

American Institute of Architects (AIA)

AIA is the largest, most influential network of architects and design professionals.

That's 98,000+ members who share a passion for design, a desire to change the world, and a commitment to the highest standards of practice.

www.aia.org



Kathleen Lane

Managing Director, Climate Action & Design Excellence



Lisa M. Ferretto

Sr. Director, Climate Action & Design Excellence

Description + Learning Objectives



Description

Propel your project success with the AIA Framework for Design Excellence — the defining 10 principles of design excellence. No matter your role as an architect, engineer, consultant, or owner, this presentation will examine how Framework principles apply across the project lifecycle and advance progress toward a zero-carbon, healthy, just, resilient, and equitable built environment.

As a real-world case study showcasing the successful integration of Framework principles and pledge targets and goals, we'll share the comprehensive renovation of AIA's Washington, DC Headquarters into the AIA Global Campus for Architecture & Design.

Learning Objectives

- Describe AIA's Framework for Design Excellence and outcomes
- Identify Framework principles and use in the design process
- Evaluate Framework use in the design of AIA's Headquarters renewal and alignment with AIA's Pledge Programs
- Identify AIA resources for your projects

AIA Framework for Design Excellence May 23, 2024

- Defining principles of design excellence
- Comprised of 10 principles
- Goals
 - to transform the day-to-day practice of architects
 - to inform progress toward a zero-carbon, healthy, just, resilient, and equitable built environment

10 principles



Integration



Energy



Communities



Well-being



Ecosystems



Resources



Water



Change



Economy



Discovery

4 outcomes



Zero carbon



Equitable



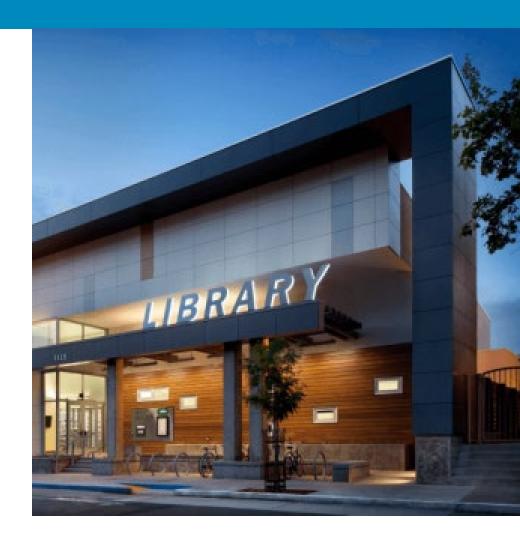
Resilient



Healthy

Design for Integration

- Use an integrated design process that respects and values multiple viewpoints; Design a building to lift the spirits and delight the senses; Engage natural and cultural environment
- **ZERO-CARBON**: Set and articulate operational and embodied carbon goals early in the process.
- **RESILIENT:** Establish resilience goals early in the process and monitor progress throughout the project.
- **EQUITABLE:** Map, identify, and engage diverse project stakeholders throughout the project's development.
- **HEALTHY:** Identify human health and well-being goals early in the process and track progress throughout the design process.



Integration



COTE® TOP TEN AWARD

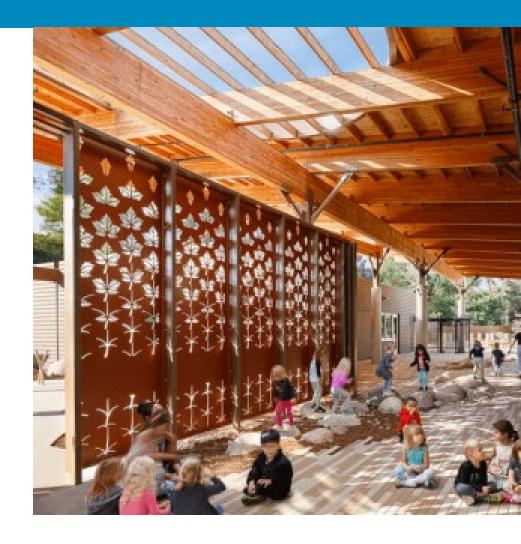
Watershed

Architecture Firm: Weber Thompson

INTEGRATED BUILDING Aurora Bridge Beehives installed **SYSTEMS** on the roof Heat pumps for flexible and efficient VRF mechanical system Heat recovery DOAS PV-ready roof Roof designed for rainwater collection Roof terrace views of Lake Union, downtown, and Mt. Rainier Low-flow, waterconserving fixtures Operable windows allow natural ventilation Rainwater art features DOAS air return DOAS air supply Roof terraces 000 manage stormwater Lightweight castellated steel beams Below-grade rainwater cistern Self-tinting glass reduces peak cooling load and glare Bioretention system cleans Aurora Bridge and roof deck stormwater runoff Weathering steel gate serving as entry canopy Educational signage tells the water story Exterior entry court and access to Lake Union to bike room Design for Integration

Design for Equitable Communities

- **ZERO-CARBON:** Evaluate embodied carbon and social value; Reduce amount of energy project requires and seek renewable and local energy sources.
- RESILIENT: Embrace community knowledge to understand social, economic, and environmental hazard impacts.
- **EQUITABLE:** Implement a robust stakeholder engagement plan; Provide diversity in development, design, & construction team. Work with designers, contractors, and consultants that participate in a social equity program (such as JUST).
- HEALTHY: Design with products that address chemical transparency & organizational equity; Create gathering spaces and social infrastructure to support strong human networks.



Communities

DESIGN FOR EQUITABLE COMMUNITIES



COTE® TOP TEN AWARD

Casa Adelante 2060 Folsom

Youth Speaks FIRST EXPOSURES STREET Ł ALL GENDER RESTROOM

PODER's mission is to organize with Latino immigrant individuals, families and youth to put into practice people-powered solutions that are locally based, community led and environmentally just.



Youth Speaks creates spaces that challenge youth to develop and amplify their voices as creators of societal change, including hosting a monthly under-21 open mic and teen poetry slam at Casa Adelante.



Larkin Street Youth Services is a nonprofit empowering young people to move beyond homelessness, eliminating barriers so they can flourish.



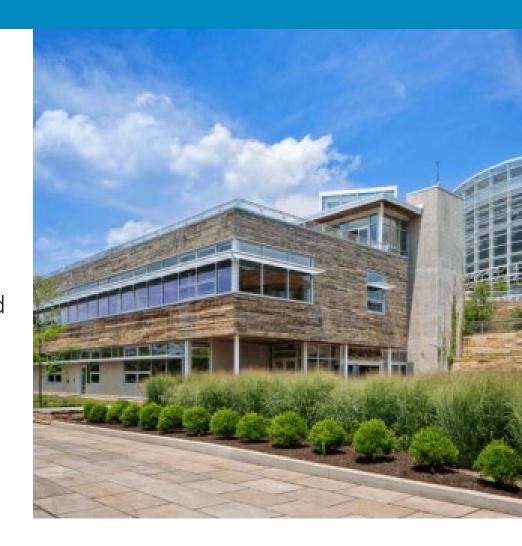
Good Samaritan Family Resource Center provides free parent-child support systems, free and low-cost infant, toddler and youth programs, and affordable preschool.

Architecture Firm: Mithun with Y.A. Studio

Ground floor on-site services offer a birth-to-career continuum of comprehensive support.

Design for Ecosystems

- **ZERO-CARBON:** Consider manufacturing, construction, end-of-life and ecosystems when selecting materials.
- RESILIENT: Assess attributes of predevelopment condition, ecosystem services, and the capacity to adapt to a changing climate.
- **EQUITABLE:** Research history and culture of land to understand its development over time. Incorporate restorative strategies
- **HEALTHY:** Identify the most consequential strategies that reduce negative impacts on the ecosystem, improve human health, and eliminate chemical toxicity.



Ecosystems



COTE® TOP TEN AWARD

Confluence Park

Architecture Firm: Lake | Flato Architects + Matsys

DESIGN FOR ECOSYSTEMS

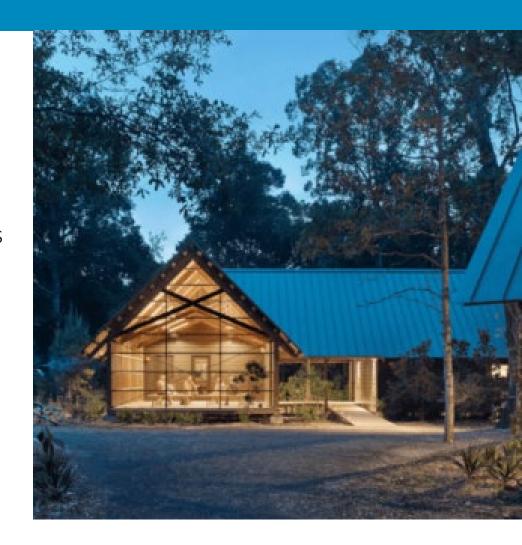


ECO TYPES

- 1 Texas Oak Conservatory
- 2 Trans Pecos / Chihuahuan Desert
- 3 Blackland Prairie
- 4 Texas Live Oak Savannah
- 5 SA River Restoration

Design for Water

- **ZERO CARBON**: Incorporate water reuse and reduction strategies; understand relationship with energy and carbon.
- **RESILIENT**: Project future climate conditions; establish strategies to manage water at site, including watershed effects
- **EQUITABLE**: Identify stakeholders impacted by water use decisions and take steps to correct historic inequities.
- **HEALTHY:** Protect water sources for site, downstream communities, and future consumers.



WATER MITIGATION AND RECLAMATION

Water

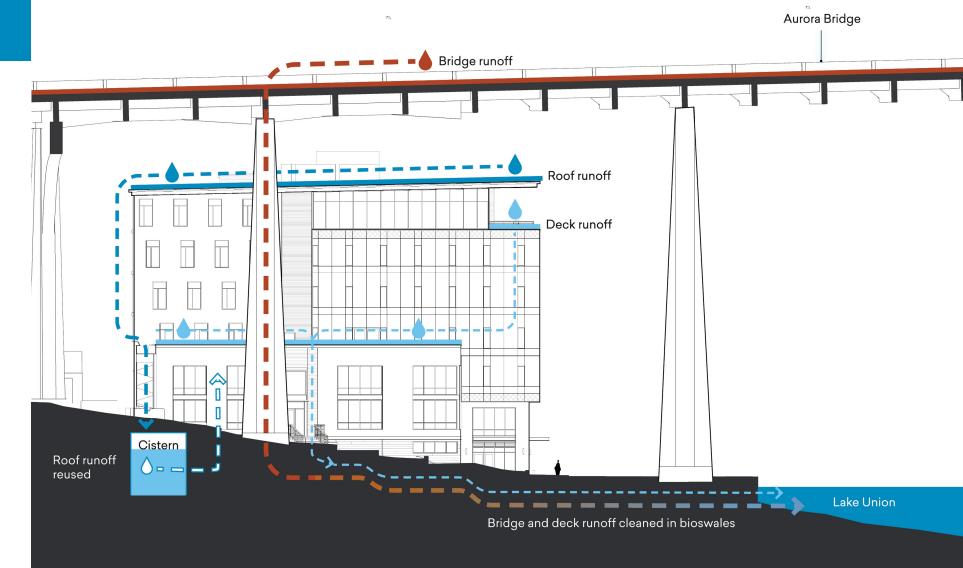


COTE® TOP TEN AWARD

Watershed

Architecture Firm: Weber Thompson

May 23, 2024

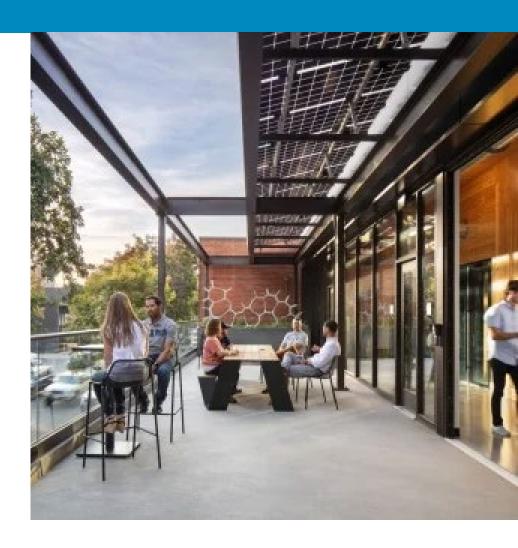


- Bridge stormwater runoff cleaned in bioswales
- ♦ Roof rainwater captured for reuse
- Occupied deck stormwater runoff cleaned in bioswales
- ♦ Cistern water reused in building



Design for Energy

- **ZERO CARBON:** Reduce building energy use and carbon impact by benchmarking, setting targets, and performing iterative energy modeling throughout the design process.
- **RESILIENT:** Design all-electric buildings with grid interoperability to take advantage of distributed energy sources.
- EQUITABLE: Design to achieve passive survivability without use of grid energy.
- HEALTHY: Transform energy use by promoting renewable energy and embracing building electrification.



Energy



COTE® TOP TEN AWARD

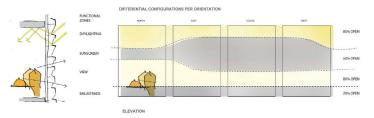
Harvard
University
Science and
Engineering
Complex

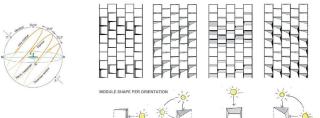
Architecture Firm:Behnisch Architekten

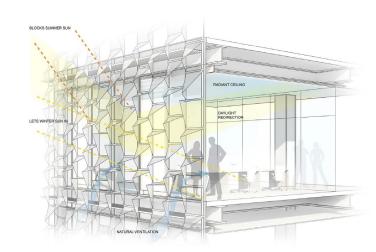
14 Shade Profiles

12k Individual Shades

1.5 mm-thick Stainless Steel







May 23, 2024



Design for Economy

- **ZERO CARBON:** Reuse an existing building if possible and reuse materials wherever appropriate.
- Right-size program early and keep the square footage as efficient as possible.
- **RESILIENT:** Identify proposed service life for the building and create a plan to adapt to hazard risk over time.
- **EQUITABLE:** Design to support a vibrant local economy; maintain diverse populations; support local resources & trades
- **HEALTHY:** Balance operational and maintenance to improve occupant health and well-being, improve community health outcomes, and lower household health care expenses.



DESIGN FOR ECONOMY

Economy



COTE® TOP TEN AWARD

Casa Adelante 2060 Folsom

Architecture Firm:Mithun with Y.A. Studio

25% INCREASE IN UNITS

optimized City investment in land for affordable housing

80% OF GROUND FLOOR SURFACES

use structure as finish

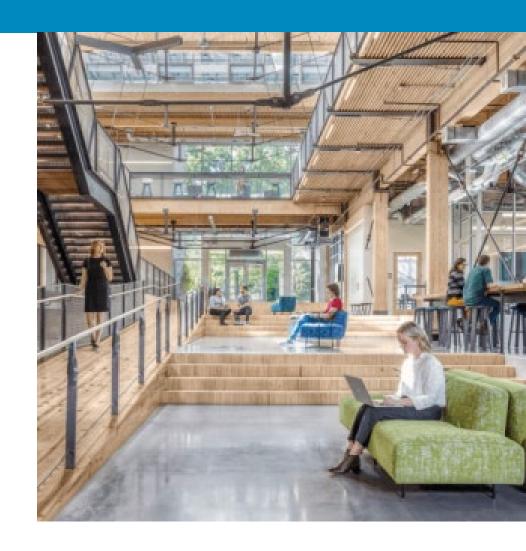
Early in concept design the design team initiated a study for moving to all-concrete construction to add three stories within the 85' midrise limit, adding 25% more units than expected by the City at the same cost per unit, leveraging City investment and enabling 30 more low-income families to benefit from this amenity-rich transit oriented site.

The mix of single- and double-height ground floor spaces maximizes residential area while meeting zoning requirements for a tall ground floor at commercial streetscapes.



Design for Well-being

- ZERO CARBON: Reduce use of fossil fuels.
- RESILIENT: Design for passive survivability in the event of service interruptions.
- **EQUITABLE:** Provide community with healthy spaces to support well-being & promote social interaction.
- **HEALTHY:** Design to achieve excellent air quality, whether in living, learning, working, or other environments.
- Design for active living and access to nature. Utilize biophilic design to improve mental and physical health and well-being.



Well-being



COTE® TOP TEN AWARD

Science and Environmental Center

Architecture Firm:Leddy Maytum Stacy Architects

May 23, 2024



100% Occupied spaces have views to outdoors and access to operable windows

- Operable windows maximize fresh air ventilation
- 2 Indoor ceiling fans promote air circulation and increase thermal comfort zone
- 3 0 VOC paints on all surfaces

DESIGN FOR WELL-BEING

100% Outside air ventilation

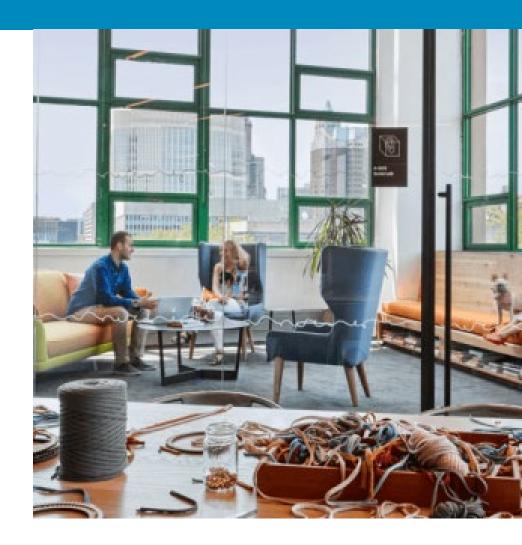
- Red list free linoleum flooring provides durable, cleanable surface.
- 5 Formaldehyde free casework
- Direct/ Indirect LED lighting augments natural daylight

Pandemic Resilience with open-air circulation and excellent access to natural ventilation, the building has proven to be easily adapted to the health requirements of the COVID pandemic.

- 7 Flexible power supply, allows space to easily be reconfigured for a variety of users and allows students to spread out throughout the classroom.
- Outdoor circulation promotes exesccive and connection to natural world. (next image)

Design for Resources

- **ZERO CARBON:** Select products that reduce carbon emissions. Consider the materials' carbon footprint from cradle to cradle.
- RESILIENT: Consider the durability of materials to withstand anticipated shocks and stresses.
- **EQUITABLE:** Consider the health of communities where resources are extracted, harvested, manufactured, and disposed. Demand product transparency.
- **HEALTHY:** Simplify materials palette to reduce potential for chemicals of concern; prioritize healthier materials; seek to eliminate the use of hazardous substances.



Resources

COTE® TOP TEN AWARD

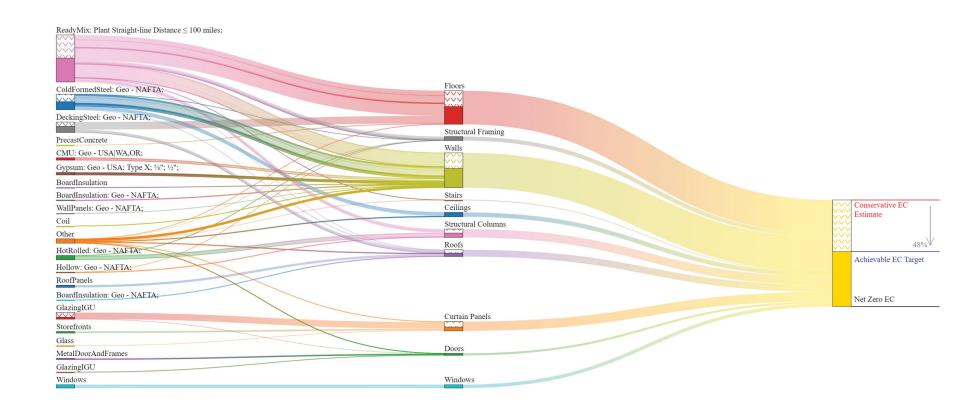
Watershed

Architecture Firm: Weber Thompson

May 23, 2024

RESOURCE CONSCIOUS

The embodied carbon for the project was calculated, optimized, and offset. Materials were salvaged from the previous building on site and reused.



Salvaged overhead panels in office



Salvaged cedar formwork in lobby area



Salvaged outdoor benches

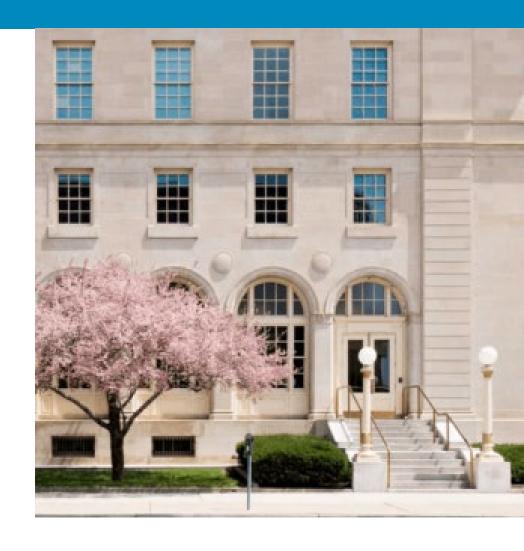


Salvaged foundation wall



Design for Change

- **ZERO CARBON**: Design buildings that are ready for and adaptable to future uses, energy sources, and technologies.
- RESILIENT: Design for adaptation and flexibility by reviewing climate risks and determining service life of the building
- Design buildings to act as a community resource during disaster events, offering shelter, charging points, etc.
- EQUITABLE: Asses how project can respond to current and future disaster events to protect the most vulnerable members of the community and enable rapid recovery.
- **HEALTHY:** Address potential public health risks associated with climate change and design to improve community health.



Change



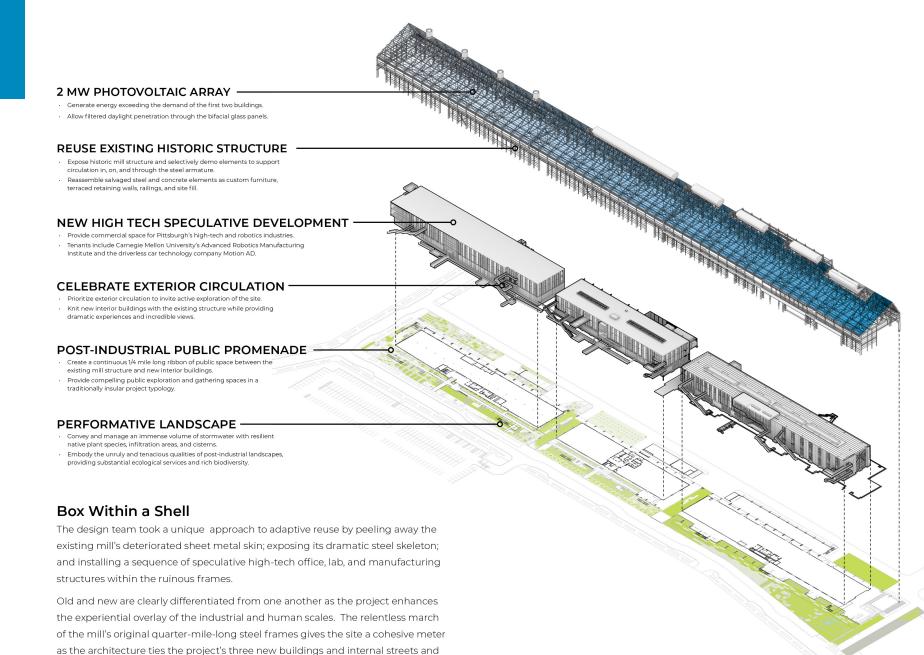
COTE® TOP TEN AWARD

RIDC Mill 19: Buildings A & B

Architecture Firm:
MSR Design with R3A Architecture

courtyards to the planned neighborhood grid.

May 23, 2024



Design for Discovery

- **ZERO CARBON**: Conduct post-occupancy assessments to evaluate achievement of the project's carbon goals. Advocate for carbon reduction to community stakeholders, local government, and authorities having jurisdiction.
- RESILIENT: Conduct post-occupancy assessments to evaluate the achievement of the project's resilience goals. Study building performance under less-than-ideal conditions, such as disaster events. Does it provide passive survivability, continuity of operations, or serve as a community resource?
- **EQUITABLE:** Conduct post-occupancy assessments to evaluate achievement of project's equity goals.
- HEALTHY: Conduct post-occupancy assessments to evaluate achievement of project's human health and well-being goals.



BUILDINGS THAT TEACH

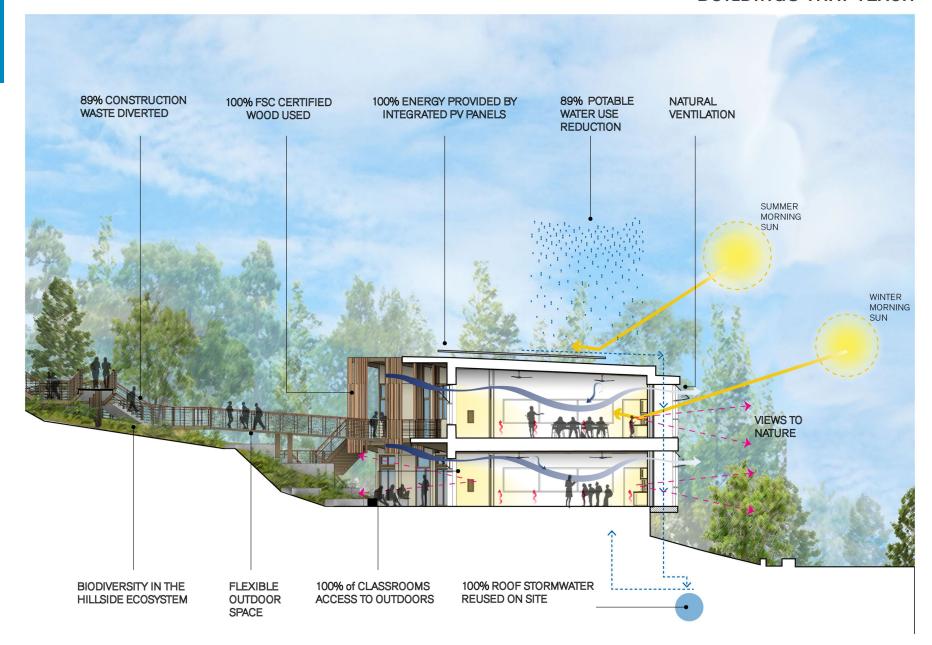
Discovery



COTE® TOP TEN AWARD

Science and Environmental Center

Architecture Firm:Leddy Maytum Stacy Architects





May 23, 2024

Acknowledgements































AIA Values

Advocating for a zero carbon, equitable, resilient, and healthy built environment













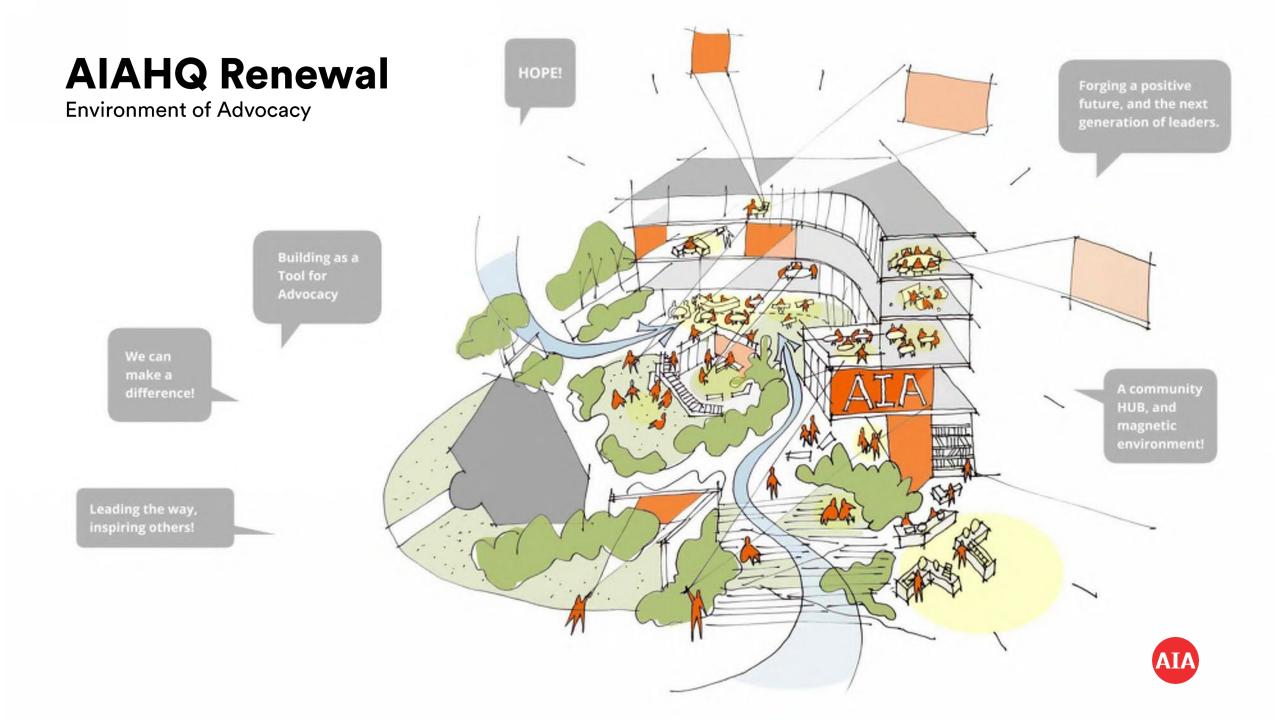












AIAHQ Renewal

Environment of Advocacy

Design for integration

Design for equitable communities

Design for ecosystems

Design for water

Design for economy

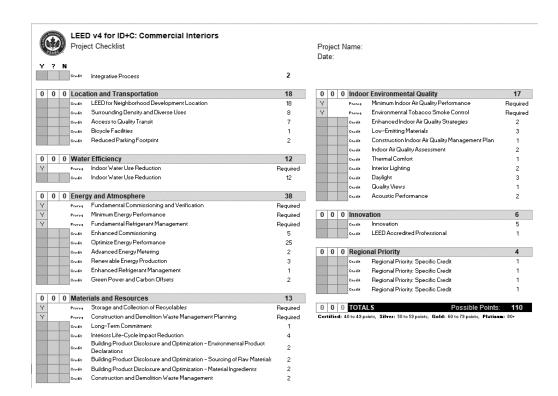
Design for energy

Design for well-being

Design for resources

Design for change

Design for discovery



8 servings per container Serving size 2/3 cur	(550
Amount per serving Calories 2	230
% Da	aily Value
Total Fat 8g	109
Saturated Fat 1g	59
Trans Fat 0g	
Cholesterol 0mg	09
Sodium 160mg	79
Total Carbohydrate 37g	139
Dietary Fiber 4g	149
Total Sugars 12g	
Includes 10g Added Sugars	209
Protein 3g	
Vitamin D 2mcg	10
Calcium 260mg	20
Iron 8mg	45
Potassium 240mg	6

(For educational purposes only. These labels do not meet the labeling requirements described in 21 CFR 101.9.)

Image: FDA

A CLIMATE POSITIVE FUTURE



Electrify Everything



Decarbonize Materials



Reimagine What Exists



Resilience for Change

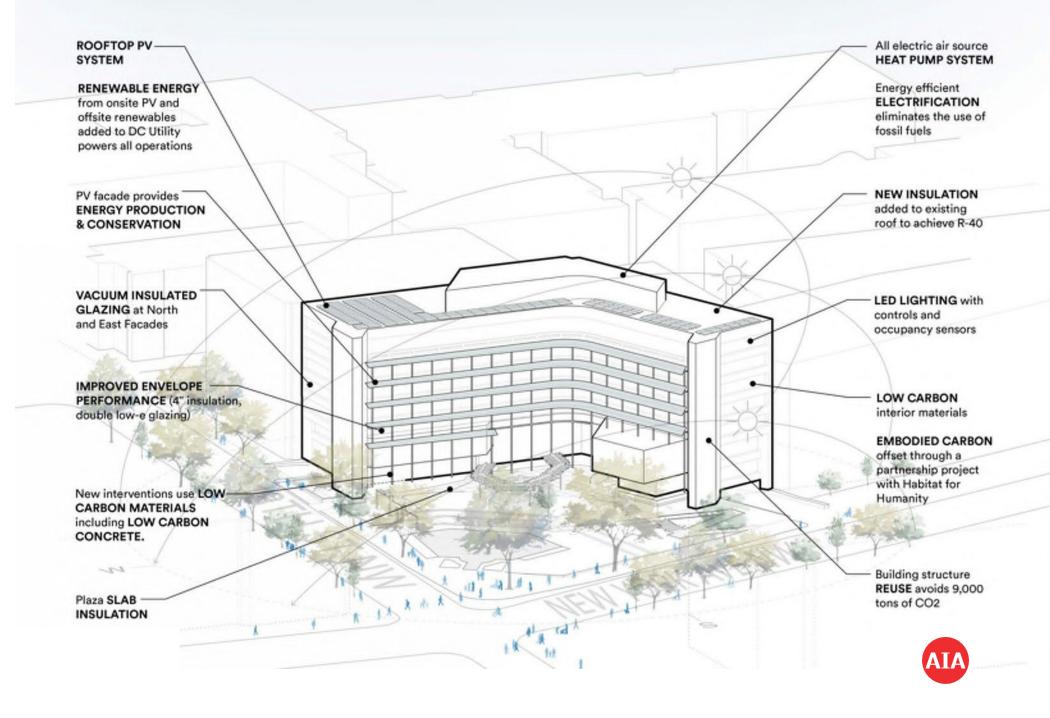


Leadership through Advocacy

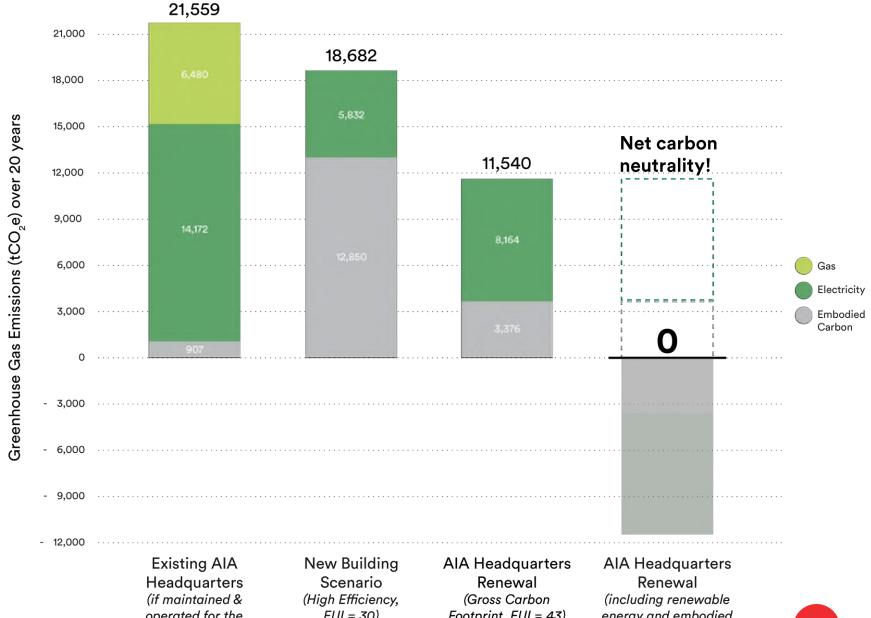
Resilience for Chang



Climate Positive AIA HQ DESIGN FEATURES



CARBON EMISSIONS COMPARISON



operated for the next 20 years)

EUI = 30)

Footprint, EUI = 43)

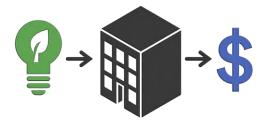
energy and embodied carbon offset project)



Equitable & Scalable

STEPS TO DECARBONIZATION

1.



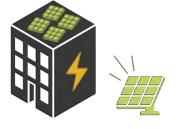
Push energy efficiency to cost effective limit

2.

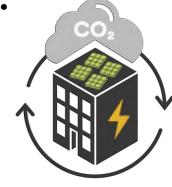


Electrify all building systems

3.

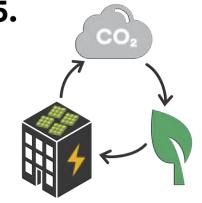


Serve building with 100% renewable energy (mix of onsite and offsite) 4.



Transform existing building through low carbon renovation

5.



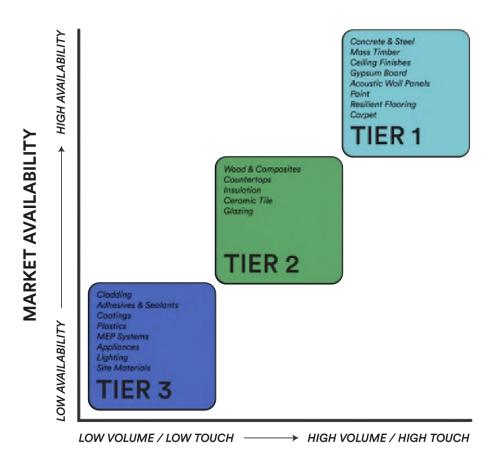
Offset remaining embodied carbon through a socially engaged community offset project







MATERIAL SELECTION CRITERIA



RELATIVE IMPACT

						Cetagories			
-			CONDITIES Consider feasibility of meeting		STIEL Consider feasibility of meeting		IASS TIMBER		CELAG TLE
	CUMMIT HEALTH	Southers Concrete. Nade Minet Concrete: 0.1500 psi 2001.0000.psi 3001.0000.psi 4005.5000.psi 5006.0000.psi 6006.0000.psi 6006.0000.psi 6006.0000.psi	Consider foliability of meeting financia and Sabalaged Manarian chimies of 200 Mg Colya Ne ³ 200 Mg Colya Ne ³ (INF LIME ³ 310 Mg Colya Ne ³	Structural Stant. Stant Stant Status Stonel Stan and Mouth Plicia Stant Structural Stant Sections Stant Stant Stant Stant Sections Stant Stant Sections Stant Stant Stanting Spon-web Stant Statis	Consider feedballing of entering feedballing of the consideration of the	Mes Timber (\$43) (0.3) (0.3) (0.3)	Consider flowfalling of execting Curtoes Positive Measurest-criteria SWIFT Laws ⁵ SD4 kg Co ₂ apm ²	Accepted Deling Tile	Consider flowbilling of meeting flowers and Serveged Messessis orders distributed ³ & kg Co ₂ q/m ²
	STATE STATE	Ready Mixed Concerts:	Six Classes Pres		Sin Clintare Free	Mas Importist, VII/94, MCI and Arbestons	Six Classes Free Made without the following Chemicals all Canasses* - Formation/yell photology use- formation/yell - Issuingurutes - Issuingurutes - Pertice/boogs/emol	Accepted Enling The	Six Classes Floor Made without the following Clicon of Concessors -PV Service CPVC -Prevalenthyle producting wind- farmationlysis -Monoethanislamine VOC Consistence Evaluation
	No.	Concrete Masony Sinit:	Six Classes Five Made without the following Drominato of Concern ² - Formatilehyde (Including urea Scienceshyde):			Mara Tortion Adhesives	YOC Emissions Evaluation / Farmanouthydo Emissions Distriction YOC Content •		
	839				Most righted Products	s and disrepance prherie			
	HOUSE HEALTH SHOWN AND EQUITY		Cero Words Ma	nuturousing Certifications./ D		- following oritoria:	ck Programs / Recycled Content / Walte	Cated Waterlay	
		WUIS		nutriculing Certifications, / D	Meet any of the resigned for Dissibility / Oceand Loop Pro	hillowing orderac stocks / Manufacturer Taketpe		Oxford Materials	CARPY
		Coppen Basel State Mat Oppose Sheeting 1/2" 5/8"	OWF LINE 2.5 NEOD, AIR S OWF LINE 2.5 NEOD, AIR S OWF LINE 2.5 NEOD, AIR S 4.71 NEOD, AIR S	nutriculary Continuations / D	Meet any of the	hillowing orderac stocks / Manufacturer Taketpe	CS Programs / Recycled Content / Helsa LENT FLOORING UNIT Limit ¹ S Rg 00-ya'ns ²	Colored With resides	CAMPAT GREET CHOICE OF BIG COUNTY
	CHICKLAR	Opean Bearl State Mic Spean Sheeting 5/2*	OWY LONG 2.5 NE CO, ACM COT LONG 2.5 NE CO, ACM COT LONG 2.5 NE CO, ACM COT LONG 2.5 NE CO. ACM CO. AC	Painty	Meet any of the resigned for Circularity / Closed Loop Plu	- following orders: Automotive Telestone Telestone PESS Resilient Feeding	LIENT FLOORING	Corports	
	MEALTH COMMANY CONCULAR	Oppose Board Blass Mot Oppose Sheedling 5/2" 5/8"	AND WALL PROBLES OVER TIMES 4.21 by CO Janes 5.22 by CO Janes To Classes Fire Made without the following Common PIC and CPVC - Symmetrolytes (including unes- formatrolytes)	Painty	Meet any of the property of the part of th	Indicating ordered Advantage Teleston PASS Resilient Teleston	Land Functions Six Climate Free Made without the following chamicals of Climates - Chicoconne - Borgaretin - Monosthanogemin - Monosthanogemin - Monosthanogemin - Monosthanogemin - PVG and DVC - Signere	Corport	Six Classes Free Made extract the following Class of Constant - Price of Constant - Price of Constant - Price of Constant - Price of CONST - System - Opposite - Oppo
	MALALE SELECTS SCHOOL CONTRACTS CONTRACTS	Oppose Board Blass Mot Oppose Sheedling 5/2" 5/8"	AND WALL PROBLES OVER TIMES 4.21 by CO Janes 5.22 by CO Janes To Classes Fire Made without the following Common PIC and CPVC - Symmetrolytes (including unes- formatrolytes)	Painty	Meet any of the beagand for Croutelity / Closed Loop Fin FANT EPO Business No Classes Pres Made ethout the following Chesical of Concess* Made analysis and passes WOC Entreatine Enduation	Indicating ordered Advantage Teleston PASS Resilient Teleston	Land Functions Six Climate Free Made without the following chamicals of Climates - Chicoconne - Borgaretin - Monosthanogemin - Monosthanogemin - Monosthanogemin - Monosthanogemin - PVG and DVC - Signere	Corport	Six Classes Proc Made attract the following Class of Consens," —Enoughed —Broughed —Monochardamine —PriC and (EVC) —Special —Coggardin Compounds

AIA Global Campus for Architecture + Design





May 17, 2024

AIA Global Campus for Architecture + Design



41



AIA Global Campus for Architecture and Design



42



AIA Global Campus for Architecture and Design



45



AIA Global Campus for Architecture and Design



46



Resources

- **AIA Climate Action**
 - www.aia.org/design-excellence/climate-action
- Framework for Design Excellence
 - www.aia.org/design-excellence/aia-framework-design-excellence
- COTE Top Ten
 - Main website, www.aia.org/design-excellence/awards/cote-top-ten-awards
 - 2023 Award Winners, www.aia.org/cote-top-ten-award-2023

AIA Framework for Design Excellence

The world today is facing broad and complex challenges that threaten every aspect of our lives. The architect's call to protect the health, safety, and welfare of the public has a new and broader meaning amid challenges such as increasing climate extremes and social inequity. Architects everywhere must recognize that our profession can harness the power of design to contribute to solutions addressing the most significant needs of our time. Every project can be used as a platform for addressing big problems and providing creative solutions. Every line drawn should be a source of good in

The Framework for Design Excellence represents the defining principles of good design in the 21st century. Comprised of 10 principles and accompanied by searching questions, the Framework seeks to inform progress toward a zero-carbon, equitable, resilient, and healthy built environment

These are to be thoughtfully

The Framework for Design Excellence challenges architects with a vision the profession strives to achieve.

considered by designer and client at the initiation of every project and incorporated into the work as appropriate to the project scope. The Framework is intended to be accessible and relevant for every architect, every client, and every project regardless of size, typology, or aspiration.



INTEGRATION



EQUITABLE COMMUNITIES

Design solutions affect more than the client and current occupants.

- What is the project's greater reach! How could this project contribute
- Who might this project be forgetting?
- How can the design process and outcome remove barriers and
- What opportunities exist in this project to include, engage, and
- promote human connection?



Design for ECOSYSTEMS



Design for WATER

Good design consumes and improves the quality of water as a precious resource.



Design for ECONOMY

Good design adds value for owners

- How do we design robust projects that enhance economic, return, intel-
- How will the design choices balancest with long-term value?
- How can the performance of the

ENERCY



CHANGE

essential to good design, which seeks to enhance usability, functionality, and value over time.

RESOURCES

- risks and vulnerabilities from social economic, and environmental change?
- or changing markets?
- How closs the project address pas

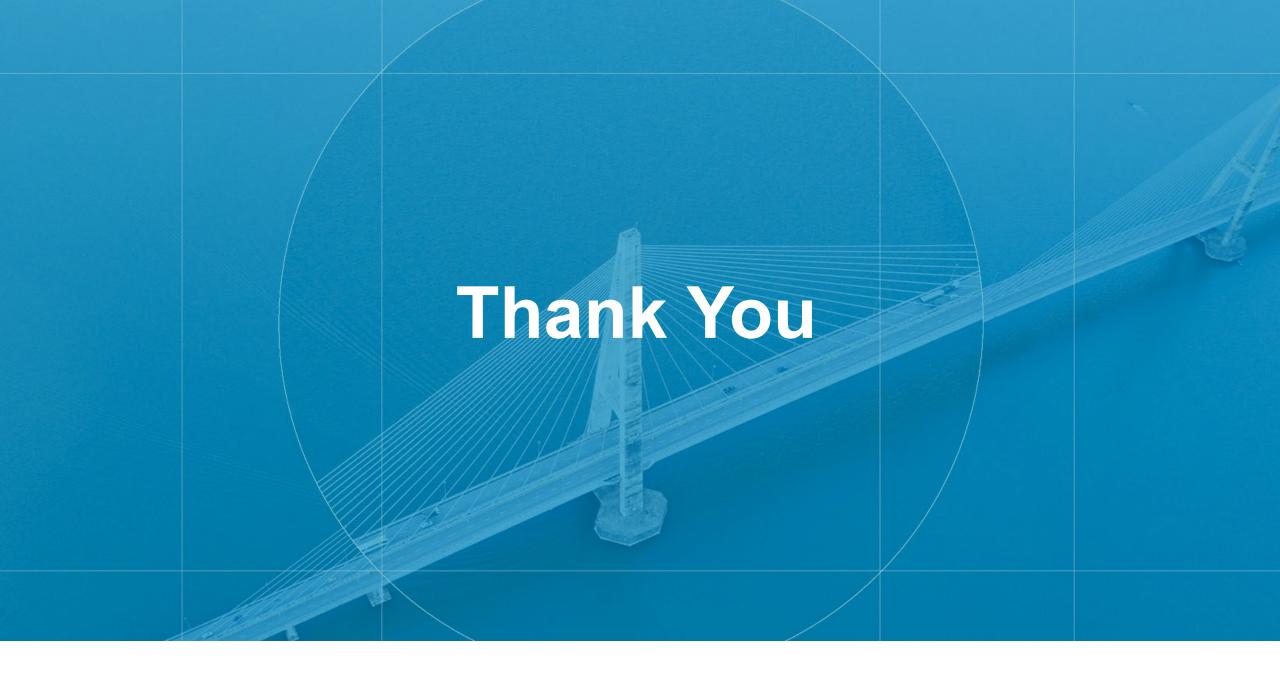


WELL-BEING

- How can the design encourage a healthy lifestyle?
 - How can the project pro
 - How can the project be welcoming and indusive for all?
 - How can the project con with place and nature?
 - How can material selection reduce hazards to occupants and communities throughout the supply chain?







American Institute of Architects (AIA)

AIA is the largest, most influential network of architects and design professionals.

That's 98,000+ members who share a passion for design, a desire to change the world, and a commitment to the highest standards of practice.

https://www.aia.org/



Kathleen Lane

Managing Director, Climate Action & Design Excellence

kathleenlane@aia.org



Lisa M. Ferretto

Sr. Director, Climate Action & Design Excellence

lisaferretto@aia.org