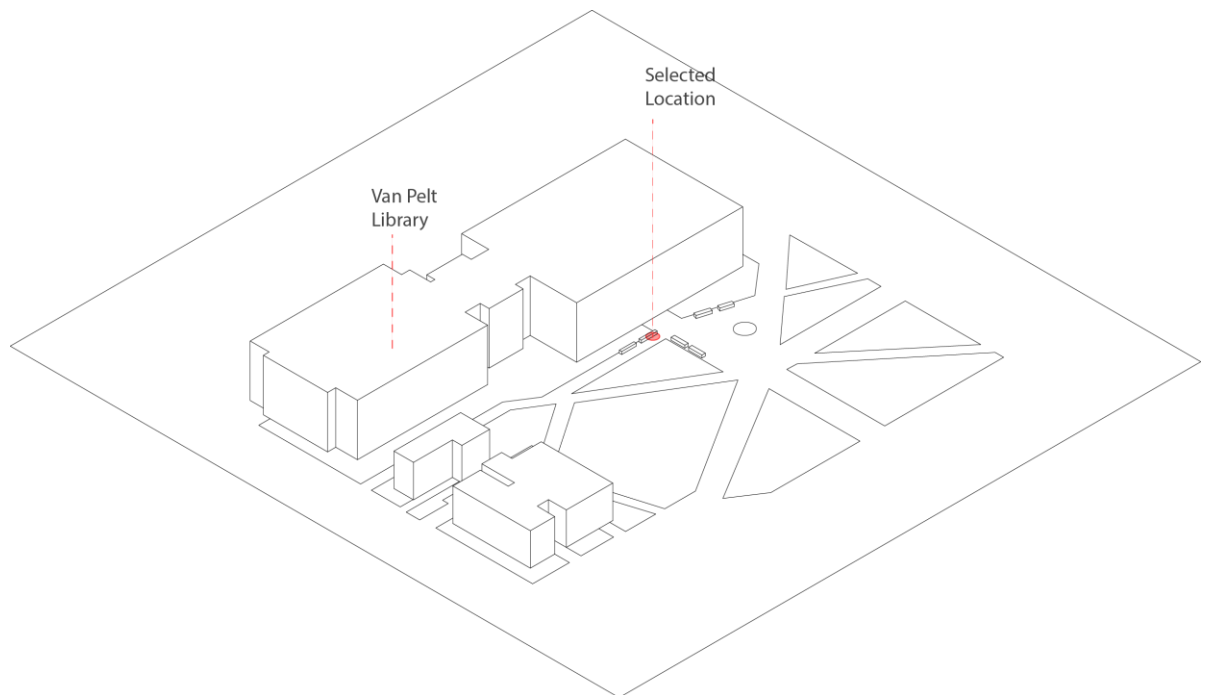


Outdoor Comfort Simulation

Yi Zhang

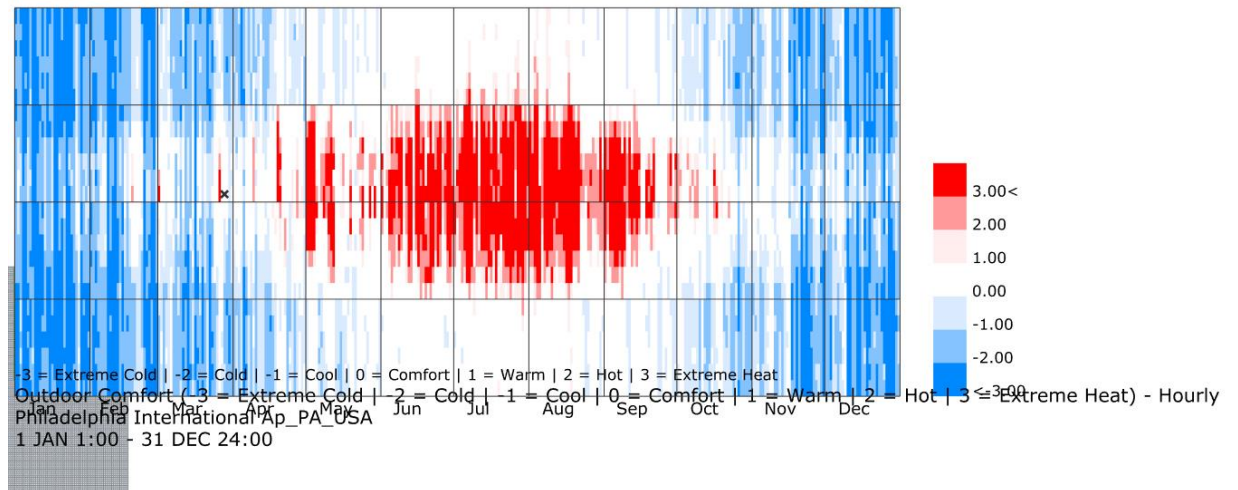
9/27/2017

1. Location



Location is on the bench in front of Van Pelt Library where people usually rest on.

2. Comfort hours percentage

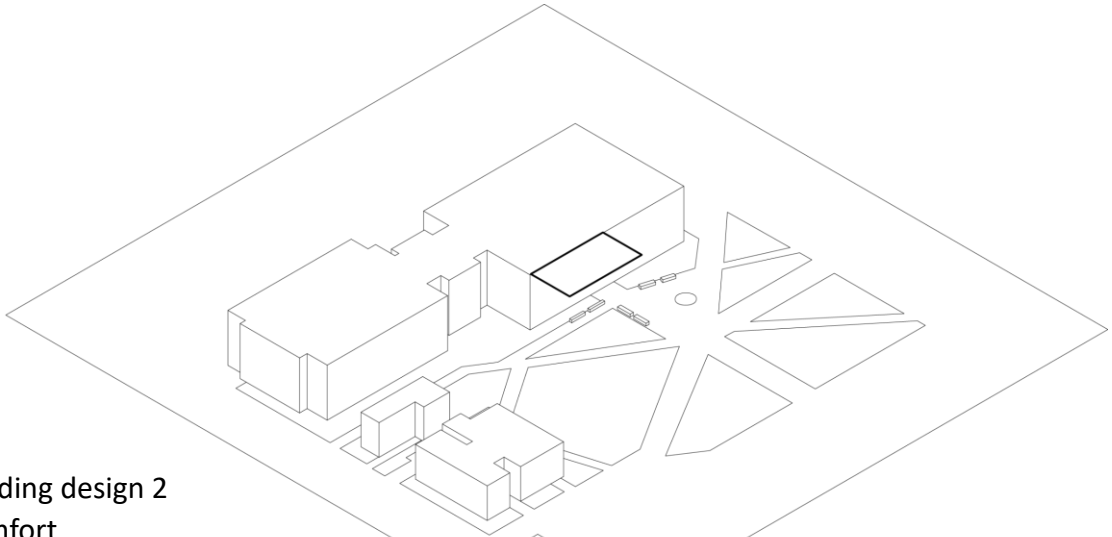


Comfortable: 37.34%; Short period comf.: 18.5%; Heat stress: 12.51%; Cold stress: 31.64%

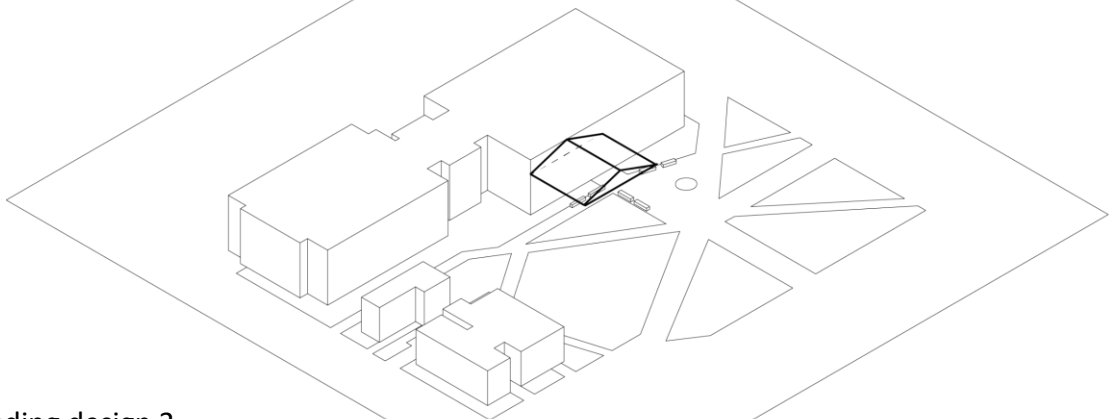
Under natural condition, the comfortable percentage during the year on the selected location is 37.34%.

3. Shading designs

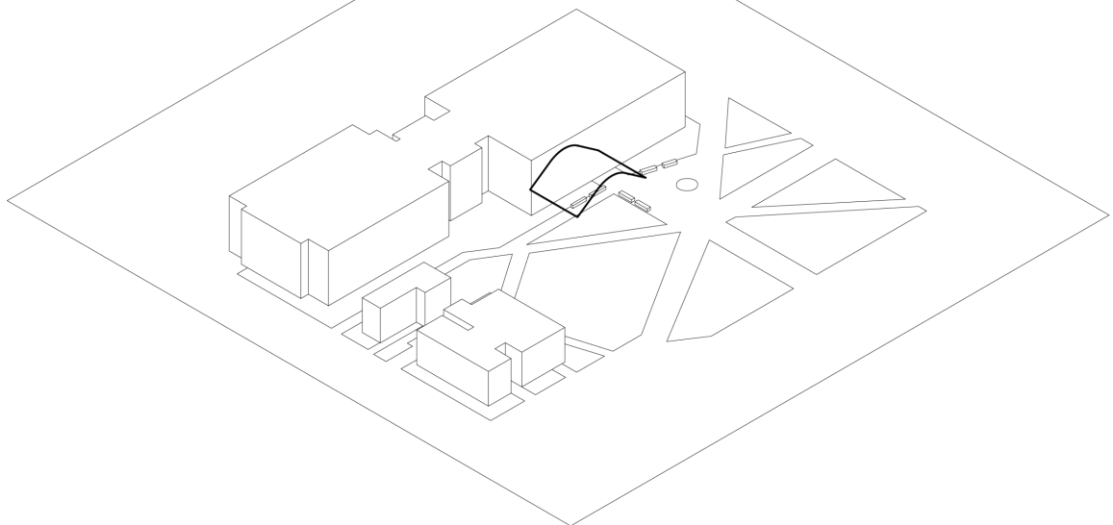
Shading design 1
Comfort percentage:41.29%



Shading design 2
Comfort percentage:41.86%

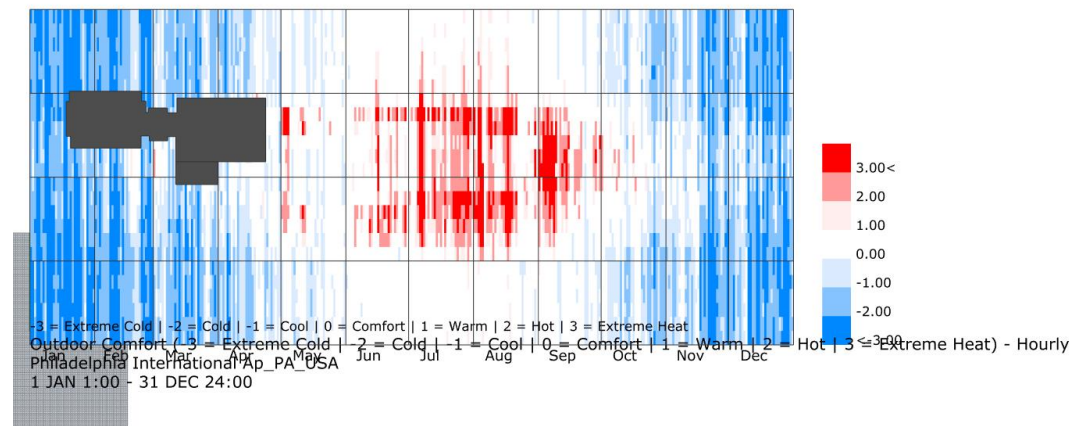


Shading design 3
Comfort percentage:42.0%

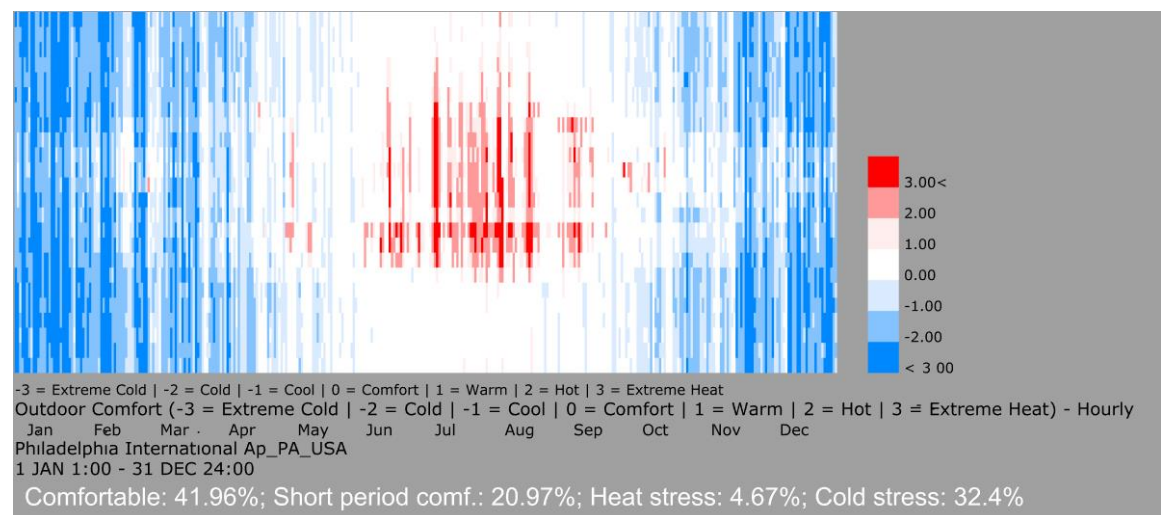


Comfort Simulation

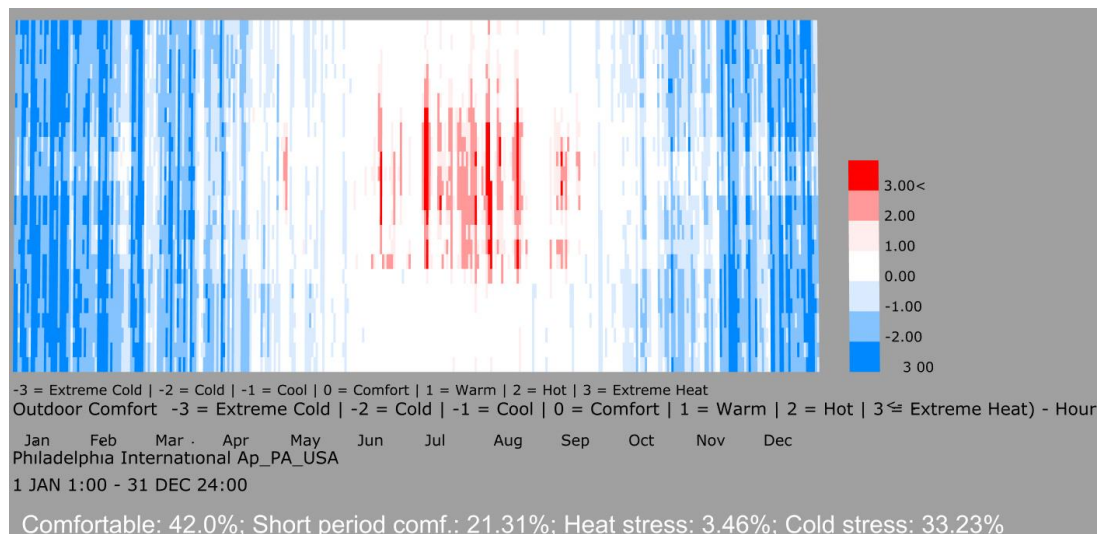
Shading design 1



Shading design 2



Shading design 3



4. Achieved comfort percentage

The comfort percentage cannot achieve 100% after calculation, due to the cold stress is much higher than heat stress, which is more practical to be solved by shadings.

The best comfort percentage is 42%.