

SHED: DESIGN PROCESS

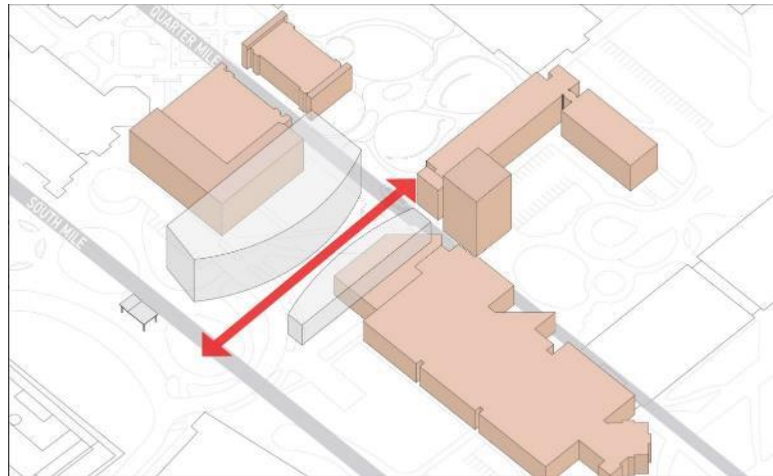
The process of design for the SHED was as interactive and interdisciplinary as the mission of the building itself. The program was developed through multi-stakeholder meetings involving a broad section of the university community. During design, multi-day workshops involved sessions focused on the needs of each of the users, and on ways to encourage these users to work together. Fortunately, most of the Concept Design phase and Schematic Design phase benefited from in-person meetings with interactive large-scale physical models.

The team invented together a process for continuing to engage the learners and community of users as the COVID pandemic impacted plans in March 2020. We quickly developed ways of sharing physical and interactive digital models. The multi-day workshops evolved into a pace of virtual meetings -- which in fact amplified the audience we were able to reach, and the extent of our engagement with each other.



All photos: Michael Prattico / MRB Group

SHED: ORGANIZATIONAL AND DESIGN PRINCIPLES



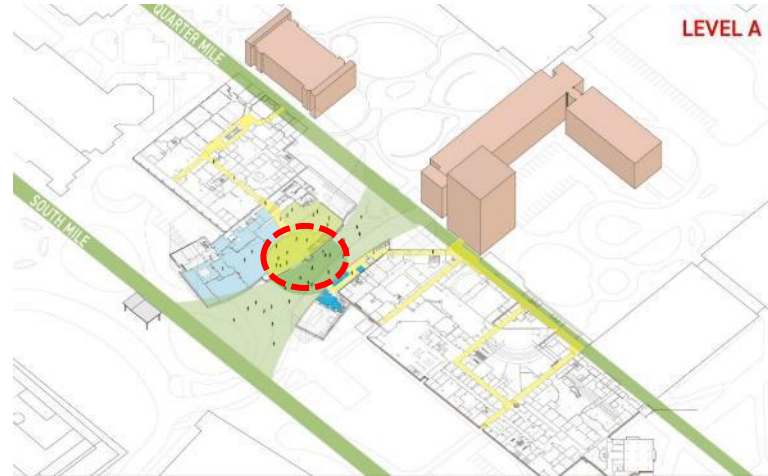
Gateway to Campus: Promotes openness from center of campus connects major pedestrian spaces

The SHED (Student Hall for Exploration and Development) is a dynamic, 200,000 sf complex that centralizes the university's multidisciplinary focus on creativity and innovation. It is a building with no precedent, envisioned by University leadership as a "supercollider of ideas," the building combines three floors of engineering team workspace, maker spaces, and an expansion of its performing arts program together with 27 active-style classrooms and the campus's main library. The building is a microcosm of the University itself—a place you can understand this institution's unique blend of arts and engineering simply by walking through the door.

The SHED defines a new type of Innovation Hub, an Idea Supercollider, incorporating the following design considerations:

Mashup of Uses (Maker, Performance, Classroom, Library)

The SHED advances the premise that creativity is an active ingredient in innovation, repositioning the arts and humanities as newly relevant collaborators within a STEM dominated ecosystem. The SHED creates an ecosystem of diverse uses that support hands-on learning and student driven exploration across multiple STEAM disciplines. This new curricular and research paradigm requires the creation of a new building types that delivers active and immersive experiences and that facilitate impactful STEAM collaboration.



A Central Space: Building draws campus in, enveloping pathway and intertwining Interior and Exterior Connections to Library and Student Union

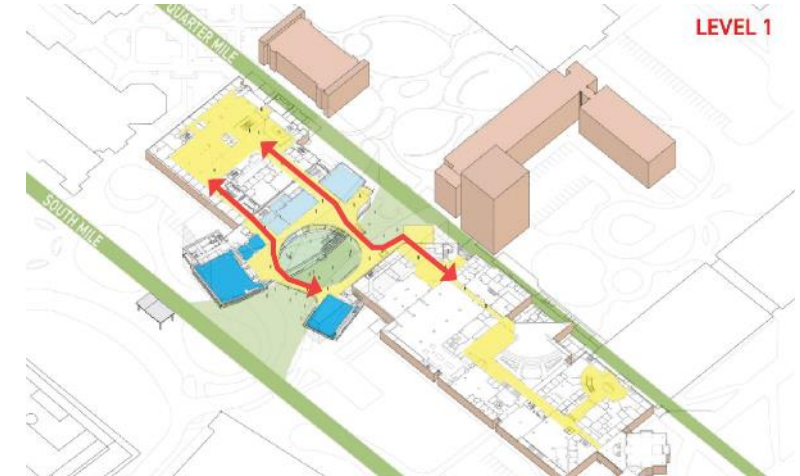
New Levels of Porosity Heightening Invitation and Participation

The creation of such an Innovation Hub, an Idea Supercollider, requires a new level of porosity, intertwining exterior and interior spaces and pathways blurring the boundary between campus and building. Located at a new Campus Gateway, the building envelops an outdoor campus promenade as it passes through the heart of the building – below a hovering ring of bridges that binds together a central circular volume, half inside (maker hub) and half outside (working courtyard).

Layered Transparency Engaging Diverse Users With Each Other

The Layered Transparency of this curved glass building creates an environment that acts like a *theater-in-the-round*, where everyone is both actor and audience as they walk through or alongside the SHED. This heightened sense of invitation signals a new paradigm for inclusive and active collaboration, from so many vantage points/stages:

- From within each of the nine maker shops, where students are very aware of other activities and potential collaborators, while their activity spills out through interior garage doors into the collective hub;
- From glazed performance studios for music, dance and theater;
- From balconies overlooking the interior 3-story hub, and from bridges overlooking the exterior working courtyard;
- From interior and exterior working courts, connected by a garage door;
- From the campus promenade looking below and through the ring of bridges carrying popular hang out spaces, leading to performance nodes.

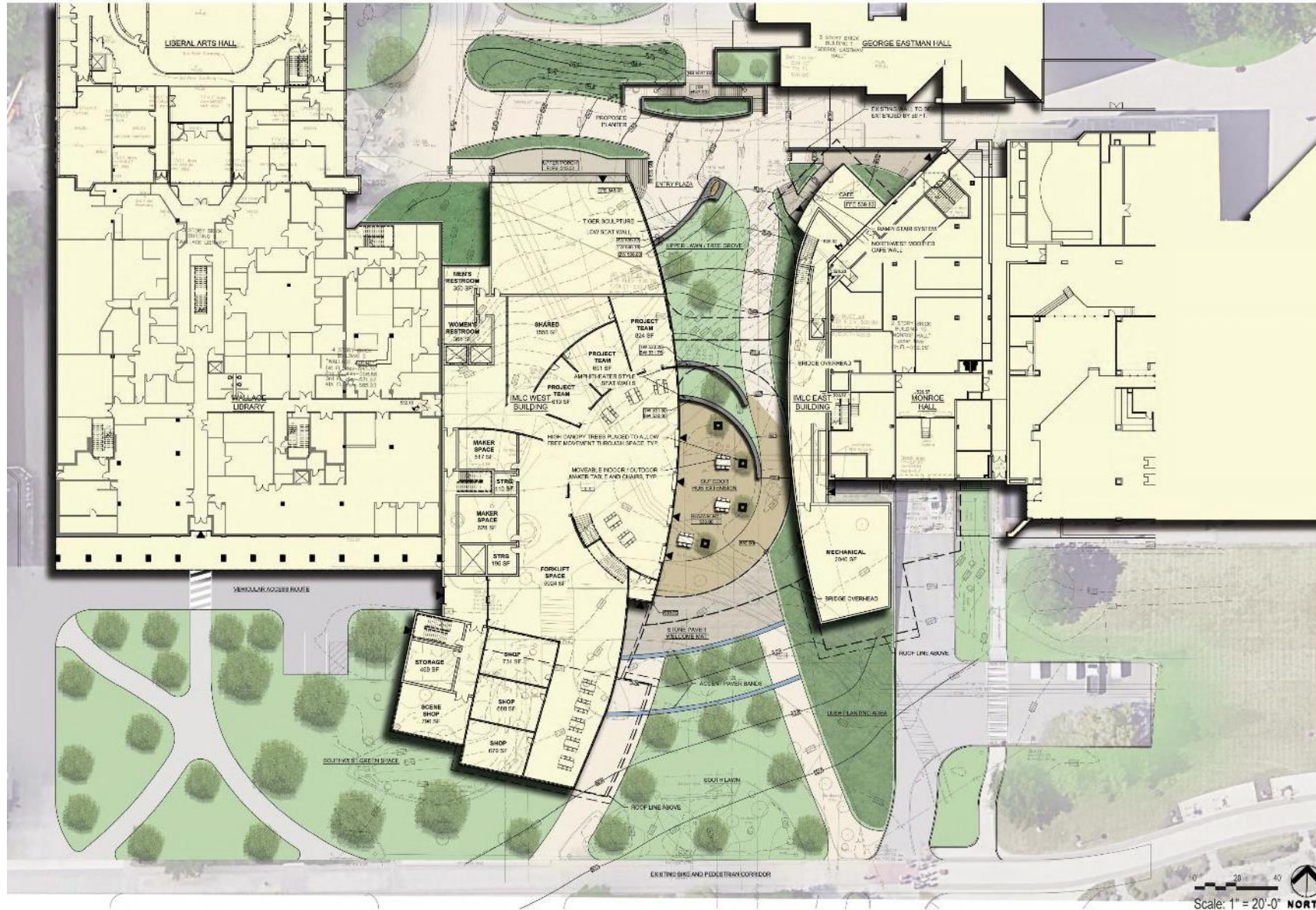


Bigger than a Single Building: Creating an ecosystem at the heart of RIT's Campus

Bigger Than a Single Building

The new SHED is a campus crossroads that merges with neighboring Library and Student Union buildings, creating a new whole – expanding the reach of the innovation hub, while re-imagining the campus library to be a Creative Library. Rather than stand between the Library and Student Union, the SHED engages both buildings, and connects seamlessly across party walls at all floors, creating multiple east west interior pathways. At the main ground floor level, a 900-foot "interior street" connects Library front door, cafe, and learning center, with the SHED's maker and performance Hub, with the Student Union's cafés, dining hall, and student resources (clubs, etc.).

SHED: SITE PLAN



The SHED was built to be a nexus for the University community – a place for transformational learning which will ultimately transform the world. A place in which learning is accelerated through deep engagement across disciplines, pushing students to take ownership of their learning, and develop competencies of resiliency, growth, curiosity, creativity and optimism.

The aim was to create a building that can become the center of the university, embodying the experience, creations, collaboration, experimentation, collision of disciplines and innovation enabled in its walls. The building contains three major hubs for innovation – a “monster” maker space, a library for creators, and collaborative performance studios – along with new Active Classrooms.

WALLACE LIBRARY

Renovated

SHED

New Construction

STUDENT ALUMNI UNION

Existing



Credit: Rochester Institute of Technology



Main design elements of the SHED:

Diversity of Uses. The SHED advances creativity as an active ingredient in innovation and integrates the arts and humanities as collaborators within a STEM-dominated ecosystem.

Facilitating Student Participation. As a new campus gateway, the building envelops an outdoor promenade as it passes through, creating space that is half inside (the Hub) and half outside (courtyard).

Layered Transparency. The building creates an environment where everyone is both actor and audience, establishing a new paradigm for inclusive and active collaboration.

More Than a Single Building. A 900-foot “interior street” connects the library, café, and learning center, new maker and performance Hub, and the Student Alumni Union’s cafés, dining hall, and student support services.

Machine for Daylight. The SHED is a counterpoint to the mid-century modern campus core, inviting students to experience an environment that is lacking across campus.

The building overlooks and engages the most active pedestrian pathway on the campus – the Quarter Mile

Photo: © Robert Benson



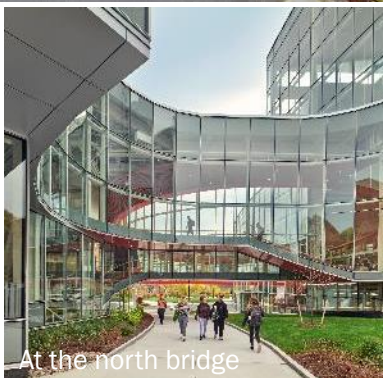
A view to the new campus gateway and exterior Hub space



Within the exterior Hub space, looking toward to the Quarter Mile



At the south bridge



At the north bridge

All photos: © Robert Benson



Daylit collaborative and meeting space, doubling as pop-up performance venue



Diversity of program engaged around collaborative Hub

All photos: © Robert Benson

LEVELS 3 & 4

- RIT Archive
- Quiet Study
- Student Gallery
- Group Study Spaces
- 40 active-style classrooms

LEVEL 2

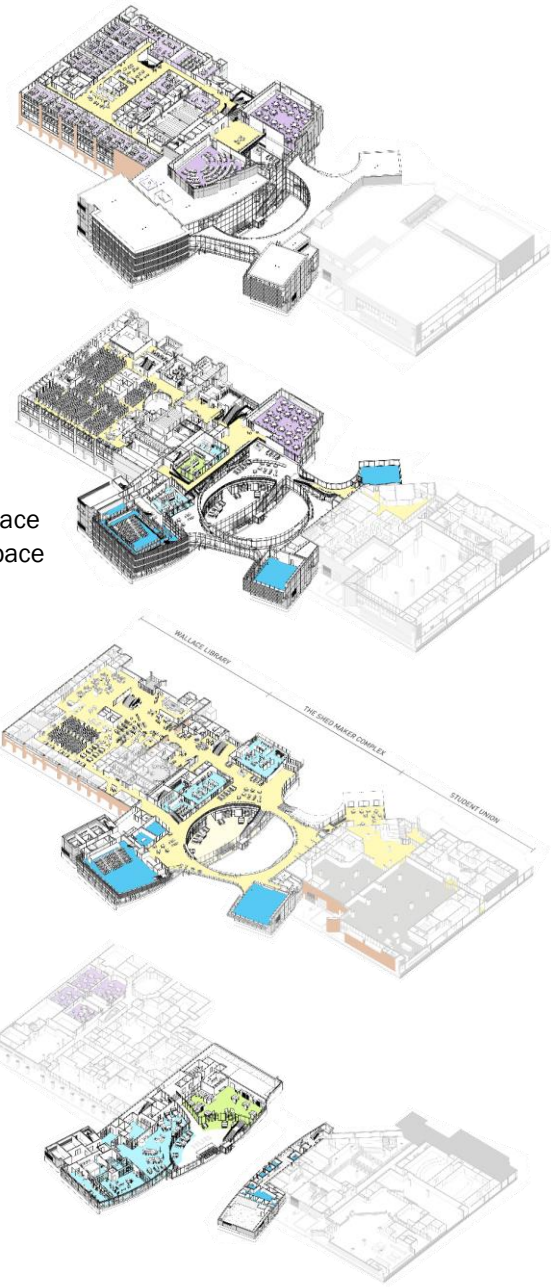
- Cary Collection/Press Space
- Shared Special Collections Classroom
- Textile/Electronics Maker Space
- Biomedical Project Teams Space
- CAD Classroom

LEVEL 1

- New library entry, circulation desk, and cafe
- Knowledge Market
- Flex Theatre
- Maker Showcase and general-use maker spaces

LEVEL A

- Large scale maker space
- Engineering team space
- Music practice rooms
- Active classrooms



A HUB FOR INTERDISCIPLINARY COLLABORATION



The light-filled atrium is a campus node for collaborative and independent work

Photo: © Robert Benson

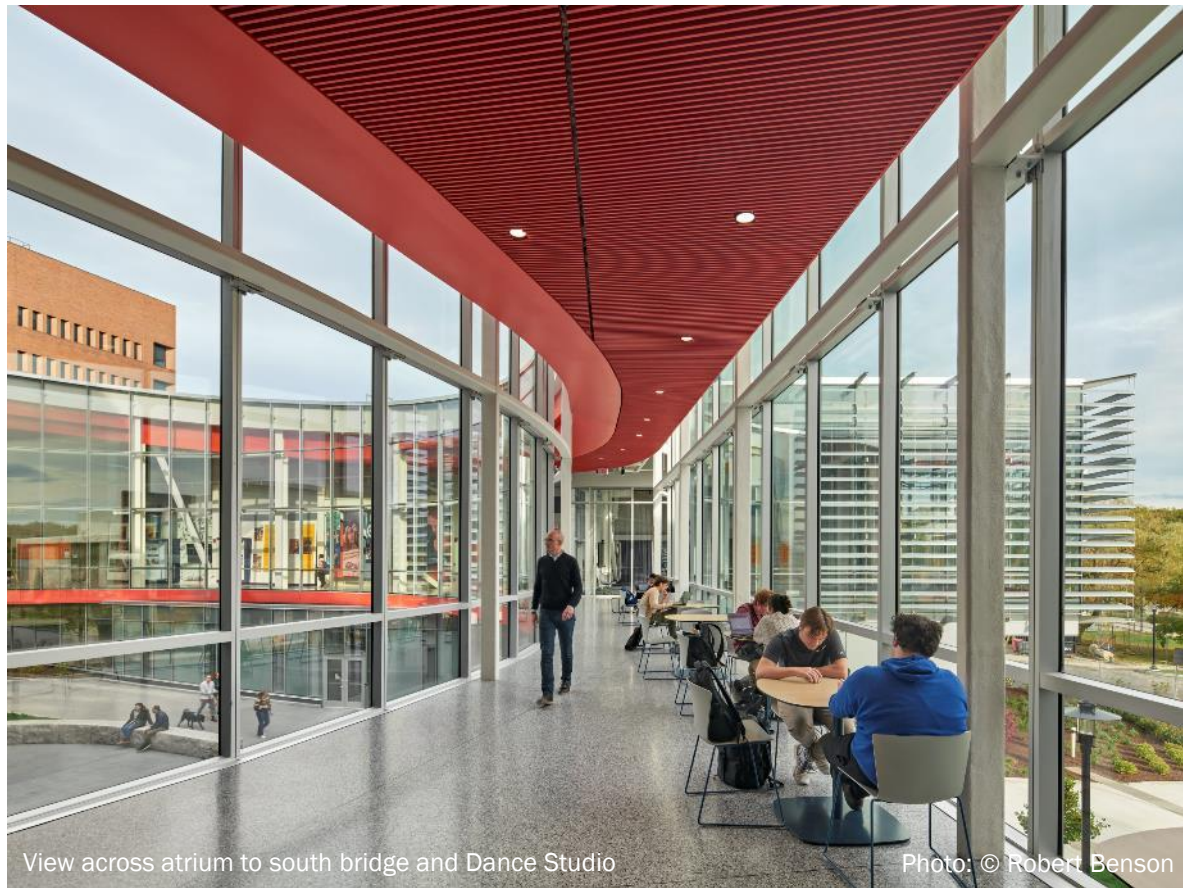


Photos at left:
RIT Twitter



View across atrium to north bridge and connection to SAU

Photo: © Robert Benson

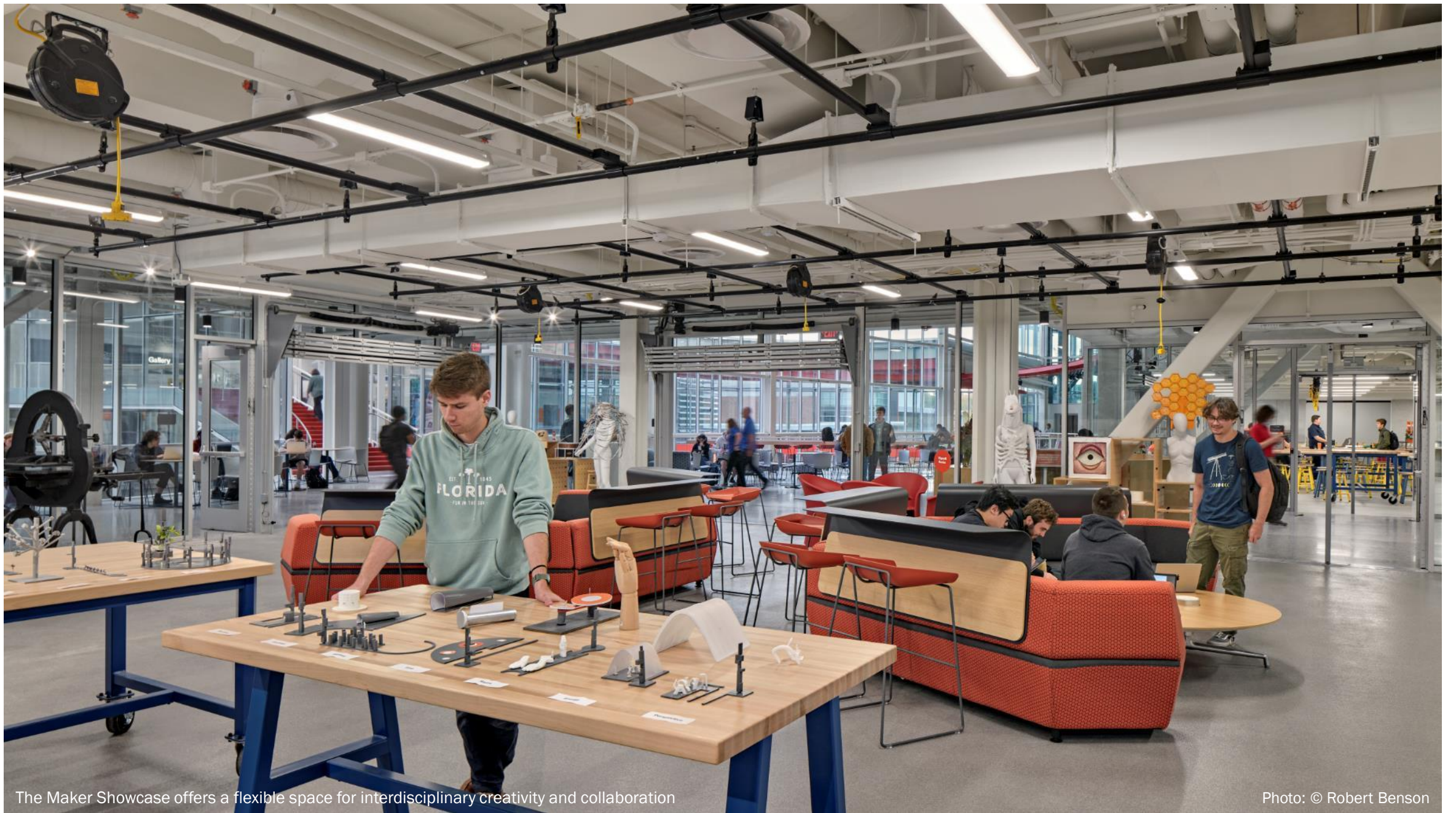


View across atrium to south bridge and Dance Studio

Photo: © Robert Benson

Multidisciplinary study, creativity and innovation are in the DNA of this institution which hosts a creativity festival that draws 30,000 attendees annually. The National Technical Institute for the Deaf offers cutting edge arts experiences alongside STEM degree programs. Faculty and students conduct visionary research representing an array of scholarship that includes work in traditional disciplines as well as interdisciplinary areas melding cybersecurity, humanities, personal health care, sustainability, ethics within engineering and studies to prevent crime.

The SHED was built to be a nexus for the University community – a place for transformational learning which will ultimately transform the world. A place in which learning is accelerated through deep engagement across disciplines, pushing students to take ownership of their learning, and develop competencies of resiliency, growth, curiosity, creativity and optimism.



The Maker Showcase offers a flexible space for interdisciplinary creativity and collaboration

Photo: © Robert Benson



View of classroom volume from Quarter Mile

Photo: Michael Prattico / MRB Group



View of Flex Theatre and back of house from Half Mile

Photo: Michael Prattico / MRB Group



Collaborative active classrooms allow students to learn from one another in cohorts

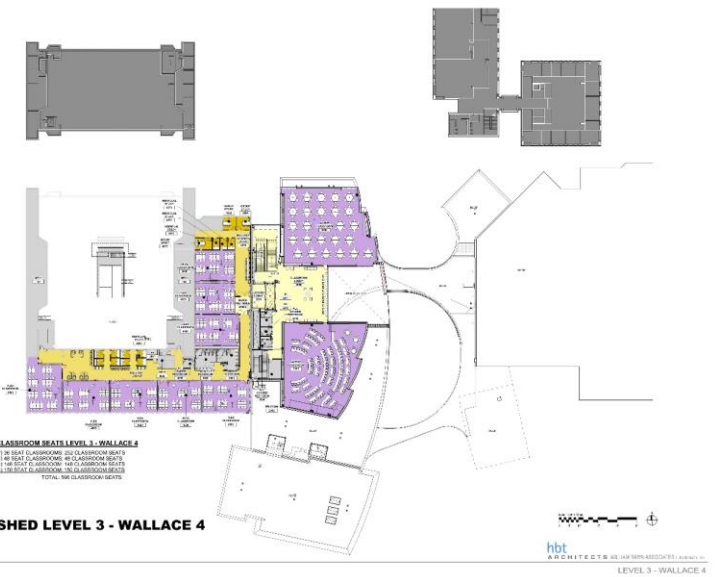
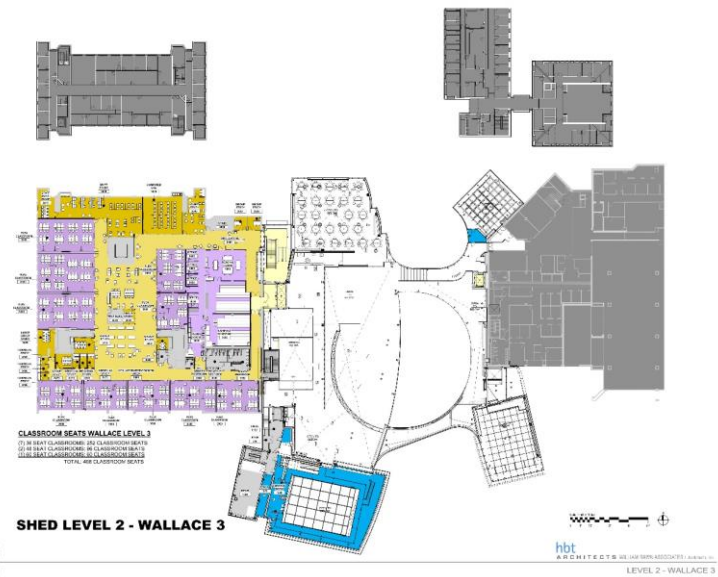
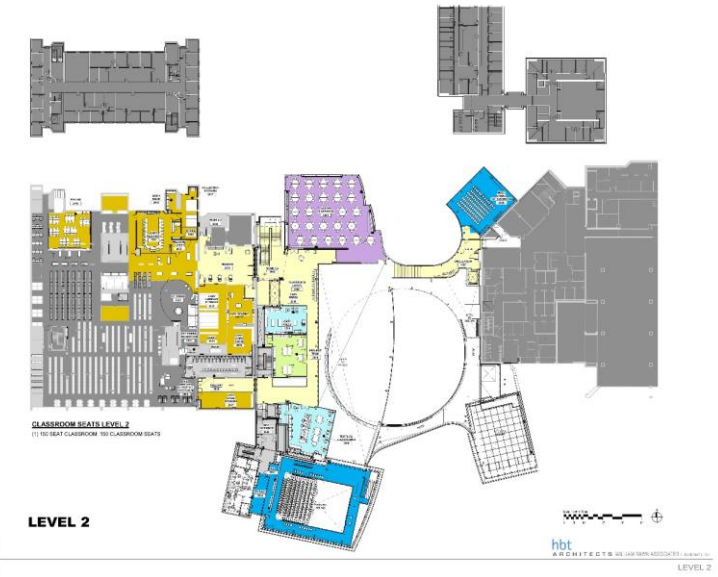
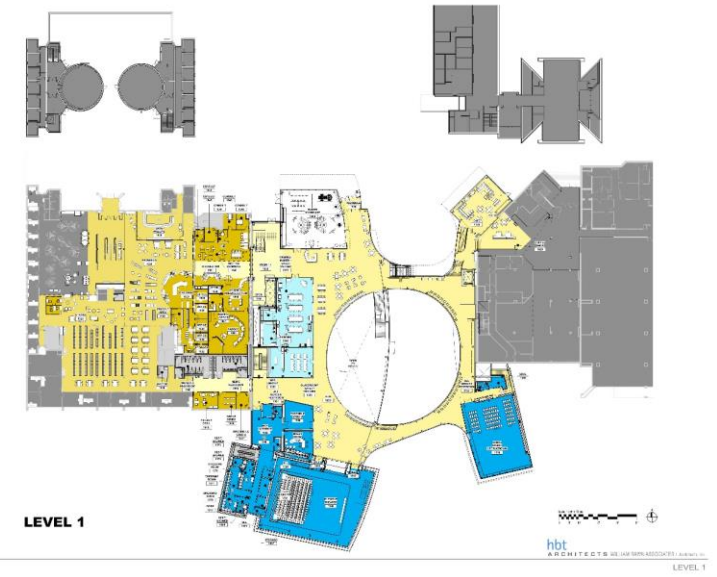
Photo: © Robert Benson

ENCOURAGING LEARNING

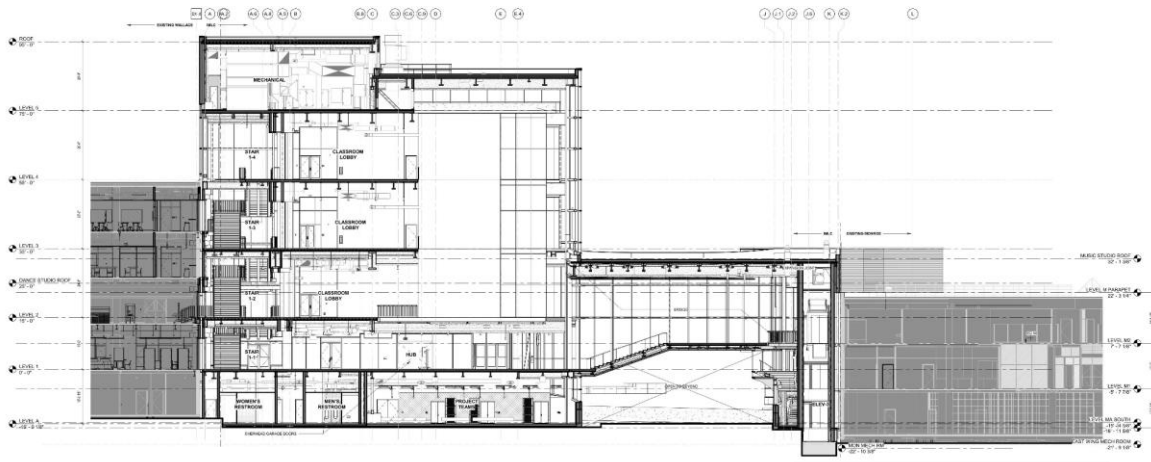
The SHED creates an ecosystem of diverse uses that support hands-on learning and student driven exploration across multiple STEAM disciplines. This new curricular and research paradigm requires the creation of a new building types that delivers active and immersive experiences and that facilitate impactful STEAM collaboration. 5 large, active classrooms (150 seats each) 22 mid-sized active classrooms (20-30 seats) support hands-on learning.

View of classrooms from Eastman Quad
Photo: Michael Prattico / MRB Group

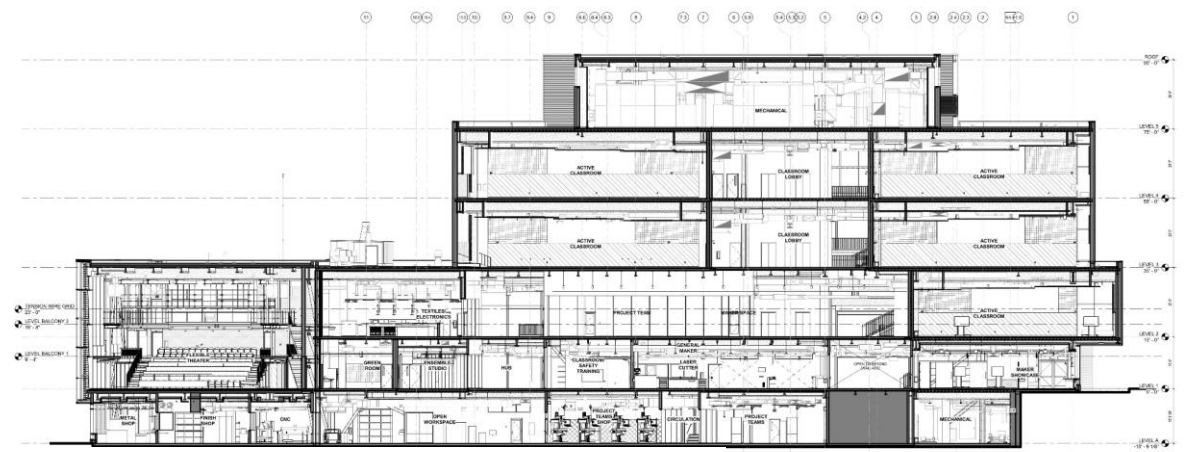




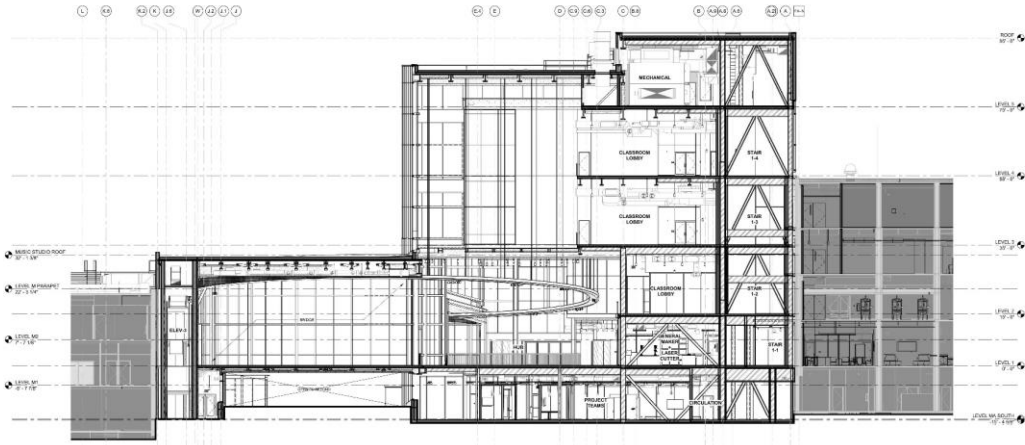
PROJECT FLOOR PLANS



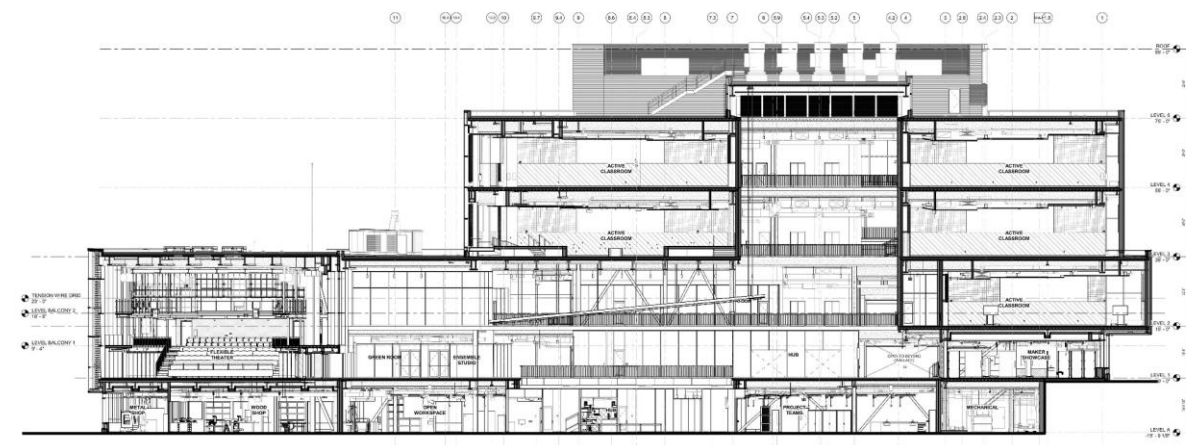
EAST-WEST SECTION AT NORTH BRIDGE - FACING NORTH



NORTH-SOUTH SECTION THROUGH MAKERSPACES

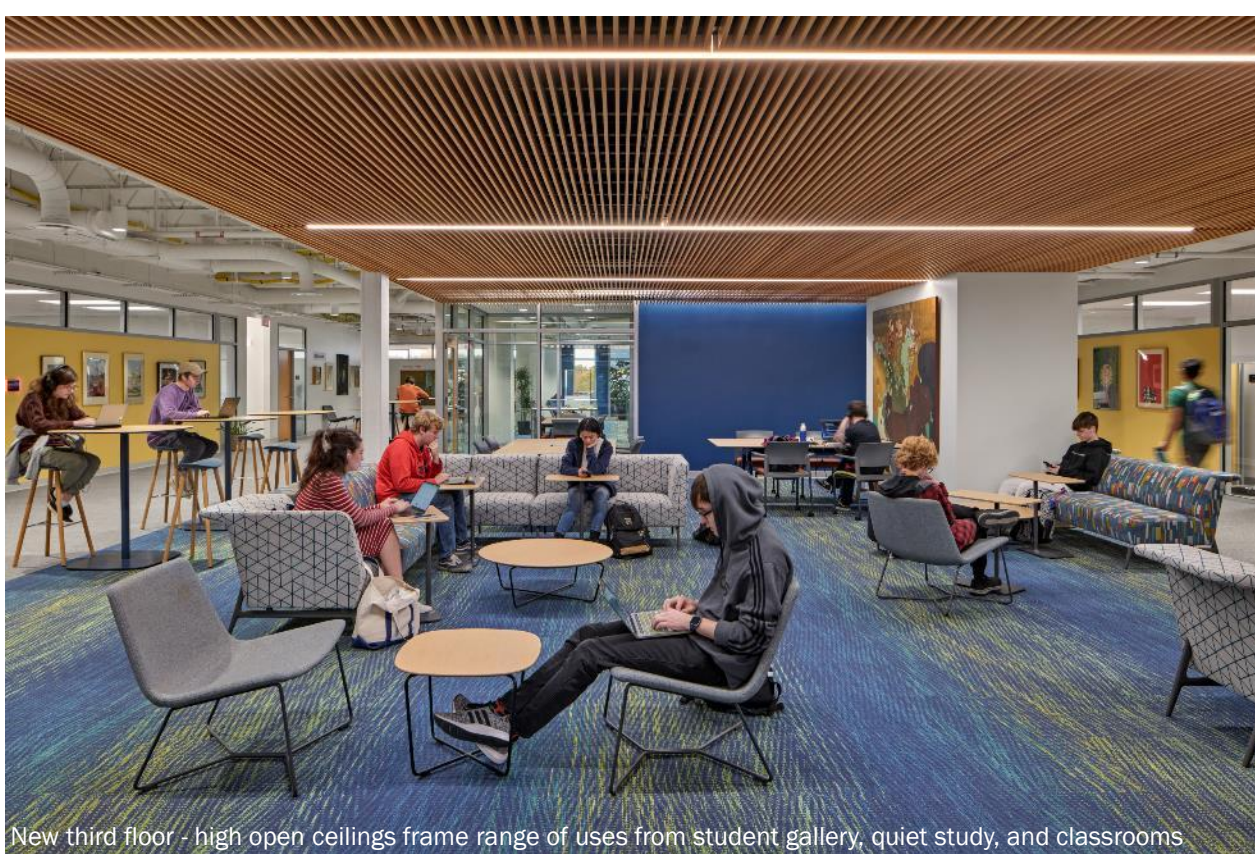


EAST-WEST SECTION AT NORTH BRIDGE - FACING SOUTH



NORTH-SOUTH SECTION THROUGH HUB AND ATRIUM

BUILDING SECTIONS

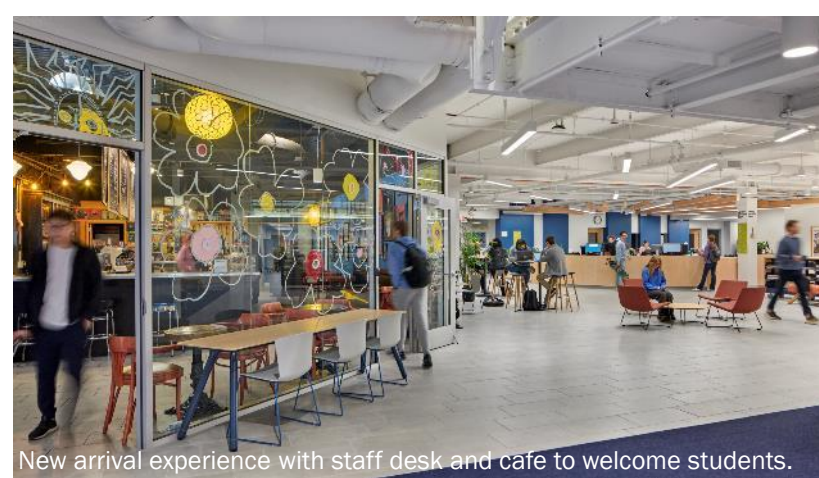


New third floor - high open ceilings frame range of uses from student gallery, quiet study, and classrooms

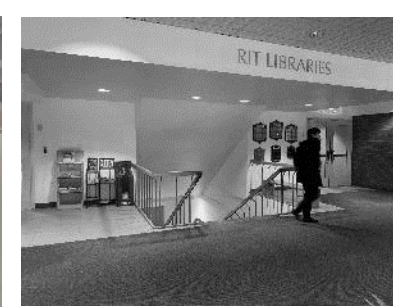
WALLACE LIBRARY TRANSFORMATION

Seamlessly connected to the maker activity of the SHED on each floor, the renovated Wallace Library reimagines the academic library as a place for engaged learning, content creation and interdisciplinary collaboration. With the repositioning of the Circulation Desk (and its associated back of house spaces), the ground level opens up to an “interior street” connecting library front door to café, tech center, Knowledge Market, the center of the SHED, and across the bridge to Monroe Hall (Student Union).

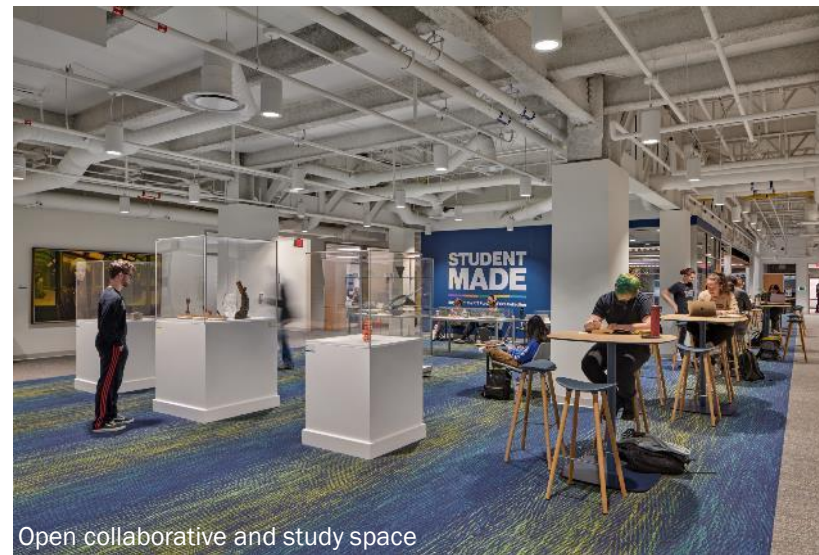
Special library resources (Archives and Cary Collection) are repositioned to be visible and accessible from the SHED, with the library’s historic printing presses becoming its own maker space expanding the SHED’s range of maker resources.



New arrival experience with staff desk and cafe to welcome students.



EXISTING: Library was hidden from view at existing entry - circulation staff had their backs to arriving students.

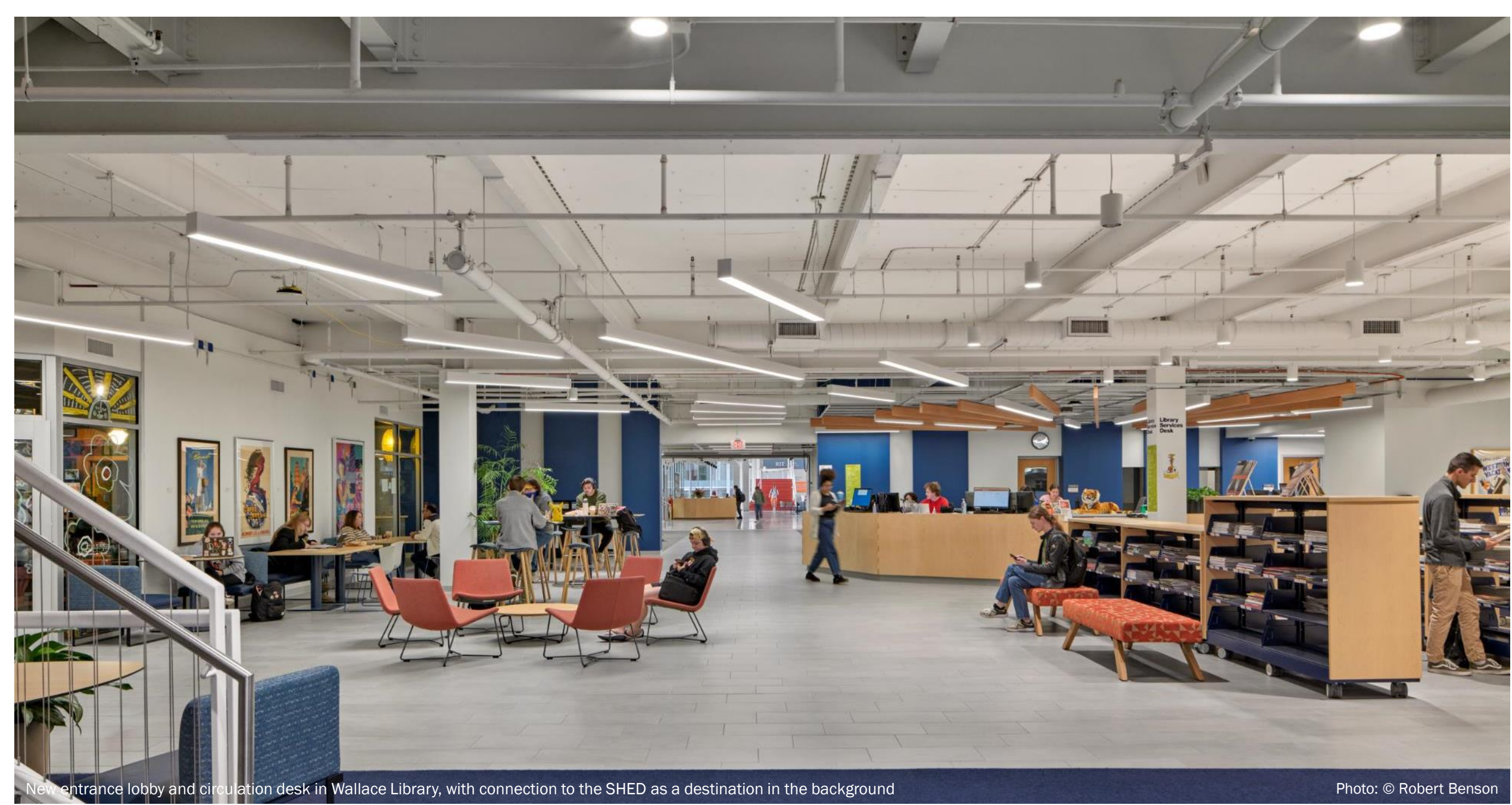


Open collaborative and study space



EXISTING: Low ceilings and undifferentiated rows of stacks throughout library.

All color photos: © Robert Benson
All black and white photos: William Rawn Associates



New entrance lobby and circulation desk in Wallace Library, with connection to the SHED as a destination in the background

Photo: © Robert Benson

Project Description/Narrative

In a maximum of 300 words, describe the basic program requirements, special site problems and how the design process and solution satisfies these. Please also state any technical, environmental or social advancements regarding your project. **(The minimum font size should be 10pt/Arial.) DO NOT change the background of this slide.**

The name of the project can be mentioned generically. For example entrants can say “The education center was designed for the university.” Instead of “the John Johnson Educational Research Center was designed for the university.”

The SHED is a dynamic, 218,000 SF complex that centralizes RIT’s multidisciplinary focus on creativity and innovation. It is a building with no precedent, envisioned by university leadership as a “supercollider of ideas.” The building combines engineering team workspace, maker spaces, performing arts, active-style classrooms, and the main library. The building is a microcosm of RIT – where visitors can immediately understand the institution’s unique blend of arts and engineering:

A. Maker Studios

- Wood, Metals, Paint shop (doubles as scene shop)
- Engineering Team Bays (vehicles, rockets, etc)
- Textiles and Electronics
- Printing Press

B. Performance Spaces

- Glass-Box Theater
- Dance Studio
- Music Studio

C. Creative Library

- The renovation strengthens Wallace Library as a resource for discovery and collaboration

D. Active Learning Environments

- Five 150-seat active classrooms in the SHED, twenty-two 20-36 seat classrooms in the library

E. Atrium as a Pop-Up Venue

- Designed for gathering, performance, and makerspace activity.

The five main design elements of the SHED:

1. Diversity of Uses

The SHED advances creativity as an active ingredient in innovation and integrates the arts and humanities as collaborators within a STEM-dominated ecosystem.

1. Facilitating Student Participation

As a new campus gateway, the building envelops an outdoor promenade as it passes through, creating space that is half inside (the Hub) and half outside (courtyard).

1. Layered Transparency Engaging Diverse Users

The building creates an environment where everyone is both actor and audience, establishing a new paradigm for inclusive and active collaboration.

1. Bigger Than a Single Building

A 900-foot “interior street” connects the library, café, and learning center, new maker and performance Hub, and the Student Alumni Union’s cafés, dining hall, and student support services.

1. Machine for Daylight

The SHED is a counterpoint to the mid-century modern campus core, inviting students to experience an environment that is lacking across campus.

AIA's Framework for Design Excellence

(Unused AIA Framework measures not included, for clarity.)

- 1. Design for Integration:** What is the big idea behind this project and how did sustainability inform the design concept? (Please note: Our response follows the AIA's formal language for this framework element: *Good design elevates any project, no matter how small, with a thoughtful process that delivers both beauty and function in balance. It is the element that binds all the principles together with a big idea.*)

The design of the building enhances the sensory experience through the broad access to daylight, which reaches nearly every program area. A sense of openness and transparency throughout the building is unique to the RIT campus and offers a welcome respite for students and visitors alike.

This transparency creates dialogue between the interior and exterior, fostering connection and engagement with the new program spaces. The two bridges over a heavily-used promenade provide a new perspective on the campus, allowing occupants to be both participant and observer.

The SHED also promotes equity through various features: a multi-stall all-gender restroom, the first of its kind on campus; acoustic dampening in the structure and floor systems for students with hearing difficulties; smaller study rooms for those uncomfortable in larger group settings; and a new home for the RADSCC (RIT ASL and Deaf Studies Community Center).

AIA's Framework for Design Excellence

(Unused AIA Framework measures not included, for clarity.)

2. **Design for Equitable Communities:** How does this project contribute to creating a walkable, human-scaled community inside and outside the property lines? (Please note: Our response follows the AIA's formal language for this framework element: *Design solutions affect more than the client and current occupants. Good design positively impacts the future by helping communities thrive—socially, economically, and environmentally.*)

The main directive of the project was to encourage new connections, collaborations, and interactive learning. To help reinforce RIT's sense of community, the design team sought input from a wide range of campus stakeholders to help tune the program for this project.

The project connects the existing Student Alumni Union and Wallace Library – two of the main centers of gathering on campus. The new building was intentionally programmed with seating, study spaces and Makerspaces along the connections between buildings – facilitating meetings, interactions, and collaboration.

The program includes five 150-seat classrooms and three performance venues. Classroom learning can be lecture-style, or in small group breakout sessions. The performance spaces are programmed for Theater, Dance, and Music, but like the classrooms are available for use by clubs, student activities, and off-campus groups.

The renovations to Wallace Library created more open, welcoming spaces, including a range of collaborative and sought-after group study spaces. These form the backbone to the instructional program areas and help to foster the campus community.

AIA's Framework for Design Excellence

(Unused AIA Framework measures not included, for clarity.)

4. **Design for Water:** How does the project relate to the regional watershed? (Please note: Our response follows the AIA's formal language for this framework element: *Good design conserves and improves the quality of water as a precious resource, including addressing wise use of water and how the system accommodates adverse events.*)

The main RIT Campus, developed in the late 1960s, is located adjacent to the east bank of the Genesee River on former farmlands in the town of Henrietta, NY. The 2.49-acre site, located between Wallace Library and the Student Alumni Union, was a previously developed mix of paved roadways and sidewalks, and mowed grass with minimal landscaping. The new post-development condition resulted in an increase in impervious area (+0.45 acres).

A new underground storm chamber system provides water quality volume and water quantity volume by detaining and treating a 100-year rain event from approximately 0.35 acres of new roof runoff from the SHED expansion and a portion of the adjacent surface areas, prior to discharging downstream.

The bioretention area is a surface filtering and infiltrating practice that provides water quality volume and runoff reduction volume for a 1-inch "first flush" rain event for the contributing impervious drainage area, as required by the NYSDEC Stormwater Management Design Manual. The green infrastructure practices are designed to replicate and pre-development filtration and infiltration characteristics of the existing permeable surfaces prior to being conveyed to downstream areas – including existing adjacent wetlands.

AIA Rochester Community Impact Award

As architects and designers our focus and priority are the pure aesthetics and functionality of the buildings and spaces we design. The color, materials, scale, and functionality of the client's needs drive the projects. After the pencils are put down and the construction dust has cleared, there sits a building/structure/space that now impacts the community where it has been placed. While the design may be added to, subtracted from, and ultimately give way to another, its impact is a permanent part of the community and site's history.

In that spirit, as part of the 2023 Design Awards, we are requesting that you include with each submission a brief summary explaining its "community-impact goals". Projects can affect communities in many ways: improving the housing stock, rejuvenating a neighborhood, adding a pedestrian or biking route, filling a gapped-tooth "street smile" with a parklet, steering the life of a business district in a previously unforeseen path, adding beauty and functionality, and more.

This information is intended to be used during and following the Design Awards event in promotion of the Design Awards via AIA Rochester's social, news outlets, and in promotion of AIA Rochester.

Community Impact Award summary (500 words or less):

RIT leadership envisioned the SHED project as a "supercollider of ideas." The building is intended to foster learning, creativity, and collaboration in ways never seen previously on campus. A project of this scale can drastically change how students learn and interact, positioning RIT and Rochester to export this knowledge and experience to the community, and to the world. A place in which learning is accelerated through deep engagement across disciplines, pushing students to take ownership of their learning, and develop competencies of resiliency, growth, curiosity, creativity, and optimism.

At the scale of the RIT, the new SHED creates connections in multiple ways. The building unites the renovated Wallace Library with the SAU, creating a 900-foot long "interior street" enhanced by cafés, dining halls, a learning center, new maker and performance Hub, and multiple student support services.

The promenade under the building's bridges connects the northern Quarter Mile, a heavily-traveled pedestrian pathway across campus, with the southern Half Mile, a growing parallel axis that connects to public transit and athletic facilities.

In the original 1960s design, a "wall" of brick buildings formed the southern façade of the campus, apart from a gap between Wallace and the SAU. The new building fills in this previously undeveloped space, not only connecting the original buildings but providing a new gateway to the main campus. This gateway is part of a concerted effort in boosting the design aesthetic of the campus and offers a transparent and fluid counterpoint to the mainly 1960s-modern institutional context.

In Wallace Library, the renovations adapted the building for 21st century learning and collaboration, creating welcoming and inclusive spaces for study and socializing. This approach redefines the library's role on campus and reinforces it as a "third space" for student life.

RIT's goal of bringing performing arts to the community is manifested with three dedicated, technology-driven performance spaces – a flexible theatre, dance studio, and music instructional studio. Each of these is intended to be integrated into the learning environment, offer uses for external groups, and are highly visible from the exterior.

The project program consolidates maker spaces from across the campus, and provides a second home for competitive student project vehicle teams. Plus, library Special Collections were renovated, and the Genesee Country Village and Museum received exhibit space, further adding community impact on the building. Each of these, from maker and teams spaces, to printing presses, are much more prominently featured than at their previous locations, offering exceptional visibility and access for community involvement, enjoyment, and research.