



NE elevation, Family Residence, Alyce Glen, Petit Valley, Trinidad, B.Arch. Thesis Project, Laura Narayansingh, 2014
(Thesis Advisers, J.Lombard and R.Valbrun) Laura is now Director of ACLA Architects, Port of Spain, Trinidad and Tobago

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University of Miami School of Architecture
Secondary appointment, Miller School of Medicine
Department of Public Health Sciences

Content Overview

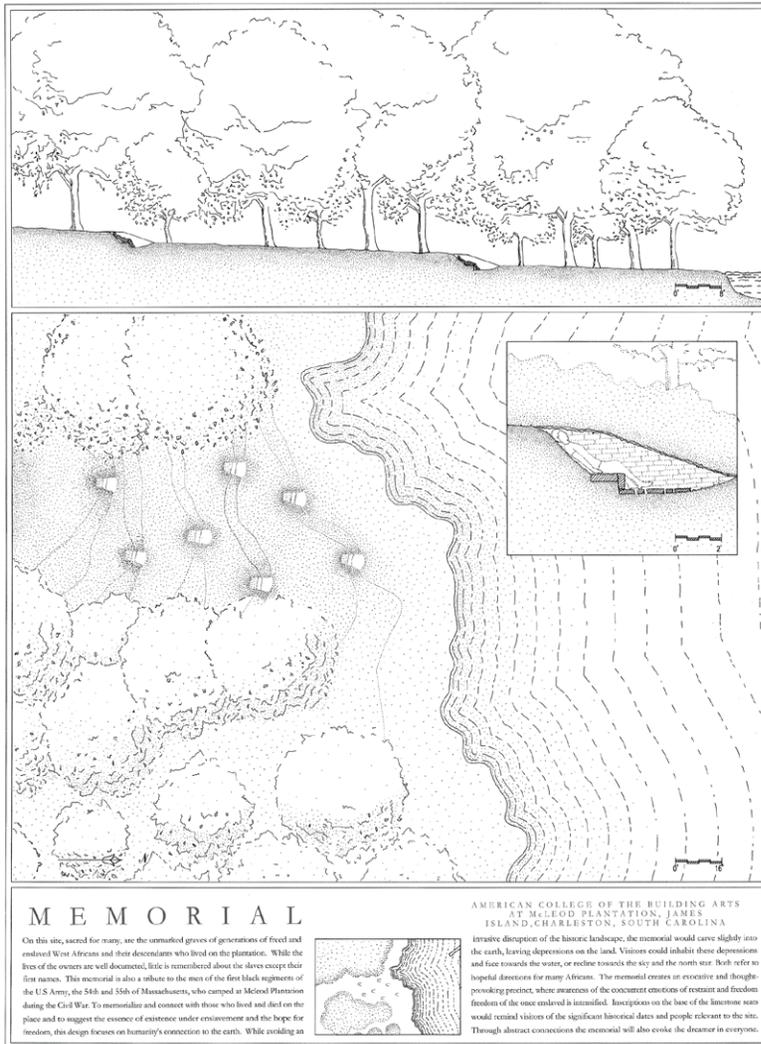
My evidenced-based research, inter-disciplinary teaching and mentorship of students has focused on how architecture, landscape and urban design considered together, can positively influence public health and climate change impacts planning and response.

Early research and professional work initially focused on how the design and preservation of landscapes were integral to health in the built environment. In the Olmsted tradition, landscape and architecture were studied and taught together as mutually beneficial. The development of core courses in the undergraduate program, such as the Hometown maps for all students in the professional program, provided students and faculty a holistic view of the built environment. Teaching the core theory course on Architecture and the Environment provided a foundation for students to understand how architecture and community design can look to research for actionable knowledge to benefit design and health (pages 4-8).

Consultations with healthcare systems on new and existing medical campuses that can serve as emerging models of healthy communities within and beyond their walls create opportunities for students to engage in community-based design in the areas of health, community, and resilience, and to participate in coursework with colleagues in other disciplines and institutions (pages 9-13).

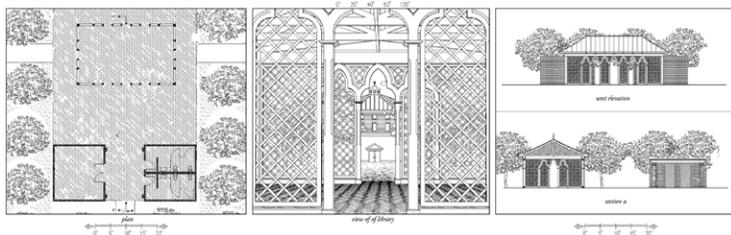
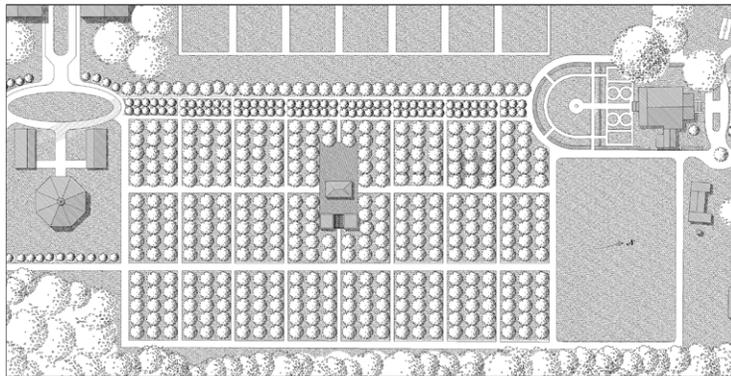
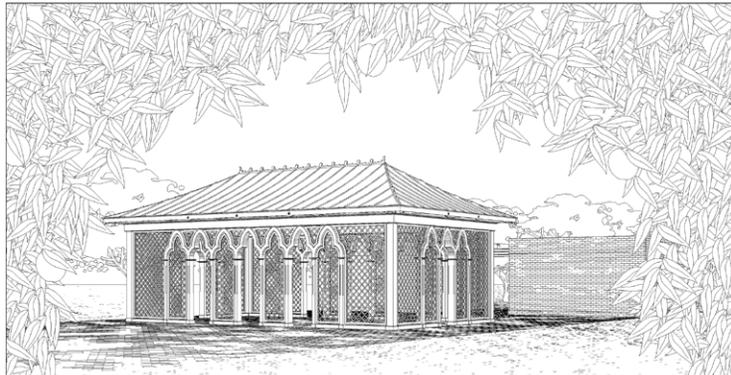
The UM Built-Environment Behavior & Health Research Group (founding member) and the University of Miami U-Link teams are two examples of how funded research can connect professionals and students to the community through interdisciplinary collaboration. This work has resulted in more than \$15 million in funded research, informing and guiding teaching to provide an expansive approach to architecture that enables students to develop their own areas of interest that they carry forward into their professional lives, and provides architects with relevant research readily applicable to practice (pages 14-18).

Advising students on competitions such as the ULI Hines encourages students to compete nationally on interdisciplinary and inter-institutional teams to develop viable projects for sustainable and resilient communities on principles mined in their core courses and charrettes. Integrating teaching and research through service extends the work of the school into the community and roots the concerns and aspirations of the community into the life of the school (pages 19-20).



Leah Harper, B.Arch. 2006, Memorial Proposal for the American College of the Building Arts, Charleston, Historic Preservation Studio, Faculty: J. Lombard, C. Lynn, and V. Vasconez Leah Harper is now Director of Operations and Design for the LGBT Bar Association of Greater New York (LeGAL)

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 Proposal for the American College of the
 Building Arts, Charleston, Historic Preserva-
 tion Studio, Faculty: J.Lombard, C.Lynn, and
 V. Vasconez; Erik Hutson, Architect, LEED AP
 is now CEO, Architecture, Construction, and
 Development Projects, LLC, Charleston, SC

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The material that follows provides an overview of work and out-comes along a career time line reaching two current areas of focus: Healthcare & Community and Climate & Community that integrate research, teaching and service to inform and advance.
04. 1979-91 Early Teaching, Scholarship & Service
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After this point, focus topics are presented as an integrating theme for teaching/research/scholarship/practice on pages 7-18.
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 - 12. Seminar: Healthcare Transect
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Early Teaching, Scholarship & Service

Early teaching and scholarship focused on curricular development for what became a new School of Architecture (1983). National service on ACSA committees and the JAE Editorial Board provided important guidance for a more relational exploration of design which grew out of research and teaching on architecture and landscape in the European and American city and expanded to include research on the tropical landscapes and urbanism of South Florida.

Outcomes:

Teaching

New Course Developed: Theories of Landscape Architecture, 1990

Awards

Outstanding Faculty Award, University of Miami Department of Architecture & Planning, 1980

Arthur W. Wheelwright Traveling Fellowship, Harvard University Graduate School of Design, 1983-84

ACSA SE Region Design Award, 1985

AIA Florida Design Award, 1985

University of Miami Max Orovitz Award in the Arts & Humanities, "Viczaya: European Precedent & American Form," 1985

Publications/Exhibitions

Looking at the Public Landscape, *Fairchild Tropical Garden Bulletin*, April 1983:17-24

Book Review: *Gardens are for People*, and *Landscape Architecture*, *Journal of Architectural Education*, Vol. 37, Number 2, Winter 1983: 31-2.

American Gardens: Epic and Artifact, *Utah Architect*, Fall 1984:13
 American Gardens & European Precedents, *OZ*, Volume 8, 1986: 20-25.

Six American Gardens, Architecture Gallery, Mississippi State University, January, 1987.

Fifties Find, *South Florida Home and Garden*, May 1987: 36-39.

Beach Club & Cottages, *Seaside: The Making of an American Town*, David Mohny and Keller Easterling, NY: Princeton Architectural Press, 1991 (116-117).

Editorial Board

Journal of Architectural Education, 1985-87

Service

Initiated Joint Program with *Istituto Universitario di Architettura di Venezia (IUAV)*, 1984

Initiated, 1980, & Taught Summer Studies for Elementary - High School Students, 1980-83

ACSA School Councilor, 1985-89

ACSA Annual Meeting, Host School Coordinator, 1988

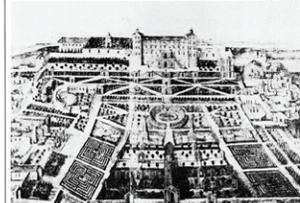
ACSA Value-Added Task Force, Chair, 1990-91

Clockwise from top right, Venice sketch, 1984; Program poster, 1980; Seaside sketches, Easterling, Mohny, 1991:116; *OZ*, 1986:20.

American Gardens and their European Precedents:

Tradition and Strategy

Joanna Lombard



Perspective view, Villa D'Este.

Introduction

The study of American gardens and their European precedents has yielded two essential ideas. One is a way of categorizing garden form, the other an elaboration of the parts of American gardens that seem distinct and shared.

The garden history significant to American gardens can be classified into two traditions, that of the epic, and that of the artifact. The epic tradition presents a spatial sequence evocation of the literary epic journey. The gardens of Renaissance Italy most clearly illustrate this notion in their execution of a literal, iconographic narrative. Distinct spaces denote arrival, sequence and departure. Participation in the unfolding journey is essential and the complete experience

of the garden is dynamic and cumulative. The artifact tradition is most easily seen in the picturesque English garden where objects are arranged compositionally. The object holds particular symbolic meaning and associate power without the spatial delineation of sequence. The quality of the visual experience supercedes both sensorial movement through space and the literary narrative.

American gardens borrow from these traditions, one dynamic and fully sensorial, the other static and primarily pictorial. It is important here to distinguish between garden tradition and garden plan. While the gridded plan of the Renaissance garden is static, the totality of spatial sequence is dynamic. In

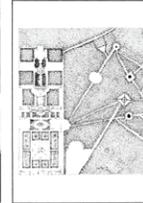


Villa D'Este.



Villa Lante.

In contrast, the picturesque plan appears dynamic but the spatial sequence is in fact static.

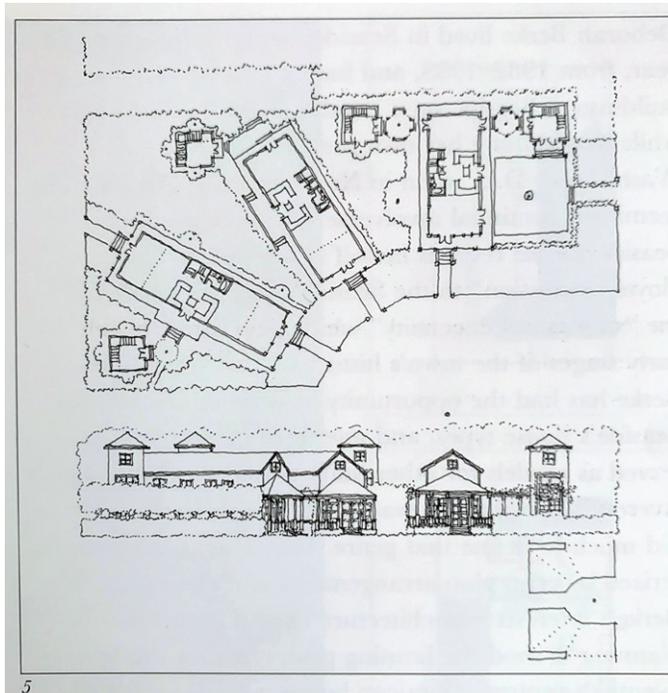


Plan, Villa Lante.

The Epic Tradition

Villa D'Este

Examples of the epic and artifact tradition precede an analysis of American gardens in order to illustrate both precedent and subsequent transformation of the American garden. Two Italian gardens express the epic tradition clearly. Villa d'Este at Tivoli and Villa Lante at Bagnaia. Palladio's Villa Barbaro at Maer further describes the evolution of the type into a precursor of American gardens. Stourhead in England illustrates the characteristics of the artifact garden. Finally, five American gardens exemplify American gardens focuses on the distinction of the genre.



The Department of Architecture and Planning
 School of Engineering and Architecture University of Miami

ARCHITECTURE

SUMMER STUDIES 1980

16 June - 12 July

The Elementary School Program · The Middle School Program
 The High School Program

Classes meet Monday through Friday - Grades 2-5 9:30-12:00 p.m.
 6-8 9:00-12:00 p.m.
 9-12 9:00-12:00 p.m.

Enrollment is limited to 20 students per program. Contact: Joanna L. Lombard, Department of Architecture and Planning, School of Engineering and Architecture, University of Miami, Coral Gables, FL 33041 (305) 291-3138

Hurricane Andrew: New Research Collaborations

- in the ruined city the cheapness, the flimsiness, the real estate shacks, the billboards, the garish swinging signs, the houses badly built, the dizzy ideas, the boom itself, was blown away. What was left were such foundations of buildings or ideas as had been well and truly laid. There was the sea and the bay, tranquil and innocent already as blue flowers. There was the rock below, the sun and the fine exuberant air. And the courage, the fundamental character, of a sobered people.

Marjory Stoneman Douglas, *The Everglades: River of Grass* (Sarasota: Pineapple Press [1947]1988), 340-341

Hurricane Andrew devastated Miami in 1992 bringing Marjory Stoneman Douglas's words to mind. Miami's architects worked against statewide opposition to successfully change the building codes to respond to flood and wind resistance. This also inspired a radical rethinking of the role of the architect and architectural education to place responsibility for public health, safety and welfare at the forefront. This was the beginning of university-wide collaborations that led to projects of national interest in new models for rebuilding in the wake of catastrophic hazard events.



1926, North Miami Beach, State Archives of Florida

Outcomes:

Teaching
New Course Developed: Landscape Documentation 1993

Award
University of Miami Max Orovitz Award in the Arts & Humanities, Coral Gables Historic Landscape, 1992.

Publications
Windsor Townhouse, w/D.Hector, J.Hernandez, *Miami: Architecture of the Tropics*, eds. Maurice Culot and Jean-Francois Lejeune. Brussels: Center of the Fine Arts, Miami- Archives d'Architecture Moderne, 1992:185.
Competition Entry, w/Maria Nardi, *A New American Green Design Competition Catalog for the Winning and Other Selected Entries*, Olympia Fields Park District. Olympia Fields: Illinois, 1993:18.

Funded Research
Knight Foundation, *National Research Conference in Hurricane Hazard Mitigation*, CoPI w/Denis Hector, 1993-94, \$132,000.
National Science Foundation: *Hurricane Andrew: Data Collection and Damage Assessments*, Investigator w/Denis Hector, Ahmad Namini and Mehrdad Soltani, \$42,439. and *Research Experiences for Undergraduates Supplement*, 1992-1994, \$9,000.

Service
ACSA 81st Annual Meeting, Charleston, Co-Chair w/ Michael Fazio, MSU, 1993.

Hurricane Hazard Mitigation: A Report on the National Research Conference on Hurricane Hazard Mitigation, eds. D. Hector and B. Dunlop, UMSA/Knight Foundation, 1996.



1992, Hurricane Andrew Damage, Country Walk, Miami, Florida, photo by Tim Chapman, Miami Herald

Integrating Teaching, Scholarship/Research & Service

After Hurricane Andrew, there was a shift in the school's core curriculum, practices, and community outreach which led to research on the importance of place. Documenting historic and current context became an essential safeguard and a first step in building, and now rebuilding. Living through weeks without power and water, with the physical fabric of neighborhoods literally shredded, and drawing from deeper community engagements, we developed projects to advance student understandings of the interrelationships of place and people (*drawing, below right*), local research (*JDKA, near right*), and a more substantial knowledge base, which led to forming what is now the Built Environment Behavior and Health Research Group. The Robert Wood Johnson Foundation funded our first study on built environment impacts on middle-school children (*see below*).

Outcomes:

Teaching

New Courses Developed: Landscape Design Studio, 1995
 Redesign and Course Development: (Core Requirement) Architecture & the Environment, 1998

Awards

ACSA SE Region Design Award, 1985
 University of Miami Excellence in Teaching Award, 1996
 AIA Florida Unbuilt Design Award w/Denis Hector, 1996
 University of Miami Max Orovitz Award in the Arts & Humanities, Wilderness & Cultivation: The Work of William Lyman Phillips, 1996
 School of Architecture Outstanding Faculty Award, 1997

Publications

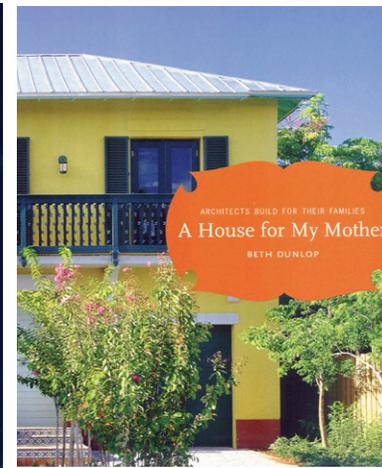
The Best Little House #24, w/D. Hector, *Home* (Volume 42 No.9, November 1996): 118-123
 Side-Yard House, Windsor, w/D.Hector, J.Hernandez, *Between Two Towers*, Vincent Scully. NYC: The Monacelli Press, Inc. 1996 (140).
 Architecture: Corpus Vivus, w/ L.Trelles and T.Victoria, *Proceedings of the 84th Annual Meeting and Technology Conference*, Washington, D.C.: ACSA, 1996: 207-212.
 LL.B. to J.D. and the Professional Degree in Architecture, *Architecture: Material and Imagined, Proceedings of the 85th ACSA Annual Meeting and Technology Conference*, Washington, D.C.: ACSA, 1997: 585-591.
 Coral Gables: The City as a Garden, *Coral Gables An American Garden City*, eds. Roberto Behar and Maurice Culot. Paris: Norma Editions 1997:65-83.
 The Memorable Landscapes of William Lyman Phillips, *Florida Theme Issue: The Journal of the Decorative and Propaganda Arts* 1875-1945 (Vol. 23, 1998):261-287. (*above right*)
 Clematis House, w/D.Hector, *A House for My Mother*, Beth Dunlop. NY: Princeton Architectural Press 1999 (Cover, 176-83). (*above far right*)

Funded Research

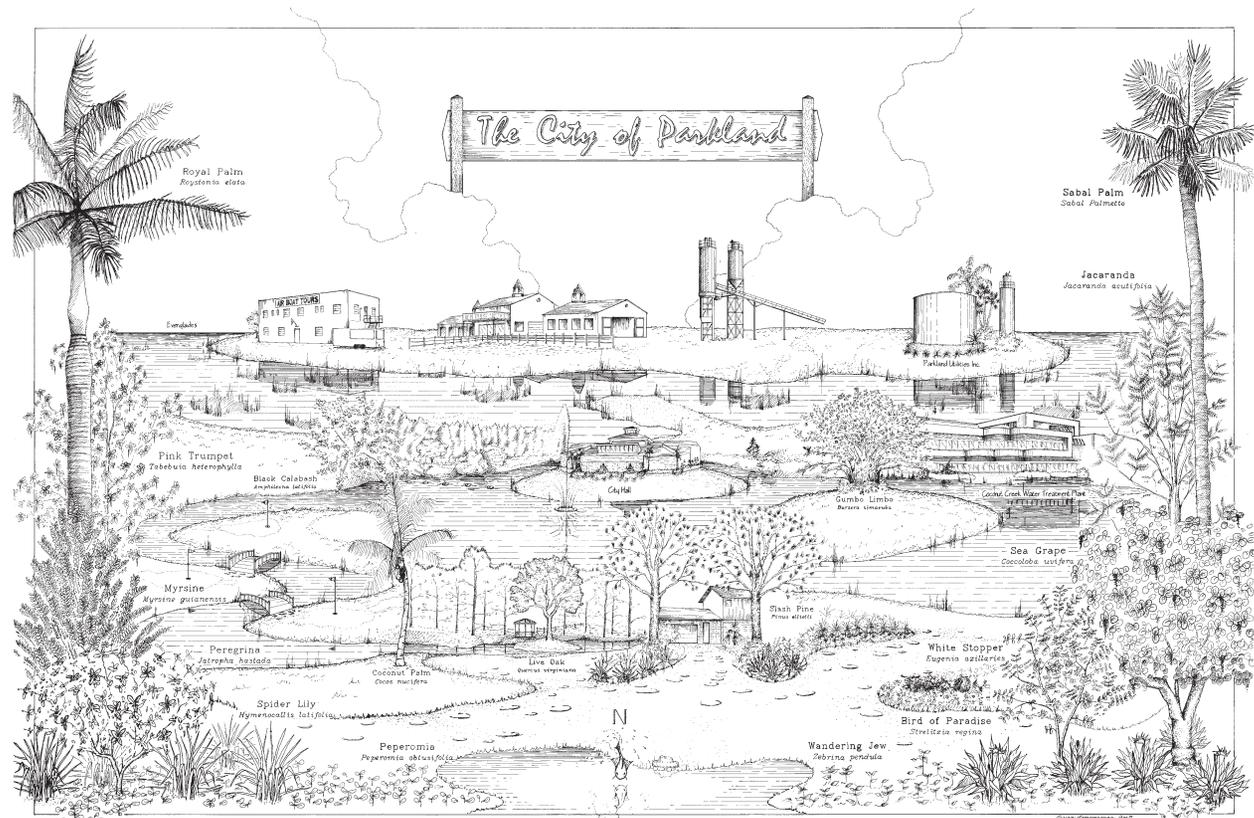
The Role of the Built Environment in Risk and Protection for Drug Abuse: Policy Implications, Investigator, PI, José Szapocznik, Robert Wood Johnson Foundation, \$346,304.

National Service

ACSA National Administrators Conference, Local Coordinator, 1996



The Hometown Map (example below) engages beginning students in documentation and analysis of a place of their choosing to explore the relationships of architecture and environment to illustrate what they perceive as most valuable. Presented in a paper at the 84th ACSA Annual Meeting, the project continues in new formats to the present.



Student Work: Hometown Map, Brian Lemmerman, B.Arch. 2009, now Co-Founder, F.E.A.R.S. Advantage-DEI Consulting, Bayern, Germany

Architecture & the Cultural Landscape

The foundation of documentation and analysis of built environment impacts on health reinforced the important role of the cultural landscapes. In addition to exposure to the destruction of the hurricane force winds and water, many of Florida's historic cultural landscapes were threatened by development. This led to nearly a decade of collaborative work with students and faculty on the documentation of Florida's historic landscapes through which we traced the lineage of landscapes and structures, and the people who shaped them (*drawing example below, right*).

Outcomes:

Teaching

New Symposium for Architecture & the Environment Class: H. Wanless, Geological Sciences; C. Weaver, Senior Environmental Scientist, South Florida Water Management District, C. Hubbuch, Director of Plant Collections, Fairchild Tropical Garden, R. Kelley, Tropical Audubon Society, 2000

New Interdisciplinary modules for Arc & Env- Coastal Systems, Hydrology, Hazards & Global Warming: Principles & Analytical Tools for Design, 2002

Comprehensive Studio Pilot: Atelier Model, 1st-5th year B.Archs, 2003

Course redesign: Negotiation Modules Professional Practice w/M. Reeves, 2004.

Awards

Outstanding Achievement in the Field of Preservation Education/Media, Florida Trust for Historic Preservation, *Historic Landscapes of Florida* w/R.Ceo, 2002.

AIA Florida Honor Award, Fairchild Tropical Garden Visitor Center, consultant to DPZ, 2005.

Florida Humanities Council "Roads Scholar," 2005-6; Presentations- Homestead Library, Okeechobee Library, The Villages of Sumter of County, the Goodwood Museum, Pensacola North Hill Preservation Association, Archaeological Society of Southern Florida, Dade Heritage Trust, Women's Club of Coconut Grove, Naples Botanical Garden, and the Villagers of Coral Gables

Publications/Exhibitions

Historic Landscapes of Florida, w/Rocco Ceo, Miami: Deering Foundation and University of Miami School of Architecture, 2001.

Exhibition- *Historic Landscapes of Florida*

Cutler Estate, 2001, Edison Estate, Fort Meyers 2002, Mennello Museum of American Folk Art, Orlando 2003; Bok Tower Gardens, Lake Wales 2004, Florida Museum of History, Tallahassee, 2005

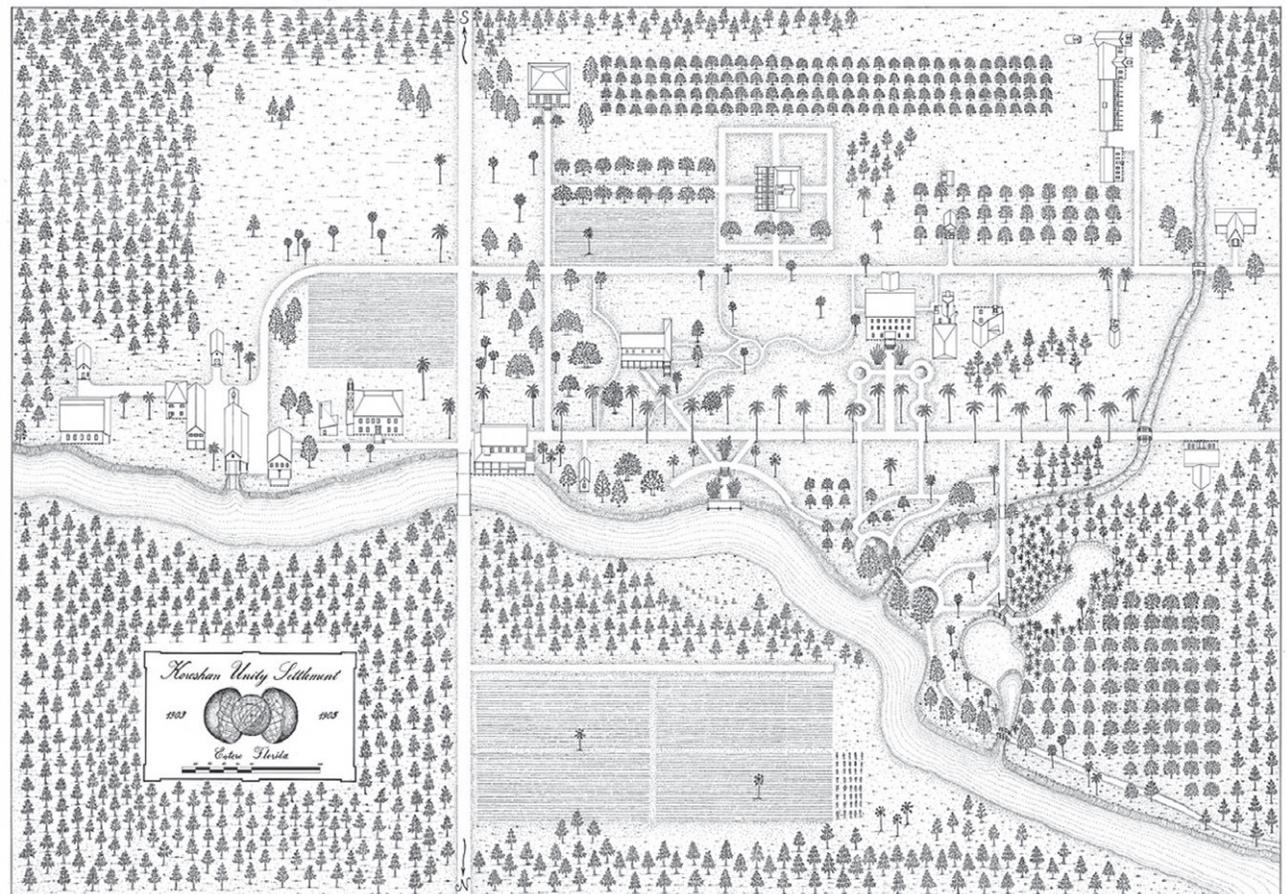
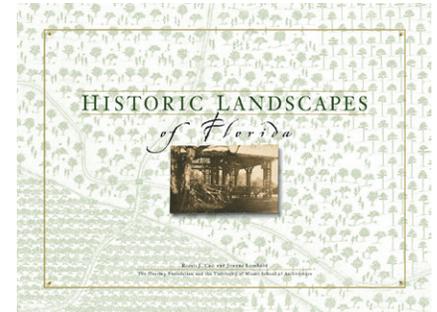
The Architecture of Duany Plater-Zyberk and Company, New York: Rizzoli International, 2005

Funded Research

Historic Landscapes of Florida, w/R.Ceo, James Deering Danielson Foundation, 2000-01, \$50,000.

William Lyman Phillips & the Dade County Park System, PI R.Ceo, James Deering Danielson Foundation, 2005 \$25,000.

Built Environment & Hispanic Elders' Behavioral Health, Investigator, PI, J.Szapocznik, NIMH/NIEHS R01 MH 063709 2000-2006, \$2,584,689.



Koreshan Unity Settlement, Estero, Florida, Reconstruction Drawing, Vivian Alvarez, Sonia Baltodano, Yvonne Branchini, Carlos Chiu, David Swetland, Frank Wenzel, Gary Wunderlich, 36"x73.5" ink on mylar, 1996, in *Historic Landscapes of Florida*, w/Rocco Ceo, Miami: Deering Foundation and University of Miami School of Architecture, 2001:55.

Built Environment & Health Impacts

Findings on architectural and neighborhood features' impacts on children and elders (*right*) led to assessing how recent immigrants responded to aspects of Miami's neighborhoods. This analysis provided the foundation for a study on the relationship of Miami-Dade's built environment to health outcomes of the county's 750,000 Medicare beneficiaries. The study informed design studios, seminars, and consulting work with healthcare systems responding to opportunities for community benefits through engagement and design as well as the design of the New Urbanism Online course which was launched in 2008. Findings provided a foundation for the American College of the Building Arts project as they considered a move to James Island. The studio developed a campus plan (*below*) and architecture that would support the ACBA mission, respect the site's history, and contribute to community health and wellbeing.

Outcomes:

Teaching
 Funded Studios: American College of the Building Arts, St. James Island, SC, 2006; Overcoming the Underpass, Overtown; Royal Poinciana Way Building Renewal Plan, 2008
 Developed/launched *New Urbanism Online* Course, w/N. Bixby, C. Bohl, 2007-8

Awards
 School of Architecture Outstanding Faculty Award, 2010

Publications
Great Houses of Florida, w/Beth Dunlop, NYC: Rizzoli, 2008
Identifying Streetscape Features Significant to Well-Being, Spokane, Lombard, Perrino, et al., *Architectural Science Review*, September 2007, 50(3):234-245.
 The relationship of built environment to perceived social support and psychological distress in Hispanic elders: The role of 'eyes on the street,' Brown, Mason, Lombard, et al. *Journal of Gerontology: Social Sciences*, 64B(2), 2009, 234-246.
 Built environment and physical functioning in Hispanic elders: The role of 'eyes on the street.' Brown, Mason, Perrino, Lombard, et al. *Environmental Health Perspectives*, 2008, 116(110), 1300-1307.
 The Impact of the Built Environment on Children's School Grades: The Role of Diversity of Use in Hispanic Neighborhoods, Szapocznik, Lombard, et al. *American Journal of Community Psychology*, September 2006, 38: 299-310.
 Patient safety begins with proper planning: a quantitative method to improve hospital design, Birnbach, Nevo, Scheinman, Fitzpatrick, Shekter, Lombard, *Quality & Safety in Health Care*, 2010;19:462-465.

Funded Research
Hispanics, Built Environment, & Metabolic Syndrome, Investigator, PI, J.Szapocznik, NIIDDK R01 DK 074687, 2007-12, \$4,044,735.
Built Environment and Hispanic Elders' Health, Investigator, PI, J.Szapocznik, NIA R01 AG 027527, 2006-10, \$1,409,319.



ACBA Site plan (above) Zambia Brannon, Lucienne DeNunzio, Kimberly Clemente, Timur Dincer, Valerie Grasseti, Renée Habib, Leah Harper, Erik Hutson, Keith Iorio, Jen Liston, Megan McLaughlin, Katy McQuillin, Jake Seiberling, Erine Stames, Eugenia Theofilaktidou, Danielle Wainer, Annamaria Zampogna, students; Joanna Lombard, Catherine Lynn, and Veruska Vasconez, Faculty, Daniel D'Angelo, TA; Frances Hanahan, Historic Charleston Foundation, William Bates, ACBA, City of Charleston, and Dale Jaeger

Identifying Streetscape Features Significant to Well-Being

Arnold R. Spokane,^{1†} Joanna L. Lombard,^{2,4} Frank Martinez,^{2,4} Craig A. Mason,³ Deborah Gorman-Smith,⁵ Elizabeth Plater-Zyberk,² Scott C. Brown,⁴ Tatiana Perrino⁶ and José Szapocznik^{4,2}

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²School of Architecture, University of Miami, Coral Gables, Florida, USA
³College of Education and Human Development, University of Maine, Orono, Maine, USA
⁴School of Medicine, University of Miami, Miami, Florida, USA
⁵College of Medicine, University of Illinois at Chicago, Chicago, Illinois, USA
⁶Corresponding author: Tel: 610 758 3250; Fax: 610 758 3227; E-mail: arsl@lehigh.edu

Received 8 October 2006; accepted 28 February 2007

Abstract: To determine effective relationships between the built environment and health and well-being, a transdisciplinary team of architectural, behavioral and health scientists developed a built environment coding system (UMBECS). They examined the relationship of resulting streetscape features to health and well-being at the block level. The research team conducted studies of the validity of UMBECS focusing on children through school conduct and grades, and on elders through a longitudinal cognitive functioning study. For children, contrary to popularly held views, commercial-residential mix was as effective as a high proportion of residential use in predicting children's school outcomes (i.e., better conduct, achievement, effort, and grades). For elders, modest but statistically significant relationships existed between block-level features, elders' neighborly behaviors, and social support, which in turn were significantly associated with cognitive and affective functioning. These findings suggest the utility of this built environment coding system for examining the relationship of built environment features to residents' health and well-being. UMBECS offers a useful tool for developing a viable transdisciplinary model of the role of the built environment in behavioral and health outcomes.

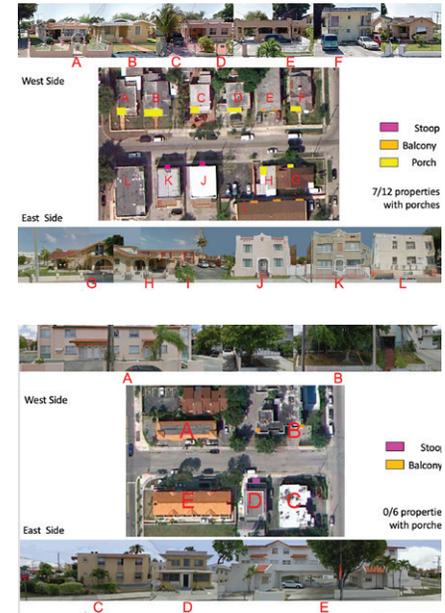
Keywords: Block-level analysis, Coding systems, Community design, Environmental health, Environmental measurement, Streetscapes, Urban planning, Well-being

Introduction

Basic human experience tells us that places in which we live and work exert an influence on our behavior (i.e., Gifford, 2007; Sovich, 2003). Theorists and researchers have identified aspects of the physical environment that affect individuals and communities (i.e., Jacobs, 1992; Leyden, 2003; Plora, Bull, Jamrozik, Knuiman, Giles-Cori & Donovan, 2002; Srinivasan, O'Fallon & Deary, 2003). Many empirical studies have found specific physical and psychosocial features of urban neighborhoods that affect residents, including the physical arrangement of buildings (Abu-Ghazeh, 1999; Brown & Cooper, 2001), size of dwelling (Lawton, Brody & Turner-Massey, 1978), intersection space (Skjerve and Carling, 1997), and friendliness toward activity (Brownson, Chang, Ejler, Ainsworth, Kirtland, Saelens, & Sallis, 2004), as well as some general physical features (Evans, 2003; Northridge, Sclar & Biwas, 2004; Taylor, Shumaker & Goodfriend, 1983). Conclusions from this work reinforce the supposition that the design of neighborhoods affects individual residents (Coaburn, 2004; Frumkin, Frank &

Jackson, 2004). The precise mechanisms, however, by which the physical aspects of the built environment of neighborhoods sustain or diminish the health and well-being of their inhabitants are still largely unknown.

To advance understanding of the interactions between people and neighborhoods, it is important to build upon the foundation of the many significant, discipline-specific or element-specific studies that integrate physical, psychosocial and design processes. Whereas research in this area tends to rely on residents' perceptions or observational measures of the overall neighborhood such as block length and intersection density, the collaborative effort of this study sought to identify in an objective manner the specific features of the streetscape at the lot level that contribute to the social processes relevant to well-being. Refined measurement systems are crucial to progress in understanding the complex manner in which the built environment affects behavior, and subsequently, the health of residents.



Healthcare & Community Research and Practice Foundations

Outcomes:

Funded Studios- \$100,000. to date
 De Paul Medical Center, Norfolk, VA, 2009; Greenfield Hospital, Henrico County, VA, 2010; St. Mary's Children's Hospital & Medical Center, Richmond, VA 2011; Piedmont Fayette Medical & Town Center, Fayetteville, GA, 2012; Roper St. Francis Health District, Berkeley County, SC, 2013; Bon Secours Medical Village, Broad Hill Centre, VA, 2014; Frederica Wilson and Jessie Trice Liberty City Health Clinic, Miami 2015; Resurrection Health, Chicago 2015; West Town, Chicago, 2018; Generation Park, Houston, 2019; Providence St. Patrick, Missoula, MT, 2020
 Students engaged: 200+ students in Architecture, Urban Design, Real Estate, Law, Medicine and Public Health

Awards

CNU Merit Award, *East End Transformation*, w/Bon Secours Richmond, City of Richmond, DPZ, 2016
 Public Outreach and Engagement Award, American Planning Association, Virginia Chapter, 2011 *East End Vision Charrette*, w/Bon Secours Richmond, City of Richmond, RRHA, DPZ, 2011
 Outstanding Achievement in the Field of Preservation Education/Media, Florida Trust for Historic Preservation Award, *Great Houses of Florida*, w/B.Dunlop, 2011.

Publications

Walk Score: Associations with Purposive Walking in Recent Cuban Immigrants. Brown, Pantin, Lombard, et al. *American Journal of Preventive Medicine*, 2013, 45(2):202-206.

Neighborhoods and Social Interaction, w/S.Brown, *Wellbeing and the Environment: Wellbeing: A Complete Reference Guide*, Vol. II, eds. Rachel Cooper, Elizabeth Burton and Cary L. Cooper, Wiley-Blackwell. John Wiley & Sons, Inc. 2014 (1-28).

Walking and Proximity to the Urban Growth Boundary and Central Business District, Brown, Lombard, et al., *American Journal of Preventive Medicine*, 2014, 47(4):481-486

Designing Parks for Health, *Parks & Recreation: The Official Publication of the National Recreation and Park Association*, Oct. 2016: 76-81.

Neighborhood greenness and chronic health conditions in Medicare beneficiaries. Brown, Lombard, et al., *American Journal of Preventive Medicine*, 2016, Jul;51(1):78-89.

The Role of Gardens in Healthy Communities, *The Bulletin: Garden Club of America*, Oct. 2017: 16-18.

Health disparities in the relationship of neighborhood greenness to mental health outcomes in 249,405 U.S. Medicare beneficiaries. Brown, Perrino, Lombard, et al. *International Journal of Environmental Research & Public Health*, 2018, 15(3): 430.

Funded Research

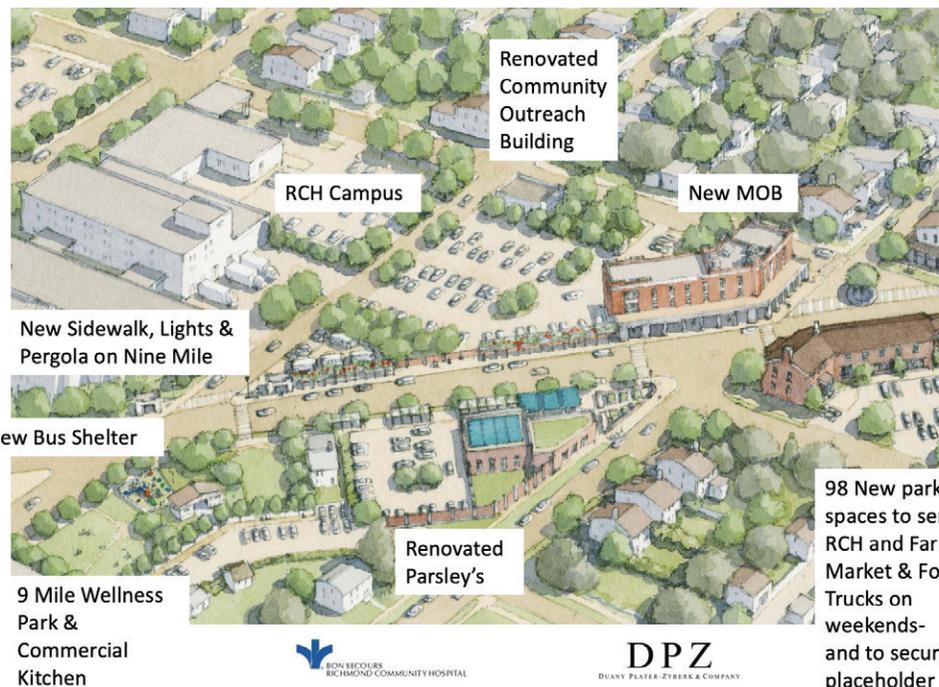
Health Impacts of the Built-Environment among Miami Medicare/Medicaid Beneficiaries, Investigator, Pls S.Brown, E.Plater-Zyberk, Dept. of Housing and Urban Development, 2011-17, \$500,000.

Increasing Physical Activity Opportunities in Miami-Dade County Parks, Co-Principal Investigator, CoPI, S.Brown, CDC Partners To Improve Community Health (PICH) Grant, Florida Department of Health in Miami-Dade County, 2016-18, \$330,000.

Impacts of Greening on Cardiovascular Disease in Low-Income Miami Neighborhoods, Investigator, Pls S.Brown, J.Szapocznik Robert Wood Johnson Foundation, 2018-21, \$382,500



The foundation of research findings and practice enabled the integration of this work into interdisciplinary studios for architecture, urban design and real-estate students. Building on the model of the professional charrette each studio addresses a project introduced by a not-for-profit, engages professionals associated with the project in participatory design with related community members, develops and tests proposals through multiple feedback/design sessions, and organizes results in summary documents, usually in the form of a project prospectus, that can be used by the not-for-profit to seed professional continuation of the work.



Clockwise from top left- Council Representative Newbille image from the film, *Passion for a place: Church Hill & Richmond's East End*, (<https://vimeo.com/14981186#embed>), Church Hill Studio; Detail of Nine Mile Road Projects (2014); Youth Workshop, East End Charrette, Richmond, Virginia, Bon Secours Richmond Health System, The City of Richmond, and Richmond Redevelopment & Housing Authority (2010), East End Post-Charrette Workshop (2013).

Healthcare & Community Studio: West Town, Chicago

The West Town Studio (*right*) and the Missoula studio that follows (*next page*) represent examples of the range of investigations situated within the 12 Healthcare & Community Studios conducted since 2009. This evidence-based teaching approach is conducted within an overall framework consistent across the studios, with site visits and speakers unique to each location and facility, and when possible, seminar courses that focus on related issues. The framework for these studios typically consists of:

- 1) Sponsored workshops with constituents, local leaders and community members;
- 2) Learning sessions with healthcare professionals in administration, medicine & public health; healthcare architects and urban designers;
- 3) Student collaboration in the programs of real estate in the Architecture, Business, and Law Schools, as well workshops with public health and medical students;
- 4) Mid-point and development reviews with the local project team; and
- 5) Publication of outcomes in the form of a physical and online book.

Sponsored by Presence Health in Chicago, the West Town Studio explored possibilities for establishing a health district linking two historic, but newly acquired facilities, and developed proposals for new and/or renovated facilities and programs to enhance system unification and contribute to a healthy neighborhood.

Outcomes:

Teaching
DesignIntelligence 30 Most Admired Educators for 2013

Student Awards
 AIA-AAH Student Design Challenge in Nashville, 2018
 Caitlyn Smith, 1st Place Team; Erin Hickey, 2nd Place Team

Student Impacts (2018 Awardees)
 Caitlyn Smith, Designer, *Torti Gallas+Partners*, WDC
 Erin Hickey, *Design Associate*, HDR, Chicago

Project Viability
 Presence Health initiated a review for historic designation of St. Mary's Hospital as an example of Chicago brutalist architecture.



Streetscape Before (top) & After (above), Erin Hickey, B.Arch. 2018



Studio in Chicago w/Presence Health Leaders, March 2018

Healthcare & Community Studio Example: Presence Health St. Mary and St. Elizabeth Medical Center, West Town



New & Renewed Proposal: Irene Balza, B.Arch. 2016, MUD, 2018; Erin Hickey, B.Arch. 2018; Ronan Kerouille, M.Arch. Nantes; Kun Li, MUD, 2019; Nathan Morales Gallardo, B.Arch. 2019; Siyu Wang, MUD, 2019, Finance: Alex Briel, MSAE, 2018, Anna-Bo Emmanuel, LLM, RE 2019, John Grant, MREDU 2019, Ronald Rojas, LLM, RE 2018, Chao Wang, MRED+U, 2019

Healthcare & Community Studio: Missoula, Montana

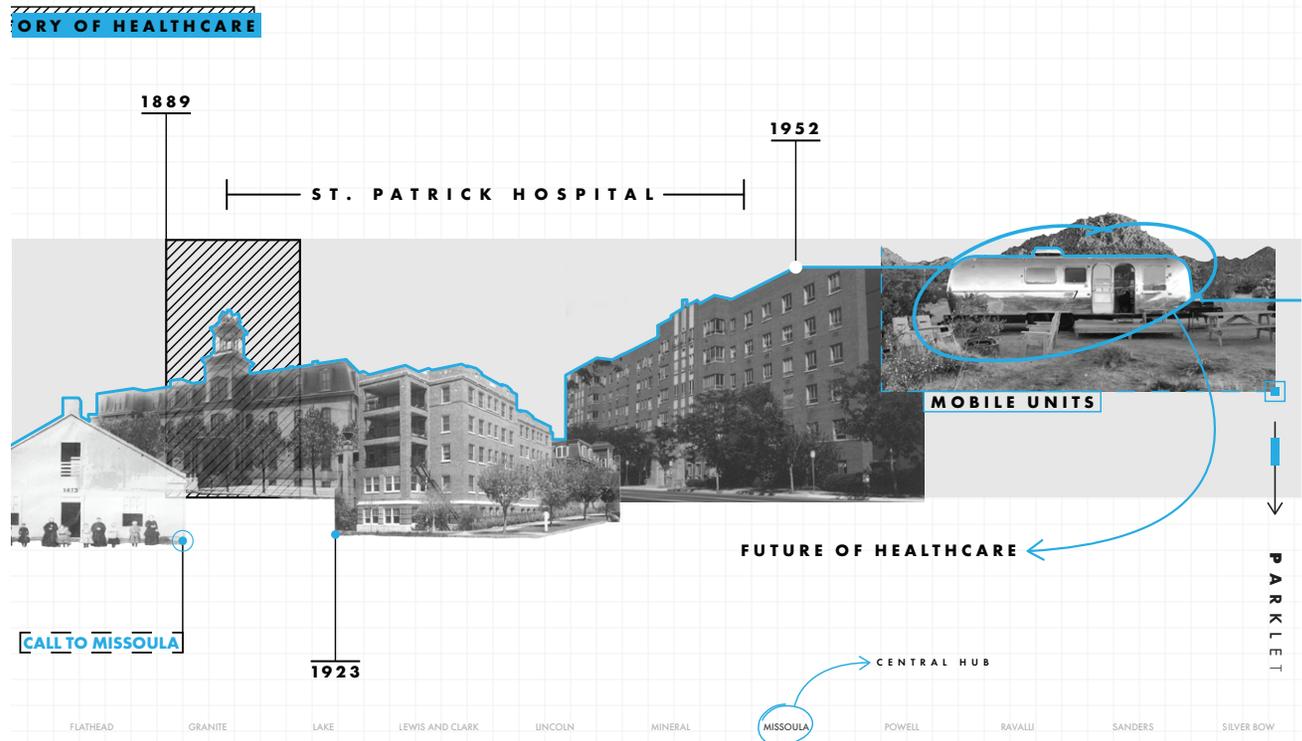
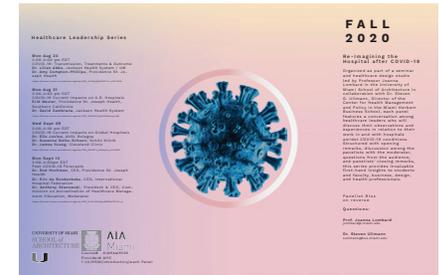
The 2020 Missoula studio opened with an international symposium of physicians and health care leaders from Berlin, Bologna, Brussels and London, and the US who shared their observations from the frontlines of COVID care. Working in collaboration with the local healthcare team members and design professionals, as well as advisers in healthcare architecture, and UM Real Estate, Law, Urban Design, and Public Health Sciences faculty and students, and employing both charrette and design-thinking methods, the students developed proposals for the medical campus district, medical and community buildings, and landscapes.

Outcomes:

Teaching Hospitals, Health Care Services and Access: An Interdisciplinary Inquiry, w/faculty in the College of Arts and Sciences, Herbert Business School, Law, Miller School of Medicine, School of Nursing and Health Studies and the UM Institute of Bioethics and Health Policy (2011-present)
 Healthcare Leadership Series, developed and moderated with S.Ullmann, Miami Herbert Business School, 2020 (above right)

Publications
 Relationship of neighborhood greenness to mental health outcomes in 249,405 U.S. Medicare beneficiaries, K. Wang, J. Lombard, et al. *Journal of the American Heart Association*. Vol.8(6), March 19, 2019
 Neighbourhood greenness and depression among older adults. T.Perrino, J.Lombard, et al. *British Journal of Psychiatry*, 2019, 215(2), 476-480.
 Relationship of Neighborhood Greenness to Alzheimer's Disease and Non-Alzheimer's Dementia Among 249,405 U.S. Medicare Beneficiaries. W. Aitken, J.Lombard, et al. *Journal of Alzheimer's Disease*, (81), 597-606, 2021.

Funded Research
Impacts of Neighborhood Greenness & Greening Initiatives on Alzheimer's Disease in Medicare Beneficiaries, Co-PI w/ S. Brown, JSzapocznik, Ed & Ethel Moore Alzheimer's Research Grant, State of Florida Department of Health, 2019-21, \$95,000.
Neighborhood Greenness & Cardiometabolic Health Among Hispanics in the HCHS/Sol Study, Investigator, Pls S.Brown, J.Szapocznik, NIH R01HL148880-A, 2020-23, \$2,274,147.
Neighborhood Greenness, Cognitive Performance and Vascular Outcomes in the Northern Manhattan Study: NOMAS-Greenness, Investigator, Pls S.Brown, J.Szapocznik, NIH/NIA 1 RF1 AG074306-01, 2021-24, \$2,264,013



Clockwise from top right: Healthcare Leadership Series; Providence St. Joseph Health, Missoula, Montana Studio Mobile Health Project Team, Tiffani Banks, Jheanelle Miller, Gabriel Soomar, B.Arch. 2021; St. Joseph Pavilion Hospital, Emily Camejo and Polen Durak, M.Arch. 2021; Zoom Session, Pre-Final Review, Studio and Providence St. Joseph National and Missoula Leadership teams, November 2020

Healthcare & Community Seminar: Healthcare Transect

Working with colleagues on the introduction of Health Districts for the practitioners of the Congress for the New Urbanism (CNU), we wondered whether exploring the transect theory, as understood in planning, from a healthcare planning perspective could yield useful analytical strategies for professionals. Seminar students then spent a semester exploring healthcare campuses across the globe seeking examples where the hospital campus was well connected to its community and served as an amenity, if not an outright tourist attraction. The list was winnowed to represent the key lessons across each domain from rural to urban as well as a distinct Health District.

Outcomes:

Student Paper Presentation
 CNU 22, Buffalo 2014, Dina Dajani, Jared Payne and Shalinie Persaud

Student Presenters

Dina Dajani, PhD in Cognitive Neuroscience, works in the Brain Connectivity and Cognition Lab at the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA where she continues her interest in built environment impacts.

Jared Payne, M.Arch. Columbia University, 2021, currently a Teaching Associate at Columbia

Shalinie Persaud, Licensed architect, Project Manager and BIM Leader at ICON Architecture, Boston.

Publication

CNU Health District website, CNU Health Districts Advisory Committee, L. Heery, C. Green, J. Harper, J. Lombard, L. Frank, B. Van Akkeren

Student Authors: Dina Dajani, B.Sci. 2014, Johnathan Hrasar, B.Arch. 2014, Xiaoyu Huang, B.Arch. 2015, Cynthia Mills, B.Arch. 2014, Joselyn Ojeda, B.Arch. 2016, Jared Payne, B.A. 2014, Shalinie Persaud, M.Arch. 2015, Raymond Peters Ahedo, NDG, Lilisbeth Valdes, B.Arch. 2014, Zhe Wen, B.Arch. 2014, Xuwen Xing, M.Arch. 2015

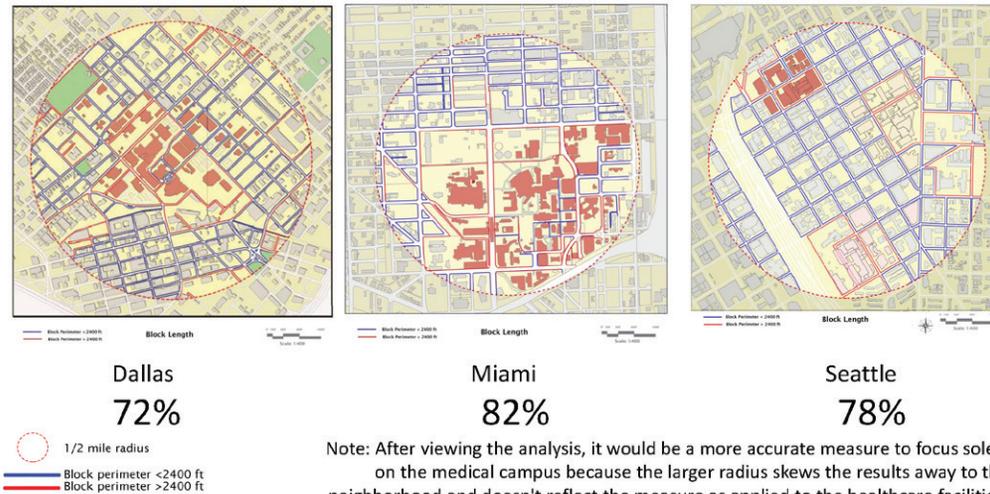


Student Research/Scholarship Example: Healthcare Transect

Healthcare & Community Seminar: Health District Metrics

This seminar explored the potential to develop evidence-based metrics that could be applied to design decision-making. After conducting literature reviews on health and wellbeing impacts of built environment features, we focused on the US Green Building Council's LEED for Neighborhood Development (LEED ND) standards as a research-validated set of measures which could be applied to healthcare districts and hospital campuses. Students reviewed leading US medical centers to analyze through the LEED-ND framework. After multiple tests and presentations with healthcare architects, Jason Harper, Perkins Eastman, and Sheila Elijah-Barnwell, Pact Studios; as well as UM and Jackson Memorial Health System executives and facilities planners, the students determined that four aspects of the Neighborhood and four aspects of the Medical Campus could be found to be predictors of beneficial impacts on neighborhoods and salutatory campus environments for patients and caregivers.

Neighborhood Metric: (1/2 mile radius used due to medical district sizes)
Block Length (% blocks < 2400 Linear Ft. perimeter)



Note: After viewing the analysis, it would be a more accurate measure to focus solely on the medical campus because the larger radius skews the results away to the neighborhood and doesn't reflect the measure as applied to the healthcare facilities.

- 4 Neighborhood Metrics
1/2 mile radius
- Intersections (>90 per square mile)
 - Commercial Destinations (#)
 - Block Length (% < 2400 linear feet perimeter) (Illustration left)
 - Access to Transit (% within 5-minute walk)

Outcomes:

Student Paper Presentation
CNU 23, Dallas/Fort Worth 2015, Nora Gharib, Divya Gosain, and Tom Makowski
w/Faculty backup, J. Harper & J. Lombard

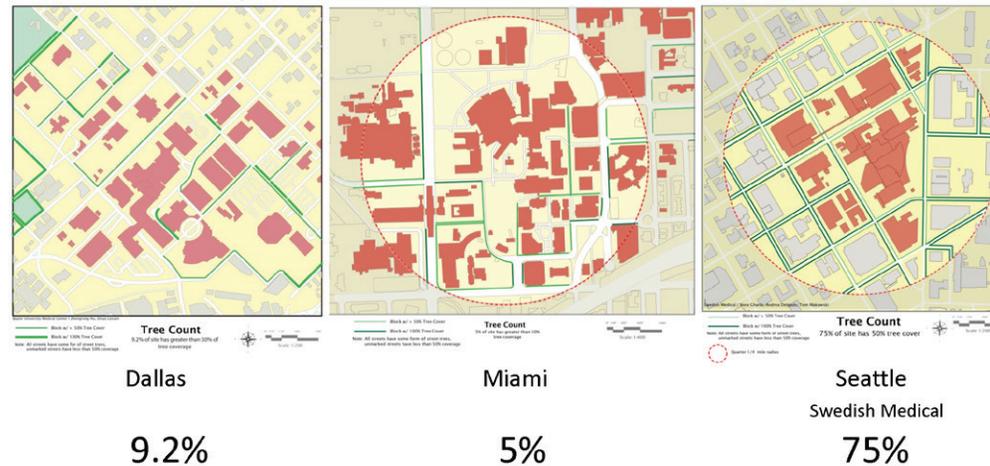
Student Presenters
Nora Gharib, Interior Design & Architecture, NYC.
Divya Gosain, Architect, AECOM, Delhi, India
Thomas E. Makowski, AIA, NCARB, Licensed architect, Project Architect at BPF Design, Daytona Beach

Publication
CNU Health District website

Subsequent Presentations (Lombard)
From 2015-present, included in talks, workshops and webinars such as:

AIA Knowledge Community Academy of Architecture for Health, Webinar: Architecture for Health, Perspectives Beyond Architecture for Healthcare, Webinar, Moderator, John Kriedrich, AIA, CHC, LEED AP B+C, 18 July 2017

Medical Campus Metric:
Tree Canopy (Blocks with 50% or greater tree canopy)



- 4 Medical Campus Metrics
1/2 mile radius
- Tree Canopy (% blocks > 50% canopy) (Illustration left)
 - Street Profiles (>15% 1:3)
 - Building Frontage (% within 1' of sidewalk > 40%)
 - Block Service (% frontage with < 20% service entries)

Student Authors:

Catherine Batista B.Arch. 2015, Andrea Delgado M.Arch. 2016, Nora Gharib M.Arch. 2017, Madeleine Merck Hurtate, B.Arch. 2017, Divya Gosain, M.Arch. 2106, Zhengrong Hu, B.Arch. 2015, Norm Kennedy, B.Arch. 2015, Thomas E. Makowski, M.Arch. 2016

Climate & Community Studio: Grove Park, Atlanta

Atlanta's Emerald Corridor Foundation Board Member Laura Heery and Exec. Director Debra Edelson sought proposals to support resilience for the historic Grove Park/Bankhead neighborhoods along the Donald Lee Hollowell Parkway corridor, specifically to address accelerating climate impacts of flooding and heat, as well as economic impacts from increasing gentrification pressures.

With funding from the *Live/Work/Walk Foundation*, the studio met on site with community members and advocates. In addition to community speakers and engagement, meetings with researchers in the areas of healthy communities for aging, and climate gentrification provided a foundation for building and neighborhood design.

Student proposals ranged from environmental restorations of historic flood plains into a Stormwater Park, to reallocations of public right of ways into public amenities as well as public/private partnerships for restorations, such as a new Theatre Arts Complex, re-purposing the historic *E Pawn* building, based on its original life as a movie theater, and facilities for the YMCA and Woodson Park Academy (above right).

Outcomes:

Student Profile

Emily Elkin, (photo right) designer of the Stormwater Park, interned with the Van Alen Institute on their climate competitions in Miami. She focused on resilience planning along the Miami River for her M.Arch. thesis project (J.Lombard, adviser), and is now a designer at S9 Architecture in NYC where she said that her work on Grove Park continues to be a resource. S9 is working on multiple projects in Atlanta, and Emily has been able to apply her work to adaptive reuse.

Project Viability

The *Grove Park Neighborhood Association* is now working on a 2022-23 Action Plan with the revitalization of the Donald Lee Hollowell Parkway as a key objective.



Studio Faculty:
 Joanna Lombard and Veruska Vasconez
 Studio Sponsor,
 Laura Heery, *Live/Work/Walk Foundation*
 Studio Speakers:
 Drennell Thomas, past president, *Atlanta Planning Advisory Board*, president, *Historic Westin Heights/Bankhead Neighborhood Association*
 Justin Bleeker, *Grove Park Renewal*
 Joel Bowman, President, *B+C Studio*
 Tom Dalia, Managing Principal, *Smith Dalia Architects*
 Daniel Gura, Director, *Capital Markets & Financial Systems, Habitat for Humanity International.*
 David VanGroningen, Senior Associate, *Historical Concepts*
 Caro van Dijk, Architect, *Amsterdam & Delft, Typologies for Aging & Community*
 Jesse Keenan, *Climate Gentrification*
 Grove Park 2017 Students-
 Karim Eliabiy, B.Arch. 2017, Reem Najjar, B.Arch. 2017, Corey Weiss, B. Arch. 2017; Frank Noska, B.Arch. 2018; Brandon Fennell, Xiang Li, Xiyang Li, Xinyuan Shi, Jing Wang, M. Urban Design 2017; Emily Elkin, M.Arch. 2018

Climate & Community Studio: Lake Wales, Florida

Sited on the ridge of Florida's only mountain range (345' elevation) Lake Wales is a potential climate migration destination. The studio addressed the potential for reinforcing the economic resilience of the historic Northwest Lake Wales (NWLW) neighborhood with opportunities for long-time residents to determine the locations and character of a population influx with respect for its history as an iconic stopover for Black musicians traversing the state. The NW main street, Lincoln Avenue, was renowned for its music and dance halls, hotels, and shopping, which flourished until the post-war era of suburban and industry exodus. Dover Kohl & Partners conducted a charrette in the Northwest Neighborhood (<https://www.doverkohl.com/lakewales>) that provided the foundation for student work. Real Estate Development + Urbanism students joined the design teams to collaborate on financial projections. The real-time impact of the work and relationships with the NWLW leaders ensured an ongoing process of consultation. Tiffani Banks (B.Arch. 2021) developed her proposal (right) further, consulting with LCD President, Sara Jones, and with a resolution of endorsement from the Lake Wales City Commission, submitted her project to the national MetroLab Student Cup Competition. After rising through two rounds of presentations to MetroLab juries, Tiffani won the Health & Resilience Category.

Outcomes:

Student Award
National MetroLab Student Cup Competition, Health & Resilience Category Winner, \$1000., Tiffani Banks, B.Arch. 2021

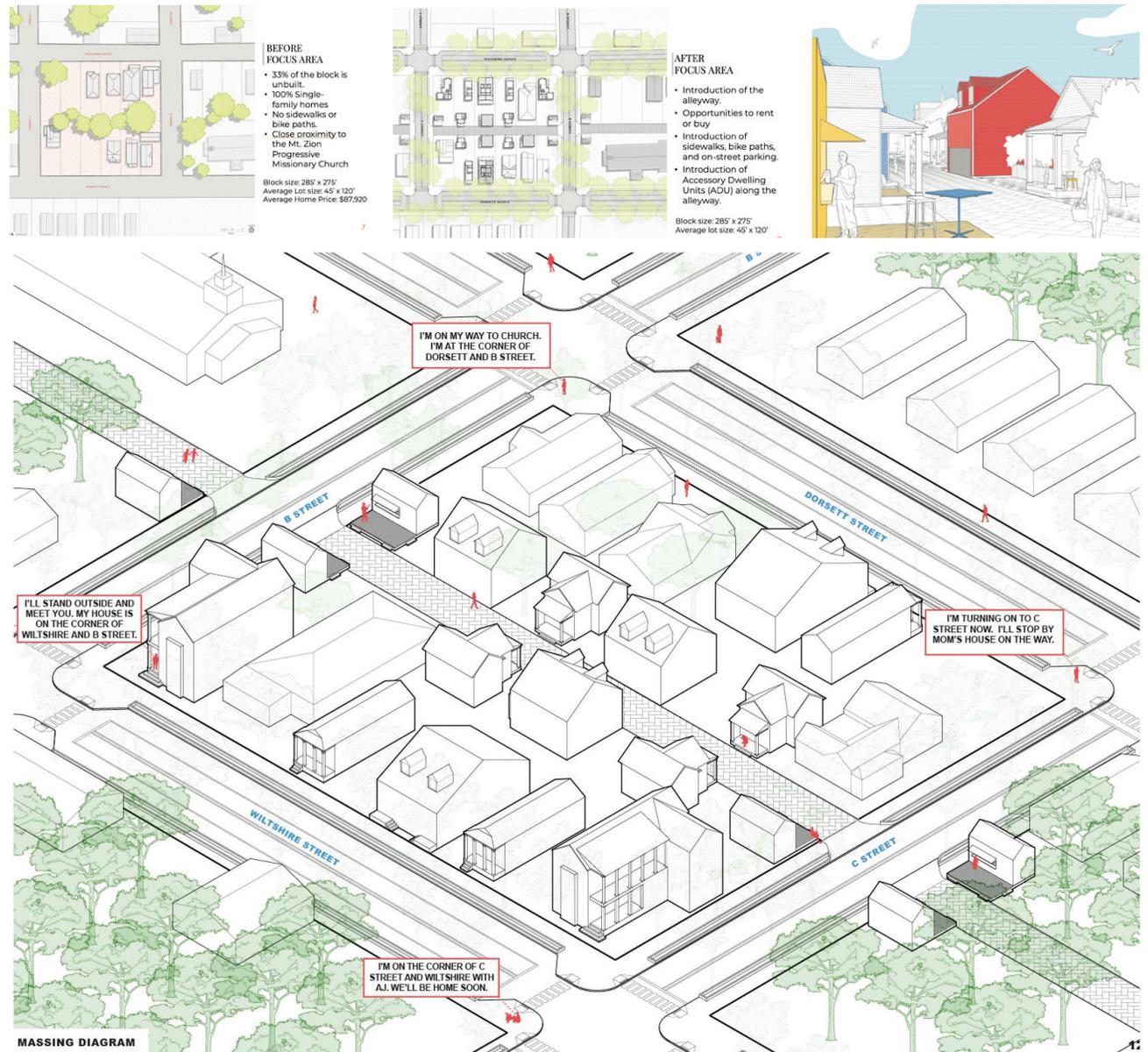
Project Viability

The City of Lake Wales has awarded \$150,000 to develop two new restaurants on Lincoln Avenue and explore support for local businesses.

Design Faculty: Joanna Lombard and Veruska Vasconez, Victor Dover; Real Estate, Tim Hernandez, Mark Troen

Studio Speakers:

Commissioner Terrye Howell, City of Lake Wales Commission;
Sara Jones, Esq, President, Lincoln Community Development;
David Price, Bok Tower Gardens; Karen Thompson, Lake Wales CRA



Lake Wales 2020 Students-
Lou Aldamkhi, B.Arch. 2020; Tiffani Banks, B.Arch. 2021; Megan Browne, B.Arch. 2020; Shuyi Cao, MUD, 2020; Qiaochu Han, MUD 2020; Clarissa Hellebrand Blasini, B.Arch. 2021; Vaishvi Likhari, MUD 2020; Hannan Vilchis- Zubizarreta, B.Arch. 2020, Kurt Gessler and Michael Lia, Nick Nicola, Raymond Pereira, Christian Salgado-Soto and Andrew Samonas, MRED+U, 2020

Climate & Community Workshop: Wagner Creek

Healthcare & Community Studio, Community Workshop Example: Wagner Creek Workshop, Miami Health District

Laurent Saint-Louis, MPH, 2016, Health Foundation, 2019 (above left) University of Miami Wagner Creek Workshop

Wagner Creek West Bank Proposal, Before (below left) & After (below right) Basmah Alohaly, B.Arch. 2016, M.Urb. Des., 2018 and Kun Li, M.Urb.Des., 2018



Conducted in collaboration with Sonia Succar Rodríguez, then Urban Program Manager for *The Nature Conservancy* in Florida, the Wagner Creek Community Workshop focused on the social and ecological resilience of the historic Wagner Creek in the *Miami Health District*. Working with UM Public Health students and alumni, the architecture, urban design and real estate students, based on community input, developed projects to enhance connectivity among the highly active facilities and destinations of courts, hospitals, clinics, schools and residences in the District, proposing new buildings, pedestrian bridges and waterfront improvements to encourage public access and commercial activity in a supportive natural environment (below right).



Outcomes:

Students (photo above right; project below right)- Laurent St. Louis is now in Austin, Texas "integrating research, technology, and design to strategically address community and organizational needs."

Kun Li is also in Austin, working as an Urban Designer at Perkins+Will Basmah Alohaly is the Urban Planning & Design Lead at The Royal Commission for Al-'Ula, a region of notable natural and cultural significance in northwestern Saudi Arabia

Partners

Sonia Succar Rodríguez is now with the Adrienne Arsht-Rockefeller Foundation Resilience Center (Arsht-Rock) at the Atlantic Council in DC and still attentive to the potential of this project

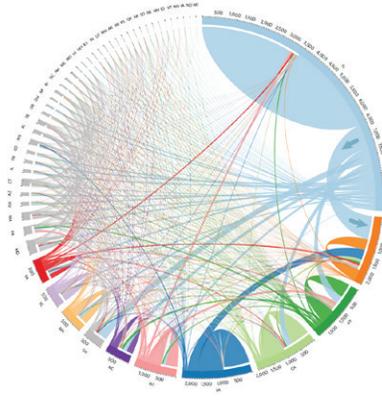
Project Viability

The Nature Conservancy has advanced planning with Miami-Dade County's Jackson Memorial Medical Center, as well as future collaborations with property owners and the City of Miami



Climate & Community Colloquia

With the support of the *Alberto and Olga Maria Beek Family Foundation*, the University of Miami Leonard and Jayne Abess Center for Ecosystem Science and Policy, and MeetingHouse Miami, the 2018 *Retreat & Relocation Colloquium on Climate Migration* was the first event of this kind in Miami-Dade County. Speakers introduced aspects of the topic and participants convened at one of 5 workshop tables to identify leading issues and opportunities for each focus (Graphic Report below, right). Through the auspices of the Abess Faculty Scholar Program, the *Sanibel Colloquium (2021)* featured a panel and discussion with authors of the scientific reports that informed the Wallace, McHarg, Roberts, and Todd work in the *Sanibel Report: Formulation of a Comprehensive Plan Based on Natural Systems (1976)*. Much litigated, but ultimately successful, Florida's first comprehensive plan offers a valuable model for current climate adaptation planning.



Matt Hauer, *Circular plot of bi-lateral SLR migration flows for US States under the 1.8m scenario and no adaptation.* (far left) Tick marks show the number of migrants (inflows and outflows) in thousands. States are ordered clockwise by the size of inflows. The top ten outflow states are coloured; all other states are abbreviated to standard two-letter codes. Presented in *Retreat and Relocation Colloquium*, published in "Migration induced by sea-level rise could reshape the US population landscape," *Nature Climate Change*, 7, (2017) 321–325.

Outcomes

Collaborators
Retreat & Relocation: Rosetta S. Elkin, then at Harvard Graduate School of Design, now Academic Director of Pratt Institute's Master of Landscape Architecture Program; Marta Urquilla then Deputy Director of Georgetown University's Beek Center for Social Impact and Innovation and now President, Centri Tech Foundation; Andee Holzman, Gina Maranto and Veruska Vasconez, UM
The Sanibel Report: Rosetta S. Elkin and Gina Maranto

Participation
 Fifty representatives of Miami-Dade advocacy, government and public health agencies participated in *Retreat & Relocation*. *The Sanibel Report* convening included Sanibel's Mayor and Lee County Planning staff as well as forty participants from across the state.

Follow-up
 Inter-agency meetings with Miami-Dade's Office of Emergency Management and the Consortium for a Healthier Miami-Dade led to greater inter-organizational communication (2018-present) Imagining the *Landscape of Retreat* at the Radcliffe Institute for Advanced Study, Organizer, R.S. Elkin (2018)
 The Georgetown University Climate Center team convened *Seeking Higher Ground: Strategies for Managed Retreat in Response to Sea Level Rise* (2019).

New community partnerships developed with The CLEO Institute and the Van Alen Climate Design Lab, and led to the formation of University of Miami U-LINK team, *Advancing a Hyperlocal approach to community engagement in climate adaptation (HyLo)* (2019-present)

Publication
Tabula Rasa: Designing South Florida, R S.Elkin and J.Lombard, OASE #110 / *Journal for Architecture, Tijdschrift voor architectuur, Part 3: Soil as an Urban Design Challenge* (153-165), 2022

RETREAT AND RELOCATION: A Colloquium on Climate Migration

05 February 2018

Abess Center for Ecosystem Science & Policy
 University of Miami
 Georgetown University
 Harvard Graduate School of Design

SPEAKER POINTS

- Case studies- Dunwich, UK; Constitución, Chile; The Republic of Kiribati; Sendai, Japan; Grantham, Australia
- Community adaptation means being compatible with the changing landscapes.*
Rosetta S. Elkin
- Landscapes are dynamic
Art can provide a means toward understanding dynamic processes.
Sharon Harper
- Projecting migration patterns based on current migration and flooding locations
Climate migration is happening already. Larger migrations are predicted; receiving communities need to plan.
Matt Hauer
- Staten Island neighbors determining the future of their neighborhoods after Hurricane Sandy
Acknowledging the history of the land which is reasserting itself enables consideration of alternative futures.
Liz Kozlov

87 PARTICIPANTS

Areas Represented
 Art, Business, Design, Education, Environment, Government, Healthcare, Landscape, Law Planning, Real Estate, Social Services

Workshop Tables

- 1. Data Analysis & Comprehensive Planning process**
 Model real-world water systems
 Quantify costs/benefits of relocation
 Identify vulnerability priorities: geographic, socio-economic
Scott Davis
- 2. Stakeholder Engagement & Communication Frameworks**
 Need to address climate change causes and reduce greenhouse gas emissions
 Establish green infrastructure, clean energy
 Engage art to communicate
Mark Girardo
- 3. The Needs of affected Residents**
 Health impacts of climate change and healthcare continuity
 Investment to relocate vs rebuild
 Economic stability: jobs, education, institutions
Jessica Gramis
- 4. The Tools to Facilitate Retreat**
 Mandatory disclosures
 Investment timeline transparency
 Role of public infrastructure/ability to abandon
Peter Byrne
- 5. Preparing Communities to Receive Relocated Residents**
 Miami is an inflow and outflow community
 Alignment of markets to incentivize retreat:
 insurance, mortgage, tax
 How many total flood days are too many?
Uwe Brandes

Quantify costs

- Align adaptation funding with accurate timeline; balance with relief/resettlement funding
- Prioritize pollutant removal planning-- current waste disposal sites, industrial sites, buildings, infrastructure, power plants, septic systems
- Develop legal framework for retreat (mandatory disclosures, costs, funding sources, incentive and disincentives policies)

OUTCOMES

Core Values:
 Community Stability
 Household Prosperity
 Ecological Kinship

Methods

- Participatory Processes**
 Network of action-oriented, people-focused advocates
- Identify Vulnerable**
 populations (social, economic, geographic, hospitals, senior care)
- Art and communication**
 to convey risks and opportunities
- Establish Migration Timeline**
 (transparent analysis of multiple risk exposures, i.e. water, sewage, access, flood, health)
- Receiving Communities**
 Identify and plan collaboratively
- Advanced mapping of water systems**
 (fresh water, wastewater processing, saltwater inundation; modeling impacts at 6" increments of sea level rise, % of monthly flooding)
- Identify infrastructure**
 to support population in transition.
- Enhance Disaster Readiness**
 Individual and community resources, public and private infrastructure needed to adapt to manage response evacuation and transition

PREMISES: Global & Local to South Florida
 Current levels of CO₂ in the atmosphere @ 410 ppm; the last time earth had a concentration of 300 to 400 ppm of CO₂ the mid-Pliocene era, 3 million years ago, and sea levels were 50-80' higher



2060: 14 - 36" Sea Level Rise
 Sunny-day flooding much of the year*

Graphic Design & Summary: Veruska Vasconez

*Sea Level Rise Projection, Southeast Florida Regional Compact Climate Change, October 2018

Climate & Community Research

Based on experience with community workshops and the Van Alen Institute Climate Design Lab, with community partners and colleagues from across the university, climate research continues through the University of Miami Laboratory for INtegrative Knowledge (U-LINK), which funded the HyLo research team (*Advancing a HyperLocal approach to community engagement in climate adaptation*), to develop and test a people-first approach to empower neighborhoods and communities to advance physical, social, and economic adaptation measures to address changing climate conditions (*materials right*). Key elements include the development of an *Integrated Climate Risk Assessment (ICRA)* for neighborhoods and communities to evaluate their overall risk based on multiple conditions of vulnerability and security; a new community engagement method integrating Photovoice, Design Thinking, and an ICRA into a workshop series; and workshops conducted in five communities selected on the basis of an integrated risk assessment and ongoing community advocacy partnership, with an opportunity for community members to engage with government agency representatives. The Spinal Cord Injury (SCI) U-LINK team is conducting interviews with South Florida SCI groups to enhance climate resilience protocols in coordination with City and County agencies while the Parks project is engaging in interventions and assessments to enhance access and neighborhood resilience.

Outcomes:

Teaching
 Van Alen Climate Design Lab, 2019; National Recreation and Parks Association *Innovation Lab*, 2020; University of Miami Interdisciplinary Course, 2020, Climate Justice Course, K.Mach, lead, 2022

Presentations & Publications
 "A hyperlocal approach to climate adaptation and community engagement in two vulnerable South Florida communities." *International Communication Association, Environmental Communication Division*, Paris, France, 24-27 May 2022.

"Integrated Climate Risk Assessment for Hyperlocal Climate Adaptation," *At what point managed retreat: Resilience, relocation, and climate justice*. Columbia Earth Institute, 22-25 June 2021.

"Using Communication as Design to Integrate Photovoice, Design Thinking, and Climate Risk Assessments for Hyperlocal Community-Based Climate Adaptation" *International Communication Association Annual Meetings, Environmental Communication Division*, 27-31 May 2021.

"Reframing climate adaptation at a hyper-local scale in Miami," *At What Point Managed Retreat? Resilience Building in the Coastal Zone*, Columbia Earth Institute, 20 June 2019.

"A System for Resilience Learning: Developing a Community-Driven, Multi-Sector Research Approach for Greater Preparedness and Resilience to Long-Term Climate Stressors and Extreme Events in the Miami Metropolitan Region," T.Troxler, et al. *Journal of Extreme Events* (8)3, 2021.

"Advancing a hyperlocal approach to community engagement in climate adaptation: Results from a South Florida pilot study in two communities," *PLOS Climate* 1(6): e0000041, 2022.

Funded Research
 HyLo w/ A.Clark, A.Clement., T. Harrison, G.Maranto, S.Purkis, UM U-LINK, 2019, \$40,000.; Phase I, 2020, \$150,000. Phase II 2021, \$150,000; AT&T, \$50,000.

Using community-engaged research for climate change resilience for SE Floridians living with spinal cord injury (SCI), Co-PI w/ T. Green, K. Mach, D. McMillan (CI), Univ. of Miami U-LINK Resilience Challenge, 2022, \$100,000.

Parks, Physical Activity, and Health, Co-PI w/ T. Harrison, Florida Department of Health in Miami-Dade, DEX85, CDC NH7OT000055, 2022-23, \$475,000.

Clockwise from top right, HyLo Theoretical Model (Hypotheses and Anticipated Outcomes); lower right, LiDAR map showing Little River and Homestead Communities; left, Photovoice Board, Little River Participant



I located another flooded street off I-95 and Exit 7 behind the wall. I decided not to drive through the puddle of water just for precaution. The tree and grass area is the back of an elementary school



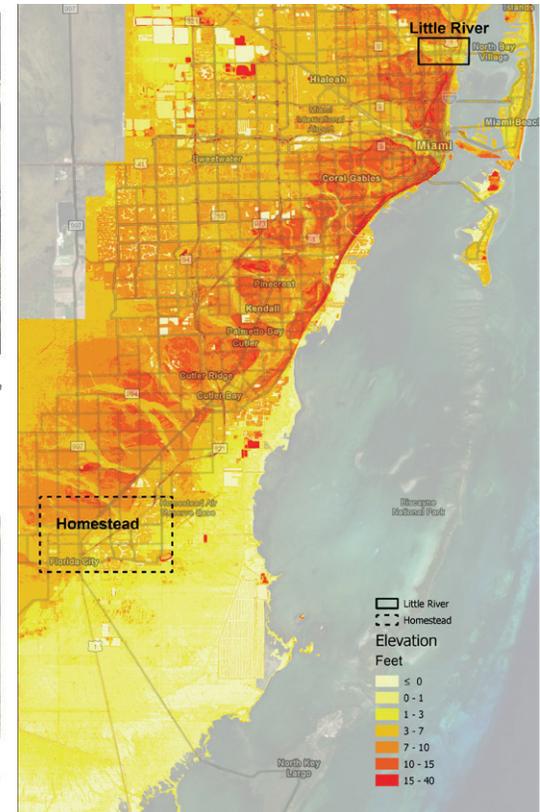
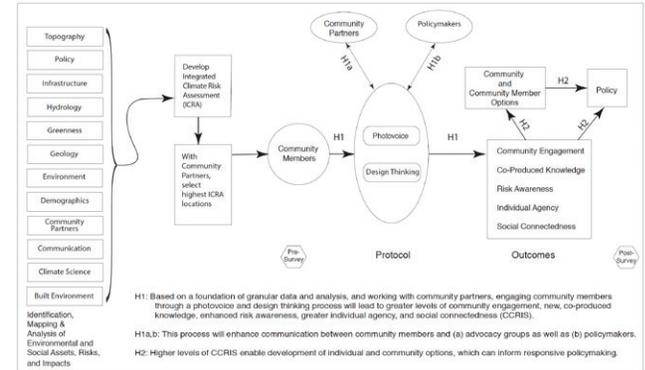
We must descend to engage Facing reality head on. The plants and the trees seem to be thriving from afar. But staring more closely, we encounter the truth. I see him through brick and mortar shadows With tons of industrial equipment as his backdrop. Wearing personal protective gear Protecting him from both heat and germs As he voluntarily fits plastic. Yes, a plastic bag. With overlooked and abandoned trash



I've lived in Miami all of my life and every summer feels hotter than the last. On this day in June while hiking through a mostly shaded nature preserve, the heat felt unbearable to my Costa Rican pup and I. This photo was taken about 15 minutes into the hike. We stopped to rest after and drank ice-cold water in the shade. In June of 2020, Miami experienced its hottest week on record. And it's expected that we will experience more record-high temperatures as our hottest summer days approach (late July to August). Human-induced climate change is making way for extreme weather in South Florida. It's more important now than ever to take action to protect our environment and mitigate climate change.



A reflection of our progress standing still. Although we have advances in building infrastructure at a rapid pace our flooding water is just standing still for days if not weeks with no progress.



UM HyLo Team: Gina Maranto, Micaila Hamner, Marcus Reamer, Abess Center for Ecosystem Science and Policy; Angela Clark, Amy Clement, Sam Purkis, Rosenstiel School for Marine, Atmospheric, and Earth Sciences; Abraham Parrish, Richter Library; Joana Lombard, School of Architecture and Department of Public Health Sciences, Miller School of Medicine
 HyLo Partners: Mayra Cruz, Anaruth Solache, Catalyst Miami; Olivia Collins, Caroline Lewis, The CLEO Institute

Student Competitions

Competitions provide students with the opportunity to participate in a large cohort focusing on the same topic which enables valuable external context for evaluating one's work. This applies equally to faculty advising students in competitions. I have worked with students through a "special problems" course format (*right*) and as part of a faculty team on the ULI Hines Student Competition (*below right*). The ULI/Hines protocol provides an ideal platform for interdisciplinary collaboration based on deep site/context research and the capacity to develop architectural solutions in an intensive, dynamic, and participatory process. Building on Veruska Vasconez's experience with the 2016 finalists we designed a new course structure for the competition to enhance learning outcomes for every team member.

Hines Faculty Team: 2017-21, Design & Coordination: Joanna Lombard, Veruska Vasconez and in 2022 w/Visiting Critics, Fadi Masoud, UToronto; Victor Perez-Amado, Ryerson; UM Real Estate Faculty: 2017-22, Charles Bohl, Alex Morcate, Mark Troen; Professional Advisers 2021: Shawn Seaman, (B.Arch.1995,UM; MAUD, CREDD, Wharton,U.Penn1998), President, Hoffman & Associates; Seth Shapiro, 1995 ACSA Wood Council Winner, (B.Arch.1995,UM; MAUD, HGSD), Principal-Director of Planning & Urban Design, BartonPartners Architects, Planners

Outcomes:

Student Awards

ULI Student Competition Honorable Mentions

Garden District, Toronto, 2018, Frank Noska, Sarah Potter, B.Arch. B.Arch. 2018; Kun Li, Jingbo Sun, MUD, 2018; Shuo Huang, MBA 2018

The Prairie, Kansas City, 2021, UM, Johnny Laderer, Michael Ganom, M.Arch. 2021; Miriam Alanzi, M.Urban Design 2022, Nicholas Bailkin, JD, LLM, 2021; UC Berkeley Dan Alston, MBA 2021

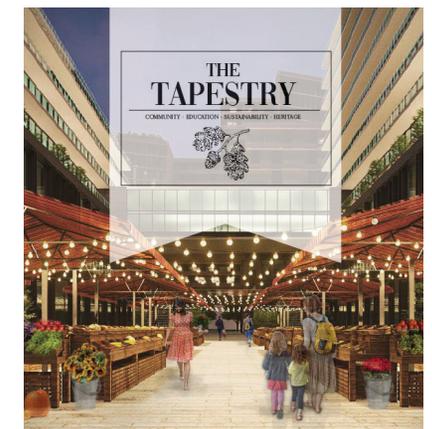
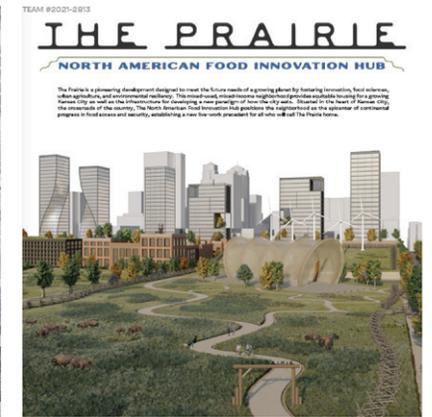
Mosaic, Oakland, 2022 UM, Ziyi Chen, MUD 2022; Eugenio Janeiro, M.Arch.2023; Alvaro Otero, MRED, 2022; Ryerson: Micha Gutmanis, MPI, 2022; U.Toronto: Emily McCarthy-Bachetti, MLA, 2022
 ULI Jury Comments: *The jury appreciated the transition of the built form to fit in the context. They commented that the design was very creative and thoughtful. The proposal addressed connectivity under the freeway well, particularly by using Sixth Street as a pathway to Jack London. The building scale and footprint was reasonable and well thought out. The jury liked the simple, easy to understand graphics, and specifically called out the buildings typology sheet. They also praised the inclusion of possible partnerships with organizations such as the Port of Oakland.*

Tapestry, Oakland, 2022 Isacio Albir, Tiffany Agam, Megan Barrett, M.Arch. 2023; Garrick Donnelly, MREDU, 2022; Tomas Tapias, M.Arch., MCM, 2022

ULI Jury Comments: *Beautiful architecture that pays great homage to Oakland, which would be embraced locally. The farmer's markets were also great. A gorgeous project with careful consideration to the local context.*

Lyceum Competition-
 Gabrielle Boyar, B.Arch. 2021, Lyceum Competition, 2021, 3rd Prize, \$4500.

Lyceum Competition Ames Estatem 3rd Prize
 (right)
 ULI Hines Honorable Mentions:
 Clockwise from below left, *Garden District*,
 Toronto; *The Prairie*, Kansas City (*below right*);
The Tapestry, Oakland (*bottom right*);
Mosaic, Oakland (*bottom left*)

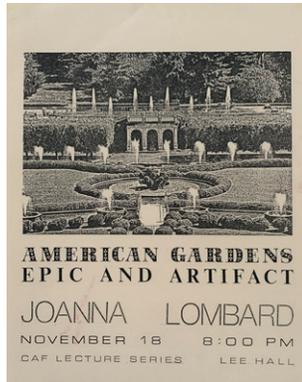


Service

Elevate the concept of service to the nation so that it is at the core of architectural education. Establish a climate of engagement. Clarify the public benefits of architecture. Promote the creation of new knowledge. Stress the critical importance of ethical professional behavior.

Ernest L. Boyer and Lee D. Mitgang

A Special Report: Building Community, A New Future for Architecture Education and Practice, Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching, 1996:133.



Academic

Studio Reviews
HGSD, Dec 2015, Feb 2016, 2017, 2019, May, Sept, 2019;
Yale May 2017;
McGill Dec 2020, 2021

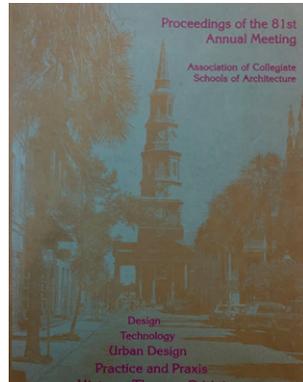
Thesis Reviews Tulane, 2021

Lectures
Clemson (poster above) Nov 1985, UNC Charlotte, Mar 1986, USC West 1986, Mississippi State Jan 1987, MIT, Mar 1987, Catholic U, Mar 1989, U. Maryland Apr 1989, FAU Mar 2002

Grand Rounds
Environmental Aspects of Well-being, UM/JMH Psychiatry & Behavioral Health, Nov 2021.

Juror
Stanford White Awards Jury, ICAA, New York, Oct 2017.
Committee on Architecture for Health AIA Houston, Student Design Intervention Competition (and Keynote address) Feb 2014.
AIA Mid-Missouri, 2010.
AIA Orlando, 1990.
ASLA Florida, 1989.
Clemson Univ. Center for the Performing Arts, 1989.

Article/Manuscript Reviews
Elsevier, *Building & Environment*, 2019-20; Routledge, Taylor & Francis Group, 2018.
ACSA 105th Annual Meeting Paper Session, Oct 2016.
JAPA, 2015-14.
Univ.Press Florida, 2014; *Journal of Urbanism*, 2010-11.



National Professional

AIA/ACSA Intersections Research Conference: Healthy Communities Plenary, co-pnlsts W.Bahnfleth, C.Higgins; Mdr, L.Dearborn, Sept 2021.

AIAS THRIVE Webinar: *Sustainability*, co-pnlsts J.Wasley, H.Rogers; Mdr, S.DeFranza, 02 Dec 2021

RWJF, RELevent Action Research Symposium, *Housing Policy, Neighborhood Conditions & Health*, Mdr, Pnlsts. S.Glied, K.Theall, A.Gillman, RWJF, Jan 2021.

CNU 27 Regional Symposium, Louisville, KY, *Designing the Healthy City of the Future*, pnlst, 2019; CNU 26, Senior Housing, mdr, 2018; CNU Atlanta/CDC Healthy Communities, spkr., 2012.

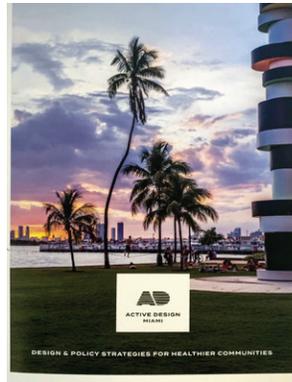
SxSW *Getting a Good Return on Our Health Investments*, moderator, E.Hagan, co-panlsts. J.Otten A.Venkataramani, Mar 2019.

AIA Natl Conf, *Moving AIA Design+Health Research Consortium Outcomes into Practice*, Mdr., A.Landreaneau, co-pnlst. S.Ahrentzen, Apr 2017.

AIA Design & Health Research Consortium (2015-present)

AIA/AAH Community Health and Healthcare Design: Three Perspectives, J.Kriedich mdr, co-panelists, JS Baum, C. Beckham, Nov 2014.

Healthy Rhode Island Environmental Design Summit, *Healthy Neighborhoods Session*, EDRA 44, May 2013.



Local Professional

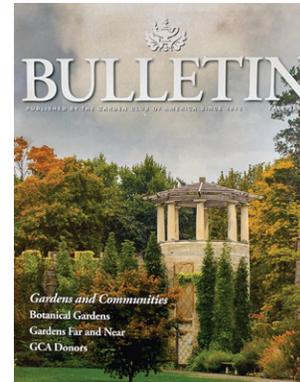
Southeast Florida Regional Compact 13th Annual Climate Change Summit, *Resilient People and Places: Building Inclusive Communities*, co-pnlsts, A.Bayat, M.Mejia; Mdr, J.Cole, Dec 2021.

AIA Miami On Climate Symposium, *Climate+Advocacy: Between Natural+Built Environments*, Mdr, Pnlsts A. Savino, A.Yoachim, A. Bogdanoff, June 2021.

AIA Miami; AIA Christopher Kelly Leadership Development Program: *Working Together: Health, Well-being & Resilience*, w/ E.Plater-Zyberk, Oct 2020;
Future Designers Seminar, May 2019;
Future of Practice Seminar, May 2018.

AIA Miami Fit City: *Why Active Design, Overview of Health Measures, the Role of Buildings & Open Spaces Play in Improving Health*, FitCity 5 Feb 2018, (cover above);
Designing & Building for Health, FitCity 4, Feb 2017,
Health & the Built Environment, FitCity 2, Feb 2015.

5 Points of a Healthy Neighborhood, City of Coral Gables, US1, Red, Sunset Corridor Visioning Workshop, July 2015.



Interest Groups

Fundamentals of Health and Well-Being, in Parks and Pandemics: Their Critical Role in Public Health, co-pnlsts K. Roth, NRPA; S. Muqueeth, TPL; *The Power of Parks*, *Great Parks Summit*, July 2022.

Consortium for a Healthier Miami-Dade's Mental Health Virtual Summit, *How Urban Design Influences Mental Health*, Sept 2022

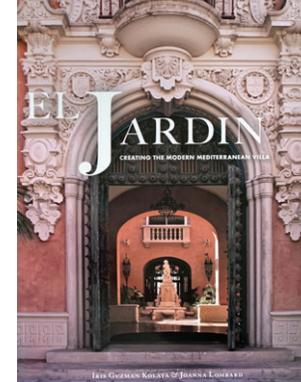
Health Links Webinar, Center for Health, Work & Environment; *How healthy buildings impact the health and safety of working people*, Keynote & panel, pnlsts, N. Kahre and D. Seibert, Sept 2022.

Healthy Communities: Parks, Gardens & Greens, Mountain Lake Speaker Series, Lake Wales, Feb 2020.

Community Wellbeing: Innovative Possibilities for Healthcare, Adventist Health White Memorial, Los Angeles, Aug 2018.

Hancock Park Garden Club, Los Angeles, *The Role of Gardens in Healthy Communities*, Oct 2016 (published in *The Bulletin*, Oct 2017 cover above).

Parks and Greens: Research and Applications, Keynote and Workshop Facilitator, National Recreation and Parks Association Inaugural Innovation Workshop, 12 March, 2015.



Local

Book Talk w/I.G. Kolaya, *El Jardín: Creating the Modern Mediterranean Villa*, Regis Press, 50th Anniversary, Dade Heritage Trust, Polished Coconut, May 2022 (cover above).

Tropical Architecture & Florida Vernacular Workshop, discussants J.Carney, UF; J.Brillhart, R.Ceo, D.Hector; A.Nanni, UM; K.Baldwin, C.Weisz, M.Yoes, XYZ, Miami, Feb 2020.

Book Talk: *The Death and Life of Great American Cities*, Historic Preservation Association of Coral Gables, Nov 2019.

Op-Ed: w/A. Clement, "In South Florida, we need to transform our communities to address climate change and sea-level rise," in "The Invading Sea," *Miami Herald*, 25 May 2018.

"History of Landscape Design," Fairchild Tropical Botanic Garden, Nov 2016.

Marian & David Fairchild's Vision for the Kampong, National Botanical Garden Board, Coconut Grove, Nov 2015.

Building the Third Space, Pen & Sword Society, University of Miami, pnlsts, M.Kaplan, Books & Books, Matt Haggman, Knight Foundation, mdr E.D. Smith, Apr 2015.



Community Action

Resilience 305 Collaborative Ongoing, Co-Lead with C.Caban-Aleman and C.Holder, *Health and Wellbeing Core Group*, Pls A. Clement, T.Troxler, June 2020-present (J.Extreme Events paper, 2021).

David Brooks Convening, Nina Johnson Gallery, Oct 2019 (Essay, "Reflections on Blue Lagoon," in *Commuter Biennial*, ed. Laura Randall, Knight Foundation, 2019, 13-16, cover above).

Shared Pathways, Re-imagining Mobility in Coconut Grove 2030, Facilitator, Nov 2019.

Water Resilience Workshop: Infrastructure & Ecosystems, *Health & Wellbeing*, Arup/Miami-Dade Water & Sewer Dept., July 2019.

"Greenness, Parks & Health," Community Health Improvement Summit (CHIP), Florida Department of Health in Miami Dade, Dec 2016.

Placemaking, Design Excellence & Well-being, Miami-Dade Planning Excellence Construction Retreat, Nov 2016.

Miami-Dade Parks Leadership Retreat, Facilitator, Aug 2016.

Reclaiming the Concrete Jungle: Investing in Urban Green Spaces, Clinton Global Initiative University, Mdr, Pnlsts., M.Daly, R.Horne, J.Lrner, K.Washington, March 2015.

Every level of service yields insights and opportunities that can inspire and invigorate teaching, scholarship, research and practice as well as extend the inspiration of architectural teaching, scholarship, and research into the larger world. With service interwoven into every year of teaching, the number of events, committees, panels, lectures, journal and project reviews is extensive. The images below represent several categories of service: academic (beyond UM), national and local professional (architectural education & practice-based engagements), related interest groups (parks & gardens), local interests, and community action. Listed below each are service engagements, some of which resulted in the images shown above.