



# SHADE ZONES DESIGN COMPETITION

2025  
MODULAR SHADE

Shape the shade: creating flexible designs to cover  
sidewalks, fan zones, and everywhere in between

DESIGN BRIEF

ORGANIZED BY



PUBLIC EXCHANGE™

USC School  
of Architecture

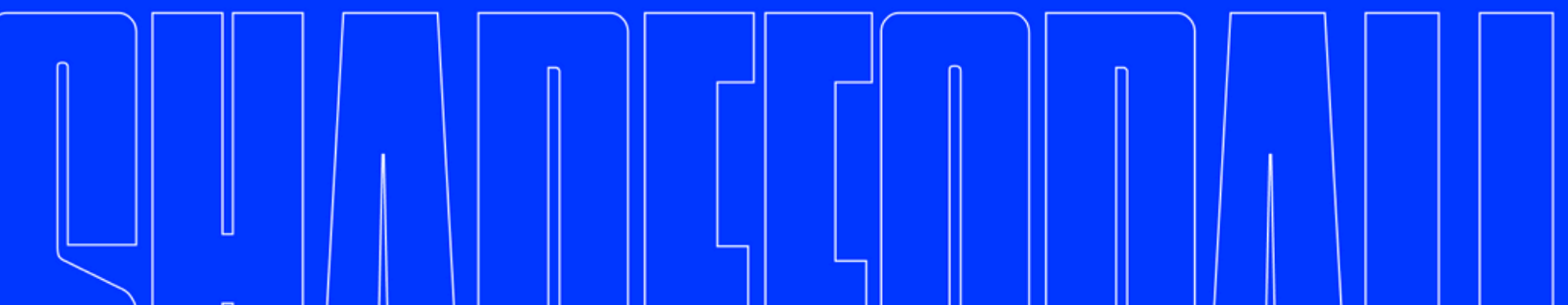


Metro



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# ABOUT THE ORGANIZERS

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## **ShadeLA**

ShadeLA is a people-powered campaign to cool Los Angeles, led by USC Dornsife Public Exchange in collaboration with UCLA Luskin Center for Innovation, and with participation by the City of Los Angeles, County of Los Angeles Chief Sustainability Office, L.A. Metro and the Los Angeles Organizing Committee for the 2028 Olympic and Paralympic Games (LA28). The campaign combines research, planning, design, and public engagement to bring shade to the places that need it most.

## **LA Metro**

The Los Angeles County Metropolitan Transportation Authority (Metro) is the lead transportation planning and funding agency for LA County and serves nearly 1 million daily boardings on a fleet of 2,200 low-emission buses and six rail lines. Metro is involved in planning, operating, designing, maintaining and constructing transportation services for the country's largest, most populous county. As a core participant in ShadeLA, Metro is advancing climate-resilient infrastructure to protect the public from the growing threat of extreme heat.

## **USC School of Architecture**

The USC School of Architecture shapes visionary architects and designers through a rigorous, interdisciplinary education. For more than 100 years, USC Architecture faculty and graduates have pushed beyond the traditional boundaries of the field to pioneer many paradigm shifting new practices of architecture. Deeply rooted in the City of Los Angeles and also intensely connected to global concerns, USC architects and scholars work shoulder to shoulder with our surrounding communities to develop, empower, and leverage local insight that enables them to become pioneering practitioners and forge creative solutions. The school empowers students to design for climate resilience, equity, and community wellbeing—at every scale.

## **USC Dornsife Public Exchange**

Public Exchange connects academic expertise with public and private partners to solve real-world challenges through collaborative, evidence-based solutions. As one of the lead organizers of ShadeLA, Public Exchange is bringing together universities, public agencies, and community organizations to respond to extreme heat.

**NOTE:** For avoidance of doubt, LA28 is not a sponsor or organizer of this competition in any way, and shall have no liability or responsibility for any claim arising in connection with this competition.



# 1. INTRODUCTION

Los Angeles stands at a transformative moment. With major sporting events like the 2026 FIFA World Cup, 2027 Super Bowl and the 2028 Olympic and Paralympic Games on the horizon, we have a once-in-a-generation opportunity to reimagine our public spaces—not just for the global spotlight, but for the Angelenos who call this city home. This series of events will bring thousands of visitors from around the world to our streets, plazas, and neighborhoods, amplifying the urgency to ensure safe, comfortable, and climate-resilient environments for all.

At the same time, Los Angeles faces rising temperatures and intensifying heatwaves, particularly in communities that have long lacked access to adequate shade and green spaces. The need to move people efficiently and safely across a sprawling city during these major events must be matched by bold, beautiful, and sustainable solutions that offer relief from the heat.

ShadeLA is a people-powered movement to expand shade coverage across Los Angeles—led by University of Southern California’s Dornsife Public Exchange, in collaboration with UCLA Luskin Center for Innovation, and participation by City of Los Angeles, County of Los Angeles, LA Metro, and the Los Angeles Organizing Committee for the 2028 Olympic and Paralympic Games (LA28). The campaign helps residents, businesses, nonprofits, schools, and public agencies add both natural and built shade—like trees, canopies, and awnings—to the places Angelenos live, work, and gather. It also supports long-term care and engagement strategies to make sure the shade LA creates actually lasts.

As part of the ShadeLA Campaign, USC Dornsife Public Exchange will serve as the organizer of the annual Shade Zones Design Competition, which will be held every fall for the next three years. Rooted in Los Angeles’ broader commitment to sustainability, community resilience and design excellence, this design competition series calls on the next generation of architects and designers to help shape a cooler, more resilient Los Angeles—one that shines on the world stage in 2028 and beyond.

The first of these competitions is in collaboration with USC School of Architecture and LA Metro and invites college students in programs throughout Los Angeles to design innovative, temporary, modular shade systems that can help transform public places—from bus stops and sidewalks to open-air gathering places—into cooler, more welcoming spaces. The designs should not only offer physical protection from the sun but also serve as symbols of community pride and Los Angeles’ climate leadership.

## 2. DESIGN BRIEF

The use of built shade to protect people from the natural elements is found throughout human history and around the world. Early use of the word shade is associated with trees and the ability to protect one from the elements.<sup>1</sup> In Greek and Roman architecture, the use of *velarium* was often seen at theaters and amphitheaters.

**velarium:** from *velum*- "sail, curtain, or awning" and *arium*- "place for"

1: large awning used to cover a theatre or amphitheater as a protection against sun or rain

2: a cloth used for covering or shading

The design of the shelters often took the form of fabric stretched and anchored to posts or other supports. The structure provided shelter from direct sunlight, while allowing for natural ventilation and air flow through the structure to cool the users. We continue to use these types of temporary shade structures today, at concerts, festivals, and other events. Another form of shade structure is a pavilion. Pavilions were historically associated with temporary structures at outdoor events.

**pavilion:** from *papilio*- "butterfly"

1: small tent-like covering or canopy

2: a dwelling place or shelter, of a temporary nature

Pavilions continue to be used today within architectural design to explore and initiate conversations on place, culture, and community. These temporary structures evoke varying themes, from the interface between the built and natural environments (see the Serpentine Pavilion 2025<sup>2</sup>), to the intersection of materiality and the built and natural environments (see The Resnick Pavilion, Los Angeles County Museum of Art<sup>3</sup>). Pavilions may serve well beyond providing shelter and shade, communicating the context in which they were designed and built.

While the Los Angeles palms serve as an icon for the city and the 1932 Olympic Games<sup>4</sup>, ShadeLA is expanding the use of nature-based and constructed shade solutions to build resilience within our communities. The Shade Zones Design Competition expands on this program and invites creative and innovative temporary shade solutions that will support Los Angeles in protecting residents, workers and visitors as they move about the city during mega-events.

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1. Oxford University Press. (n.d.). Oxford English dictionary. Retrieved May 26, 2025, from <https://doi.org/10.1093/OED/3786078485>

2. Tabassum, M (2025) A Capsule in Time by Marina Tabassum, Serpentine Galleries. Retrieved May 26, 2025, from <https://www.serpentinegalleries.org/whats-on/serpentine-pavilion-2025-by-marina-tabassum/>

3. Tennent, S (2010) The Rise of the Resnick Pavilion. LACMA Unframed. Retrieved May 26, 2025 from <https://unframed.lacma.org/2010/06/07/the-rise-of-the-resnick-pavilion>

4. Smaus, Ro. (1982). an urban forest by 1984, Los Angeles Times, Jul 25, 1982, pg. M12.

## 2.1 DESIGN OBJECTIVES

In partnership with LA Metro, this competition will focus on modular temporary shade designs that can be adapted to fit a wide variety of real-world use cases. As part of Metro's goal to make it easier to take public transit for major events, Metro is developing a regional 'kit of parts' to activate and enhance temporary pedestrian and cyclist pathways and mobility hubs to support access to venues. The 'kit of parts' supports events-focused needs through temporary deployments to accommodate high volumes of people walking, biking, and rolling from transit to venues. Modular temporary shade is an integral component of the kit of parts, enhancing comfort and supporting climate mitigation. There are various guides available that describe best practices and use cases for temporary infrastructure and street treatments, including the following:

- [Guidance for temporary street closures and design concepts](#), National Association of City Transportation Officials (NACTO)
- [Quick build materials](#), Metropolitan Transportation Commission (MTC)
- [Quick Build Guide](#), Cal Bike
- [Guidance for temporary street and lane closures](#), Open Streets project
- [Quick Build Toolkit and Pre-Planning Study](#), San Francisco Municipal Transportation Agency (SFMTA)
- [Mobility Hub Guidance](#), SCAG
- [Pop-Up Guide](#), AARP

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## DESIGN OBJECTIVES

Designs will be assessed according to their ability to achieve the following objectives:

**Quality Shade:** Design temporary shade that can protect people—with a focus on vulnerable street users, such as pedestrians and bicyclists—from extreme heat by ensuring that designs produce quality shade during the most vulnerable times of the summer day (e.g., peak heat hours: 12pm-4pm<sup>5</sup>). Quality shade must block direct exposure to sunlight, assessed by the lack of shadow in the area of blocked sunlight.<sup>6</sup>

**Modularity:** Designs should be capable of being used in multiple applications and spatial extents. Shade will need to be deployed in a large variety of circumstances. Designs will need to be modular to allow for additional units to be connected, so pedestrians can move between shaded areas without being exposed to heat. Think: a shade “archipelago” rather than shade “islands.”

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5. California State Parks (nd). Protect Yourself and Your Family Year Round. Retrieved May 26, 2025 from [https://www.parks.ca.gov/?page\\_id=24287](https://www.parks.ca.gov/?page_id=24287).

6. California State Department of Industrial Relations (nd). T8CCR 3395b: Shade and Other Cooling Measures. Retrieved May 26, 2025 from [https://www.dir.ca.gov/dosh/etools/08-006/EWP\\_shade.htm](https://www.dir.ca.gov/dosh/etools/08-006/EWP_shade.htm)

## DESIGN OBJECTIVES CONTINUED

**Durability:** Designs must also be configured for assembly and disassembly, to allow for storage, construction, and deconstruction after events end. Installations should be designed to withstand a variety of weather conditions. Components should be sized to fit on a standard pallet size and should be durable enough to withstand storage and transport. A standard pallet size is 48 inches by 40 inches, with a maximum weight supported of 4,600 pounds. All components must fit within this size and weight limit.

**Accessibility:** Proposals should comply with the [Americans with Disabilities Act \(ADA\)](#) and reflect accessibility standards and universal design principles. Participants should be aware that venue cities have different design standards, so proposals should take these various standards into consideration and be adopted accordingly.

**Sustainability:** All materials used must be sustainable - locally sourced, repurposed, nature-based or other low-environmental impact materials.

**Material Legacy:** The submission should include a plan for how installations or the component materials could be repurposed after the series of major events end. This stipulation will reduce waste and, moreover, ensure that the valuable materials used to construct the installations have a legacy in the community after mega-events are over.

**Aesthetics:** A flexible look and feel that can be updated to meet different event branding needs, and could be adapted to accommodate sponsorship and/or way-finding information.

**Simplicity:** Designs will be assembled, in many cases, by teams of volunteers without backgrounds in construction or engineering. Thus, designs should be simple enough that they can be assembled without the need for specialist knowledge or the need for specialized tools.

**Arts and Culture:** Designs should consider local arts and culture, and students should think about how the design can integrate art and reflect the local cultural context of Los Angeles.

## 2.2 ENVIRONMENTAL SUSTAINABILITY

Sustainability is an essential part of any design. The design should demonstrate consideration of materials, manufacturing, as well as lifespan. In addition to minimizing environmental impact, teams are required to consider how the structure might be re-used. Additional resources on material life cycle and circular economy principles may be found on the competition website.

# 3. DESIGN REQUIREMENTS

The design should be detailed, with qualitative assessment of environmental impacts and cost. Recycled and reused materials, both of which are highly encouraged, should be considered as zero-cost. Particular attention should be placed on the visual and contextual impact of the design as well as structural detailing, paying particular attention to the ease of assembly and disassembly. All structures should be accessible to people with disabilities, and accessibility should be centered in design decisions. Students should utilize [Universal Design Principles](#) and [ADA Accessibility Standards](#) to ensure that all temporary infrastructure is accessible to people with a wide range of abilities and needs, including those with auditory, visual, intellectual, developmental, and mobility-related disabilities.

## 3.1 STRATEGIES AND CONSTRAINTS

### 3.1.1 DESIGN

The design must be free-standing and not require any permanent anchorage to the site. To maximize air-flow and pedestrian circulation, it must be open-sided. The design must support dead and live design loads, including consideration of wind forces. No detailed structural analysis is required, however the design should clearly demonstrate adequate performance under design loads. The design must also be modular and scalable to fit the various site constraints noted below.<sup>7</sup>

### 3.1.2 MATERIALS

Material selection is an important part of the design. Only materials that are non-hazardous, flame-resistant, or treated with a flame retardant are allowed. The materials will need to be justified in the design proposal, including an environmental assessment and cost estimate.

### 3.1.3 DESIGN FOR ASSEMBLY AND DISASSEMBLY

The designs will be transported to the site and the community will be responsible for construction. The construction process for assembly and disassembly must be accessible to non-experts and volunteers. Consider the weight of the structure and how it will be constructed, including the number of people and the tools required to construct the design.

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7. [https://apps.engineering.lacity.gov/techdocs/stdplans/s-400/S-470-1\\_20151021\\_150849.pdf](https://apps.engineering.lacity.gov/techdocs/stdplans/s-400/S-470-1_20151021_150849.pdf)

## 3.1.4 DESIGN SCENARIOS

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To adequately shade visitors attending major sporting events, temporary shade will need to be implemented in a number of different spatial configurations. Residents and visitors will move through narrow streets, wide avenues, plazas, parks, and other public spaces, so the designs should accommodate various use cases. High resolution images of the various design scenarios will be provided on the competition website for use in submission entries. The various site categories and related dimensions are provided below.

### ***Multi-Purpose Designs***

Designs will be suitable for all three of the scenarios - small, medium and large. From narrow sidewalks to large plazas and parking lots, shade structures will need to be movable and deployed in a large variety of circumstances (see: [12.2 Site Gallery](#), pages 16-18)

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## SMALL SCALE

### **Sidewalks, Local or Neighborhood Street, and Closed Travel Lane**

Small-scale shade modules should fit within compact spaces and serve as standalone coverage or building blocks for larger set-ups. For example, shaded sidewalk passageways guiding spectators between transit stops and venues, or temporary bus stops in narrow residential areas. In these tight spaces, modular shade is especially useful because it can be placed without blocking pedestrian flow, adjusted for varying widths, and removed quickly once the event concludes.

**Typical footprint (width):** 5–40 ft (1.5–12 m)

**Sidewalk:** According to the National Association of City Transportation Officials (NACTO), sidewalks are typically a minimum of 5 feet wide in residential areas, with commercial and downtown sidewalks ranging from 8 to 10 feet in width, and some areas exceeding 10 feet. Sidewalk width across LA County can vary depending on the context and community. The design must fit within this dimension without any connection to the roadway or adjacent structures.

**Neighborhood Street:** According to NACTO, local or neighborhood streets are typically 30–36 ft (9–11 m) curb-to-curb, with individual travel lanes measuring 10–12 ft (3–3.6 m) in width.

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## MEDIUM SCALE

### **Non-Arterial Streets, Closed Two-Way Streets, Metro Station Entrances, and Small Plazas**

Medium-scale configurations should cover areas where people gather, move between spaces, or wait for activities to begin—such as small plazas used for live programming or concessions and Metro station entrances where spectators arrive in waves.

**Typical footprint (width):** 40–80 ft (12–24 m)

**Two Way Street:** Per NACTO, downtown two-way streets are typically 40–50 ft (12–15 m) wide, including travel lanes and on-street parking, with sidewalks 8–12 ft (2.4–3.6 m) wide on each side.

**Metro Station Entrance:** Forecourt or plaza areas in front of station entries vary, but for event planning should allow crowd surges beyond standard pedestrian flows.

**Small Plaza:** Per NACTO, small urban plazas often span 40–80 ft (12–24 m) across, offering flexible open space for temporary shade installations. This range is used here as a design benchmark since no LA-specific dimension standard exists.

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## LARGE SCALE

### **Public Plazas, Parking Lots, Fan Zones, and Large Arterial Streets/Downtown Thoroughfares**

Large-scale configurations link multiple small and medium modules to provide shade in spaces that are temporarily repurposed for large-event activities. Public plazas, pedestrianized streets, schoolyards, or public parks may host fan zones and watch parties, while parking lots may be converted into bus loading/unloading areas. These transformed spaces often have little to no built-in shade, requiring temporary solutions that can cover wide, open areas and support large gatherings.

**Typical footprint (width):** 80 ft+ (24 m+)

**Public Plaza or Major Event Space:** Large open spaces used for major gatherings can exceed 80 ft (24 m) in width according to NACTO, including expansive civic plazas, multi-block pedestrian streets, and large schoolyards or park areas converted for event use.

## 4. ELIGIBILITY

The competition is open to undergraduate and graduate students from any school, college, or university within Los Angeles County. To enter the competition, students will need to form teams (maximum of 4 members per team, solo participants are also eligible) and identify an institutional mentor or supervisor (e.g., faculty, lecturer, supervisor, school administrator, etc.). All team members must be from the same institution. Teams can also participate through their courses (e.g., design studios), if available at their institution.

## 5. TEAM REGISTRATION

Team registration will be open between September 1 - October 15. Teams must register by October 15, 2025 in order to submit an entry. There will be only one proposal per team, however multiple submissions per any one institution are allowed.

Registration will be available on the ShadeLA competition website: [Shade-LA.com](https://Shade-LA.com). Registered teams will receive access to additional resources, office hours and the proposal submission form.

## 6. SUBMISSION REQUIREMENTS

Teams will produce a design concept, an explanation of the design's heat mitigation strategy, material choices, and a description of how community needs, material legacy, and sustainability have guided the design. The designs must comply with the strategies and constraints listed in the brief. All design entries will be submitted digitally (.pdf) through the submission form made available to registered teams.

The format is a single 36 inch x 48 inch poster in portrait. The poster must include:

- Concept + Rationale (max. 300 words)
- Image of the design, including superimposed on site (min. 2 images)
- Design, structural strategy, material selection, and construction sequence
- Sustainability and re-use strategy
- Diagrams, sketches, design development

References and research materials must be cited and will be submitted separately from the poster. Each entry will require a submission attestation, acknowledging the entry is the original work of the team. No personal or school identifiers should be included on the submission, as the submissions will be judged anonymously. An identification number will be created for each submission. Acceptable file formats and file sizes will be provided on the competition website.



# 7. JUDGING CRITERIA

The entries will be judged based on the following criteria, in no particular order, and from the requirements set out in the brief:

- **Architectonic quality and design:** The overall design excellence of the proposal, including its form, expression, and ability to make a distinct and memorable contribution to the built environment.
- **Function, organization, logistics, scalability and accessibility:** How well the design adapts to varied urban scenarios and addresses real-world needs, including spatial organization, user flow, accessibility, and the logistics of transport, deployment, and use at different scales.
- **Execution and Reuse:** Demonstrates feasibility at scale, with a clear path from concept to implementation. Designs should be practical for deployment in real-world conditions and show potential for reuse or adaptation for future events or sites.
- **Buildability:** Shows a thoughtful approach to materials, fabrication, and assembly. The design should be easy to construct, modular, and capable of being deployed, maintained, and removed with minimal disruption.
- **Sustainability:** Integration of environmental, economic, and social sustainability throughout the lifecycle of the design—from concept and construction to operation and reuse—reflecting a commitment to long-term impact and climate-conscious design.

These criteria mean that the design rationale, site options, structural development, exploration of materials, user studies, and sustainability of the proposed solution, as well as strategies for assembly and disassembly, should be clear in each entry.

# 8. JURY MEMBERS

The jury will be composed of public sectors leaders, design experts and community members. The jury will be announced ahead of the registration deadline. Please check [Shade-LA.com](https://shade-la.com) for further announcements.

## 9. AWARDS

Winners will be selected for each scenario based on the evaluation criteria above. The competition will award:

- Award of Excellence (Top 3 submissions overall)
- Award for Innovation (Most forward-thinking and creative design)
- Award for Sustainability (Best sustainability oriented design)
- Honorable Mention Awards (1 per scale category: Small, Medium, Large, Multi-Scale)
- Fan Favorite Award (Selected by public vote via ShadeLA website)

## 10. TIMELINE

August 28, 2025 **Informational Webinar**

September 2, 2025 **Design Competition Registration Opens**

October 15, 2025 **Registration Closes at 11:59 PST**

October 16 - December 19, 2025 **Virtual Office Hours with Expert Advisors**

November 3, 2025 **Submissions Open**

January 15, 2026 **Submissions Due by 11:59 PST**

January 16 to 30, 2026 **Jury Review**

February 2026 **Design Competition Winners Announced**

April 2026 **Design Competition Exhibition**

## 11. FAQs

A webinar will be held on August 28th. All competition related questions should be emailed to: [shadezone@usc.edu](mailto:shadezone@usc.edu). A frequently asked question (FAQ) section, that will be updated throughout the competition, will be available on the competition website.

# 12. RESOURCES

To support students in developing thoughtful, technically sound, and site-appropriate designs, the ShadeLA Design Competition website will provide a curated set of resources. These materials will help guide participants through design, sustainability, community context, and deployment planning.

## 12.1 PRECEDENTS AND CASE STUDIES

**Modular Shade Design:** Examples of temporary, modular structures from festivals, public spaces, transit agencies, and other settings.



© Joshua White ([jwpictures.com](http://jwpictures.com))

*Pulp Pavilion Coachella* by Ball-Nogues Studio (2015)

**About:** Temporary, 1,300 ft<sup>2</sup> pavilion made from recycled paper-pulp tubes forming seven 20-ft sculptural “trees.”

**Key Features:** Offers shade during hot festival hours while serving as dramatic visual and environmental statement.

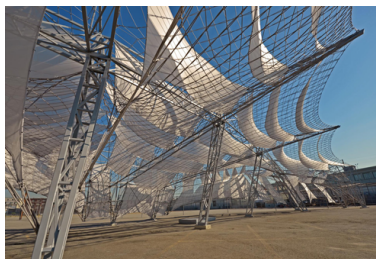


© Spinagu

*¡MOMENTO! Pavilion* – Grand Park, Los Angeles (2017)

**About:** A temporary, modular pavilion made of four reconfigurable components—shade, seating, service, and shelving—used for a public launch event in LA's Grand Park.

**Key Features:** Lightweight wood construction; components can be rearranged to adapt to different community uses and site needs.



© Oyler Wu Collaborative

*Storm Cloud Pavilion* - SCI-Arc, Los Angeles (2013)

**About:** A temporary tensile pavilion created with steel supports and stretched spandex fabric to celebrate SCI-Arc's 40th anniversary.

**Key Features:** Modular frame with dramatic twisting form; uses patterned shade to play with light and cooling in an urban public space.



© ¡Sombra!

*¡Sombra! – Experiments in Shade* - Phoenix Office of Arts and Culture, (2023–Present)

**About:** A seasonal public art and shade program commissioning artists to create temporary, modular shade structures in parks across Phoenix.

**Key Features:** Blends climate adaptation with cultural storytelling through lightweight, rapidly deployable shade installations.

## Modular Shade Designs Continued

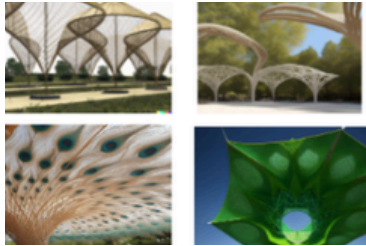


© PAO People's Architecture Office

### [Tangram Canopy](#) - Lijiang, China (2014)

**About:** A modular, steel-rod canopy composed of triangle-based “tangram” modules, used as a covered market pavilion during the COART Festival.

**Key Features:** Flat-packable L-shaped units create expandable, direction-agnostic shade; lightweight structure that visually recedes.

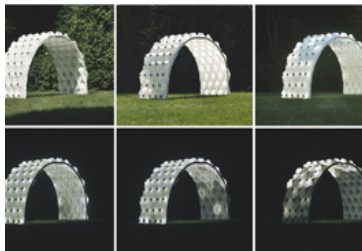


© Pando Populus

### [LATTC Shade Structures & Systems](#) - LATTC Architecture & Environmental Design Program, Los Angeles (2023)

**About:** A community-engaged initiative to co-design temporary, scalable shade and clean cooling systems for high-heat, underserved LA neighborhoods, in partnership with Pico Union Housing Corporation and Pando Populus

**Key Features:** Uses biomimicry-inspired, modular cooling structures designed and built by local residents equipped with fabrication tools and training.



©Cortesia de Brian Peters

### [Solar Bytes Pavilion](#) - Cleveland, OH (2014)

**About:** A robotic-3D-printed pavilion made of 94 interlocking plastic modules designed for outdoor festivals, doubling as a daytime shade canopy and nighttime light sculpture

**Key Features:** Solar-powered LEDs within each module, UV-filtering translucent plastic, and recyclable design—crushed and reused after the event.



©Michael Juliano

### [Serpentine Pavilion](#) by SelgasCano (2019)

**About:** Originally built as an immersive pavilion for Kensington Gardens, the structure has been exhibited around the world

**Key Features:** Provides a consistent visual identity with flexible components allowing site-specific configurations that can scale multiple spatial extents.



©GeekWire Photo / Kurt Schlosser

### [Redmond Technology Station Bridge](#) - Redmond, WA (2024)

**About:** A series of large, interconnecting, white canopies that run the length of the 1,100-foot pedestrian bridge

**Key Features:** The design integrates seating, nature and unique water diverters.

**Los Angeles-Based Shade Interventions:** Precedents from LA Metro, LA DOT, and others that integrate shading into first/last mile infrastructure, bike paths, and bus stops.



© Joe Linton/Streetsblog

*La Sombrita – LADOT Bus-Stop Shade Pilot/KDI (2023)*

**About:** A small perforated metal panel with solar lighting, attached to existing bus stop poles as a fast-deploy shade and safety solution in underserved LA neighborhoods.

**Key Features:** Rapid to install and low-cost, its form and seeming ineffectiveness became widely criticized online—but La Sombrita highlights how zoning, ADA, and sidewalk clearance regulations can constrain shade design to the point of public backlash.



© Lawrence Anderson Photography, Inc

*Santa Monica Big Blue Bus Stops by LOHA Architects (2016)*

**About:** Santa Monica redesigned its bus stops in 2016, using modular components to create attractive and unique public spaces

**Key Features:** Provides a consistent visual identity with flexible components allowing site-specific configurations that can scale multiple spatial extents.



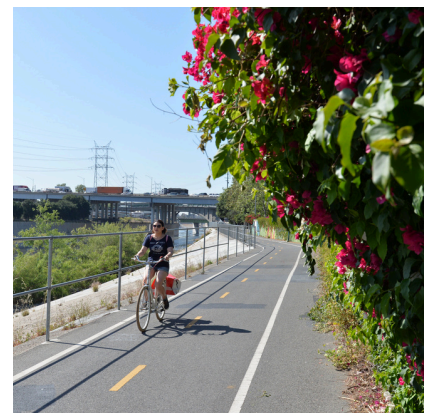
## 12.2 SITE SCALES

Image gallery provided for context of small, medium, and large-scale deployment zones, including sidewalks, public plazas, street and lane closures, and publicly-accessible transit-adjacent locations

### SMALL SCALE

#### Reference Gallery

All reference gallery photos provided courtesy of L.A. Metro





# MEDIUM SCALE

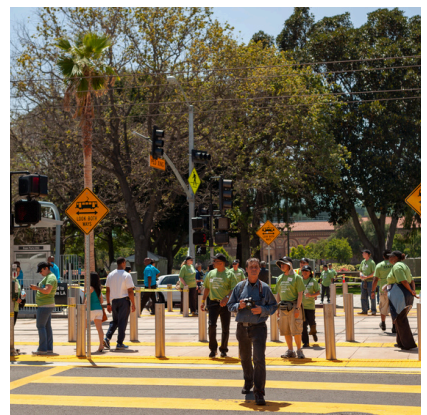
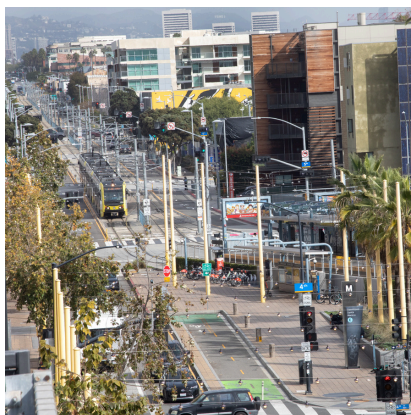
## Reference Gallery





# LARGE SCALE

## Reference Gallery





## 12.3 VENUE AND TRANSIT CONTEXT

Maps of Metro stations, transit lines and event-related corridors to inform real-world application and modular adaptability will be provided to registered teams.

## 12.4 SUN PATH AND CLIMATE DATA

LA-specific data on solar exposure, average temperatures, and prevailing wind patterns should be used to inform shade orientation and effectiveness.

- UCLA's has created a [shade layer](#) on the American Forests Tree Equity Score that projects shade at noon, 3 PM, and 6 PM: <https://www.treeequityscore.org/map>
- Web apps that can help you see which way shadows are cast in LA during different times of year and day include [ShadeMap](#) and [Shadowmap](#).
- [Shade Planning for Public Spaces](#) produced by the Municipal Association of Victoria, Australia

## 12.5 TECHNICAL GUIDANCE & EXTERNAL REFERENCES

To support environmentally responsible, buildable designs, the following external resources are recommended:

- [Shade](#), an Urban Design Mandate
- Circular Design & Material Reuse
  - [Ellen MacArthur Foundation](#) – Circular Economy Design Principles
- Low-Carbon Construction & Embodied Carbon
  - Rocky Mountain Institute – [Embodied Carbon 101](#)
  - Carbon Leadership Forum – [Embodied Carbon 101](#)
- Temporary and Modular Architecture
  - [ArchDaily on Temporary Architecture](#)

## 12.6 VIDEOS AND BACKGROUND BRIEFINGS

Short recorded briefings will be available on the competition site to introduce:

- Key design considerations (modularity, accessibility, anchoring, and airflow)
- Interviews with Metro about shade deployment challenges and opportunities
- Orientation to the ShadeLA campaign and the broader legacy vision for community impact

## 12.7 EXPERT SUPPORT & OFFICE HOURS

Student teams will have access to virtual “Office Hours” hosted by participating architecture, engineering, and construction firms. These will be held throughout the design window and will allow students to ask targeted questions related to feasibility, material choices, modular construction, and sustainability strategies. Teams will sign up via a centralized booking platform, with equal access for all.