2017-2018 Student Design Competition

DESIGNING
HEALTHY
PLACES

Tackling Wicked Problems

Sponsors: National Endowment for the Arts, American Institute of Architects, & Association of Collegiate Schools of Architecture

“Of all the forms of inequality, injustice in health is the most shocking and the most inhumane.” – Martin Luther King

INTRODUCTION
The Association of Collegiate Schools of Architecture (ACSA) is pleased to announce the Design & Health Student Competition for the 2017-2018 academic year. Administered by the Association of Collegiate Schools of Architecture (ACSA) and sponsored by the National Endowment for the Arts (NEA) along with the American Institute of Architects (AIA), the program is intended to challenge students, working individually or in teams, to explore a variety of design issues related to healthy communities.

March 28, 2018 Registration Deadline (free registration)
May 23, 2018 Submission Deadline
Summer 2018 Winners Announced
Fall 2018 Exhibit & Summary Publication

$7,200 in cash prizes
LANDSCAPES OF RISK AND PROTECTION

Public health has come to recognize place as an important determinant of health. While assessments of health have traditionally emphasized individual behavior and risk factors, we now understand that risks and protection are also socially determined. Risk is the “probability of damage or harm in a specified period” and is elevated in places lacking protection or resilience (Fitzpatrick and LaGory). Risk and protection are functions of spatial structure, itself constrained by group status and income level, neighborhood conditions, and other social forces. Important forms of protection, like individual immunity and social organization, are compromised by chronic socio-environmental stressors common in high-risk neighborhoods. Stressors tend to intersect and cascade, including violence, childhood underdevelopment, food and housing insecurity, environmental toxins, and poor social affiliations. Richard Wilkinson’s work on the interrelationship between social structure and illness shows that wealthy countries with the largest income and equality gaps—despite the highest expenditures on medical care—experience the poorest overall health outcomes. The paradox of material success is that it has decreased life span and wellness among disadvantaged populations. Yet, egalitarian societies, rich and poor alike, have not exhibited these differences in wellness. Context then is a more impactful shaper of health differences than individual behavioral differences related to drinking, smoking, and exercising, according to studies cited by Wilkerson in his The Impact of Inequality: How to Make Sick Societies Healthier. Since health status is in large part predicted by one’s zip code, neighborhood design matters.

Conversely, populations of all income levels have experienced an epidemic of preventable “lifestyle diseases” (high blood pressure, cardiovascular illness, obesity, diabetes, etc.) due to abundances in food, automobiles, technology, and energy—a challenge of
affluence. If human evolution and behavior were shaped by scarcity, then abundance poses new challenges to our consumer habits and general decision making (Offer). Affluence unchecked by decision making that values resilience generates fragility. Resiliency is the ability of systems and beings to recover from disruption or shock, while fragility represents a system’s diminution, even fatality, from disruption. Resilient systems are redundant, encompassing options and back-ups in functioning. Resilient systems honor local carrying capacities or limits. And resilient systems use feedback for self-correction (i.e., they are learning systems). Arguably, design should aim for antifragility since cities are a complex system that can gain from disorder (Taleb). The operating systems organizing our places are more determinative of our health than we had previously thought.

For instance, auto-dominant metropolitan fabrics do not readily accommodate walkability nor encourage physical activity as lifestyle options. Auto-dominant street networks create higher health risks, while Complete Streets policy that democratizes access for pedestrians and bicyclists offers significant protection. Meanwhile, the loss of place-based food systems to industrialized production has homogenized food products. Not only has industrialized agriculture led to declines in nutrition and food security, but also erosions in general health and culture. Local growing alternatives to industrial production offer important protections. On the matter of water and the city, urbanism tends to eliminate watershed functioning and the 17 life-affirming ecological services that all healthy ecosystems deliver, including flood and disease control (Costanza et al.). Repair of degraded urban streams can be a powerful force (protection) for reinventing physical environments and ecological performance in post-industrial cities. Consider that the greatest ongoing challenge to design and planning is design within human-dominated ecosystems. Future urbanism will be tasked with delivering ecological services in addition to conventional urban services related to transportation, land use development, commerce, and housing.

Beyond matters of physical health, the status of mental health is undervalued in the design of places. Former U.S. Surgeon General, Dr. Vivek Murthy, declared loneliness a serious health epidemic, a “more common pathology than heart disease or diabetes” in his practice experience. Loneliness directly impacts mental and physical health, and is a gateway condition to deviant behavior. Here, housing is an important form of protection when designed for affordability and sociability. The U.S. will need more than 40 million housing units over the next 30 years, especially for aging populations. This presents opportunities to explore new modes of well-being and social connectivity through innovative residential formats that remake place, suburban and urban (Maak; and University of Arkansas Community Design Center a). The mediatization of social environments has eclipsed investment in physical public space, arguably the best predictor of community resilience. The public health community is telling us that solutions for today’s thorniest public health challenges are based in design thinking, rather than the medical model. Are architects and allied design professionals prepared to engage these challenges?

Citations:
DESIGN: WICKED PROBLEM SOLVING

Thus, cities are landscapes of risk and protection (Fitzpatrick and LaGory). Problems and opportunities are rooted in various forms of contexts—infrastructure, campuses, neighborhoods, ecosystems, and supply chains—all requiring social organization as protection against hazard and risk. Context requires a different form of design problem solving than that for buildings. Buildings are essentially discrete or tame problems with discernable clients, scopes, and known solution types. Conversely, contexts are wicked problems defined by socio-environmental complexity framed by multivariate factors, and for which there are no singular right answers (Brown et al.; and Protzen and Harris). Indeed, framing the problem and developing transferable approaches are critical parts of solution seeking, which may not be altogether clear until well into the process. Like mitigating climate change and revitalizing cities, designing healthy places is among the classic wicked problems defining an ever-growing portion of the design professions’ work.

Wicked problem solving entails development of a vocabulary or set of heterogeneous elements to address multivariate forces operating throughout a context. For instance, in his classic Image of the City, Kevin Lynch employs five elements to understand the general logic of cities: node, element, path, district, and landmark. Likewise, formulation of an operating toolkit encompassing policy and best practices in each of the six designated competition platforms is important in framing individual projects. Toolkits—or grammars of context production—should be communicable and transferable for application in other places. Toolkits ideally provide a comprehensive set of strategies shared among various scales of agency, from the small property owner to developers and local government. Therefore, Designing Healthy Places solutions or scenarios should consist of three parts which graphically communicate: 1) framing of the problem, 2) formulation of a design toolkit that is transferable for use by others, including policy communities, and 3) development of a design project that operationalizes the toolkit.
SIX DESIGNING HEALTHY PLACES PLATFORMS

Designing Healthy Places Competition is focused on projects that address the intersection of health and placemaking among six topical categories. A winner will be selected in each category. Proposals may include greenfield or urban sites, urban revitalizations, or value-added transformations of existing sites through one of the six categories below. Scenario plans that do not require a site are also appropriate vehicles for designing healthy place frameworks.

AGRICULTURAL URBANISM: Food is absent in contemporary American urban planning and policy. There are many reasons to grow food once again in the city, including access to a skilled labor force, greater food security, economic development, and establishment of local markets for high-value nutritious product. What would the city look like if locally-consumed food were to be grown, processed, and distributed around the city? Keep in mind the role that urban food hubs for wholesale, indigenous growing systems, and edible public landscapes once played in feeding the city as well as new technologies and spatial formats like vertical farms. Greenhouses, for instance, ensure greater control over climate, disease, and pests. How might growing systems, food processing, and marketing be cross-programmed with other land uses in the city? In formulating toolkits, think about closed-loop systems between growing systems, urban ecosystems, and cities. Consider appropriate scaled technologies, large-scale nutrient management (building healthy soil), waste recycling, and growing mediums (e.g., wetlands, healthy soil, hydroponics, espaliers, etc.).

AFFORDABLE HOUSING: According to a 2015 report by the Joint Center for Housing Studies of Harvard University, 41 percent of households living in the 10 highest-cost major metros could not afford the housing in which they were living. While housing cost increases continue to outpace inflation, a neglected opportunity in housing affordability lies with provision of “missing middle” multifamily housing (Parolek). Missing middle types, including townhouses, duplexes, four-squares, assorted multiplexes, bungalow courts, live-work, and courtyards have not been built since the 1940s once policy and financing privileged single-family home ownership. How might we, once again, build walkable neighborhoods of moderate densities with updated versions of these diverse housing types that were responsive to shifting household structure, and income levels? Toolkits should consider the small scale, incremental quality of missing middle housing fabric that allowed non-commercial builders to build quality housing at affordable cost points. Missing middle fabrics are flexible, offering opportunities to include neighborhood services like daycare, senior community centers, small business, community kitchens, and co-working spaces.

WATERSHED URBANISM: More than half of America’s waterbodies are unsafe for swimming, fishing, and as sources of drinking water due to anthropogenic activity. Typically, urban development eliminates essential watershed landscapes (floodplains, wetlands, riparian corridors, upland buffers, and drainage ways) and functioning. How might city form be reconciled with watershed functioning? How might all new urban infrastructure investments provide ecologically-based water management and deliver the ecological services that all healthy ecosystems like watersheds deliver (University of Arkansas Community Design Center b)? In formulating toolkits consider fluvial geomorphology—the architecture of streams—in terms of their sinuous geometry, erosion and deposition zones, riffle-pool-glide stream section, and riparian cross-section types (Rosgen). Address development problems (e.g., flooding, sedimentation, erosion, etc.) induced by “urban stream syndrome” and the terms by which watersheds and cities can be reconciled. Do not neglect the street network and connectivity in developing reconciliation urban landscapes.

HOUSING FOR AGING: By 2030, close to 80 million Baby Boomers will have turned 65 at a rate of 10,000 per day. While more than 85 percent will age in places and housing fabrics that do not support their needs, a tsunami of systemic challenges will compel this cohort to embrace more cooperative structures of living (Blanchard; and University of Arkansas Community Design Center a). The dramatic increase in single-person households among seniors will exacerbate the challenges. Consider that a majority of assisted living residents are institutionalized due to a social deficit (e.g., inadequate housing, absence of caregiving or individual support network) rather than a medical problem. How might low-density residential environments be rethought to support new forms of social and creative activity among senior populations? In constructing the toolkit consider innovation of housing models in between the single-family house and institutional settings, like assisted care, that are unaffordable to most populations. How might fabrics overcome the divide between real estate products and service platform models (Assisted Living, Memory Care, or Skilled Nursing, etc.) to incorporate at-home care services within non-medicalized housing fabrics?
NEIGHBORHOOD VITALIZATION: Writers and sociologists from Jane Jacobs to Robert Sampson view the neighborhood as the irreducible spatial format for determining livability, risk, and protection—what Sampson calls “neighborhood effects”. Life chances are shaped largely by one’s neighborhood. Subdivisions and gentrified downtowns reflect what Sharon Zukin calls “investment climates” shaped by growth of the FIRE industries (finance, insurance, and real estate). How might we build places that privilege human capital over investment climates? Human resource planning emphasizes affordable and quality housing, possibilities for social integration, economic competitiveness, and health services involving child and elderly care (Ryan; Sampson; and Sharkey). In developing the toolkit, consider what constitutes a neighborhood and its minimum necessary components, scale, limits, and public space network. What kind of spatial or architectural frameworks are necessary to foster security and social connectivity—protections that constitute resilience?

TRANSPORTATION ECOLOGIES: Urban livability is determined by how we move around. What if transportation systems were to be conceived as an ecology encompassing intermodality rather than a pitting of one modality (cars, trains/streetcars, sidewalks, bicycles) against another? What if streets—our largest single classification of public space—once again were cross-programmed to deliver non-traffic social services related to gathering, strolling, recreating, celebrating, and dining to become the city’s best landscapes (Dover and Massengale)? In constructing toolkits, recall the relationship between transportation and land use neglected in most current planning, except for Transit-Oriented Development (TOD) based on trains. Perhaps modeling begins with Development-Oriented Transit rather than the conventional TOD. Also, consider the role of green streets, parking, and trail infrastructure that deliver ecological services where streets are ecological assets rather than liabilities (Metro; and University of Arkansas Community Design Center c).

SITE
The site for the competition is the choice of the student and/or faculty sponsor. It must be in an urban context, close to public transportation and to city amenities. Submissions will be required to demonstrate graphically or otherwise the site selection and strategy.

CODE INFORMATION
Refer to the International Building Code and the local zoning ordinance for information on parking requirements, height restrictions, setbacks, easements, flood, egress, and fire containment. Challenges to conventional rules—parking requirements, for example—are encouraged but should be explained, made explicit and integral to the overall solution.
INTEGRATED DESIGN
Design proposals must reflect a clear conceptual strategy, which is resolved in built form at a detailed level. The project should be developed with an integrative approach to the innovative use of building materials and systems—spatial, structural, environmental and enclosure.

Participants will develop a selected physical area of the project in greater detail considering the building’s systems through larger scale drawings showing structure, environmental strategies, building envelope and interior spaces. Through rendered perspectives and elevations, the proposals should demonstrate surface qualities including material, color, texture, and light.

Together with the integrated resolution of structural, tectonic and technical issues, projects should be designed in a socially and environmentally responsible manner. Design proposals should respond to the physical context (geography, topography and latitude), climate (sun, wind, light and water), and culture (patterns of interaction rising from human occupation). Projects should demonstrate reduced dependency on non-renewable resources and the integration of environmental responsibility with the architectural vocabulary of the proposal.

CRITERIA FOR JUDGING
Criteria for the judging of submissions will include: creativity in the design solution, successful response of the design to its surrounding context, and successful response to the full range of issues within the concept of healthy design.

Submissions must clearly represent the selected program. In addressing the specific issues of the design challenge, submissions must clearly demonstrate the design solution’s response to the following requirements:

- An elegant expressive understanding of the healthy design concepts deployed with maximum innovative potential
- A strong conceptual strategy translated into a coherent integrated design proposal
- An articulate mastery of formal concepts and aesthetic values
- A compelling response to the physical and cultural context of the scheme
- A mature awareness and innovative approach to environmental issues
- A thorough appreciation of human needs and social responsibilities

REQUIRED SUBMISSION DOCUMENTS
Submissions must include (but are not limited to) the following required drawings:

- Three-dimensional representations - in the form of axonometrics, perspectives showing the proposal in its context, montages and/or physical model photographs – to illustrate the character of the project
- Site plan showing proposal in its context of surrounding buildings and topography, together with details of access/circulation
- Building/site sections sufficient to show site context and major spatial and program elements
- Floor plans to show program elements, spatial adjacencies and navigation strategies
- Large scale drawing(s), either orthographic or three dimensional, illustrating:
  - the use and detailing of healthy concepts

Submissions must include:

- Completed online registration including all team members and faculty sponsors
- 4 digital boards at 20” x 20”.
- A design essay or abstract (300 words maximum)
- Program summary diagram/text of spaces and areas (300 words maximum)

Incomplete or undocumented entries will be disqualified. All drawings should be presented at a scale appropriate to the design solution and include a graphic scale. The site plan should include a north arrow. The names of student participants, their schools, or faculty sponsors, must NOT appear on the boards, or in the project title or project title file name(s).
An intention of all ACSA competitions is to make students aware that research is a fundamental element of any design solution. Students are encouraged to research and document this in their design submissions; showing evidence and precedent.

SUGGESTED REFERENCES

• Fitzpatrick, Kevin and Mark LaGory. Unhealthy Cities: Poverty, Race, and Place in America, Routledge, 2010.
• Ladner, Peter. The Urban Food Revolution: Changing the Way We Feed Cities, New Society Publishers, 2011.
• University of Arkansas Community Design Center (a). Houses for Aging Socially: Developing Third Place Ecologies, ORO Editions, 2017.
• University of Arkansas Community Design Center (b), Conway Urban Watershed Framework Plan, ORO Editions, 2017.
• University of Arkansas Community Design Center (c), Low Impact Development: a design manual for urban areas, University of Arkansas Press, 2010.
COMPETITION GUIDELINES

SCHEDULE
March 28, 2018  Registration Deadline (free registration)
May 23, 2018  Submission Deadline
Summer 2018  Winners Announced
Fall 2018  Exhibit & Summary Publication

AWARDS
First, second, and third prizes will be awarded, in addition to a selected number of honorable mentions, at the discretion of the jury. Winners and their faculty sponsors will be notified of the competition results directly. A list of winning projects will be posted on the ACSA web site at www.acsa-arch.org. A total of $7,200 will be distributed to the winner in each of the six platforms.

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<th>Category</th>
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<td>Student</td>
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<tr>
<td>Faculty Sponsor</td>
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ELIGIBILITY
The Designing Healthy Places Competition is open to current students, from an ACSA member school worldwide. Students need to be upper level (third year or above, including graduate students) and are required to work under the direction of a faculty sponsor. Entries will be accepted for individual as well as team solutions. Teams must be limited to a maximum of five students. Submissions should be principally the product of work in a design studio or related class.

REGISTRATION
A faculty sponsor is required to enroll students online (available at www.acsa-arch.org) by March 28, 2018. Registration can be done for your entire studio or for each individual student or team of students participating. Students or teams wishing to enter the competition on their own must have a faculty sponsor, who should complete the registration. There is no entry or submission fee to participate in the competition. Each registered student and faculty sponsor will receive a confirmation email that will include information on how the student(s) will upload final submissions online. Please add the email address competitions@acsa-arch.org to your address book to ensure that you receive all emails regarding your submission.

During registration, the faculty will have the ability to add students, add teams, assign students to teams, and add additional faculty sponsors. Registration is required by March 28, 2018, but can be changed, edited, and added to until a student starts a final submission; then the registration is no longer editable.

FACULTY RESPONSIBILITY
The administration of the competition at each institution is left to the discretion of the faculty within the guidelines set forth in this document. Work on the competition should be structured over the course of one semester during the 2017-2018 academic year.

Each faculty sponsor is expected to develop a system to evaluate the students’ work using the criteria set forth in this program. The evaluation process should be an integral part of the design process, encouraging students to scrutinize their work in a manner similar to that of the jury.
**DIGITAL SUBMISSION FORMAT**
Submissions must be presented on four 20” x 20” digital boards. All boards are required to be uploaded through the ACSA website as Portable Document Format (PDF) or image (JPEG) files. The names of student participants, their schools, or faculty sponsors, must NOT appear on the boards, or in the project title or project title file name(s).

**DESIGN ESSAY or ABSTRACT**
A brief essay, 300 words maximum, is required as part of the submission describing the most important concepts of the design project. Keep in mind that the presentation should graphically convey the design solution and context, and not rely on the design essay to convey a basic understanding of the project. The names of student participants, their schools, or faculty sponsors, must NOT appear in the design essay. This abstract is included in the final online submission, completed by the student(s) in a simple copy/paste text box.

**PROGRAM SUMMARY**
A program summary diagram/text of spaces and areas is required as part of the submission. All interior and exterior spaces are to be included; total net and gross areas are required.

**ONLINE PROJECT SUBMISSION**
The student is required to submit the final entries that must be uploaded through the ACSA Competition website at www.acsa-arch.org by 11:59 pm, Pacific Time, on May 23, 2018. If the submission is from a team of students, all student team members will have the ability to upload the digital files. Once the final submit button is pressed no additional edits, uploads, or changes can be made. Once the final Submission is uploaded and submitted, each student will receive a confirmation email notification. You may “save” your submission and return to complete. Please note: The submission is not complete until the “complete this submission” button has been pressed. For team projects, each member of team projects may submit the final project.

The final submission upload must contain the following:
- Completed online registration including all team members and faculty sponsors
- Each of the four 20”x20” boards uploaded individually as a high resolution Portable Document Format (PDF) or image (JPEG) file
- A design essay or abstract
- A program summary

The names of student participants, their schools, or faculty sponsors, must NOT appear on the boards, or in the project title or project title file name(s).

*Winning projects will be required to submit high-resolution original files/images for use in competition publications and exhibit materials. By uploading your files, you agree that the Association of Collegiate Schools of Architecture (ACSA) has the rights to use your winning submission, images and materials in a summary publication, online and in promotional and exhibition resources. ACSA will contribute authorship of the winning design to you, your team, faculty and affiliation. Additionally, you hereby warrant that the submission is original and that you are the author(s) of the submission.*
The Association of Collegiate Schools of Architecture (ACSA) was founded in 1912 by 10 charter members, ACSA is a 501(c)(3) nonprofit association of over 200 member schools in several categories. These include full membership for all accredited programs in the United States and government-sanctioned schools in Canada, candidate membership for schools seeking accreditation, and affiliate membership for schools for two-year and international programs. Through these schools, over 5,000 architecture faculty are represented. In addition, over 300 supporting members composed of architecture firms, product associations and individuals add to the breadth of interest and support of ACSA goals.

SPONSORS
The National Endowment for the Arts (NEA) was established by Congress in 1965 as an independent agency of the federal government. To date, the NEA has awarded more than $4 billion to support artistic excellence, creativity, and innovation for the benefit of individuals and communities. The NEA extends its work through partnerships with state arts agencies, local leaders, other federal agencies, and the philanthropic sector.

The American Institute of Architects (AIA) is a professional organization for architects in the United States. The AIA offers education, government advocacy, community redevelopment, and public outreach to support the architecture profession and improve its public image. The AIA also works with other members of the design and construction team to help coordinate the building industry. More than 90,000 licensed architects and associated professionals are members. AIA members adhere to a code of ethics and professional conduct intended to assure clients, the public, and colleagues of an architect's dedication to the highest standards in professional practice.

FOR MORE INFORMATION
Program updates, including information on jury members as they are confirmed, may be found on the ACSA web site at www.acsa-arch.org/competitions.

Additional questions on the competition program and submissions should be addressed to:

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