



## Full Session Descriptions

### Energy

- 1. Net Zero Energy and Highly Controlled Environments: The New Archival Facility in San Diego County** - Museums and archival facilities typically have stringent environmental control requirements: tight ranges for temperature and humidity, precise lighting and filtration controls, special fire protection conditions, as well as redundancy, resiliency and security needs. Designing these facilities for Net Zero Energy starts with energy reduction and passive design. Clients should consider changes in behavior, while design teams need to stay up to date with the latest research and technologies. This session will discuss the requirements and design approach for the new San Diego County Assessor, Recorder and County Clerk office building (ARCC), a Net Zero Energy designed facility in Santee, California.
- 2. Smart Data for Smart Buildings** - In this dynamic conversation, Cleantech San Diego, Intuit, and Measurabl join forces to share major city-wide initiatives currently underway that continue to position San Diego as a sustainably-aware place to live and work; what benchmarking frameworks are critical when setting ESG goals and why; and best practices with a local company who is overcoming barriers to sustainability adoption.
- 3. Designing for Natural Ventilation - it's a breeze!** - In San Diego's mild climate, natural ventilation is a huge opportunity for many projects. Incorporated correctly, it is a low cost option that can improve comfort and air quality without needing energy intensive fans and mechanical cooling systems. This presentation covers the fundamentals of how occupants perceive thermal comfort and why natural ventilation can be so beneficial for satisfying those comfort needs. It

provides an overview of the architectural, mechanical, and control elements that can be incorporated into a project to optimize natural ventilation opportunities and includes examples showing various natural ventilation strategies that were successfully implemented in current buildings locally and in other regions.

- 4. San Diego County Crime Laboratory: Balancing Security, Technology, and User Comfort in the State-of-the-Art Facility** - The County of San Diego Crime Laboratory is a State-of-the-Art facility that strives to balance security and criminal investigation workflow, while simultaneously providing occupant comfort. Crime laboratories, of course, consume considerable resources making sustainable design a challenge. This project, incorporates several sustainable design strategies to benchmark LEED Gold, [ incl. Health and Safety, Indoor Environmental Quality, and Planning and Design] , that will be highlighted as part of our presentation.

## Materials

- 1. Healthy Buildings, Healthy People, Healthy Planet - Green Design & Technology in Healthcare** - There is an increasing body of research demonstrating that improvements in the built environment can have marked impacts on wellness and healthcare outcomes, reducing recovery times, perceptions of pain, incident of complications or infections, improving the patient experience, staff retention and satisfaction. This panel discussion addresses the new research and trends that are being implemented to make healthcare buildings more environmentally sustainable (addressing energy, water & material uses) and also healthier spaces for patients and providers within them. Bringing together perspectives from the owner/provider and the architect/engineering design team, this is an interactive discussion of topics, trends, and outcomes related to sustainable design in healthcare applications.
- 2. Interactive Charrette to Improve the Effectiveness of Local Urban Wood Salvage - Tree San Diego's Trējuvenation project** is a regional urban wood utilization project. We are working to build a network that diverts end-of-life urban trees away from landfills and toward beneficial products like lumber and soil. The audience will discover the process involved in salvaging urban wood, learn about new technologies that can be utilized to maximize the value of the wood, and participate in an interactive design charrette to help us develop improvements to the current process of diverting end-of-life trees. We hope to identify opportunities for policy change and generate new, innovative ideas around uses for salvaged wood in order to support local economies and the environment.
- 3. Construction and Demolition Debris Management Programs in the San Diego Region** - The City of San Diego, City of Chula Vista and County of San Diego will give an overview of State and local regulations as well as a brief overview of recyclable C&D materials still going to landfill. They will also present on their perspective, requirements regarding C&D Debris programs in each jurisdiction, their goals and their processes from start to finish. These agencies will share examples on how to accomplish better construction waste management practices in the San Diego region. The County of San Diego will share proposed changes to their non-exclusive hauling system and C&D ordinance and solicit stakeholder feedback.
- 4. Innovative Strategies for Going Green with Development in Extreme Climate Changes** - This interactive problem solving multimodal session is focused on innovative

materials in an 80 acre multiphase residential / commercial development (Villas Park) in California City in the Mohave Desert with extreme climate challenges while promoting sustainable community oriented living using the USGBC integrative process model. This model supports high performance, cost-effective project outcomes through analyses of key systems interrelationships before decisions are made and throughout the design process. Two specific materials are Tesla energy producing glass roof tiles and Shikkui plaster, an ecological nontoxic Japanese lime plaster which absorbs CO2 in the air and captures VOC gasses and odors.

## Water

- 1. Mission Impossible: San Diego Water Capture and Reuse (Pt. 1)** - An introduction to what is being done with water reuse in buildings in California and how it applies to San Diego. This introduction to the water track of the conference will begin by defining water reuse building systems before diving into paths and methods for capture and reuse. More importantly, this session will help participants develop an understanding of the obstacles to achieving building water reuse in California and, more specifically, in San Diego. A California Water-reuse map will be presented that demonstrates the regulatory paths to success in this challenging area of practice.
- 2. In the Face of Drought (Pt. 2)** - Case study of how a building project addressed the "California Drought" head on with an effort that resulted in California's first Living Building. In the face of drought Arch Nexus found ways to eliminate the needs for water to be conveyed to or away from the site in a collaborative way with local jurisdictions. Learn the strategies that were employed in order to permit and install water reuse building systems by working closely with jurisdictions to forge the next step in the future of California water reuse and learn how other local projects are looking to follow suit.
- 3. Mission Possible: San Diego Water Capture and Reuse (Pt. 3a&b)** - This workshop will tackle the perceptions and obstacles preventing building water capture and reuse in San Diego. In a collaborative effort with government and local experts, participants will find solutions to both climate and regulatory hurdles that stand in the way of innovative solutions. The results will include an improved understanding of the diverse points-of-view that surround this topic, along with multiple pathways to accomplishing building water reuse safely and effectively. Ultimately, the conservation of this critical resource is essential for the future of California, and this session will take steps to ensure that future becomes a reality in San Diego.