



# Wave

97% Shade Coverage

“The Wave” shelter takes an optimistic and spirited approach to the design of a simple and critical element of public infrastructure.

Inspired by the core ideas of the Googie style and streamlined modern design movements, the design combines simple geometric forms with bold colors and textures to create a playful and distinguishable shelter. Drawing precedent on the principle that efficient fabrication can lead to a desirable and accessible product, “The Wave” was conceived so that it could be efficiently manufactured, and is easily adaptable to all of LA’s neighborhoods and sidewalk conditions.

The kit of parts of “The Wave” shelter explores the combination of curving forms and long horizontal lines, symbolizing the idea of prosperity and an exciting future embedded in the spirit of Los Angeles.

This shelter aims to bring shade and joy to the daily commute; A place for the community to enjoy the experience while waiting. A place of function by providing comfort and safety, while also a place of beauty inspiring riders daily.

As LA pushes towards its goals of resiliency and transitions its focus from a car- driven experience to public transit, bus shelters will play a more significant role in increasing ridership. Desirability and civic pride are embedded in the design of the Wave.

## Social Infrastructure

In an era of increasing reliance on virtual and digital experiences, the bus shelter is one of the remaining elements of the urban fabric which lends towards positive social engagement. People meet. they say hello. They build relationships over time. They build community and improve social infrastructure of our cities. All because of a bus shelter on a sidewalk.

Transit shelters can promote Community Art. They can also foster community play - another way for one human to interact with another. They can be a resource - a small garden or a little Free Library system.

We are thinking about shelters and their ability to connect and build communities.



## Multi-purpose Infrastructure

Transit shelters individually have relatively small footprints in their urban context. But when looking at them in aggregate, they have the potential to serve as distributed systems of equitable infrastructure for the city.

Transit shelters can harvest water in the future. and can be an integral part of carbon sequestration. They can be true early warning detectors and informers.

Transit shelters can also be conduits of information. They can speak about civic needs. They can promote the culture of Los Angeles in an equitable way. They can be points along our journey in education.

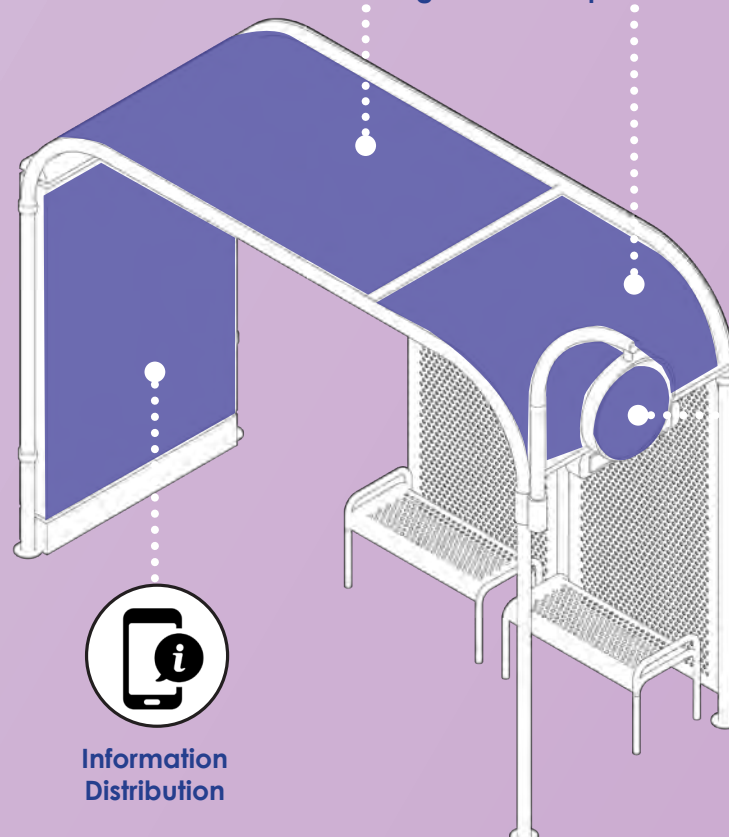
The role of transit shelters is a promising one. They can be connectors of people, at a civic scale. They can promote positive shared experiences. Shelters are a critical part of the urban infrastructure of Los Angeles.



Water Harvesting



Carbon Sequestration



Information Distribution



Early Warning

# Shade Schedule

## The Wave

The "shade schedule" below compares the shade provided by the original "Flat" and the newly designed "Wave". This hourly analysis gives a snapshot of the ability for each orientation and modular components to cast shade on the waiting area inside and in front of the shelter.

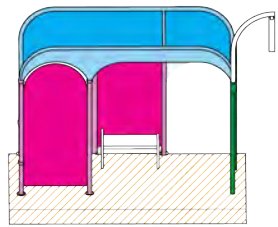
**Based on our analysis and design process, the newly designed "Wave" accomplishes 97% shading year-round.**

**Legend:**

- side panel casts shade
- back panel casts shade
- roof panel casts shade
- empty space indicates shelter is in the sun

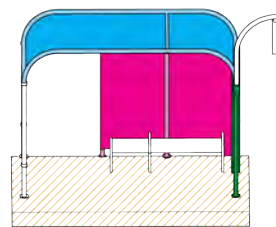
A dot indicates that shade is present at the indicated time. The color of the dot shows which panel is providing the shade.

The background color refers to the shade analysis for La's current bus shelters. A grey fill means that the shelter currently in use provides shade at this time.



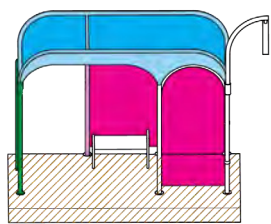
### Northbound

|        | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm |
|--------|-----|------|------|------|-----|-----|-----|-----|-----|-----|
| 21-Dec | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Mar | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Jun | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Sep | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |



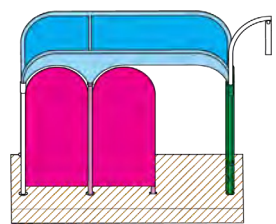
### Eastbound

|        | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm |
|--------|-----|------|------|------|-----|-----|-----|-----|-----|-----|
| 21-Dec | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Mar | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Jun | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Sep | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |



### Southbound

|        | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm |
|--------|-----|------|------|------|-----|-----|-----|-----|-----|-----|
| 21-Dec | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Mar | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Jun | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Sep | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |



### Westbound

|        | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm |
|--------|-----|------|------|------|-----|-----|-----|-----|-----|-----|
| 21-Dec | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Mar | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Jun | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |
| 21-Sep | ●   | ●    | ●    | ●    | ●   | ●   | ●   | ●   | ●   | ●   |



**Exposition Ave / Vermont Blvd Eastbound, Exposition Park, CD 9**  
 Single standard shelter with ad panel, real-time arrival display, sign attachment, litter/recycling bins, bicycle racks

# Wave

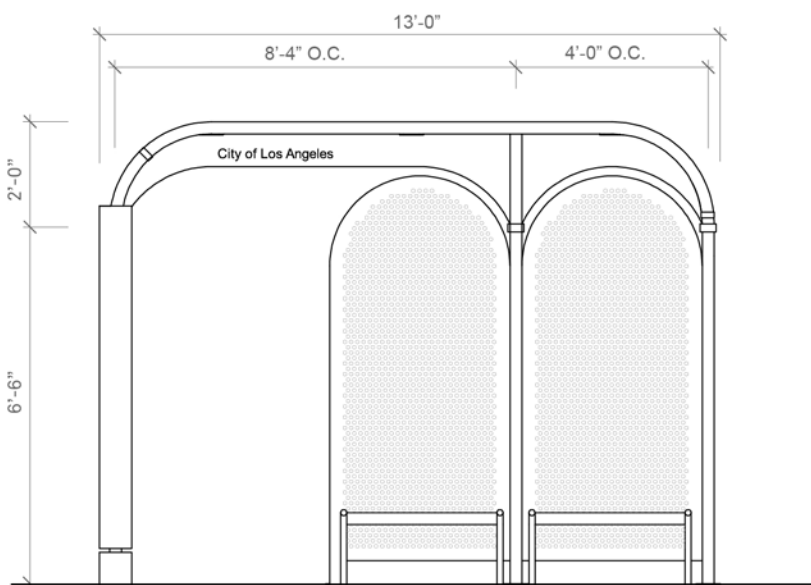
## Classic Model



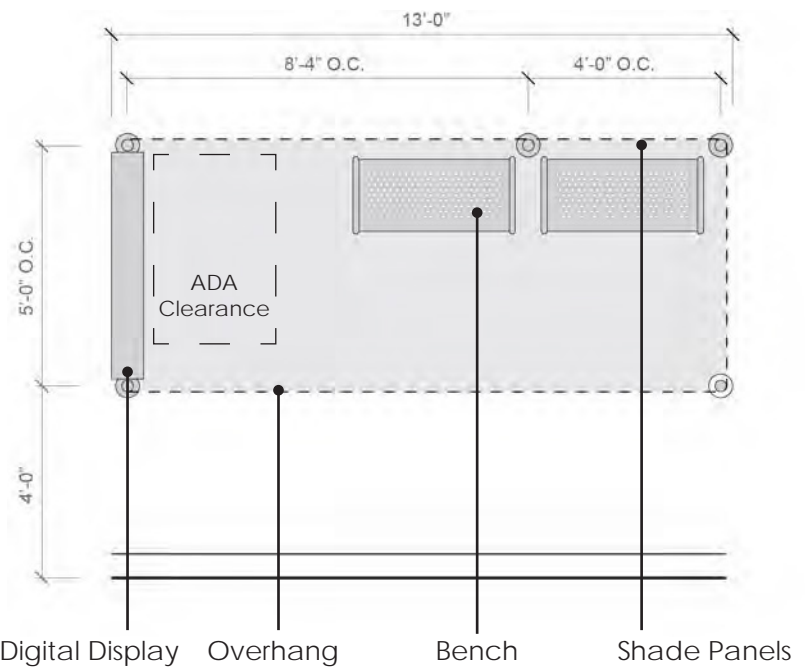
Wave without Ad



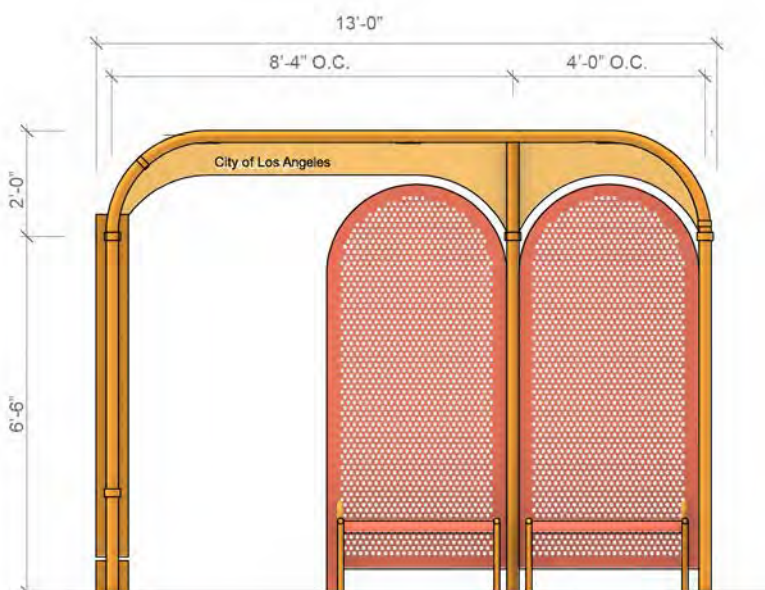
Wave with Ad



Wave Section  
Scale: 1/4" = 1'-0"



Wave Plan  
Scale: 1/4" = 1'-0"



Wave Front Elevation  
Scale: 1/4" = 1'-0"

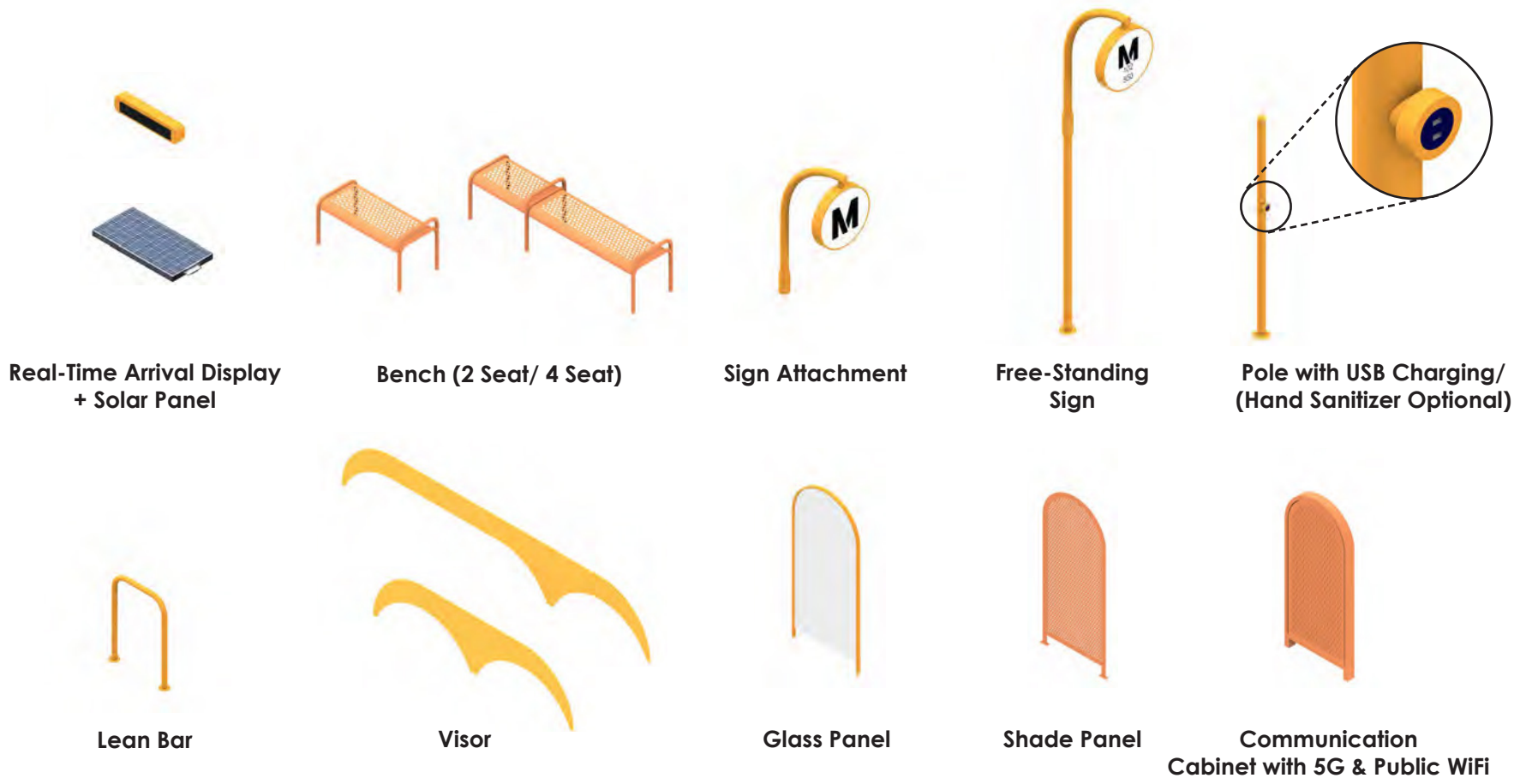


Wave Side Elevation  
Scale: 1/4" = 1'-0"

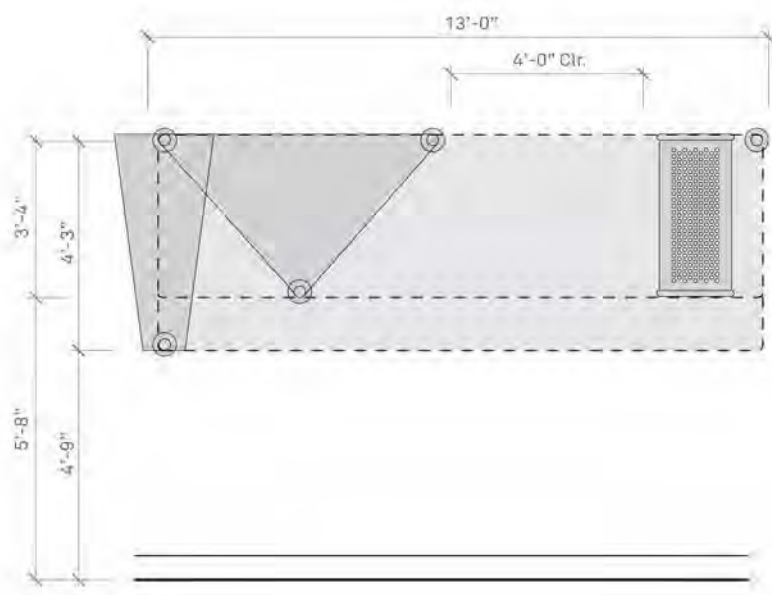
The Wave shelter is designed to provide maximum flexibility deal with LA's varying sidewalk widths and spatial configurations, Thus ensuring accessibility to shelters for all neighborhoods.

The Double design uses two basic modules to create a mini transit hub at high traffic stops, whereas the Narrow and Mini are compact versions of the shelter for locations where space is restricted.

## Kit of Parts



## Variability



Wave Narrow Shelter  
Scale: 1/4" = 1'-0"



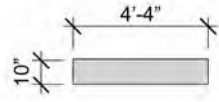
Wave Double Shelter with Elevated Urban Panel  
26'-0"W x 5'-0"D x 9'-6"H



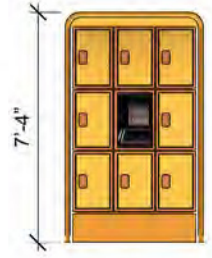
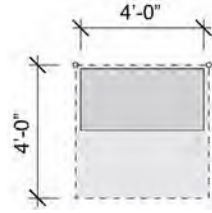
Wave Mini Shelter with Freestanding Post Sign  
7'-6"W x 5'-0"D x 8'-6"H

# Wave

## Program Elements



Wave Urban Panel Plan & Elevation  
Scale: 3/16" = 1'-0"



Wave eLockers Plan & Elevation  
Scale: 3/16" = 1'-0"



**Blade**

2'-0"W x 1'-6"D x 8'-0"H

**Litter / Recycling**

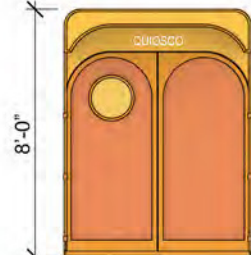
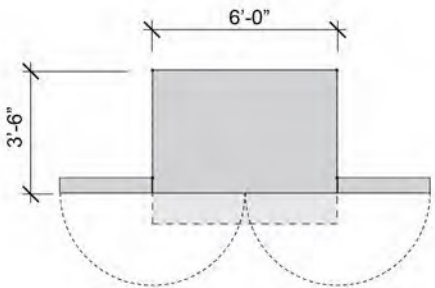
Each 2'-2"L x 1'-10"Ø  
(25 gal.)

**Urban Panel**

4'-4"W x 10"D x 9'-10"H

**eLockers**

4'-0"W x 4'-0"D x 7'-4"H



Wave Vending Kiosk Plan & Elevations  
Scale: 3/16" = 1'-0"

Wave Vending Kiosk



**Information Kiosk**

1'-10"W x 6"D x 7'-6"H

**Vending Kiosk**

6'-0"W x 3'-6" (1'-6" Overhang)D x 8'-0"H

**Bike Racks**

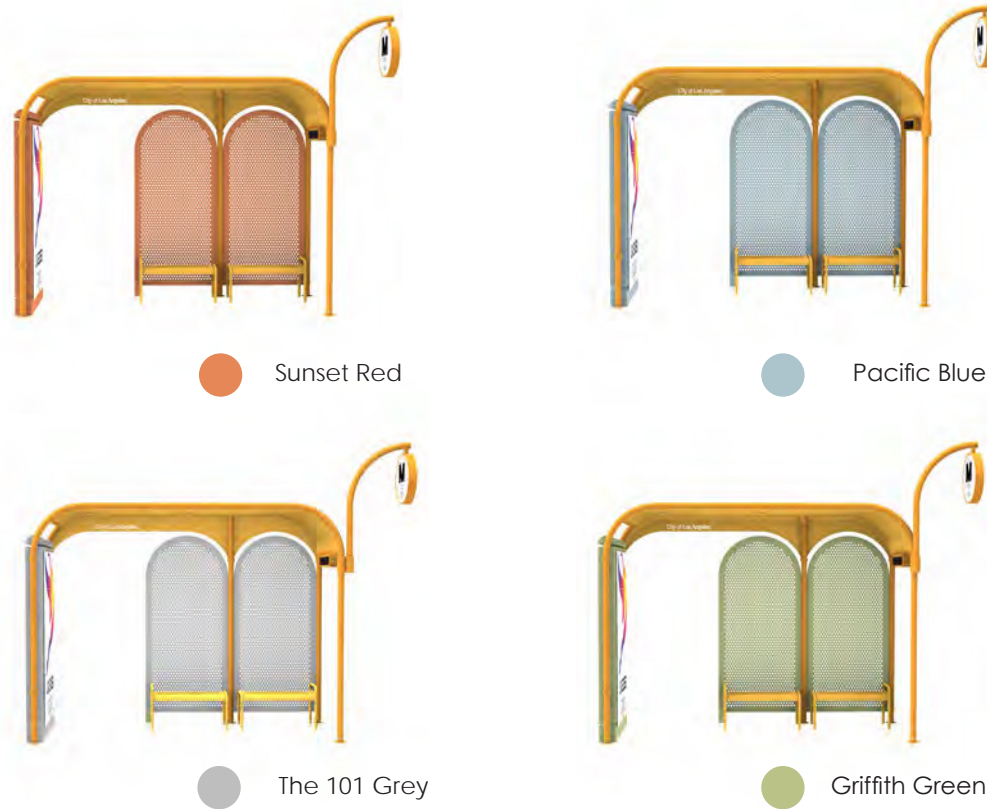
2'-0"W x 3'-0"H x 3"Ø

\*Also Available  
- Hand Washing Station  
- Hydration Station

## Materials

Designing a shelter is to design a recognizable place in the city. Our design process yielded a shelter which can be easily identifiable in whichever context it exists within.

“The Wave’s” shape factor and color palette are designed to stand out from the cityscape.



**San Fernando Road/Van Nuys Blvd Westbound, Pacoima, CD 7**  
Narrow shelter with real-time arrival display, litter/recycling bins, interactive information kiosk, sign attachment