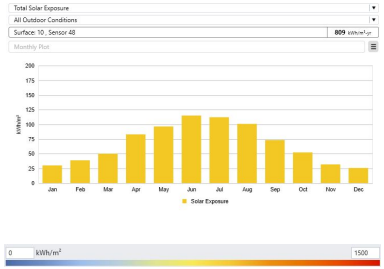
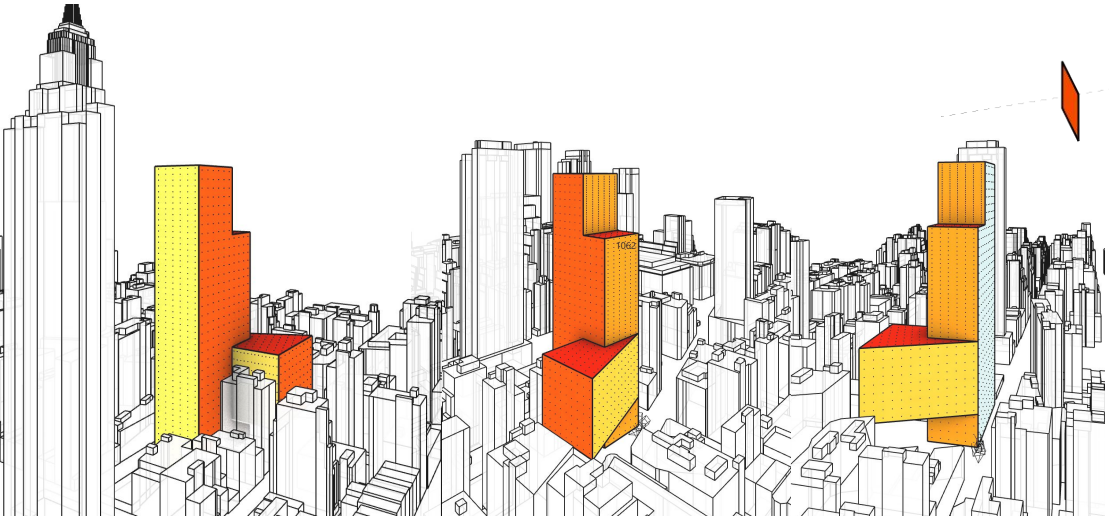
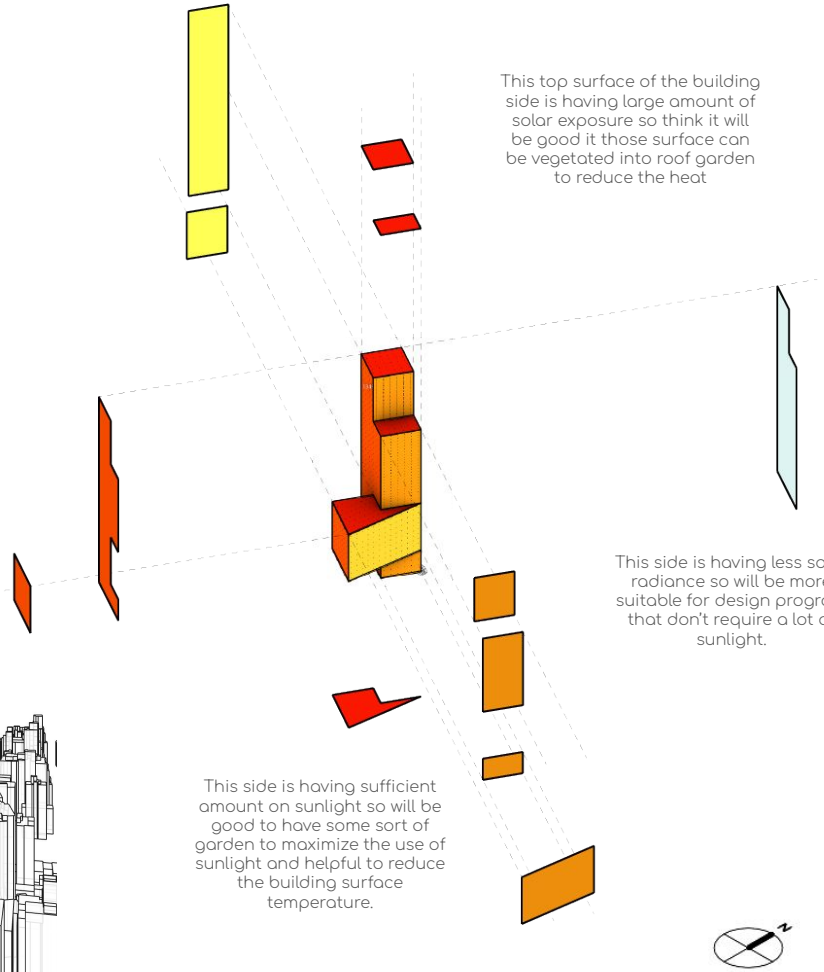
Basic Form and Surrounding Environment

Started from understanding the Radiance study on the basic form to visualize which side of the building received the most daylight and which side have less solar exposure to the sunlight. And also use this result as the metric to evaluate the program layout.



Annual Average Solar Exposure Index

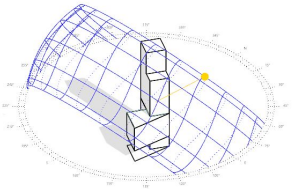
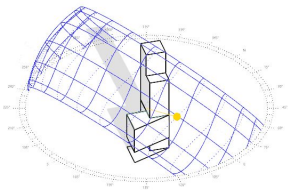
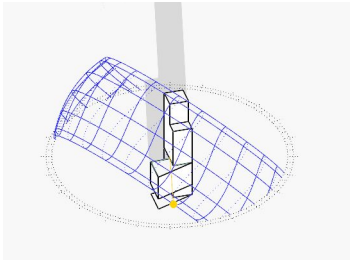
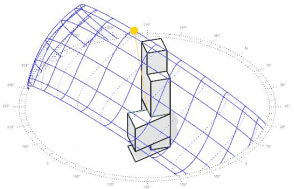
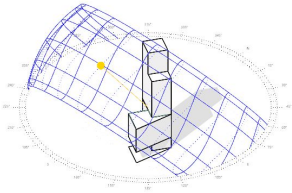
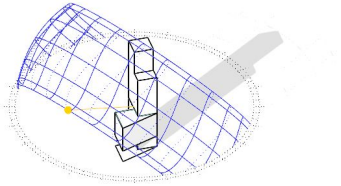
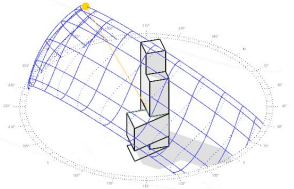
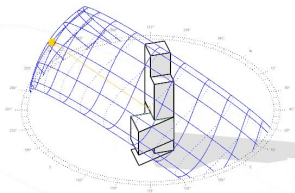
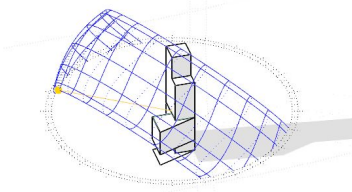




This top surface of the building side is having large amount of solar exposure so think it will be good it those surface can be vegetated into roof garden to reduce the heat

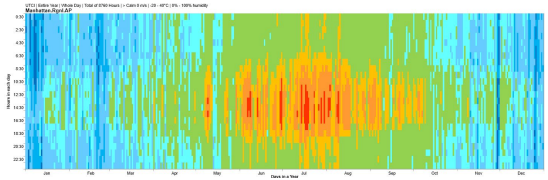
This side is having less solar radiance so will be more suitable for design program that don't require a lot of sunlight.

This side is having sufficient amount on sunlight so will be good to have some sort of garden to maximize the use of sunlight and helpful to reduce the building surface temperature.

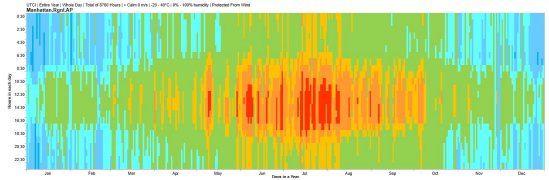
	Summer Solstice	Equinox	Winter Solstice
9 AM			
Noon			
3PM			

From this analysis, I conclude that the prevailing winds occur mainly during the summer and fall. Creating open space at the ground level would help enhance natural ventilation, which is especially valuable for a site located in a dense urban area. Based on the UTCI map, summer also shows significant heat stress, so incorporating shaded areas at ground level would greatly improve occupant comfort.

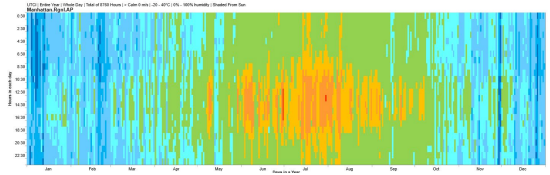
HEAT STRESS (Annual)



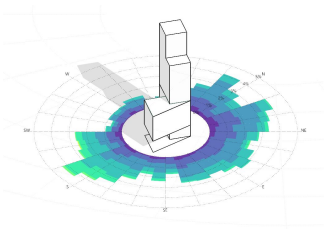
WIND PROTECTED (Annual)



SHADED (Annual)

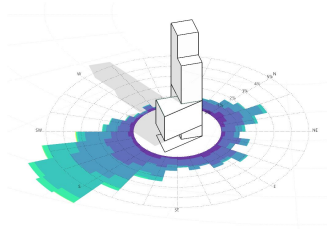


SPRING



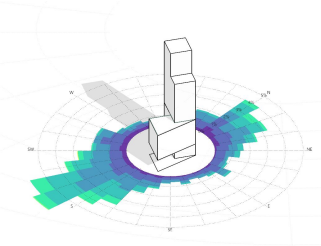
- MAR to JUNE
- All Day

SUMMER



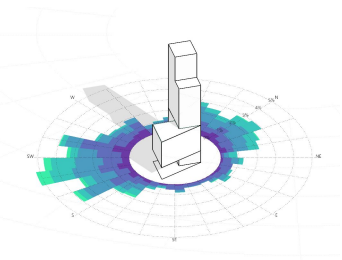
- JUL to SEP
- All Day

FALL



- SEP to DEC
- All Day

WINTER



- DEC to FEB
- All Day