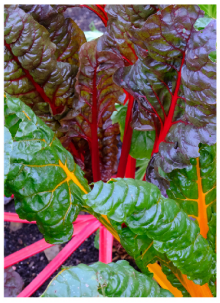
ARCHITECTURE AT ZERO 2024

A design competition for decarbonization, equity and resilience


COMPETITION CHALLENGE

Middle School Building in East Los Angeles, CA

CHALLENGE

The Architecture at Zero 2024 competition program is to design a new building on a middle school campus in East Los Angeles (East LA), California. The new building will replace relocatable classrooms and includes science labs, art classroom, maker space, outdoor learning environments, and a teacher workroom. While the competition program location is Griffith STEAM Magnet Middle School, note that this is an ideas competition and is not a “real” project.

ELIGIBILITY

Architecture at Zero is a design competition for decarbonization, equity and resilience, open to students and professionals worldwide. It serves to engage the fields of architecture, design, engineering and planning in the pursuit of sustainable design.

Win $25,000

*Prize money will be awarded at the discretion of the Jury.

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CIEF

ASHRAE San Jose Chapter

DEADLINE: DECEMBER 16, 2024 6:00 PM PST

This program is funded by California utility customers and administered by SCE, PG&E, and SoCalGas under the auspices of the California Public Utilities Commission.

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ARCHITECTURE AT ZERO 2024

A design competition for Decarbonization, Equity and Resilience in California

COMPETITION OVERVIEW

Up to $25,000 in total prize money will be awarded to student and professional winners at the discretion of the Jury.

Fees:
There is no fee for student entries.
Students must submit a valid student ID from the 2024 academic year.

Professional entry fee: $325 per entry

There is no limit to the number of entries that an individual, class, or firm may submit; however, each must be submitted separately with separate payments (if required).

OVERVIEW OF SUBMISSION REQUIREMENTS

1. Entrants will create an overall site plan to accommodate the competition program. Entrants are encouraged to highlight any energy efficiency, renewable energy, energy storage, carbon reduction, and resiliency strategies.
2. Entrants will design the building in detail, while demonstrating how the design will result in lower carbon emissions and embodied carbon, and addressing the requirements of the California Title 24 Building Energy Efficiency Standards. In order to indicate how the building design will result in lower carbon emissions, entrants will provide required documentation and may also include supplementary documentation.
3. Entrants are asked to describe how this project will build resilience. Entrants will be asked to complete a table outlining the inclusion of climate adaptation strategies and indicate these strategies on the site plan or section.
4. Entrants are asked to consider how their design addresses equity for the community. Entrants will write a short essay and indicate on the site plan or section aspects of the design that support equity.

Winners will be announced in January 2025 at an online event. Details to be announced.

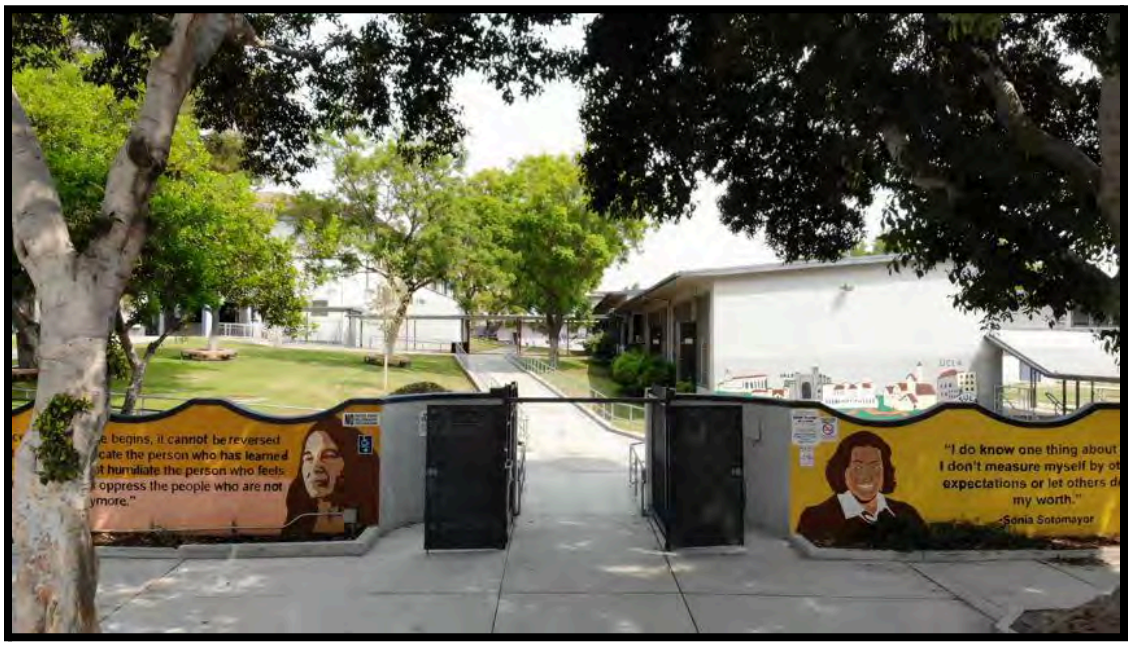
ARCHITECTURE AT ZERO

COMPETITION PROGRAM 2024

BACKGROUND

The Architecture at Zero 2024 competition program is to design a new building on a middle school campus in East Los Angeles (East LA), California. The new building will replace relocatable classrooms and includes science labs, an art classroom, maker space, outdoor learning environments, and a teacher workroom. While the competition program location is Griffith STEAM Magnet Middle School, note that this is an ideas competition and is not a "real" project.

ABOUT GRIFFITH STEAM MAGNET MIDDLE SCHOOL



The school is part of the Los Angeles Unified School District, the second largest public school district in the United States. Griffith STEAM Magnet Middle School has about 1200 students ranging from 6th-8th grade. As a STEAM magnet school, the school places particular emphasis on science, technology, engineering, the arts, and mathematics.

STEAM is designed to integrate STEM subjects with arts subjects into relevant education disciplines. These programs aim to teach students innovation, to think critically, and to use engineering or technology in imaginative designs or creative approaches to real-world problems while building on students' mathematics and science base. STEAM programs add arts to the STEM curriculum by drawing on reasoning and design principles, and encouraging creative solutions.
Most of the students at Griffith STEAM Magnet Middle School live in the East Los Angeles neighborhood but students from throughout Los Angeles can choose to attend this school. A majority of the students (over 90 %) are Hispanic.

The school website is here: Griffith STEAM Magnet Middle School

ABOUT GRIFFITH STEAM MAGNET MIDDLE SCHOOL

LAUSD is the second largest school system in the United States serving 429,000 students from transitional kindergarten through high school. The district covers 710 square miles and includes the city of Los Angeles and 25 other municipalities and several unincorporated areas, including East Los Angeles.

Los Angeles Unified School District has identified the following overarching green goals:

- Improve the learning environment & student health
- Protect the natural environment & resources
- Reduce General Fund dollars to be used for education & job training
- Build and Operate Healthy, Energy and Water Efficient, Sustainable Schools
- Provide experiential learning & prepare students for the green economy
- Create a culture of environmental stewardship
- Increase green space

Los Angeles Unified School District has identified the following Eco-Sustainability Goals:

- Reduce Energy Consumption by 20% by 2024 from a 2014 baseline
- Reduce Water Consumption by 20% by 2024 from a 2014 baseline
- 100% Renewable Energy for Electricity by 2030
- 100% Clean Energy for all sectors by 2040

ABOUT EAST LOS ANGELES (EAST LA)

To Angelenos, the Eastside of Los Angeles is an urban region in Los Angeles County, California. It includes the Los Angeles City neighborhoods east of the Los Angeles River— Boyle Heights, El Sereno, and Lincoln Heights—as well as the unincorporated community of East Los Angeles. An “unincorporated community” is a general term for a geographic area having a common social identity without municipal organization or official political designation. East LA is one of the largest unincorporated areas in the United States.

East LA is overwhelmingly Hispanic with over 90% of the population identifying as Hispanic, the highest percentage of any city or census area outside of Puerto Rico. About 83% of the population speaks Spanish.

A SHORT HISTORY OF EAST LOS ANGELES

Home to the Gabrielino- Tongva Indian Tribe for more than two thousand years, the area was taken by the Spanish in the late eighteenth century, with Mexican and American ranchers taking control of the land for much of the nineteenth century. Farmers eventually used portions of East LA to grow vegetables and fruit and raise dairy cattle, but agriculture took up only temporary residence, ultimately pushed aside as urban society rapidly expanded.

The streets are wider in East Los Angeles than many neighboring communities and houses have driveways, making the car a central part of community life. Whittier Boulevard is one of the most popular cruising strips in the world. It is in East LA that “low-riders” became a symbol of American Hispanic culture.

The area has a rich history of political activism. In March 1968, high school students in East Los Angeles “walked out” of classes to protest the quality of their education and racist school policies. The activism continued and, eventually, an estimated 15,000 to 20,000 students walked out of seven high school campuses in East Los Angeles. This action would become identified as “the first major mass protest against racism undertaken by Mexican-Americans in the history of the United States.”

These 1968 demonstrations would later coalesce into the National Chicano Moratorium Committee Against the Vietnam War. This coalition movement of Mexican American groups organized opposition to the Vietnam War and would lead a march in East LA that would draw over 30,000 demonstrators.

EAST LOS ANGELES TODAY

Today, East Los Angeles honors its history with the largest celebration of Mexican culture and history at the annual East LA Mexican Independence Day Parade & Festival. The first parade was held in 1946, and it is now the largest Mexican Independence Day celebration in the United States, attended by over 20,000 annually.

And while transportation is still dominated by the automobile, new metro stations, including East LA Civic Center and the Atlantic Metro station, are easing the notorious Los Angeles freeway commute.

COMPETITION DESIGN PROGRAM

Griffith STEAM Magnet Middle School Project Site

All competition entrants will design a 2 story building with a footprint of 12,430 square feet per floor. The site measures 154 ft x 355 ft or approximately 55,000 sq. ft. Entrants should also design learning garden(s) as part of their submission. Note that some competition design program activities must be on the ground (first) floor. Parking for 20 cars is also required on the site.

COMPETITION BUILDING PROGRAM

These uses can be placed on first or second floor:

10	Classrooms (approximately 31’ x 32’ or 1,000 sq ft. each)
4	Flexible science labs- all electric (1300 sq ft each)
2	Flexible lab science workrooms (380 sq. ft each)
1	Art classroom and workroom (approximately 1680 sq ft.)

Total: 17,640 sq ft

Each floor to include:

5	Restrooms per floor (total 800 sq ft per floor): 1 girls and 1 boys restroom, 2 faculty restrooms + 1 all gender restroom
1	Teachers Workroom and storage (750 sq ft)
1	Collaboration space (360 sq ft.)

Total: 3820 sq ft

First floor only uses:

1 Maker space and storage room (1920 sq ft)
1 Battery energy storage system (BESS) (240 sq ft)
1 Staff bike storage area (100 sq ft.)
1 Photovoltaic inverter room (120 sq ft)
1 Mechanical, electrical room and other storage (500 sq ft.)

Total: 2880 sq ft

Outside the building footprint but adjacent to the building:
Adjacent to the academic building please include the following activities outside:

1 Outdoor flexible “maker space” (1000 sq ft.)
1 Outdoor classroom area (1000 sq ft.)

Total: 2000 sq ft.

ADDITIONAL BUILDING/SITE REQUIREMENTS

Air conditioning is required.

Natural light benefits student learning and student and staff health and well-being. Prioritize natural light in classrooms.

The building, including the science labs, will be all-electric (no gas).

Height limit: 2 stories

Parking: 20 parking spaces are required on site. They should be located so they can be accessed from Ferris Street.

SCHOOL LEARNING GARDEN PROGRAM

Entrants will develop a design for learning garden(s). The garden(s) should support academic uses including the “outdoor maker space” and “outdoor classroom” area described above. Additional square footage surrounding the classroom building can be integrated in learning garden(s). Important considerations include necessary resources for growing a variety of plants. Some important strategies to consider include the need for seasonal automatic watering, and solar access (south facing area).

Important resources can be found here:

Griffith STEAM Middle School participates in the Mindful Gardeners program:
The Mindful Gardeners - About Us

Los Angeles Unified School District, through its Eco-Sustainability Office, offers numerous resources including a guide to school gardens:
SCHOOL GARDEN GUIDEBOOK

Los Angeles Unified School District Reference Guide:
Gardens as Teaching Tools

TECHNICAL CHALLENGE

CALIFORNIA CONTEXT

Building decarbonization is a key strategy to achieving California's aggressive climate goals. California's Fourth Climate Change Assessment highlights the potential impacts from climate change on California. In recent years, California has experienced record-shattering wildfires with widespread smoke and intense, dangerous heat events. Atmospheric rivers can cause huge rainfall in a short burst and lead to flooding.

Projects designed and constructed in California must meet certain energy use requirements in the building code. California's Building Energy Efficiency Standards (Title 24) focus on reducing energy used in new construction and existing buildings. The requirements for the latest version of this Title 24, and numerous other resources, can be found at Energy Code Ace: https://energycodeace.com/. Building energy codes are still fundamentally based on energy use predicted by energy models.

Entrants to this competition are asked to demonstrate or explain how their design meets the minimum performance standards for buildings in California. This does not require a code compliance model, but may be satisfied with an explanation of the requirements for building systems and how the design meets those requirements. Additional resources and training will be highlighted on the Technical Resources Page on the competition website.

TECHNICAL CHALLENGE ENERGY DEMANDS TARGETS

Energy Use Intensity (EUI) is a metric that is used to compare the energy consumption of buildings by accounting for Conditioned Floor Area (CFA). It is defined as annual energy consumption divided by conditioned floor area and is most commonly expressed in the units of kBtu/sf-yr.

EUI = Annual Energy Consumption (kBtu) / CFA

Following the first foundation of zero carbon building policies -- energy efficiency -- **participants should use the following site EUI target as a starting point for the competition,** before accounting for on-site generation.

K-12 School pEUI = less than 20 kBtu/sf-yr[1]

TECHNICAL CHALLENGE ENERGY DEMANDS TARGETS

Renewable generation is distinct from load reduction, and both are components of a successful low carbon design. Solar photovoltaics (PV) are expected to be the primary source of renewable energy for this challenge. PV with integrated battery storage systems are strongly encouraged.

BUILDING ENERGY MODELING AND SIMULATION

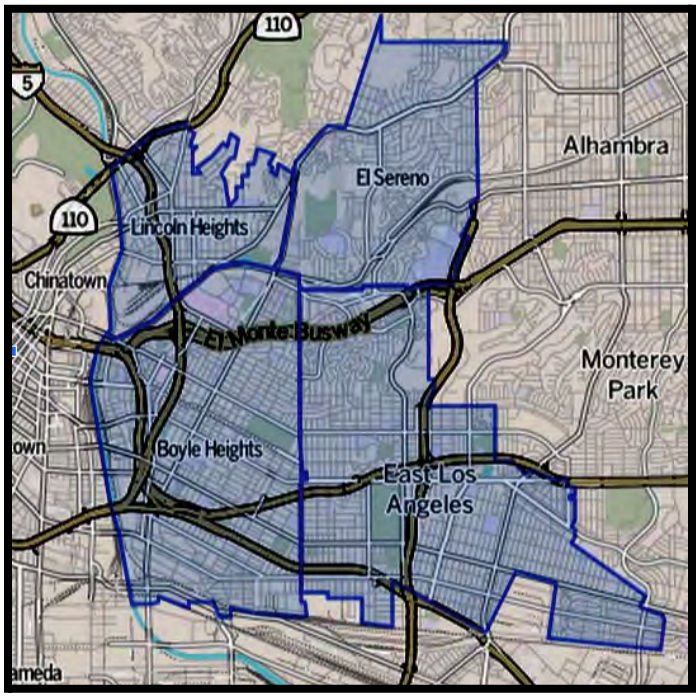
Participants are encouraged to use building energy modeling and simulation tools to optimize their designs to meet the EUI goal. For modeling to be a valuable part of the design process, the team must always ask:

- “Do these results make sense?”
- “What are the implications for the building design?”

More information about available simulation tools and resources are provided on the Competition Website under **Technical Resources**.

[1] Advanced energy design guide for K-12 school buildings : achieving zero energy. American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., The American Institute of Architects, Illuminating Engineering Society, U.S. Green Building Council, U.S. Department of Energy. Atlanta : ASHRAE, 2018.

DECARBONIZATION, RESILIENCE, AND EQUITY CHALLENGES



DECARBONIZATION CHALLENGE

In addition to energy efficiency and renewable generation, designers must design all-electric buildings. One of the primary strategies for achieving zero carbon buildings is electrification of the building's end-uses.

Zero carbon or low carbon buildings also need to be good grid citizens. The specific time that energy is used during the day or year (the "load shape") can have a substantial impact on the overall carbon emissions. Carefully reducing loads through efficiency and equipment selection has an impact, and loads can be further reduced or shifted through demand response strategies, load shifting strategies, and inclusion of energy storage.

The operational carbon emissions of buildings are generally determined by multiplying the energy use by an emissions factor. The emissions factor varies by fuel, time of year, and time of day, so a number of different strategies must be used to reduce the total carbon emissions of the project, including electrification, energy efficiency, and load shifting. An "Energy and Emissions" excel spreadsheet tool is provided as part of the downloadable Competition Packet. This will visualize results for both energy and emissions from an annual, monthly, and hourly perspective. Note that hourly simulation results are required to output hourly emission load shapes using the spreadsheet.

There is also increasing attention being paid to embodied carbon that stems from the associated emissions from material production and construction practices. Teams should consider strategies for reducing embodied carbon in their submission. Additional information and resources regarding decarbonizations can be found on the competition website on the Carbon, Resilience, & Equity Resources Page.

REQUIRED DOCUMENTATION

1. Entrants should indicate on the site plan and section drawings how and where the submission has considered decarbonization (operational and embodied).

2. Entrants must submit completed documentation of load shapes and emissions.
3. Accurately address and describe the decarbonization strategies utilized within the project.

OPTIONAL DOCUMENTATION

Entrants also have the option to submit an essay of 250 words or less about how the submission takes decarbonization into consideration. Possible topics to address include:

- Strategies for reducing embodied carbon from materials and construction
- Discussing how these strategies influenced the design process

RESILIENCE CHALLENGE

For the purposes of the Architecture at Zero competition, resilience is described as “the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.”

East Los Angeles faces a number of challenges to resilience including: air quality, extreme heat, climate change, and water scarcity. The area is also vulnerable to earthquakes. For the purposes of this competition, entrants should be aware that the State of California has strict seismic rules for new building construction, especially for schools. These are complex regulations- and entrants, particularly student entrants are not expected to include seismic mitigation in their designs.

Air Quality:

Air quality is a chronic and serious issue in East Los Angeles. A significant contributor is emissions from cars, trucks, and other vehicles. Los Angeles has a large population and high vehicle usage, leading to substantial pollutants like nitrogen oxides and particulate matter.

Studies indicate that residing near sources of traffic pollution is associated with adverse health effects such as exacerbation of asthma, onset of childhood asthma, non-asthma respiratory symptoms, impaired lung function, reduced lung development during childhood, and cardiovascular morbidity and mortality. These associations are diminished with distance from the pollution source.

Extreme Heat:

In East Los Angeles, the summers are hot, arid, and clear and the winters are long, cool, wet, and partly cloudy. Extreme heat is a deadly threat in Los Angeles and projections show a tenfold increase in the annual number of heat waves by mid- century. Risk for heat related illness increases are particularly challenging for children, pregnant people, outdoor workers, people experiencing homelessness, and older adults, among others.

Extreme heat is the “single largest cause of weather-related fatalities” according to the United States Weather Service. Exposure to extreme heat can cause dehydration, physical and mental stress, heat

stroke, fainting, cramping, and heat rash. Heat exposure can also exacerbate existing respiratory, cardiovascular, and diabetes-related medical challenges.

Older adults, young children, people with underlying health issues, and individuals without access to housing or air conditioning, are especially vulnerable. Communities of color and other historically marginalized groups also tend to be more vulnerable to extreme heat due to environmental disparities stemming from discriminatory historic zoning and banking practices.

Individuals living in highly developed, densely populated regions also face the urban heat island (UHI) effect. The UHI effect describes how areas predominantly covered by buildings and impermeable materials such as cement and metal trap and re-emit thermal energy, causing higher temperatures for longer time periods as compared to rural surrounding areas.

Water and Climate Change:

“It never rains in Southern California,” sang the British songwriter Albert Hammond, “But it pours, man it pours.” There’s a bit of truth in that. Although Los Angeles receives, on average, 15 inches of rainfall per year, the region regularly experiences atmospheric rivers which can overwhelm city roads and water systems.

Currently, only about 40 percent of Los Angeles County’s water supplies comes from local sources such as groundwater and recycled water. The majority of Los Angeles’ water comes from imported sources such as the Los Angeles Aqueduct system, built during the 20th century to transport water from the Mono Basin and Owens Valley (in the east) to Los Angeles.

The vulnerability of regional and imported water supplies was exposed during the two major droughts that occurred over the past decade. These events demonstrated that Los Angeles County cannot achieve water and climate resilience without a rapid, transformative move toward local water self-sufficiency.

Climate change will decrease the reliability of Los Angeles’s water supply, particularly imported sources, while putting stresses on water infrastructure across the state of California. Water consumption varies across the region, for example, residents of the City of Los Angeles consume 93 gallons per day, and residents of East Los Angeles consume 48 gallons per day.

Earthquakes:

Many people in Los Angeles County feel shaking from earthquakes a couple times a year, and generally they are mild or moderate with little damage. However, seismologists predict a quake of magnitude 6.0 or larger is likely to hit somewhere in Southern California every few years. No one can predict when a big earthquake will happen. The US Geological Survey has estimated that there is a probability of one or more magnitude 7.0 or greater earthquakes striking Southern California, based on a 30 year period, beginning in 2014.

California has strict seismic codes regulating the construction of new buildings, especially for schools. Designing for seismic safety is a critical responsibility of architects, designers and engineers in California. Complex state regulations govern seismic safety in California and are important to note;

however entrants, especially student entrants, are not required to address seismic safety in their competition entries but may choose to note the topic in essays.
Entrants should discuss how their project addressed resilient design considerations. See the Carbon, Resilience, & Equity Resources page on the competition website for additional resources and information.

When thinking of how to help mitigate high temperatures:

- Can the project enhance the insulation of classrooms?
- Can the project install cool roofs?
- Can the project provide a cooling center for the community?
-

When thinking of drought or extreme precipitation events:

- Can the project set up an ongoing mechanism to conserve water?
- Can the project include native plants and/or drought-tolerant vegetation?

When thinking of extreme events (severe storms/extreme heat/etc.):

- Can the project act as a resiliency center for the community (cooling center, gathering space, etc.)?
- Can the project include a backup power source to operate in case of emergency power?

REQUIRED DOCUMENTATION

1. Entrants should indicate on the site plan and section drawings how and where the submission has considered resilience.

2. Entrants must submit a completed Climate Adaptation Assessment Matrix that accurately addresses and describes the resilient design strategies utilized within the project. This table asks specific questions pertaining to the inclusion of various adaptive strategies, such as:

OPTIONAL DOCUMENTATION

1. Entrants also have the option to submit an essay of 250 words or less about how the submission takes resilient design into consideration. Possible topics to address include:

    - Reflecting on the research conducted into climate hazards
    - Discussing the resilient strategies chosen and why
    - Discussing how these strategies influenced the design process

EQUITY CHALLENGE

Equitable design takes into account social vulnerabilities, acknowledges experiences, opportunities, and barriers among different groups of people, and helps strengthen communities by engaging local social and cultural contexts.

Designing for equity means maximizing positive impacts across multiple scales by creating productive spaces and systems for the individual, the community, the environment, and global sustainability. Marginalized groups often face higher risks of climate vulnerability as well. Access to resilient spaces and resources are essential to mitigate those risks.

By dismantling barriers to elevate individuals to an even playing field, equitable design can create inclusive and empowering environments. While often used interchangeably, equity and equality mean different things and lead to different results. When we treat everyone equally, we treat everyone the same, but when we treat everyone equitably, we focus on individualistic needs. Equity asks us to acknowledge that everyone has different needs, experiences, and opportunities.

The fourth aspect of this competition requires submitters to reflect on the question of equity. Be sure to submit an essay of no more than 250 words, on how your design process was influenced by your research and consideration of issues of equity.

Twenty First Century Development[2] provides a detailed framework to gauge how influential and in depth design interventions are in terms of equitable benefits to the community. This framework is based on guidelines and principles developed by The Living Building Challenge[3]. These resources can be used as references to understand the role that equity can play in architectural design. Entries for this competition should comprehensively address issues of equity. A brief descriptive narrative that reflects on your research into equity and the local context, and how your findings were integrated into the design should be included as part of the submission. Key moments where equity comes into the design and programming should also be noted within the site plan and section drawings.

Entrants should discuss how their project addressed equitable design considerations. See the Carbon, Resilience, & Equity Resources page on the competition website for more information. Specific questions which you may address include:

- What challenges did you face in designing for a community with a complex history?
- If you or your team are from outside California, how might these challenges be the same or different for your community?
- How did your work on this project contribute to your understanding of equity?

REQUIRED DOCUMENTATION

1. Entrants should indicate on the site plan and section drawings how and where the submission has considered equitable design.
2. Entrants must submit a brief essay (no more than 250 words) about how the submission addresses equitable design considerations, such as those listed above. Specific questions that you might address include:
    - What strategies did you use to promote an environment that is culturally and linguistically responsive?
    - What challenges did you face in designing for students, educators, families, and communities from different cultural and linguistic backgrounds?
    - What challenges did you face in designing school facilities, and what questions did you ask yourself throughout the design process?

[2] Development Matrix - Twenty First Century Development
[3] The Living Building Challenge 4.0 Basics

SUBMISSION REQUIREMENTS

Note that this competition uses an electronic submission process.

The following is the list of the work products to be included in the submission. A full list of entry requirements can be found here.

https://aiacc.submittable.com/submit/291428/2024-architecture-at-zero

- All submissions must be in a PDF booklet containing the required elements detailed below.
- Format size should be letter sized (8.5 x 11 inches or A2) or (11 x 17 inches or or A3) in either a landscape or portrait format.
- If you are submitting more than one of a specific drawing please number the pages #A, #B, etc. (For example: Three Perspective Drawing pages would be numbered 4A, 4B, 4C).
- All required elements must be included or your entry will not be accepted.
- **File size must not exceed 40 MB.**
- **Please do not include names of the team or firm on any part of the entry.**

Number and label all pages after the cover page.

Required

Cover	Title page
Page 1	Project Narrative
Page 2	Site Plan
Page 3	Floor Plan(s)
Page 4	Perspective Drawing
Page 5	Illustrated Sections
Page 6	Mechanical System Summary
Page 7	Annual End Use Summary
Page 8	Monthly End Use Energy Consumption Bar Chart
Page 9	Hourly Load Shapes for Energy and Emissions
Page 10	Details of Renewable Energy Systems
Page 11	Storage Systems
Page 12	Decarbonization Strategies
Page 13	Climate Adaptation Assessment Matrix
Page 14	Equity Essay

Optional

Pages 15 - 25	Supplemental Energy/Resilience/Decarbonization/Equity Information.

Total Submission should not exceed 25 pages.

JURY CRITERIA FOR EVALUATING SUBMISSIONS

The names and bios of Jury members are on the competition website.

Entries are weighed individually, not in competition with others. Jury decisions will be based solely on the materials submitted.

The evaluation process of each entry has two phases.

PHASE 1: TECHNICAL REVIEW PANEL

Complete entries are screened by a Technical Review Panel that examines all submitted energy metrics. The panel uses the following rating system:

- This submission provides documented, defensible energy metrics to support the design of this entry, including how the design addresses requirements of the California Title 24 Building Energy Efficiency Standards.
- This submission does NOT provide documented, defensible energy metrics to support the design of this entry

The results of the Technical Review Panel's evaluation and comments are shared with the Jury during their later review of all entries.

PHASE 2: REVIEW BY ARCHITECTURE AT ZERO JURY

Jury members will "score" all entries using the following criteria:

Energy Strategy 30 points	**How does the submission incorporate energy reduction and performance in the design of the building?** Defined as: Does the design include a realistic strategy for including sufficient energy efficiency measures to approach Zero Net Energy? - Failure to describe the strategy adequately will result in a lower score. - Compelling and complete energy calculations: 20-30 points - Narrative indicates possibility of defensible energy calculations but energy documentation is incomplete or unclear: 1-20 points - No energy documentation: 0 points
Decarbonization Strategies 20 points	**How does the submission incorporate decarbonization design principles in the design of the building?** Defined as: Does the design include a realistic strategy for including sufficient energy efficiency measures and renewable energy sources to achieve decarbonized building operations? Does the submission adequately describe its strategy to reduce embodied carbon? - Failure to describe the strategy adequately will result in a lower score. - Compelling and complete carbon calculations: 10-20 points - Narrative indicates possibility of defensible carbon calculations but decarbonization documentation is incomplete or unclear: 1-10 points - No decarbonization documentation: 0 points
Resilience Strategies 20 points	**How well does the entry respond to resilience?** Defined as: How well does the design promote resilience for residents of the project? - For the purposes of this competition, we define resilience as: designing not just for typical or current climates but also considering future climate changes and incorporating "the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events". - Successful entries will consider ways to provide the building and occupants with back-up power or incorporate passive design strategies. - Entrants should indicate how the project engages resilience in the submitted drawings and in a completed Climate Adaptation Assessment Matrix.
Equity Strategies 20 points	**How well does the entry address equity for residents of the project?** Defined as: Does the design take into account social vulnerabilities, acknowledge experiences, opportunities, and barriers among different groups of people, and help strengthen communities by engaging local social and cultural contexts? - When considering equity in the design process, entrants should consider how the project contributes to the health and happiness of the occupants, what impacts the choice of energy source could impose, and how including access to various resources could benefit the community. Consider the lifespan of the building and the longer term impacts of design choices, such as system

	durability and maintainability, on the residents. Designs should attempt to capture and engage the local culture and specific community that they serve. - Entrants should indicate how the project engages equitable design in the submitted drawings and in a short essay.
Form **10 points**	**What is the Form of the project?** Defined as: Form is the visible shape and configuration of the project. - The jury will consider how the project's built-form manifests the stated intent through its materials, shape, spatial organization, detailing, etc. The project's form should indicate the building's relationship to its surroundings, its users and the public at large. It isn't enough to be beautiful. The focus should not be on creating a cutting edge or trendy form, but rather on a considered, appropriate design that is relevant and effective for its audience and intent.

FINAL NOTES

Neither the Technical Review Panel or Jury members know the names of submitters during the evaluation process.

Insider tip: Avoid jargon. Clear language helps the Jury better understand the design approach.

Questions?

Email: info@architectureatzero.com