



## Protecting comfort by simulating the effects of sun, wind and temperature.

### Daylighting & Shading

It is vital to understand how sunlight interacts with buildings and their surroundings. How much daylight reaches the ground during different seasons of the year? Where will shadows fall? How much sunlight will be reflected by a building's cladding or other surrounding features? How much heat from the sun will a building experience? These are the questions we help design teams and planners answer through our daylighting & shading services.

### Solar Glare & Reflectivity

Sun reflecting off of building glass can create annoyance for pedestrians and hazards for drivers. We assess the seasonal sunlight and solar paths, the reflectivity of the building's cladding, the massing of surrounding buildings, and points or areas of potential concern to help prevent uncomfortable or potentially hazardous glare and specular reflections.

### Thermal Comfort

Productivity, satisfaction, and even retail sales are affected by the temperature and comfort of the people in the area. To protect and enhance

human comfort (and, by extension, the value of the property), we assess indoor and outdoor spaces for acceptable temperatures. We account for metabolic rate, clothing insulation, air temperature, mean radiant temperature, air speed, and relative humidity. We compare the results against standards for perceived comfort and help the design team mitigate any potential problems.

### Outdoor Wind Comfort

Patios, pool decks, and walking areas around your tall building are susceptible to unusual wind conditions created by the building itself and by those nearby. Using qualitative and quantitative methods (as needed), we can identify areas at risk of being too windy for their intended purposes. We work with the design team to help prevent and mitigate these risks, protecting the comfort—and sometimes safety—of people using the outdoor walkways, patios, and recreational areas around your building.

