R AND S LET'S BUILD SUSTAINABLY

GREEN SHEET

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LEED®-ing The Way To Building Sustainability

On August 1, 2018 USGBC Northern California hosted GreenerBuilder at the UCSF Mission Bay Conference Center.

Rudolph and Sletten delegates in attendance were Pierce Salamack, Ivan Tapia and Kalie Ward. This was a one day conference focused on the sustainability issues in Northern California. Piggybacking on one of the major themes from last year's Greenbuild International Conference and Expo in Boston, MA, a lot of the focus was on the topic of "Resiliency", the need to build buildings and communities that are more resilient to threats in their local environment (either natural or man-made) as noted in the three takeaways below.

Green-Oriented Restoration Efforts After October 2017 Wildfires

After the disastrous series of 250 wildfires known as the Northern California firestorm in October of last year (the costliest fire in U.S. history that burned across 245,000 acres and generated an estimated ~$11 billion in insured losses and ~$1.5 billion in fire suppression costs), the rebuilding effort is producing homes that are more green–oriented than the ones that burned down. The Clean Coalition, a nonprofit organization working to accelerate America's transition away from an outdated energy system reliant on fossil fuels and towards a modern renewable energy system, hosted a Rebuild Green conference for those affected by the fires and over 2,000 people attended. The Advanced Energy Rebuild Program by Sonoma Clean Power (the self-funded, public electricity provider for Sonoma and Mendocino counties, both hit hard by the wildfires) is an enhancement to PG&E's long-standing California Advanced Homes Program, and offers two incentive packages tailored to Sonoma and Mendocino Counties to help homeowners affected by the October 2017 wildfires rebuild energy efficient, sustainable homes. One of the two incentives offers $12,500 for those affected by the October 2017 wildfires and have service provided by Sonoma Clean Power and/or PG&E who build high efficiency, all-electric homes **without natural gas service**.

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SUSTAINABLE PROJECT TALLY

35 Completed Projects
7,515,627 square feet
$2,321,779,256

23 In Progress Projects
11,201,378 square feet
$3,496,219,418

Recently Certified PROJECTS

U.S. GREEN BUILDING COUNCIL LEED GOLD USGBC

UC Santa Barbara
BioEngineering Building
83,756 sf / $68,694,057

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Natural gas was a major concern during the October 2017 wildfires as the firefighters were putting out the flames, there would be new flare ups from the natural gas lines in the neighborhoods. Initial reports show PG&E equipment was responsible for igniting many of the October wildfires, including the Atlas, Nuns, Redwood, and Pocket Fires that burned across 162,000 acres and killed 18 people. In eight cases, CalFire (the California Department of Forestry and Fire Protection) found PG&E in violation of state laws. Natural gas is made from methane, which is **84 times more potent than CO_2**. California currently gets 16% of their supply from within the state, the remainder comes from out of state. Experts predict that by 2050 we will no longer be able to provide the natural gas needed. Other utility companies are starting to incentivize homes and buildings that are all-electric including SMUD (the Sacramento Municipal Utility District), one of the ten largest publicly owned utility companies in the United States.

The San Francisco Seawall Earthquake Safety and Disaster Prevention Program

The Port of San Francisco manages the 7.5 miles of shoreline, from Fisherman's Warf to Heron's Head Park in the Bay View district. The seawall that protects much of the city was either built prior to the 1908 earthquake, or repaired as part of the rebuilding effort from the earthquake, which means it is at least 100 years old and was built using antiquated building methods. It is not easy to replace, as historic buildings, BART tracks, Muni tracks, major roads and utility lines border the seawall. With rising sea levels, the seawall could become compromised in the event of a natural disaster. The Port Authority is in the planning stages of several major projects to help with the rising sea levels, all will require net zero by 2050 and discontinue the use of natural gas. Pier 70 will require historic and new buildings to be elevated to accommodate sea level rise. Some of the projects will be private developers, helping to fund the sea wall replacement project. In July of 2017, the Port of San Francisco launched the San Francisco Seawall Earthquake Safety and Disaster Prevention Program (Seawall Program), to improve seismic performance, provide near-term flood protection improvements, and plan for long-term resilience and sea level rise adaptation along the Embarcadero Seawall. The rebuild of the Embarcadero Seawall is estimated to cost up to $5 billion and take several decades to complete. The Port is planning an initial phase of $500 million worth of improvements to address the highest priority life safety projects. Phase I funding will require local, state, and federal funding. Local funding will be provided in part by a proposed voter-approved General Obligation Bond of $425 million for the November 2018 ballot. The General Obligation Bond will require two-thirds voter approval and will not raise tax rates.

The Circular Economy

A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life. In the United States 500 million tons of demolition waste is dumped into landfills every year, which is about 90% made up of materials from demolished buildings.

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Designers are now starting to think about the circular economy of building materials and **planning buildings for other future uses**. Many design elements can be designed for adaptability, or circular design, including allowing for interstitial space, modular rooms, demountable walls, and the incorporation of disassemble products (using screws and nails in lieu of adhesive connections where possible). This allows the owner, tenant or future tenant to reuse the construction materials, without having to demolish the space and generate waste. The owners need to ensure that future owners are aware of this adaptability of their space by transferring the design models and attributes to them. Achieving a sustainable world does not require changes in the quality of life of consumers, nor does it require loss of revenues or extra costs for manufacturers and other economic agents. The argument being made is that circular business models can be as profitable as linear models and allow consumers to keep enjoying similar products and services.

If you would like to learn more about some of the organizations who are working hard to build a more sustainable world, see the below links:

Green for All – Women and Moms uniting to fight for green equality for all. https://www.greenforall.org/

Clean Coalition - working to accelerate America's transition away from an outdated energy system built around large, centralized, fossil-fueled power plants and miles of inefficient transmission lines; and toward a modern energy system where smaller-scale, efficient, renewable energy projects deliver affordable and reliable power to communities. http://www.clean-coalition.org/

Advanced Energy Rebuild Program - Incentivizes homeowners affected by the North Bay Fires to rebuild energy-efficient homes with incentives up to $17,500. https://sonomacleanpower.org/news/advanced-energy-rebuild-program

Congratulations to Ivan Tapia-Pantoja, LEED Green Associate and Pierce Salamack, LEED AP BD+C on achieving their certifications!

Rudolph and Sletten Sustainability Development Committee (SDC)

Our mission is to further develop Rudolph and Sletten as an industry leader in sustainable construction.

Sustainability Director:
John Home – Roseville

Committee Members:

Matt Chadwick	Mike Mohrman
Ben Hancock	Hannah Salling
John Home	Jeff Swinyer
JR Hussey	Kalie Ward
Hugo Mailloux-Beauchemin	