

Session 1: 8:30-10 a.m.

Adele Houghton - 6 Ways to Use Place-Based Health Data to Prioritize Green Building Strategies

As interest grows in the architecture and green building communities about the role design can play in promoting health, it is increasingly important to establish ways to measure the potential positive and negative health outcomes of land use decisions. This presentation will explain how to apply health research and data to each step of the project delivery process. It will both review the state of the evidence more broadly and address the importance of tailoring health interventions to address unique health challenges at the site level – similar to considering the site's topography, climate, and surrounding infrastructure in the initial design.

Shafik Rifaat - The Modern City Re-Invented: Conceptual Model for a Sustainable Urban Form

Explore how an investigation of the historical evolution of urban settlements leads to a conceptual model for a sustainable urban form for future cities aiming to attain zero carbon footprint. The significance of public transportation, intensity of development, and agriculture are among the issues addressed and reflected in the proposed model.

Suzanne Simpson - Staying Afloat: Urban Conservation in the Houston Region

Texas is losing its rural land at a faster rate than any other state. Conserving our floodplains is the easiest, cheapest method to secure clean drinking water and mitigate flood damage. Bayou Land Conservancy is a Houston-based land trust that focuses on protecting the floodplains of the 13 watersheds that feed Lake Houston, where most Houstonians get their drinking water. Learn how conservation easements preserve our natural resources, cultural identity, and create a city of sustainable growth.

Deborah January-Bevers - Looking Beyond Ecological Functions to the Value of Ecosystem Services

The Greater Houston-Galveston Bay region, which encompasses 10 distinct ecoregions, is an assemblage of forests, prairies, bottomlands, wetlands and bays, and receives a tremendous amount of benefits (economic and social value) from the natural world in the form of ecosystem services (ES). Without ES, the Greater Houston Region would economically and environmentally suffer in trying to provide equivalent services to its residents and industries. Based upon Houston Wilderness' Ecosystem Services Primer, the presentation provides regional examples of valuing ES, including corporate use of tertiary treatment wetlands, increased use of native filtering features in detention areas and the role of wetlands for resiliency.

Rives Taylor, Lisa Gonzales, Dirk Kestner, Mark Seibert - Net Zero for a Non Profit in the Gulf Coast Climate: A case study of HARC's new headquarters campus focus on Operational and Material Embodied Energy

The team will illuminate lessons learned from programming through collaborative design and delivery, while laying the groundwork for an on-track LEED V3 Platinum campus targeting Net Zero operational energy and minimized embodied energy. This new headquarters is located on a 3.5-acre mixed pine-hardwood forested site in the Woodlands, and will support the work of the Houston Area Research Center, an independent non-profit research hub that provides independent analysis on energy, air, and water issues. The new campus will provide the client with a comfortable and

productive work environment, embrace their mission, and ultimately create a measurable, sustainable future that helps people thrive and nature flourish.

Daniel Hellmuth and Travis Horton - *Moving Forward: Modeling and Reality in achieving Net Zero Energy in Affordable Housing*

The Moving Forward Initiative seeks to reduce energy and transportation costs for residents of affordable housing utilizing an integrated systems approach to design. The design team pursued a unique approach to achieving Net Zero Energy by setting key targets during conceptual design followed by detailed modeling during schematic design. Utilizing a combined effort with Purdue's Center for High Performance Buildings + Applied Engineering, the team created parallel energy models by working closely with the architectural firms of Hellmuth + Bicknese and CSO and the Developer, Pedcor. Modeled versus actual performance will be one of the key issues discussed.

Steve Stelzer - *Sustainability and the Brain*

Why is sustainability and green building an easy-sell to some, and so resisted by others? A few key books provide a plethora of explanations. Steve Stelzer will present interesting facts and hypotheses from social, cognitive, and political sciences, and climate change works, that will help move the green building agenda forward. Steve began a booklist in 2003 in his quest to understand more about the environment and the perception of the environment. More and more has been written about the topic, almost to a crescendo; Steve's short list can get you up to speed.

Eric Corey Freed - *The Power of Exponential Thinking: Creating the XPRIZE for Healthy Buildings*

In 2016, the XPRIZE Foundation set out to establish a "moonshot" for construction by creating the XPRIZE for Healthy Buildings. In this talk, you'll learn how the team approached this unique opportunity to develop a way to literally grow buildings by fusing synthetic biology, genomics, parametric modeling and 3D printing to create a disruption and paradigm shift that could switch us from a PETRO-chemical world, to a BIO-chemical one.