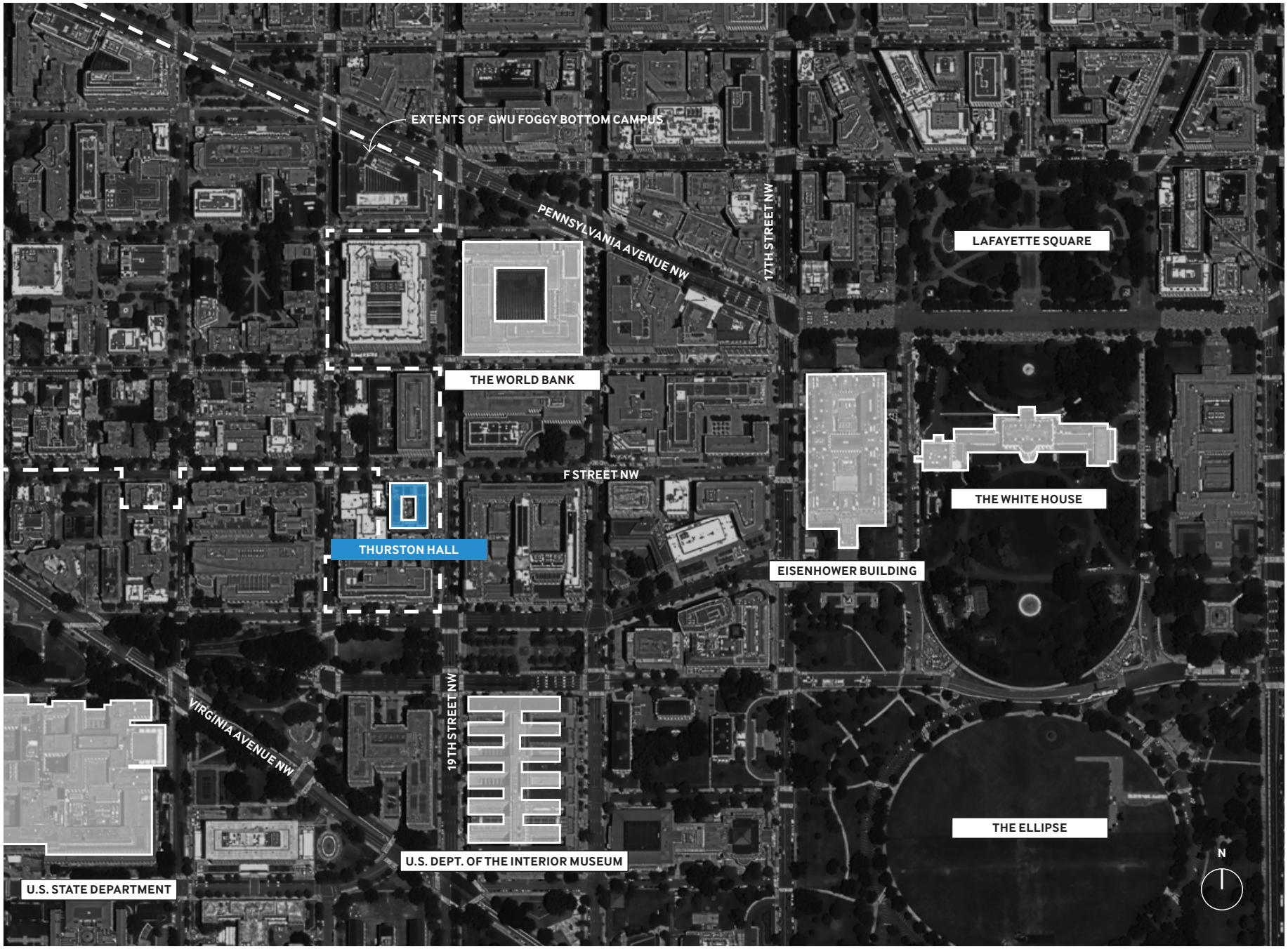
> The design's central courtyard brings the rhythms of the District into the heart of the building, while providing opportunities for students to engage with their urban context - and with each other. **De-densifying and dedicating a great amount of square footage to community spaces** enhances the building's overall quality of living and learning.

Existing Conditions

> The historic building was constructed in 1930 and included an existing, albeit vacant, light-well. **The potential to activate the central courtyard space** and expand access to natural light through the South Facade were key drivers to the overall design vision.

Courtyard, After

Courtyard, Before



Site / Context Plan - Thurston Hall is embedded within a prominent and bustilng area of the District near the National Mall

Honoring the Historic Facades

> To account for DC historic preservation codes, the renovation is largely "inward-facing," restoring the street facades while completely transforming the internal experience. Special care was given to the South facade where a portion of the brick was carved out, inserting porous framing elements that allow for natural light while **maintaining the hierachy of the original facade.**

Moving from the urban street into the student neighborhood

BEFORE

AIA DC / **Thurston Hall Renovation**

A series of gathering spaces, both inside and out, visually connect and enhance the sense of community and placemaking for student residents

Social and visual connections at every level

AIA DC / **Thurston Hall Renovation**

Floor Plans

LEVEL 1 FLOOR PLAN

- Single Units
- Double Units
- Faculty Units
- Community Spaces
- Lobby / Flex Spaces
- Administration
- Bath / Wet Core

1. Lobby / Reception
2. RA Office
3. South Lounge
4. Mechanical
5. Courtyard

LEVEL 3 (TYPICAL) FLOOR PLAN

- Single Units
- Double Units
- Faculty Units
- Community Spaces
- Lobby / Flex Spaces
- Administration
- Bath / Wet Core

1. North Lounge
2. Staff Apartment
3. Study
4. South Lounge

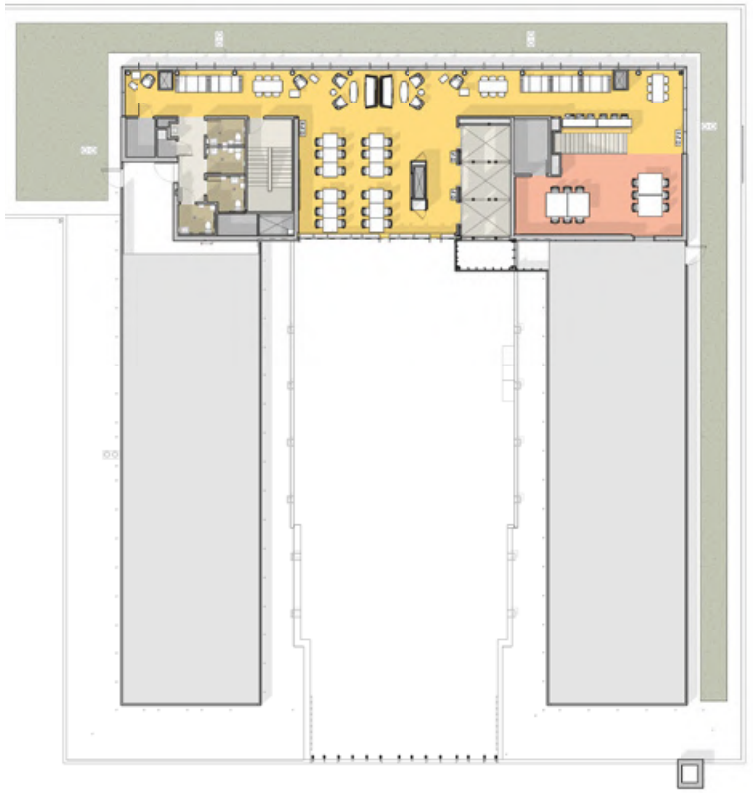
N

Floor Plans

LEVEL 7 FLOOR PLAN

- Single Units
- Double Units
- Faculty Units
- Community Spaces
- Lobby / Flex Spaces
- Administration
- Bath / Wet Core

1. North Lounge
2. Staff Apartment
3. Study
4. Terrace



PENTHOUSE FLOOR PLAN

- Single Units
- Double Units
- Faculty Units
- Community Spaces
- Lobby / Flex Spaces
- Administration
- Bath / Wet Core

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Double-height student lounges provide open kitchens, resident resources, and dramatic views of the central courtyard

Strategies for Sustainability

> Beyond its inherent sustainable approach as an adaptive reuse project, Thurston Hall incorporates numerous strategies that respond to the District's green initiatives. The project is currently projecting **a LEED rating that is borderline Platinum Level.**

Improved Envelope
Thermally-broken windows with high performance glazing units, additional insulation at exterior walls and roof, and improved airtightness

Efficient HVAC
New heat pumps, direct outdoor air system (DOAS) with enthalpy wheels, aggressive heat recovery

Building Reuse
Construction waste and carbon emissions reduction

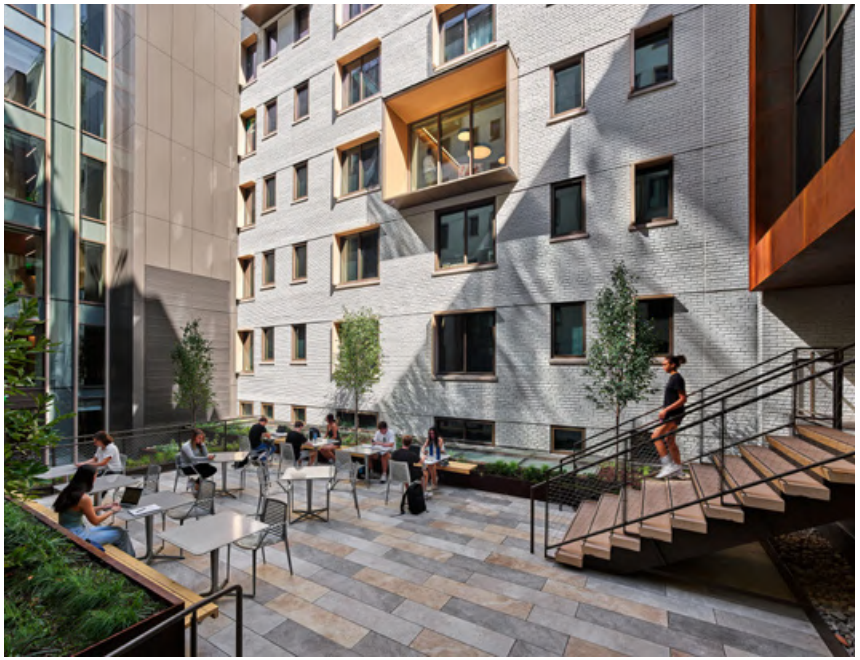
Green Roof
4,260 sf of extensive and intensive green roofs hold 335 cubic feet of rainwater and mitigate urban heat island effect.

Rainwater Harvesting
A 6,000 cubic foot cistern captures rainwater which is used for irrigation and toilet flushing.

LED Lighting
65% reduction in lighting power density through daylight integration, all-LED fixtures

Integrated controls
Demand-controlled ventilation, vacancy response

Renewable Power
110 kW array offsets 4% of building consumption.



New penthouse level with green roof

"This is a design solution that presents a deep understanding of what makes a dynamic, student-focused residential community. It has a protective sensitivity to the historic building and urban context, with an overall sense of creativity and purpose to making every component invite robust student interaction."

-Executive Director of Campus Development,
The George Washington University