HOTEL BUSINESS REVIEW Best Practices in Hotel Management & Operations

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Sustainability + Common Sense = Good Business for Our Future

By Margit Whitlock, Principal, Architectural Concepts | May 08, 2022

Sustainable Development only works with an all-encompassing approach.

What is sustainable development? According to the International Institute for Sustainable Development, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." As guests demand more environmental and social efforts, brands need to take action. Hoteliers must now demonstrate that they are purposeful about sustainability, hold strong ethical standards and operate responsibly in everything they do.

The World Green Building Council defines green buildings as those designed, constructed or operated in a way that "reduces or eliminates negative impacts, and…create[s] positive impacts on our climate and natural environment." According to the council, there are eight factors that make buildings - GREEN

Green buildings use energy and water efficiently, use renewable energy like solar power, have systems for reducing pollution and waste while enabling re-use and recycling, have good indoor air quality, use non-toxic, ethical and sustainable materials. Designers and contractors involved in the installation of green buildings take the natural environment into account in their design, construction and operation and prioritize the quality of life of the buildings' occupants. Green and sustainable buildings adapt to the environment around them as it changes.

In order to accomplish this, developers today need to look at a number of strategic scopes of work to ultimately make a cohesive and integrated sustainable development. Each aspect of the design process and construction process have many sustainable opportunities. If you are going after a LEED certification the process is critical and every point needs to be accounted for. Certification is not for everyone as the costs are high. Not so much in the materials, it is the application and professionals needed to prepare, administer and certify the building. Not all architects and general contractors are up to speed with the countless documentation needed to get a LEED Certified building. We highly recommend hiring a LEED specialist for this process.

Depending on the goal of your development you have to consider two things: Is this a flip property or a long term investment? A short time agenda will most likely not include LEED Certification as the true benefits are not realized until 5-10 years later as you get a return on your investment in terms of cost saving in energy and maintenance. Honestly if the jurisdictions did not mandate GREEN practices and procedure's most development would not utilize them. The upfront costs can be staggering. See the Case Study at the end of this article for more information.

From Site Planning to Infrastructure – A Well-Planned Project Does Payoff

Site planning

Starting with the overall site and master plan to take advantage of natural resources – sun, light, views, air flow, and circulation. The simple act of properly orienting a building can create energy savings of up to 25%. As little as an eight-degree rotation can have an impact. Consider the following when siting and orienting buildings.

- Elongating the plan on the east/west axis takes advantage of the southern sun to optimize your solar system. Remember solar panel angles are adjusted to maximize input.
- Maximize north and south exposures for daylighting. Daylighting is for public spaces as well as operations has proven to be beneficial for guests and employees.
- Minimize high solar gain exposures for windows. Use shading techniques for both interiors and exteriors. There are many cool sun shade options to explore.
- Orient your building to maximize outdoor sunny areas, use the sun shadow application in Revit or ACAD to develop solar models to explore the best orientation.

Ultimately, the best way to produce sustainable site plans is to get the entire design and construction team together early and often in the development process.

Building Products

There are many building products with significant recycled content – the use of pre and post-consumer materials re-purposed into exterior and interior building products are vast and quite impressive. Some state of the art products with a commitment to sustainability in manufacturing are …..aluminum, steel, wood, concrete, bamboo, high efficiency windows, performance insulation and solar systems. Let your design team steer you in this process. There are many sustainable manufactures out there and take advantage of their willingness to provide in-depth information.

The health and safety of the building occupants are fundamental and must be guaranteed during the construction of any building. As such, sustainable indoor technologies are mandatory for green construction. The materials used have to ensure green safety standards which include hazardous free elements, non-toxic materials, low volatile emissions, and moisture resistance.

From a Health and wellness aspect, the use of materials with low VOCs also enhances IAQ and limits exposure to health-threatening chemicals such as vinyl, phenol-formaldehyde and lead. Additionally smart appliances utilizing automation to Bluetooth technology bring additional savings in the long term.

Finish Products

Finishes such as carpet, wall covering, paint and tile have been making a commitment to the sustainable agenda for almost a decade as the USGBC and GREEN mandates like that in California and across the country started a movement that has revolutionized the industry. Materials such as bamboo, cork and engineered planks are among the best for interiors. For exterior decking as well as interior use, composites are an economical choice and offer good looks and durability. Another popular option, of course, is stained and polished concrete, eliminating the need for another type of surface on top of the slab. Tile and natural stone is still a popular choice; however, when possible, select locally sourced and produced options reducing your carbon footprint. Locally sourced products increase your LEED point as well.

Technology is Integral to Success

From systems management to the guest experience there are many many options to streamline and take advantage of in implementing cost saving tools and deliver a better physical environment. Digital technology is a true enabler of sustainability allowing for less paper and printing with data storage. Becoming mainstream with most hotel developments; control systems for HVAC, lighting, water usage and sun control are all being integrated and managed on site. Even the guest check-in experience has changed, no more printing and tossing key cards – your phone is your key. Using technology as a vehicle to drive sustainability across the organization, operations, supply chains and ecosystem adds to the cohesive sustainability plan.

High Efficient Systems Management

No better way to combat climate change and energy consumption then to invest in energy efficient system in Plumbing, Mechanical and Electrical design. Thirty to forty percent of a commercial building is typically unoccupied at any given time. Green building technology makes use of motion detectors, RFID scanners, access card readers, and other sensors to monitor the occupancy status of a building. Whenever an area becomes unoccupied, green technology automatically shuts off lights and adjusts HVAC, cooling, heating, shading and ventilation options.

Building operators can realize as much as 30% savings in their energy expenses by eliminating unnecessary energy use in this manner. Water conservation is another important consideration. One of these is the Graywater recycling system, which is the process of reusing water that has already been used in instances like laundry or bathwater and has it serve another purpose such as garden irrigation, toilet flushing, and hardscape cleaning.

Summary

As society turns its attention toward our evolving climate crises and its effects on a global scale, architects and construction managers have evolved their practices with it. To reduce waste and protect the environment, there is now a higher value on sustainable and green building methods. There are even highly desired certifications like LEED that honor the design, construction, operations, and maintenance of resource-efficient, high-performing, healthy, and cost-effective buildings. With the new advances in technologies, materials, and practices, designing and constructing has never been more focused on sustainable methods.

By now we all know, a green building is a structure which is designed, built, renovated, operated, or reused in an environmentally friendly and resource-efficient manner. In addition to that, these buildings are designed to meet certain critical objectives like: Protecting occupant health and improving employee productivity, conservation of energy, water, and reduce the use of fast depleting resources, lower our carbon footprint by reducing overall impact to the environment.

Use of Green building technology aids the green efforts, benefiting workforce and society as a whole, reducing operating costs and elevating your brand value.

Ms. Whitlock

Margit E. Whitlock AIA, LEED AP is a licensed architect in the states of California, Arizona, Texas, Pennsylvania, New York, Hawaii, and Florida. In 1992 she founded, Architectural Concepts Inc., a diverse architectural firm licensed in seven states and NCARB and headquartered in San Diego, California. Ms. Whitlock was an active member of ARDA (American Resort Developers Association) and past Chairman of the Design and Construction Committee. She currently sits on the San Diego County Cannabis Stakeholders Group (CSG), past President of SDAF (San Diego Architectural Foundation), past Scholarship Director for NEWH San Diego (The Hospitality Industry Network). As a result of her community service with Habitat for Humanity, Ms. Whitlock was elected to the San Diego Habitat for Humanity Board of Directors in 2008-2011. She is a past board member of the AIA San Diego (American Institute of Architects), The AIA San Diego chapter awarded Ms. Whitlock with the "Presidential Citation" for service to the industry. Past involvement includes the East Village Association's Land Use committee and the Old Town Architectural Review Board. Ms. Whitlock can be contacted at +1 619-531-0110 or margit@4designs.com

Extended Biography