Sustainability Action Plan

v1.0 November 2022

Assembledge+

Our Approach

Sustainably harvestered Western Red Cedar siding at the Beverly Grove Residence

Photography by Roger Davies

Since its founding, **Assembledge+** has been pursuing an architecture that is driven by a commitment to collaboration and craftsmanship with the goal of creating enduring environments that awre user-focused, innovative, and sustainable.

The name **Assembledge+** was deliberately chosen to convey the firm's passion for "assembling" all the often-complex elements. The **+** signifies an approach that looks at the whole as an inextricable combination of interrelated parts and that architecture is more than drawings and an arrangement of building materials. It includes the process of collaboration with owners, specialist consultants, and builders. It also includes ongoing exploration and innovation – programmatic, aesthetic, and technological – in pursuit of optimal, customized solutions for every project.

Our approach to architecture is situated within a contemporary modern design, particularly rooted in the Southern California tradition and climate. This is an architecture that is attuned to its environment and that supports and nourishes the people for whom it, in turn, is also the environment.

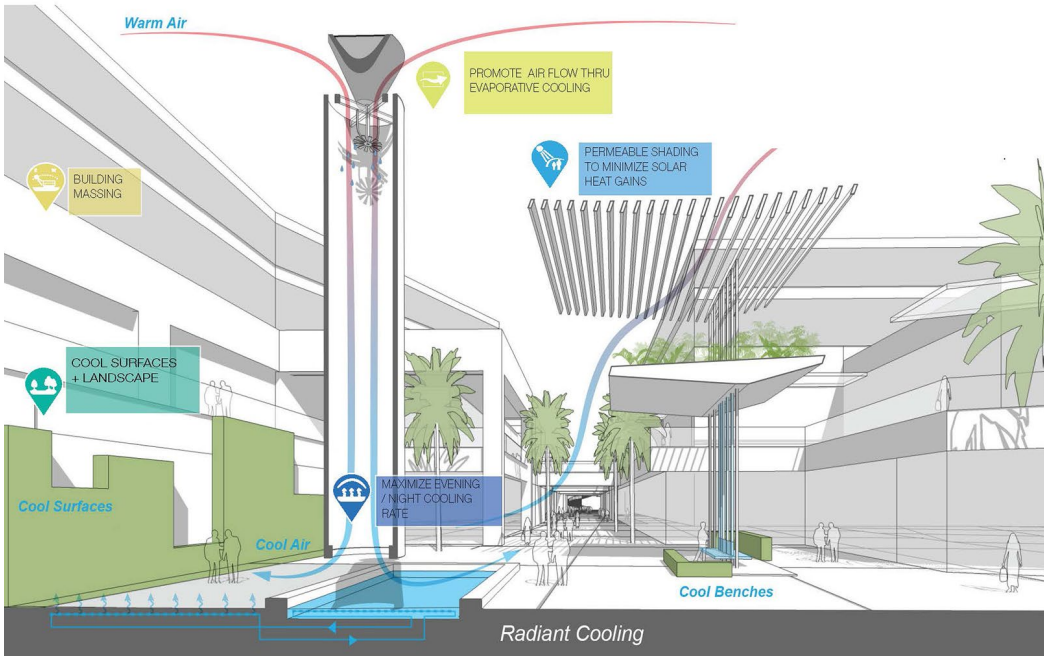
Our design process begins with questions. *What is the program and the intent? What is the aspiration?* These conversations are informed by a thorough analysis of the site – both of the property itself and of the neighboring community, and the client's specific needs and aspirations. The resulting architecture, then, combines these imperatives with materials, technology, craftsmanship, and form.

Our Focus

The urban built environment is responsible for 75% of the annual global greenhouse gas (GHG) emissions that cause climate change; building operations and construction alone account for 39%[1].

With a predicted increase of more than 1.5 °C in worldwide global warming temperatures[2], we recognize the dire situation the industry finds itself in. As a leader in the community, we have the responsibility, and obligation, to act for the betterment of future generations. We will take resolute action on climate change and demonstrate leadership through our work.

Assembledge+ is fully committed to prioritizing energy performance, carbon reductions, and resilience in design, toward the goal of carbon neutral buildings, developments, and major renovations by 2030.



CSU San Bernardino Palm Desert Campus performance driven design to achieve sustainability + resiliency goals

[1]UN Environment Programme. "Cities and Climate Change." unep.org, 2022, https://www.unep.org/explore-topics/resource-efficiency/what-we-do/cities/cities-and-climate-change#:~:text=At%20the%20same%20time%2C%20cities,being%20among%20the%20largest%20contributors.

[2]Intergovernmental Panel on Climate Change "Global Warming of 1.5°C." IPCC.ch, 2019, https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Summary_Volume_Low_Res.pdf

Our Goals

Energy Targets

- Meet the AIA 2030 targets on 100% of architecture and interior design projects by 2030
- Report data in Design Data Exchange (DDx) at regular intervals. https://2030ddx.aia.org/account/login
- Regularly evaluate projects and their data in comparison to the 2030 goals
- Submit the Projected Energy Use Intensity [pEUI] or Lighting Power Density [LPD] for 100% of all active projects

Carbon Footprint Reduction

- Achieve carbon neutrality on 100% of architecture projects by 2030
- Use Carbon Calculator to track embodied carbon in completed projects
- Implement strategies for reducing carbon footprint on studio operations
- Decrease the use of high-embodied carbon materials in current projects

Sustainable Materials

- Eliminate the use of Red List materials known for harmful impact to environmental or human health
- Require Environmental Product Declarations (EPDs) and/or Health Product Declarations (HPDs) on relevant projects
- Perform Life Cycle Assessments on projects, evaluating material transparency, content, and emissions when applicable
- Develop a selective materials library, prioritizing local, sustainable materials with low embodied carbon

Outreach & Advocacy

- Participate in various local and national sustainability communities and initiatives to create collective change
- Regular internal training on sustainable strategies and tools and facilitate research in the development and continuation of sustainable practices
- Work with local jurisdictions to streamline processes in a mutually supportive progress towards sustainable development
- Take part in volunteering opportunities to help create resilient communities

Formaldehyde-free MDF kitchen cabinetry at the Wonderland Park Residence

Photography by Laure Joliet

Our Process

Design

- Perform site assessment and climate analysis
- Establish project goals and energy targets with client
- Research and identify relevant passive and active strategies for optimizing building performance

Documentation

- Coordinate baselines and goals with project consultants
- Specify materials, details and specifications for sustainable solutions
- Establish standards for energy performance using analytical tools and consultant information

Construction Administration

- Integrate expectations in sustainable methods in the contract-awarding process
- Record and evaluate process vs. expectations, adapt and adjust as needed
- Observe the construction progress and the implementation of sustainable strategies

After Completion

- Conduct Post Occupancy Evaluation to capture and catalog feedback for future projects
- Collect and review Energy Performance Data to inform owners on potential improvements
- Reflect on successful strategies, areas of improvement, and lessons learned

Drought tolerant landscape at the Oakdell Residence

Photography by Lisa Romerein

Laurel Hills Residence

Composed of three pavilions connected by a series of glass hallways, the single-story residence seeks to create a residential oasis.

The materials consisting of **sustainably harvested Western Red Cedar,** darkly painted cement board and glass are simple and unaffected, blending seamlessly with its context of the neighborhood and the property's natural surroundings.

The residence attains the required energy and environmental goals set forth by the City of Los Angeles including reflective roof surfaces, LED lighting, high efficiency HVAC systems, properly specified and installed insulation, high efficiency glazing systems, permeable ground surfaces, and a rainwater collection system that is used to irrigate the **drought tolerant landscaping.**

Principles of **effective site orientation** are also utilized with southern facing walls that are without glazing or protected by **overhangs to mitigate solar heat gain and shield from the sun exposure.**

Large roof area serves for the installation of an approximately 15kW photo-voltaic system releasing the house from the city's electrical network

Photography by Matthew Millman

Sustainably harvested Western Red Cedar cladding

Photography by Laure Joliet

Wonderland Park Residence

Nestled in the hills of the Laurel Canyon, The Wonderland Park Residence is situated within an enclave of mid-century residences from which it draws its inspiration.

Originally a ranch house built in 1956, the project entails a second-floor addition and extensive remodel.

The kitchen physically connects the social and private areas and provides views horizontally to the landscape and vertically through the skylight. Floor-to-ceiling glass sliding doors are positioned on opposite corners of the plan establishing a diagonal axis from the front yard, through the interior spaces, and out to the back yard and pool.

The house utilizes sustainable technologies including **sustainably harvested Red Cedar cladding, a solar photovoltaic system, a grey water system for landscape irrigation, native and drought tolerant landscaping,** Caesarstone countertops**,** and **formaldehyde-free MDF kitchen and bath cabinetry.**

AETHER Apparel Headquarters

Born out of the desire for men's and women's collections to look at home in the city but withstand the outdoors, AETHER's products reflect a pure expression of form and function.

AETHER Apparel engaged Assembledge+ to renovate an existing 1953 bow truss building and design a new, dynamic headquarters to echo the brand's value and provide for a transparent and creative workspace.

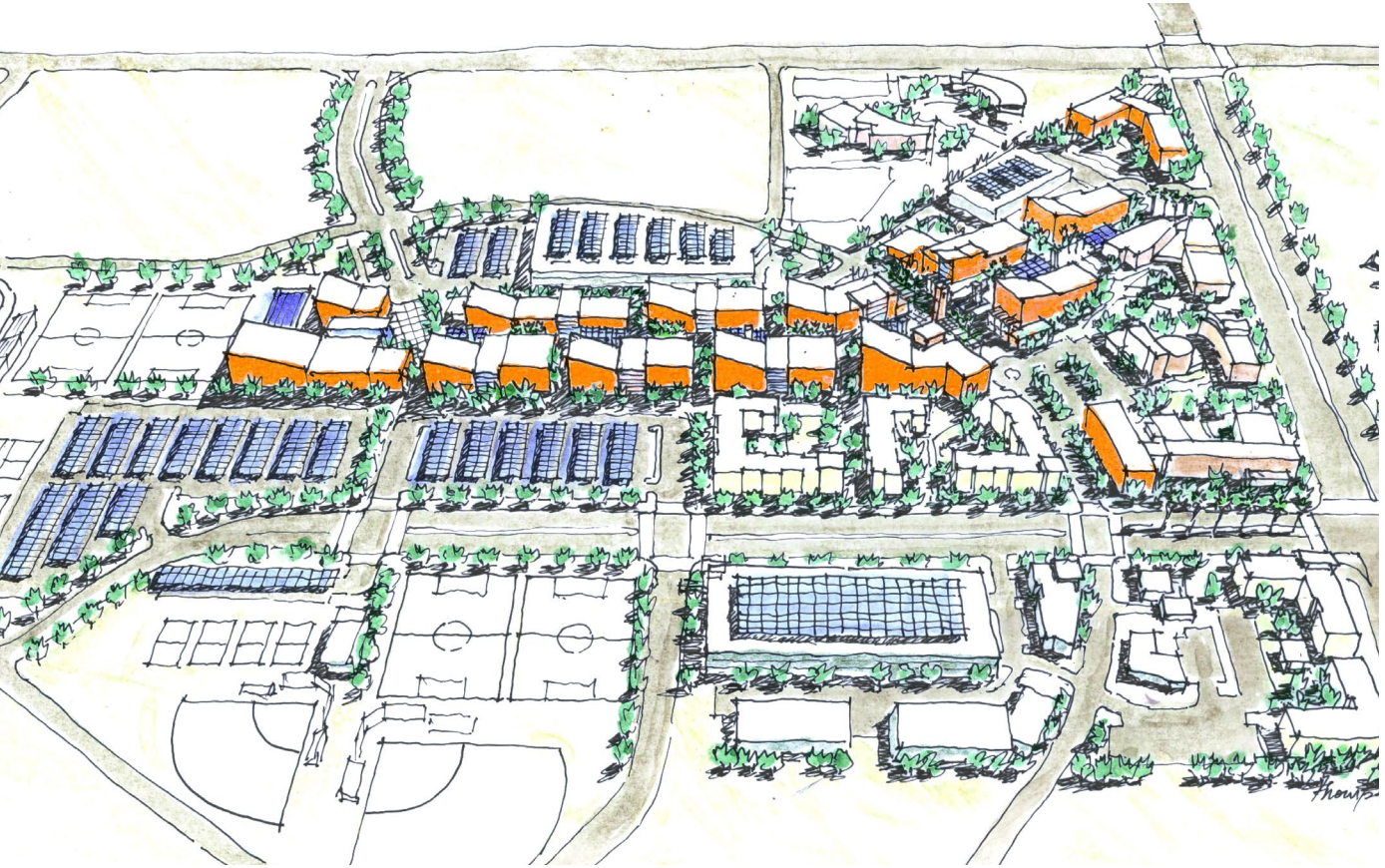
In the spirit of their extreme passion for the environment, the client requested the space to be as eco-conscious as possible and utilize **solar energy for all the electrical requirements. A cooled roof** made of foam was utilized to allow for all the wood structure and decking to be exposed while **reflecting 80% of the sun's rays.**

Outside, **a canopy** composed entirely out **of solar panels** provides shade from the southern sun and powers the entire office with solar energy, while **putting an extra 30% back into the grid.**

A canopy provides shade to help moderate temperatures and is equipped with photovoltaic panels that power the entire office

Photograophy by Yoshi Makino

Overall campus view



CSU San Bernardino Palm Desert Campus

The master plan for the satellite campus of California State University, San Bernardino in Palm Desert establishes an organizational structure for growth, using state-of the-art “Performance-Design” techniques to create a sustainable environment in an arid desert climate.

The concept of a central pedestrian promenade, ‘Palm Canyon Walk’ is modeled after **a local ecological system known as ‘Palm Canyons’** that are formed when water is found in small canyons off the desert floor. Over time, these canyons became densely populated with palm trees creating a cooling natural oasis setting.

Buildings on both sides of ‘Palm Canyon Walk’ are oriented to maximize shade, reduce heat gain, and provide wind protection when needed. Evaporative cooling towers and shade structures (both permeable and solar) provide pleasant outdoor settings for gatherings.

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