



## **Outdoor Structures: Requirements to Prevent Spread of COVID-19**

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The following guidance was developed by the San Francisco Department of Public Health (SFPDH) and is posted at [sfdcp.org/](https://sfdcp.org/). This guidance may change as knowledge emerges or when federal and state regulations change.

**PURPOSE:** To define what structures are considered outdoor spaces versus indoor spaces, for the purpose of COVID-19 health and safety measures like face masks.

**AUDIENCE:** Businesses or organizations that operate outdoors, including those that participate in the San Francisco's Shared Spaces program. People who wish to understand their risk of COVID-19 when they are dining or participating in activities in outdoor structures.

**BACKGROUND:** Being outdoors greatly decreases the risk of COVID-19. Many businesses and organizations have created outdoor structures for their patrons.

To benefit from the low risk of COVID-19 seen outdoors, structures must be built in a way that allows fresh air to flow freely through the structure. Structures that do not allow the free flow of fresh air are effectively indoor spaces; in outdoor structures that do not allow free flow of fresh air, the risk for COVID-19 transmission could be worse compared to a well-ventilated indoor space.

This document explains the elements needed for a structure to be considered an outdoor space.

### **Elements of Outdoor Structures**

- At least 50% of the outside walls of the structure shorter than 42”.
- Interior walls to separate spaces inside the structure are shorter than 42”.
- Materials that allow the free flow of air are allowed over 42” high. Examples include widely separated slats or lattices, or coarse mesh screen.

Structures that do not meet the above requirements are considered indoor spaces.

In addition, structures must follow Cal/OSHA, ADA, Fire and local and state permitting requirements. San Francisco's Parklet and Shared Spaces design criteria include requirements for wall heights, pedestrian visibility, and ceiling heights.

### **Guiding Principle: Free Flow of Air**

To prevent spread of COVID-19, the most important consideration is to maintain outdoor airflow in the breathing zone of people in the structure. The breathing zone refers to the area of space around a person's nose and mouth through which air passes as they breathe in and out.

The breathing zone may be at different heights for personnel, clients and customers. For instance, the breathing zone of someone performing a pedicure and the individual receiving the pedicure are at different heights. Maintaining the outdoor free flow of air in the breathing zone for all individuals using the outdoor space is important to reduce the risk of COVID-19 transmission between people.



## Elements of Outdoor Structures to Allow Free Flow of Air

### Design Considerations

“When is a Screen a Wall?”: Permeable vs Impermeable

- A wall is made of any impermeable material that keeps air from passing through. Rigid walls, plastic, plexiglass, or a fabric barriers do not freely let any air through and are considered walls.
- Barriers such as a lattice fence with widely separated slats, or a coarse mesh screen will allow more air to flow freely and are not considered walls.

### Perimeter Walls

- Perimeter walls are the outside walls of the structure. The Shared Spaces permit has specific requirements for perimeter walls including minimum and maximum heights for safety.
- To optimize the free flow of air, at least 50% of the perimeter should be open above 42". Walls may meet at a corner, as long as the combined length of the adjacent walls is less than 50% of the perimeter.

### Interior separators

- Barriers may be desirable inside the structure to create the feeling of private spaces, such as between dining tables or salon stations. However it may not be possible to maximize privacy and still provide sufficient airflow. To allow the free flow of air in the breathing zone, interior separators should be permeable above 42".

### Overhead Coverings

- Ceilings, roofs, umbrellas or canopies are allowed. As long as the structure is constructed with no more than 50% of the perimeter walls permeable above 42", umbrellas and other coverings will not dramatically reduce the free flow of air in the structure.

### Heaters, fans and swamp coolers

- Fans, heaters and coolers should not blow air from one group of patrons to another. People have been infected by COVID-19 in this way.

### Risk Recommendations

It is not possible to anticipate every type of outdoor structure and pre-determine whether any specific configuration allows for the free flow of air in the breathing zone for personnel, customers, and clients. In addition to the type of the barrier, air flow is affected by the height, number, and angle of the barriers, as well as the percentage of the space covered. Consider the following when designing an outdoor structure:

- Increasing the flow of air by incorporating permeable barriers like mesh and lattice into the design.
- Encourage as much free flow of air in the breathing zone as possible.

*For more information about setting up your outdoor space please visit San Francisco's Shared Spaces website at <https://sf.gov/shared-spaces> .*