DAYLIGHTING

MORE DAYLIGHTING
BOUNCE THE LIGHT

The east and south facades of the building have external light shelves that bounce daylight 34 feet deep into the workspace, reducing the need for electric lighting. This both lowers energy use and provides the building occupants with access to daylight.

KEEPING THE BUILDING COOL
REDUCE HEAT, ADD SHADERS

Shading on the exterior of the building helps reduce the heat gain from the sun. This keeps the building cooler in the summer. To design the shading for the building, the sun angles at various times of the year were studied.

The east and south faces have a combination of horizontal and vertical shading. The west façade required overall shading because of the low sun angle late in the day. No shading was needed on the north façade.

HEATING & COOLING

WHAT DOES IT FEEL LIKE?
IT FEELS JUST RIGHT.

Radiant heating feels like sitting in the sun on a cool day. Radiant cooling looks like entering a cathedral on a hot day. Because water is 3400 times more efficient than air at delivering heat, the system also saves energy. An additional benefit of this mechanical approach is a separate ventilation system that provides 100% fresh air, improving indoor air quality.

HOW'S EGWW DOING?
MEASURING IMPACT

By combining these interrelated design strategies the overall energy usage of EGWW has been reduced by 55%. One way to measure a building’s performance is with the Energy Use Index (EUI), which looks at the annual energy use by square foot. Because things like weather and tenant plug loads can have a big impact on a building’s EUI, we’ve established a range of predicted performance for the building.

EDITH GREEN-WENDELL WYATT FEDERAL BUILDING