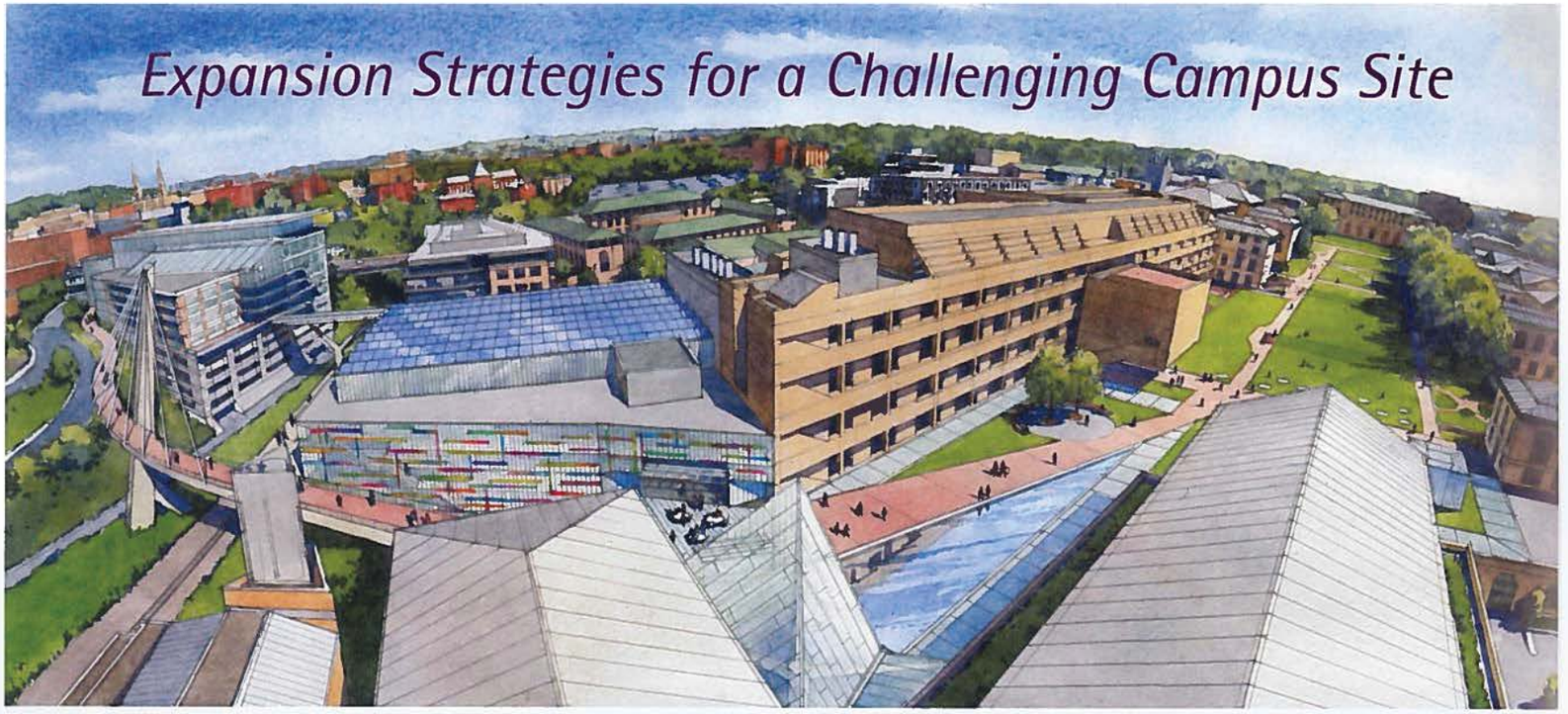
2015 COMPETITIONS Annual

Editor in Chief: G. Stanley Collyer, Ph.D, Hon. AIA
Associate Editor: Daniel Madryga, MS Arch.

With contributions by **Jayne Merkel, Jeffrey McVay and Isaac Campbell**

Expansion Strategies for a Challenging Campus Site



A Transformational Design by Office 52 Wins at Carnegie Mellon

Already ranked as one of the top engineering programs in the U.S., Pittsburgh's Carnegie Mellon University (CMU) is hardly resting on its laurels. Scott Hall, a new Nano-Bio-Energy Technologies building scheduled for completion in early 2016, will undoubtedly enhance the University's standing as a cutting edge research institution. Contrary to most curricula in the field of engineering, Nanotechnology is not based on a narrowly defined area of study; rather it is interdisciplinary in nature and can span the sciences and even reach into the arts.

As a landlocked campus, a major challenge facing Carnegie Mellon is finding space for the construction of new facilities. The site chosen for Scott Hall in 2011 was at the western edge of the historic campus property, perched at the top of a neighboring ravine, Junction Hollow, and barely separated from three adjacent buildings.

Although the campus master plan had already pinpointed a location for the new building, the University conducted a design competition to explore alternative solutions to a challenging site and a demanding interdisciplinary program. From sixteen highly regarded design firms that responded to an RfQ issued by CMU, four teams were shortlisted to participate in the two-month design competition:

- **Bohlin Cywinski Jackson (BCJ),** Wilkes-Barre / Pittsburgh, PA.
- **Wilson Architects,** Boston, MA
- **ZGF Architects,** Portland, OR. and Washington, DC.
- **OFFICE 52,** Portland, OR.

The Challenge

According to the campus master plan, the new building was to be located adjacent to three existing classroom and laboratory buildings, Hamerschlag Hall, Wean Hall and Roberts Engineering Hall. This decision was based upon the need to place Scott Hall's shared research facilities in close proximity to the other faculty and facilities in the neighboring buildings. The site was directly to the west of Wean Hall, and separated from Hamerschlag Hall by a sunken service courtyard that unceremoniously terminated the west end of the Hornbostel Mall, one of two major green spaces on campus. In addition the site was bisected by an existing service road, and dropped almost 100 feet into Junction Hollow at its western edge.

To accommodate the anticipated programs—including a 'clean room' for nano-scale research—the University's planning approach envisioned a new 78,000 SF, seven-level structure that spanned the service road and descended into Junction Hollow. For orientation purposes, the budget target for project construction was set by CMU at approximately $600 SF. To cover the design costs for the competitors, the four participating firms were guaranteed a stipend of $40,000 each.

Among the four firms participating in the competition, OFFICE 52 from Portland, with less than ten employees, was the only relatively small firm included. All of the other firms could be characterized as 'big hitters', most having multiple offices scattered around the country. When OFFICE 52's principal, Isaac Campbell, returned from the initial CMU briefing and site tour, he and his partner, Michelle LaFoe, determined that they would have to come up with a really unique solution to prevail over such formidable competitors. Some might assume that the resources that large firms could bring to the table would put a small firm like OFFICE 52 at a disadvantage. But as a small firm with maximum flexibility, the size of the stipend turned out to be an advantage for OFFICE 52. Their scale allowed them to focus on the design of their proposal almost exclusively for the two-month duration of the competition.

OFFICE 52 saw the unsightly sunken service courtyard, adjacent to the site at the west end of the Hornbostel Mall, as an opportunity to transform the project and this part of campus. Infilling this courtyard would not only provide extra space for the building program, but the infill's rooftop could be a green-roof extension of the Mall that would wrap around Hamerschlag Hall and extend all the way to the western edge of the campus. This would create new pedestrian spaces and link buildings that were previously proximal, but separated by the service courtyard. The infill also solved another critical issue: it allowed the planned seven-story tower on the original site to be reduced to only four floors. The removed lower three floors of the building were replaced with a sculptural composition of sloping steel columns that anchored the building to the steep hillside and weaved around the major campus utilities that could remained buried below the building. But, most importantly, OFFICE 52's approach allowed the extremely sensitive 'clean room' facility to move to an at-grade location in the courtyard, significantly improving its performance and reducing its exposure to vibration and electromagnetic interference.

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Although OFFICE 52's changes did not follow the campus plan, their innovative approach found favor with the University. As they had anticipated, all of the other competitors submitted seven-story proposals that complied with the University's original planning approach and located their 'clean rooms' in the towers. The plan by OFFICE 52 with the 'infill' had the added advantage of creating more green space and a more visually pleasing setting for Hamerschlag Hall and the west end of the Hornbostel Mall. As a future option, they proposed a dramatic pedestrian bridge over Junction Hollow linking the Mall and Scott Hall to potential future development on the opposite side of the railroad tracks, adjacent to the Carnegie Museum of Art.

CONTINUED ON PAGE 148

Winning Proposal

Office 52
Portland, OR

THIS PAGE, BELOW
View of computerized rendering of Scott Hall to the left from across Junction Hollow—without pedestrian bridge.

OPPOSITE PAGE
Aerial view of site with computerized version of Scott Hall to the left with surrounding buildings and potential development across ravine with pedestrian bridge.

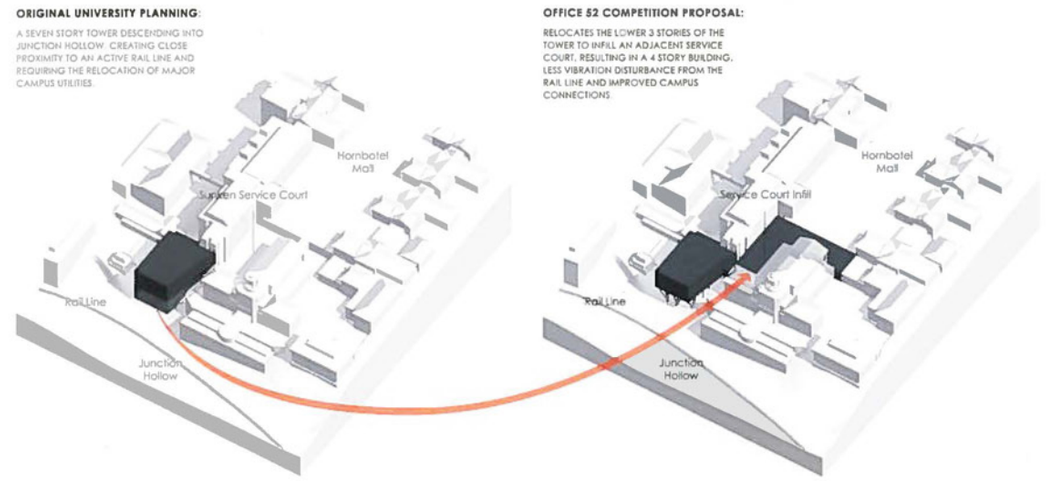
CONTINUED FROM PAGE 147

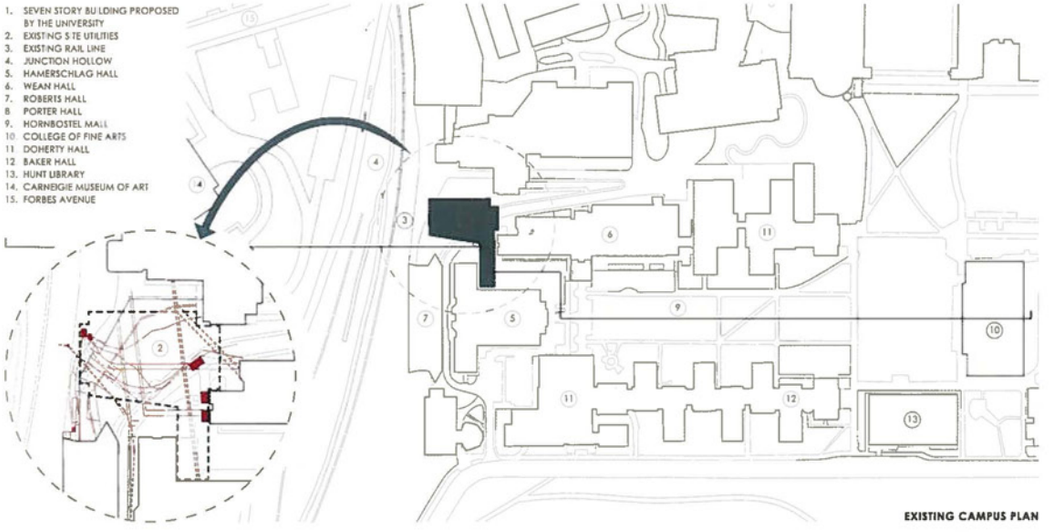
As is often the case with complicated projects, the realization of a competition proposal can require a lot of back and forth between the design team and the client; and here this was no exception. OFFICE 52's competition proposal had shown the University that their site had more capacity than originally thought. The final 109,000 SF building was the result of a long process in which the design team and the Univer-sity weighed many different options for program, building size, phasing and cost. Ultimately, because of future expansion needs and future space challenges for any construction in the center of the campus, the University ultimately decided on a larger building than originally planned.

The final design for Scott Hall creates a new and vital hub for the College of Engineering, and quite literally knits together the site, open space, and the neighboring buildings. The design creates new pedestrian green space, new plazas, new building entries, and connects to four adjacent buildings on seven different floor levels. By their transformative infill solution, the OFFICE 52 team created not only a valuable addition to the campus fabric, it added value to its neighbors.

When the building is completely finished, those approaching the building from the top of the Mall will experience a sense of adventure. The building is partially hidden behind its neighbor and emerges as a welcome arrival feature with each approaching step. Not only can one appreciate the new plaza created by the infill, but also the building's interesting exterior, a curtainwall complemented by dichroic glass sunshades, constantly reflecting change in appearance, patterns and shadows throughout the day and seasons. As if all this wasn't enough, this rite of passage distinctly frames the Univsity of Pittsburgh tower, as if that was the obvious intent of the architect..

This was not just a simple, straightforward competition for a visually attractive structure, although that had to be a serious consideration. Here a client showed the flexibility and foresight to recognize how one firm's unique approach to a design problem could also work to the long-term benefit of the university and its campus. -Ed



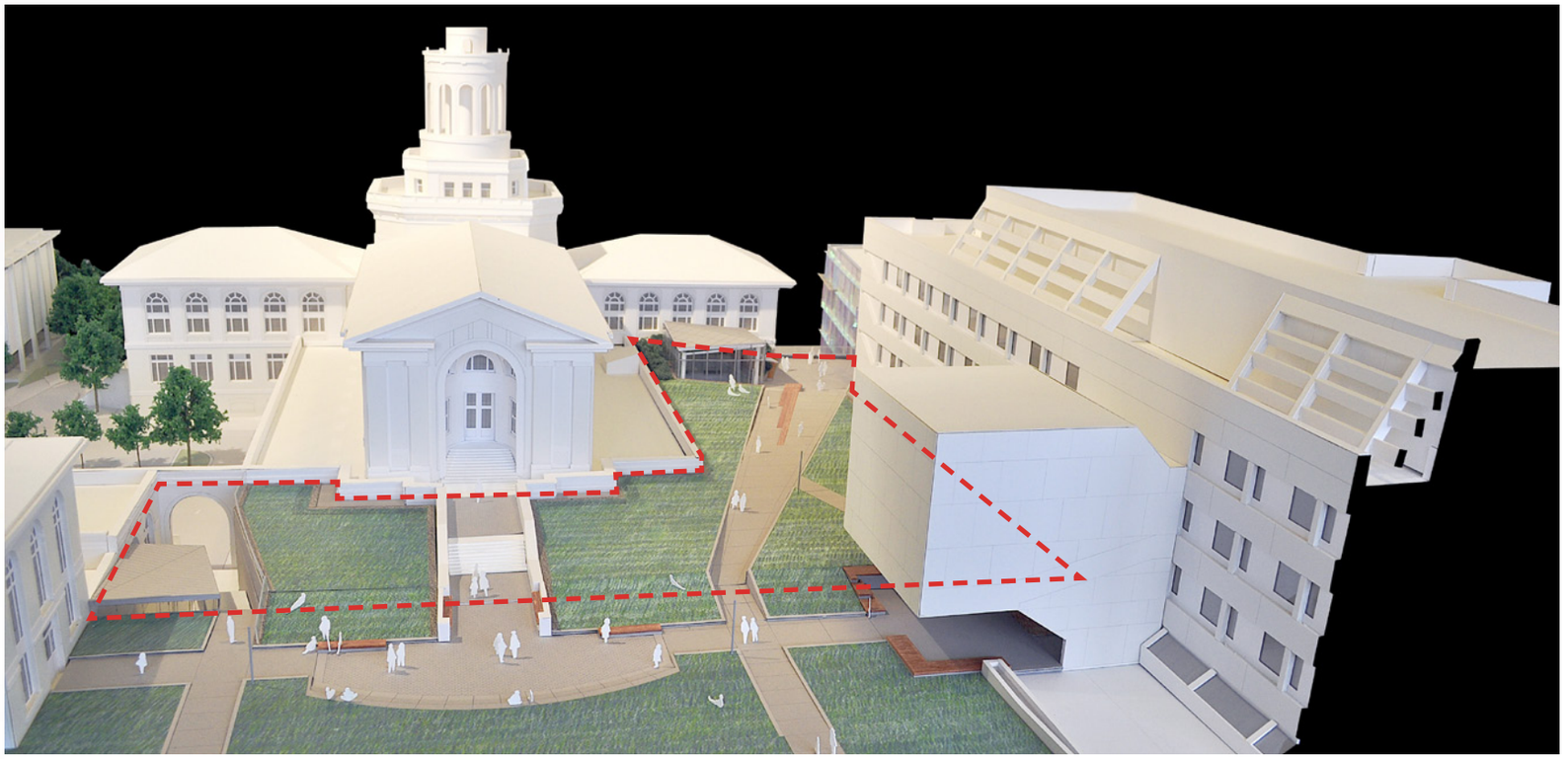


Winning Proposal

OFFICE 52: Design Architect
Stantec: Architect of Record and Civil Engineering
Arup: Structural Engineering MEP Engineering - Fire Protection, Acoustical and Lighting
Jacobs: Lab Planning
CM|GC: Jendoco Construction Company

LEFT, ABOVE
Previous site condition of service area between Hamerschlag Hall (left) and Wean Hall (right)
LEFT, MIDDLE
Original university plan (left) and OFFICE 52 competition scheme (right)
LEFT, BELOW
Existing utilities under site

OPPOSITE PAGE, ABOVE
View to construction site from Forbes Avenue bridge in August 2015
Photo: Stanley Collyer
OPPOSITE PAGE, BELOW
Computerized version of completed project, showing extension of Mall to Hamerschlag Hall and removal of service area.



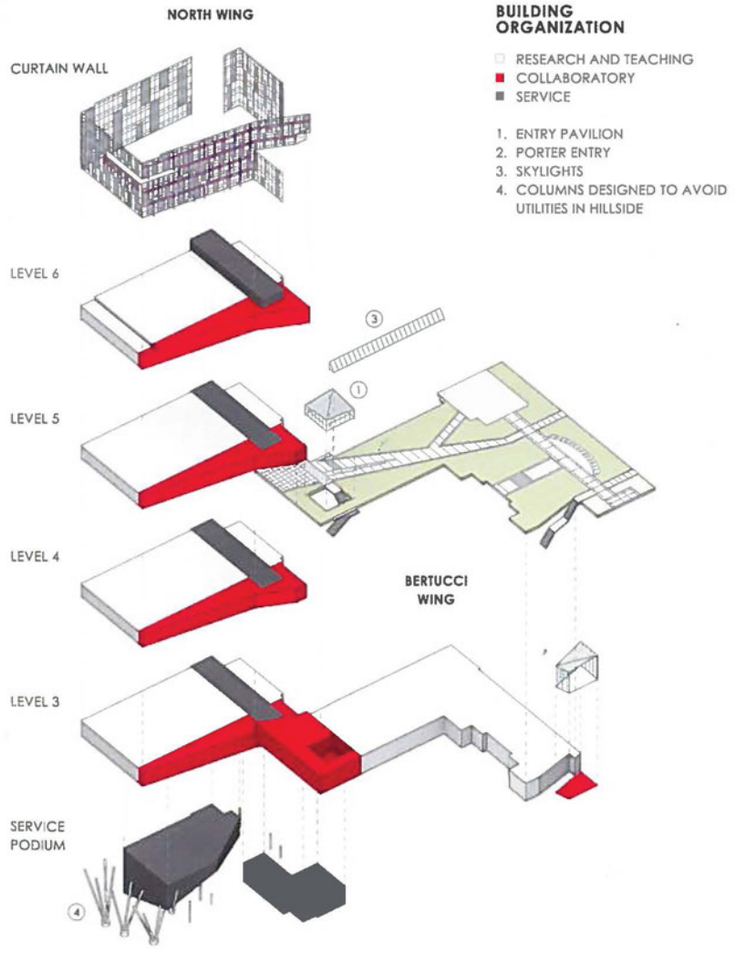

B HOTAN · 2011

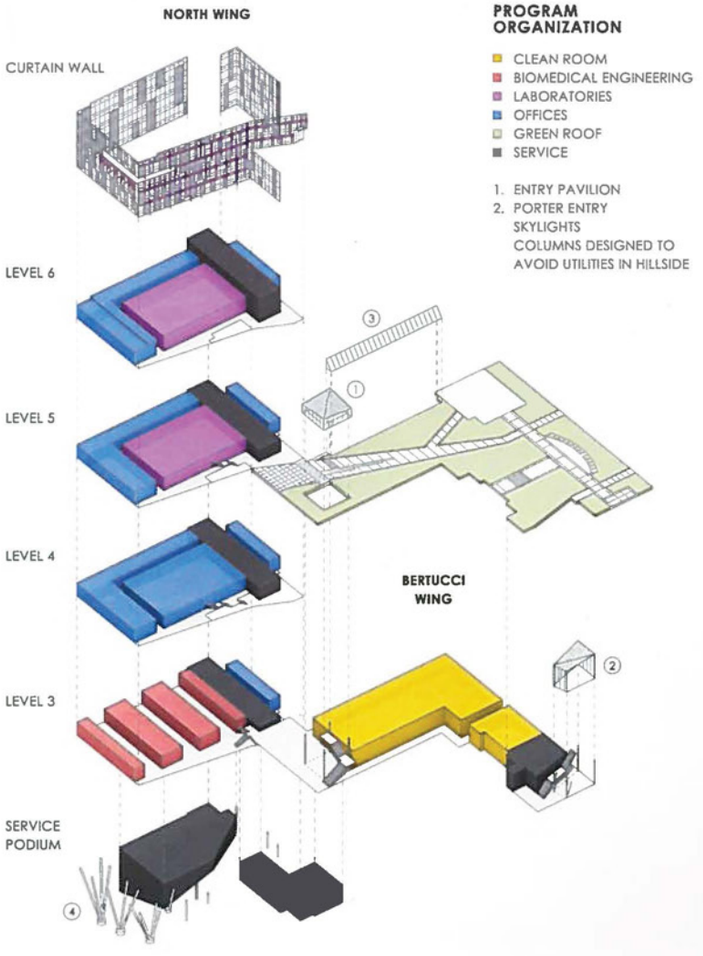
Winning Proposal

Office 52
Portland, OR

LEFT
View from entrance across Junction Hollow to University of Pittsburgh tower (photo: ©OFFICE 52)
BELOW
Organizational and program diagrams

OPPOSITE PAGE, ABOVE
Section
OPPOSITE PAGE, BELOW
Computerized version of former service infill as atrium area and connector





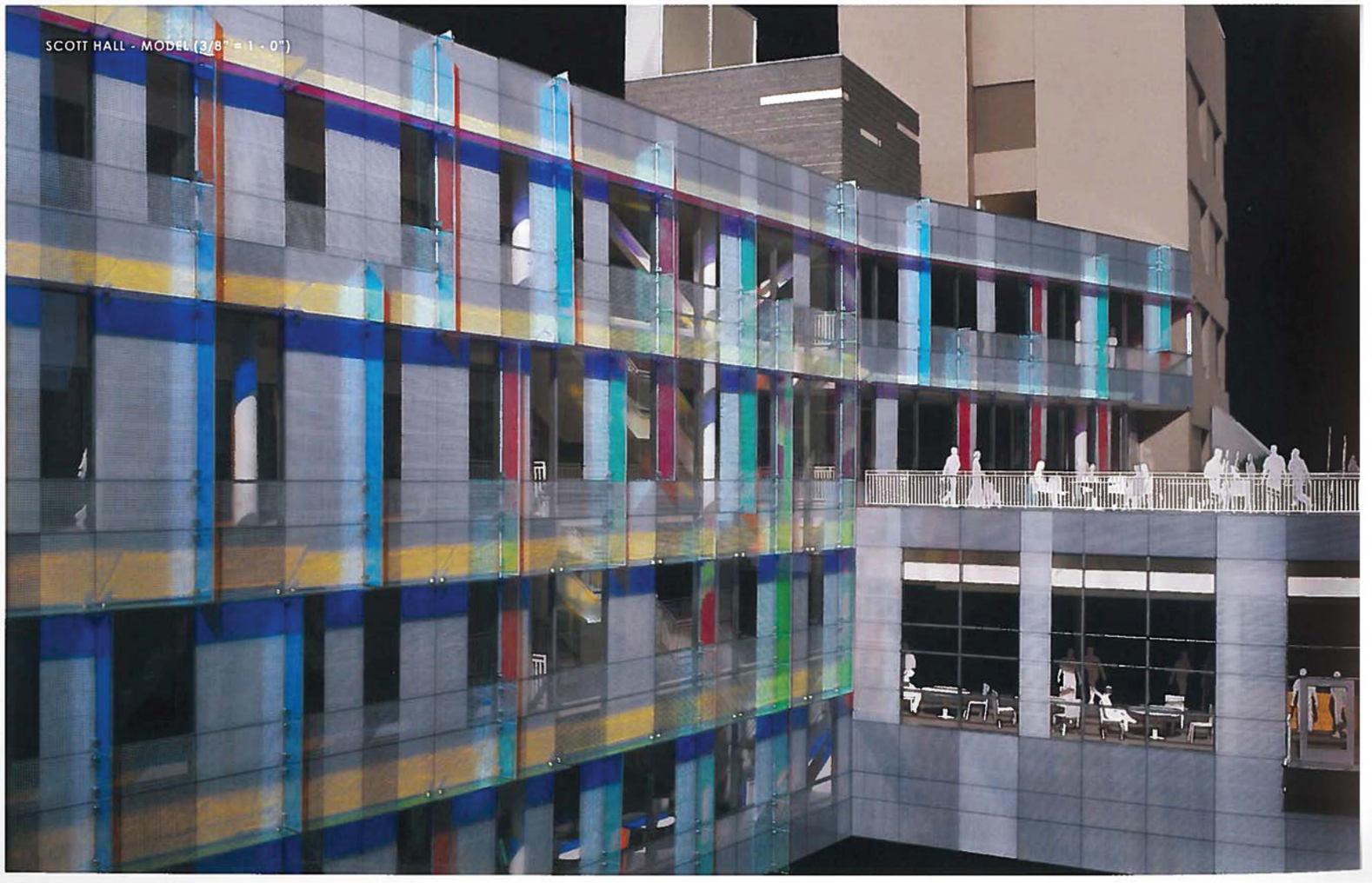
Winning Proposal

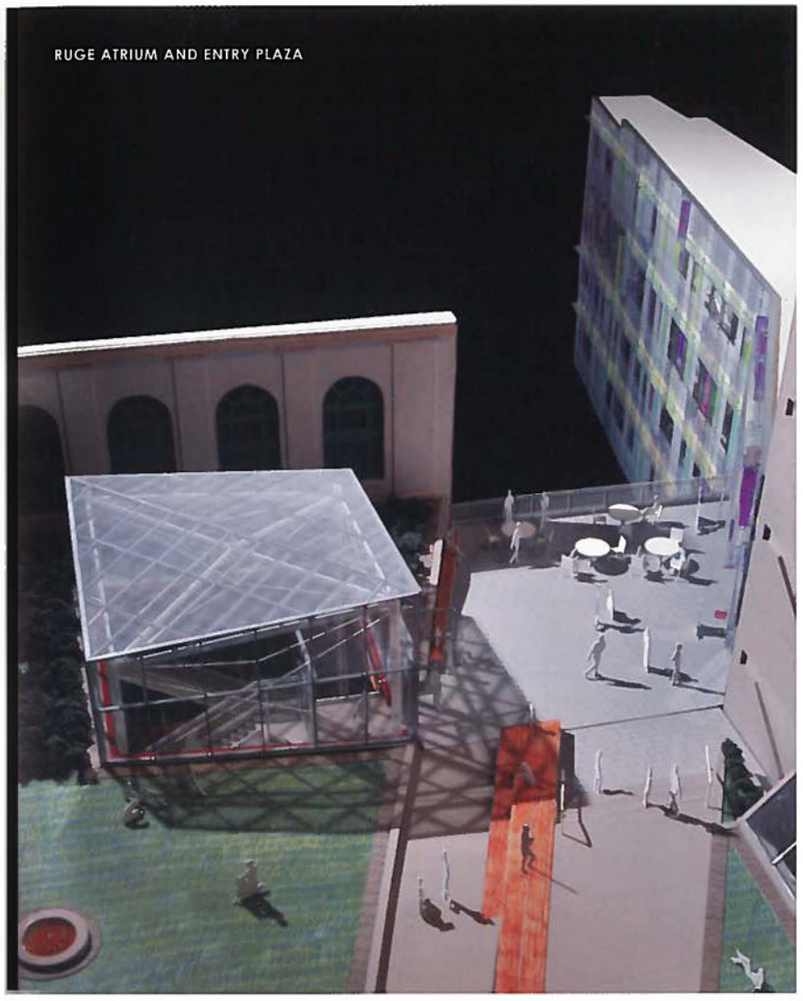
Office 52
Portland, OR

LEFT
Café viewBELOW
BELOW
View east to connector

OPPOSITE PAGE, ABOVE, LEFT
Aerial view of entrances to main building (right) and pavilion to lower "clean room" under the Mall (left)

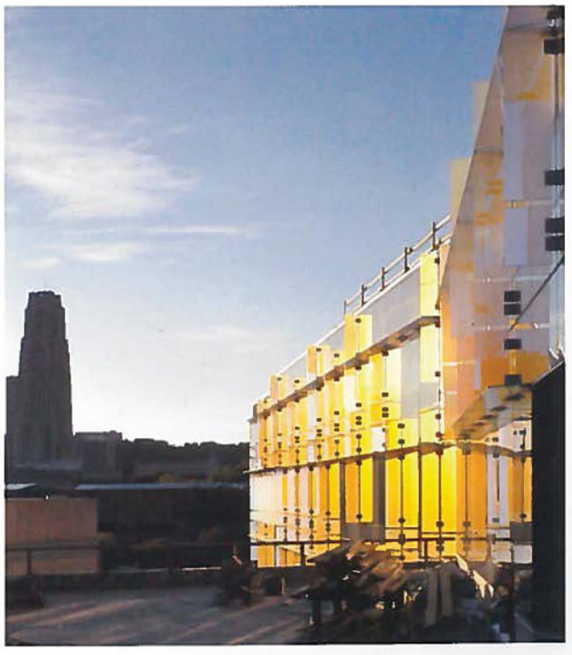
OPPOSITE PAGE, ABOVE, RIGHT
View to different levels from stair
OPPOSITE PAGE, BELOW, LEFT
View from ravine, October 2015
OPPOSITE PAGE, BELOW, RIGHT
Facade at sunset, October 2015
(photos: ©OFFICE 52)





RUGE ATRIUM AND ENTRY PLAZA

COLLABORATORY MODEL



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Of the scores of competitions which take place every year, narrowing down the number which can appear on the pages of this pubication turns into a difficult selection process. There are a few parameters: including projects that will ultimately be built is definitely a high priority; interesting programs and public interest in the international architectural community are also factors. But we do draw a line where ideas competitions are mainly theoretical, not related to any specific site, and, although well intended, produce little in the arena of new knowledge.

Unfortunately, many of the competitions featured on these pages are invited and not open to all architects. In spite of the reduction in the number of entries, we still find some interesting ideas and approaches that would not have occurred had these projects been the direct result of a normal search or commission. Yes, there is no guarantee that the international ideas Helsinki Guggenheim competition will be built. But the organization and composition of the competition jury made the publication of this event a no-brainer.

One can always debate about this selection process, as to why some got in and others got left out. But they all had their specific challenges, and how they dealt with these will always be the subject of debates for years to come.

This year's selection:

- **Taiwan Taoyuoang Airport Terminal 3**
- **Mesa's Answer to Urban Sprawl**
- **Helsinki Guggenheim Museum Competition**
- **UNO/WHO Headquarters Extension Competition**
- **CAC Obama Library Competition**
- **Dessau Bauhaus Museum Competition**
- **Technology Expansion at Carnegie Mellon University**
- **Sydney's Green Square Library Competition**
- **Expansion of the Vienna Museum of History**
- **Chicago's Biennial Lakefront Competition**

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