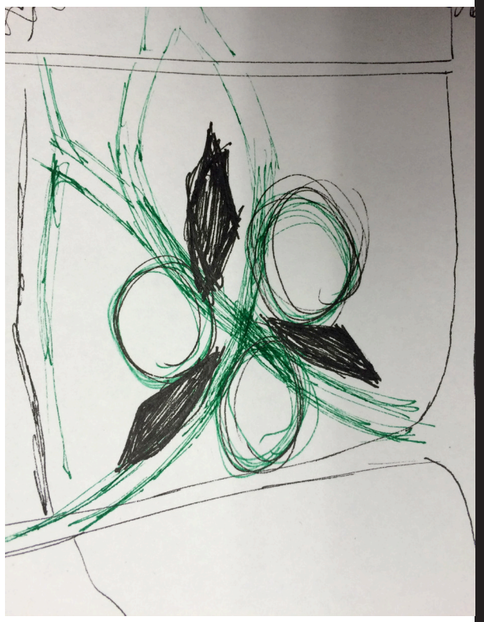
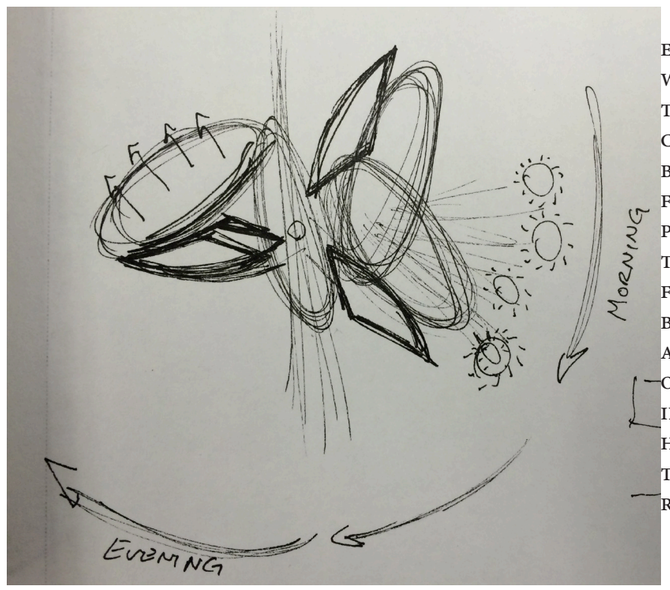
PORTLAND, OR

BRANDON YATES

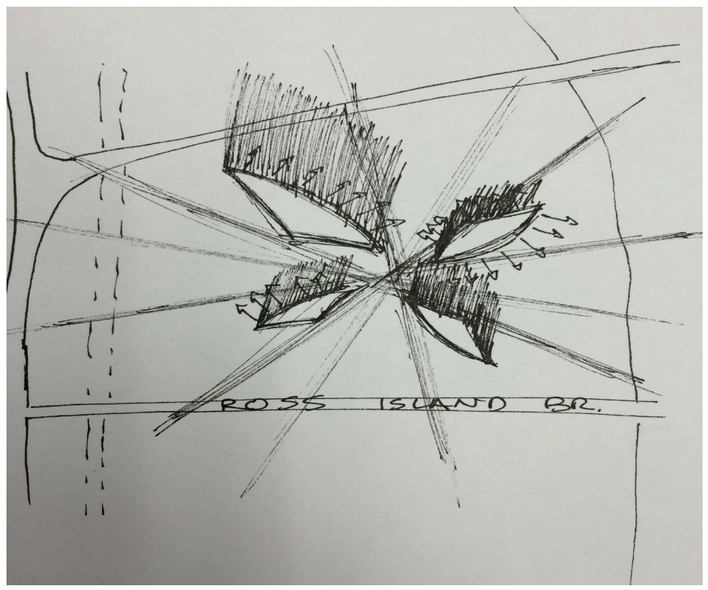
ZIDELL YARDS-



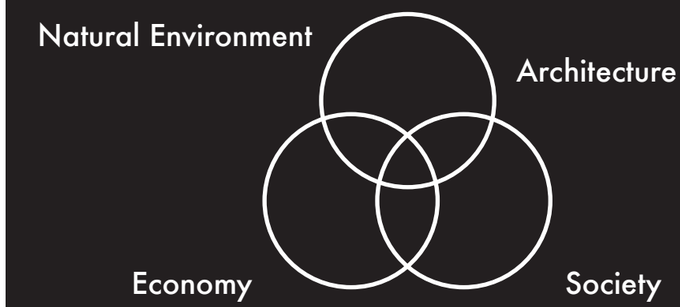
The driving design idea was to create an outside plaza instead of an interior atrium. Portland has been getting increasingly nicer, temperature and sun-wise. And in designing for the future I want to create a destination that people in Portland can travel to to hang out and eat their lunch. There is ample transportation in the area with the Trimet Max's new Tilikum crossing.



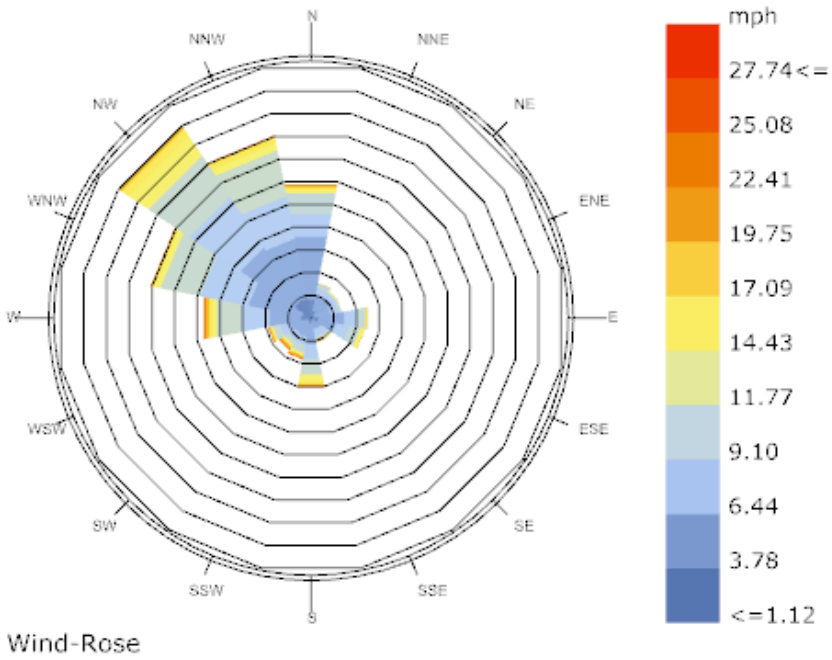
Much of the orientation of the buildings was based on the idea that I want that central courtyard/ plaza area to be sunny and comfortable for as much of the day as possible. Also at the same time I wanted to allow for ample views to the beautiful waterfront, and being able to look out from the buildings into downtown, the West Hills, and the bridges that connect across the river.



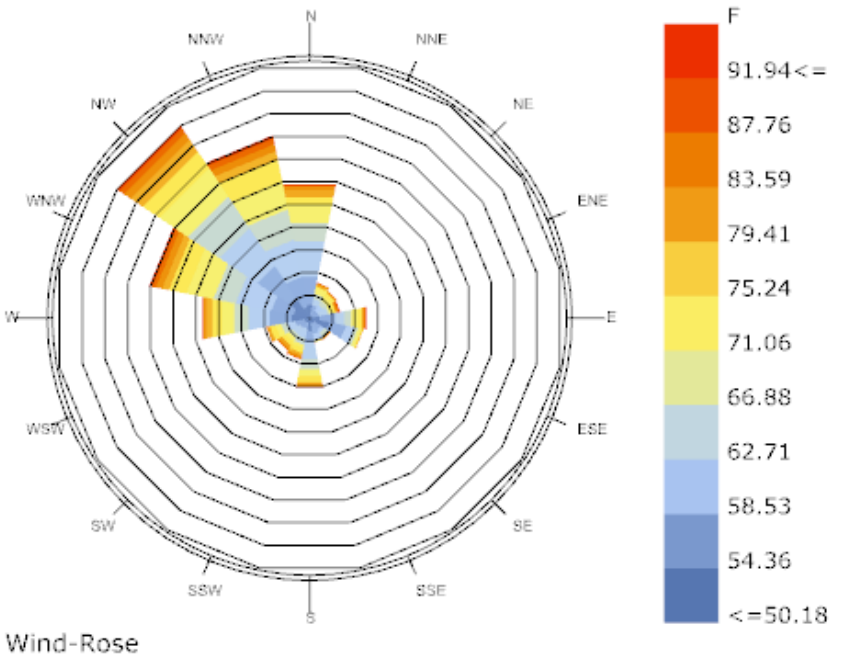
The EVOLO competition has challenged architects and students alike to come up with new and innovative ways to make buildings to create meaningful places in search for designs for the future. To me design of the future starts with solving the problems of today. The location I have set is Shenzhen, China, a growing city that is expanding faster than it has land to do so. One of the big focuses in Shenzhen and the world right now is reducing Carbon in as many ways as possible. We as architects can help by creating places that use less energy, making higher density areas to encourage walking, and incorporating systems into our designs to reduce that amount of energy needed to power the building. In essence the idea of Sustainability; But sustainable design is much more that just a green building. It is the consideration of how the building is used in order to create useable and desireable space. The ability to make a space a place, and integrate beautiful and ecological materials with design to suggest use and durability. Weihong Li describes sustainability very well as a system broken down into 3 parts that come together to make architecture: The Natural Environment, Society, and Economy.



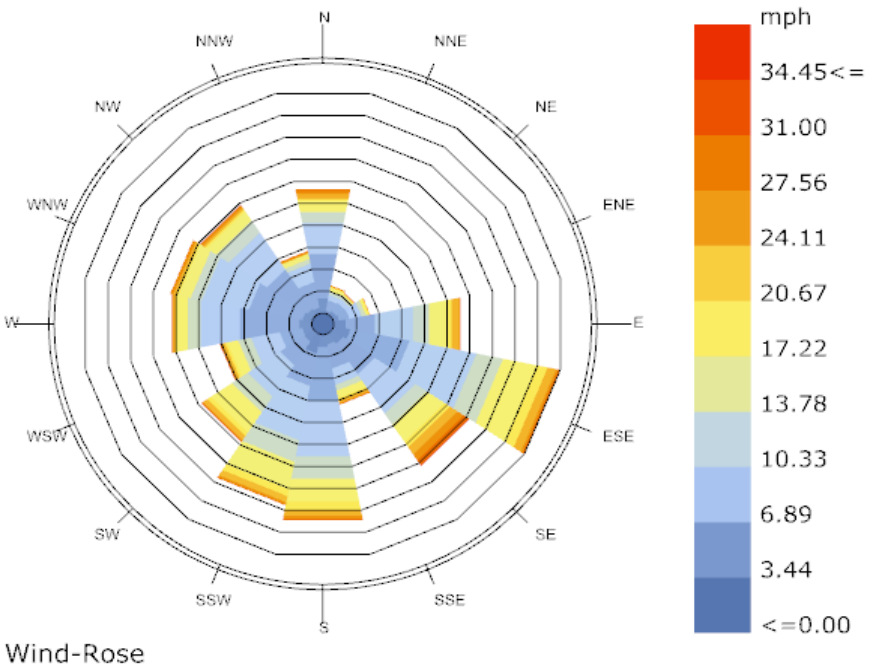
By dividing architecture into these groups you ensure that you are considering more indepth, the design and how you creating a place that will interact with the users.



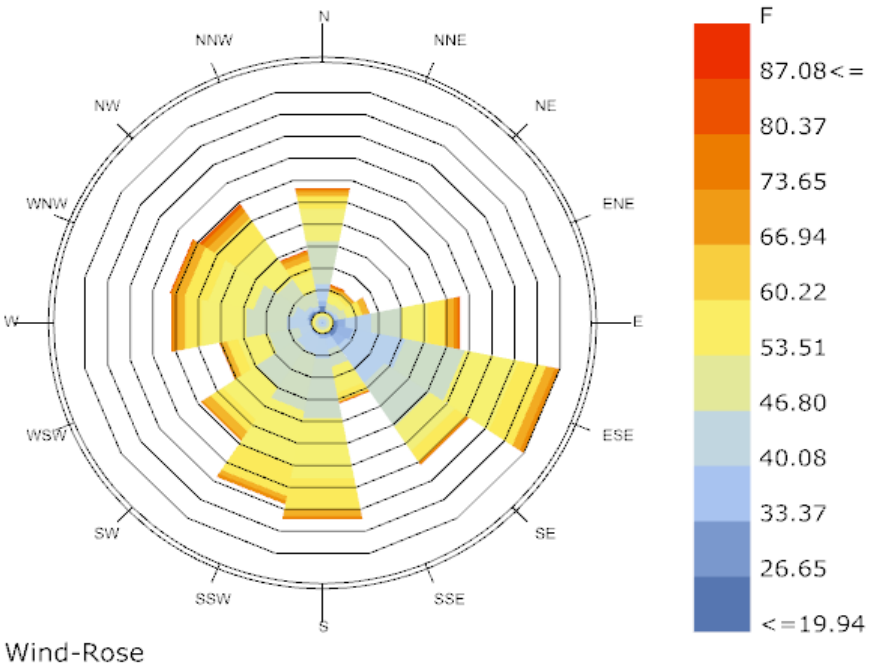
Wind-Rose
PORTLAND_OR_USA
1 MAY 1:00 - 31 OCT 24:00
Hourly Data: Wind Speed (mph)
Calm for 0.00% of the time = 0 hours.
Each closed polyline shows frequency of 1.3%. = 58 hours.
... ...
Conditional Selection Applied:
Wind Speed>1
and Dry Bulb Temperature>50
3254.0 hours of total 8760.0 hours (37.15%).



Wind-Rose
PORTLAND_OR_USA
1 MAY 1:00 - 31 OCT 24:00
Hourly Data: Dry Bulb Temperature (F)
Calm for 0.00% of the time = 0 hours.
Each closed polyline shows frequency of 1.3%. = 58 hours.
... ...
Conditional Selection Applied:
Wind Speed>1
and Dry Bulb Temperature>50
3254.0 hours of total 8760.0 hours (37.15%).



Wind-Rose
PORTLAND_OR_USA
1 OCT 1:00 - 31 MAY 24:00
Hourly Data: Wind Speed (mph)
Calm for 8.13% of the time = 474 hours.
Each closed polyline shows frequency of 1.1%. = 61 hours.



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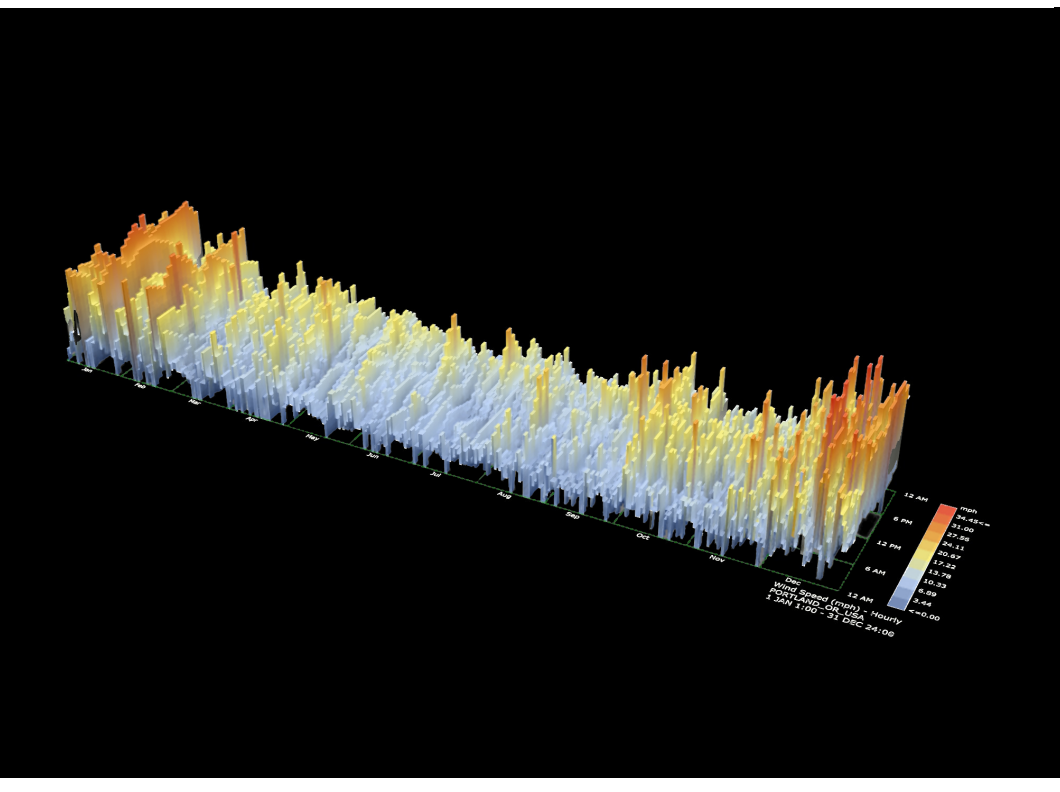
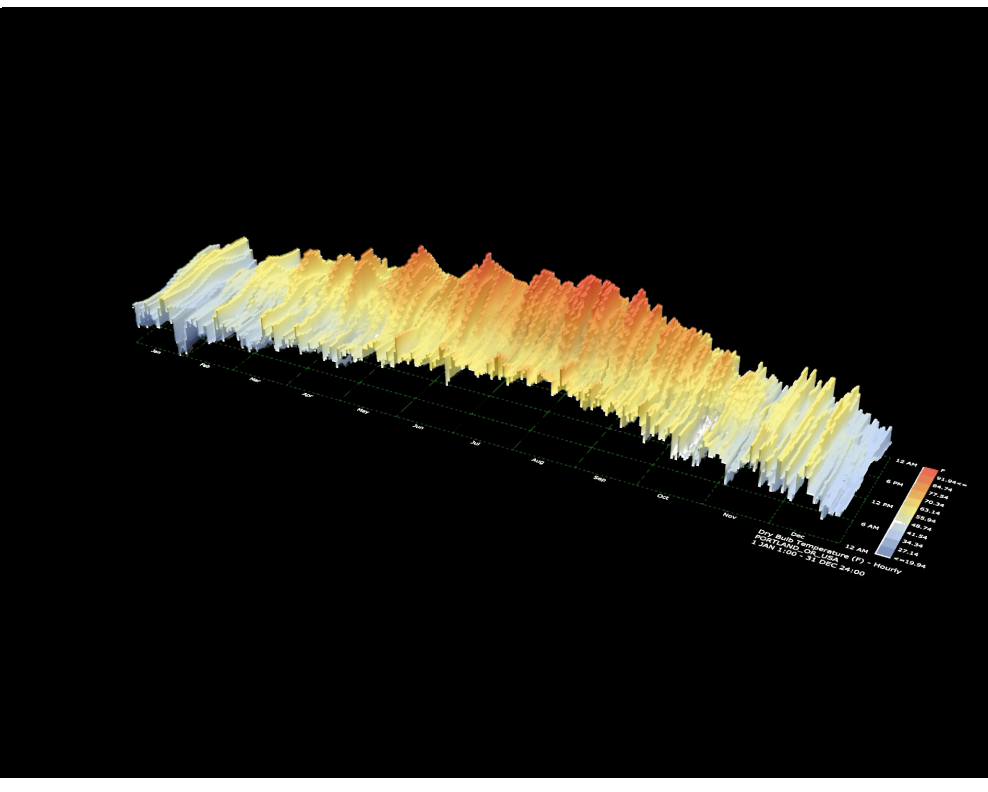
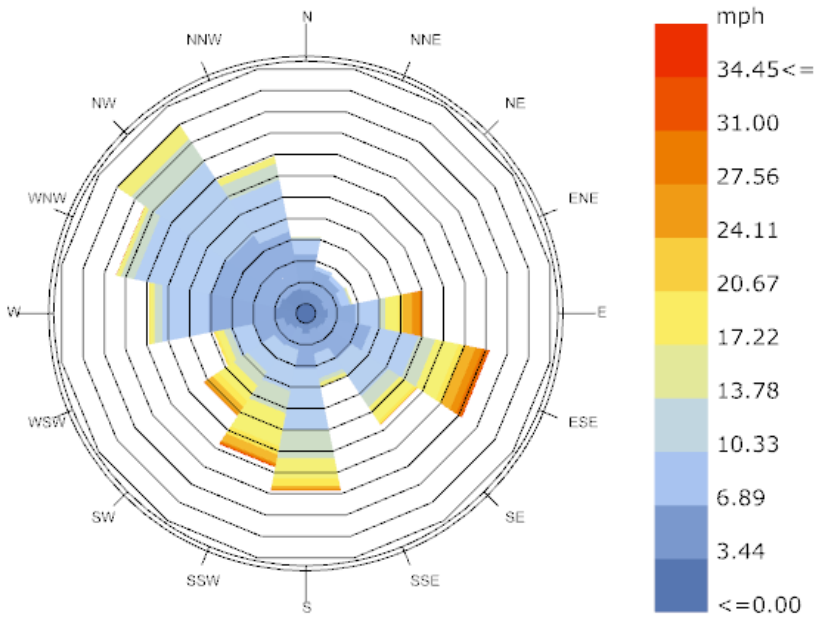
Wind intesity in Portland

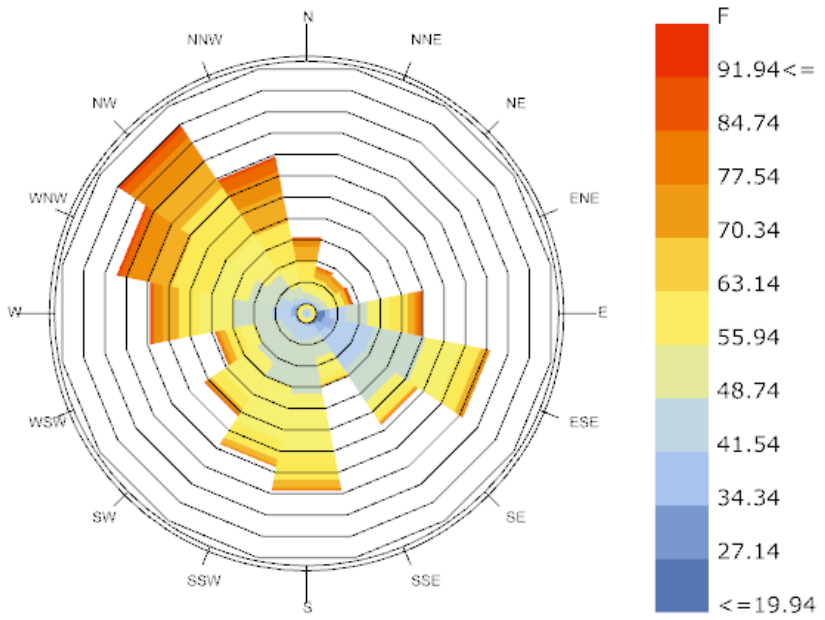


Dry Bulb Temperature in Portland





Wind-Rose
PORTLAND_OR_USA
1 JAN 1:00 - 31 DEC 24:00
Hourly Data: Wind Speed (mph)
Calm for 7.34% of the time = 643 hours.
Each closed polyline shows frequency of 1.0%. = 88 hours.



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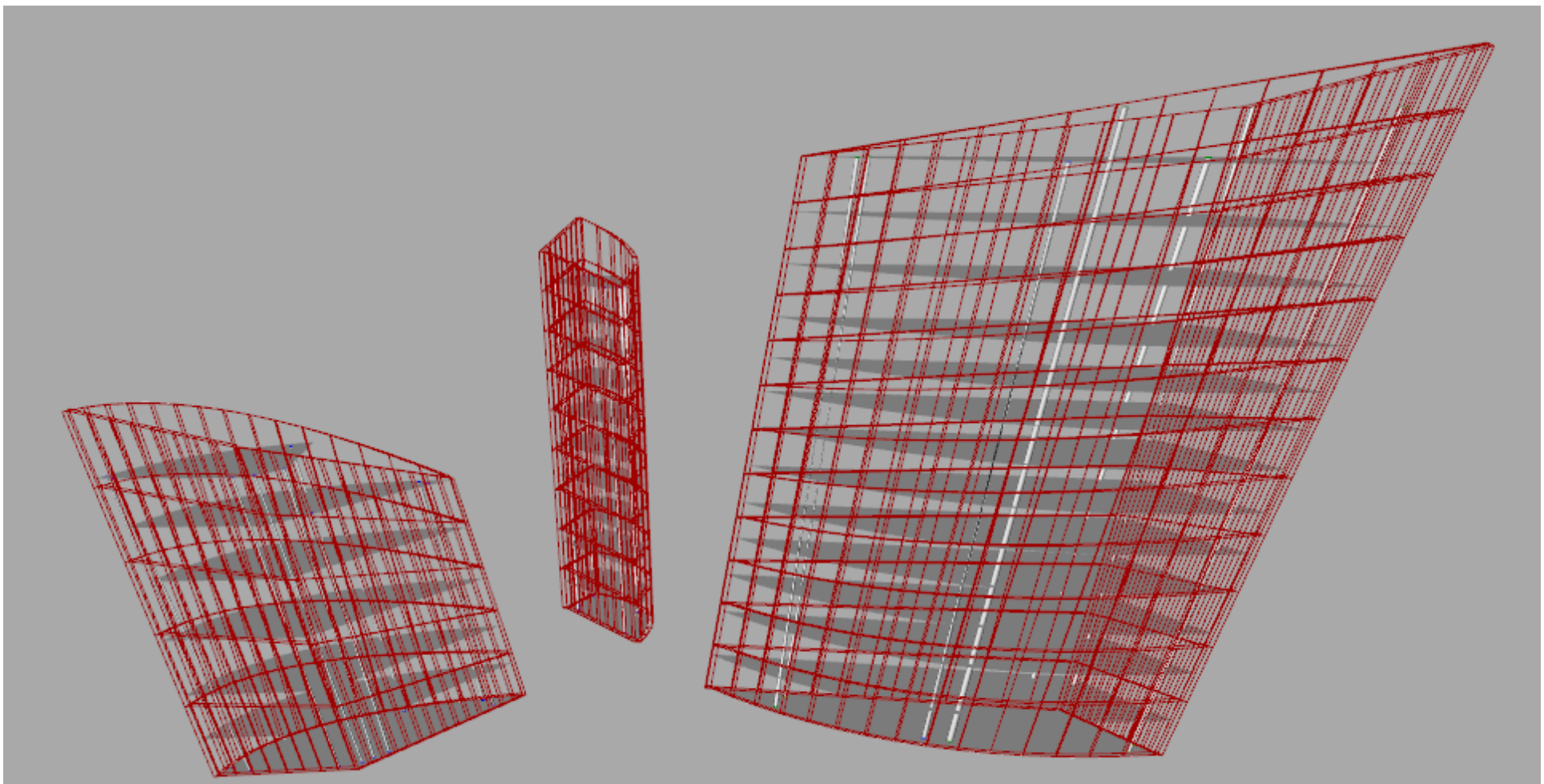
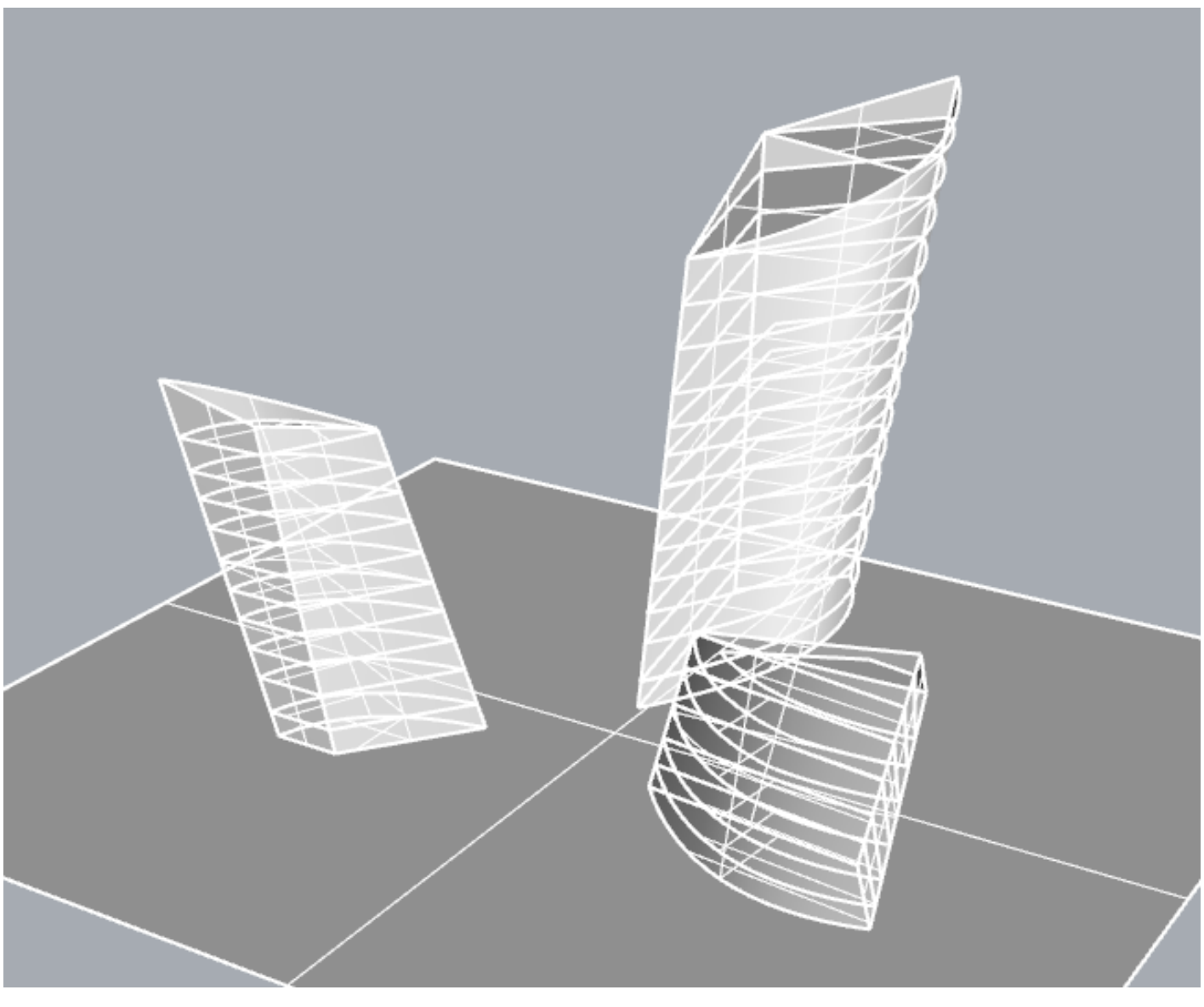


STRUCTURAL DIAGRAM

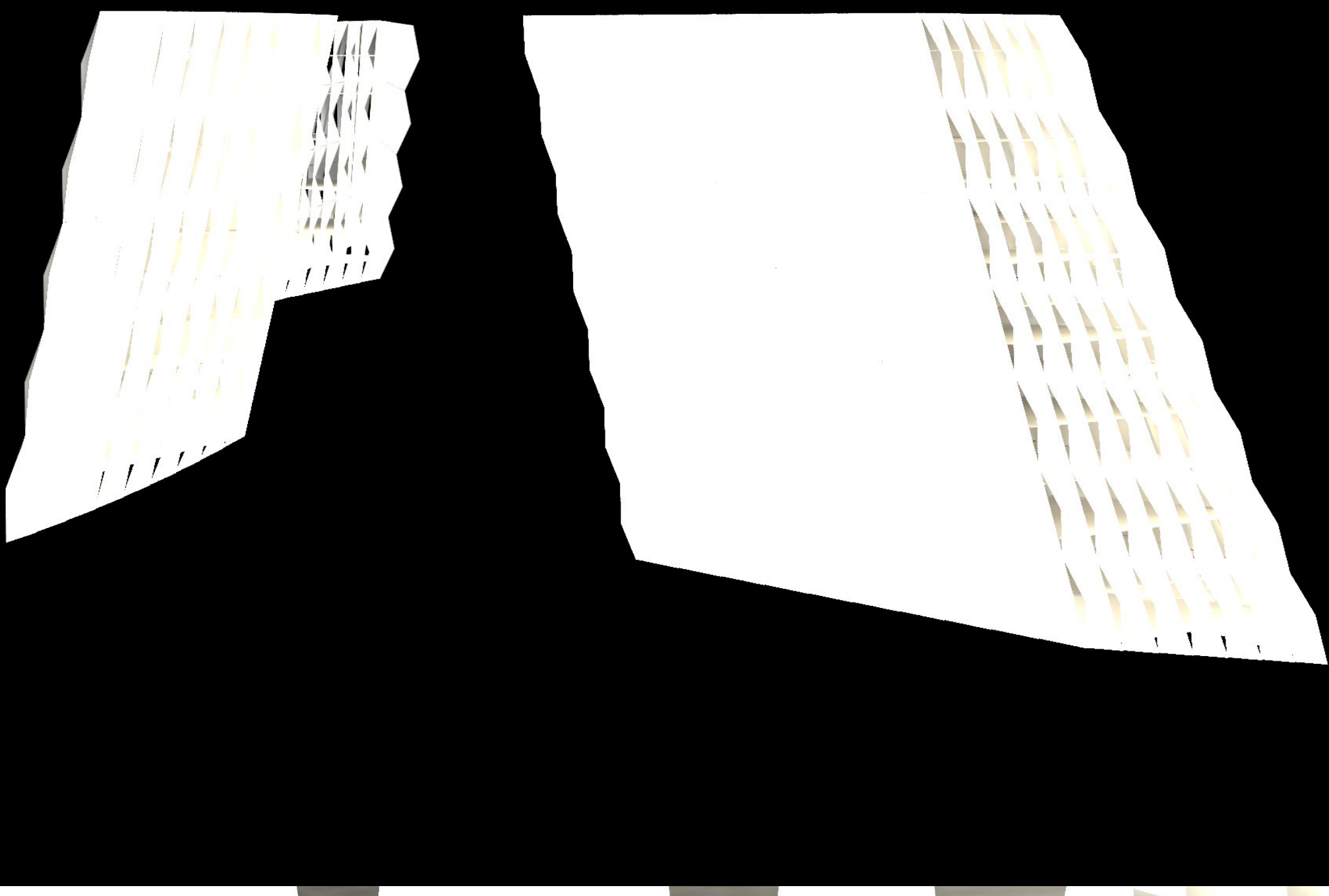


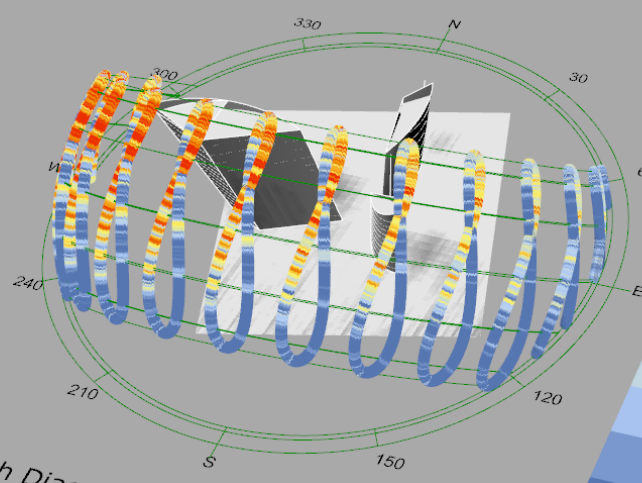
I envision the structure to be mainly comprised of the main floor plates, structural collumns that go throughout, and some type of cross mesh, that would support the exterior shading pannels, and give a more structural or industrial feel to the complex.

The orientation of the buildings is directly related to the wind and sun analysis as well as idealized locations for views along the Willamette. After analyzing the wind, I came to the conclusion that the prevailing wind is roughly North-west and South-east primarily in the winter.

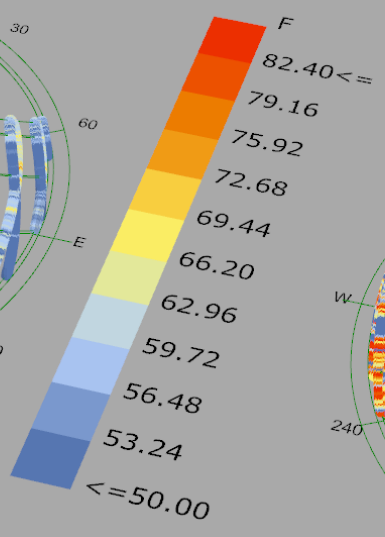
this means that in the summer there will just be a cool breeze working its way up or down river, creating a comfortable center plaza.

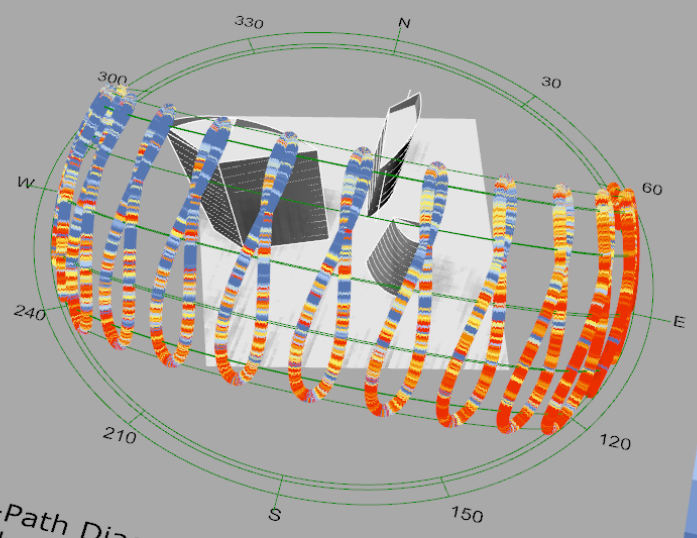
Sun- wise this orientation allows all the buildings stay out of one anothers shadow for most of the day and brings in plenty of light to the plaza in the middle.





Sun-Path Diagram - Latitude: 45.6
Hourly Data: Dry Bulb Temperature (F)
PORTLAND_OR_USA





Sun-Path Diagram - Latitude: 45.6
Hourly Data: Relative Humidity (%)
PORTLAND_OR_USA