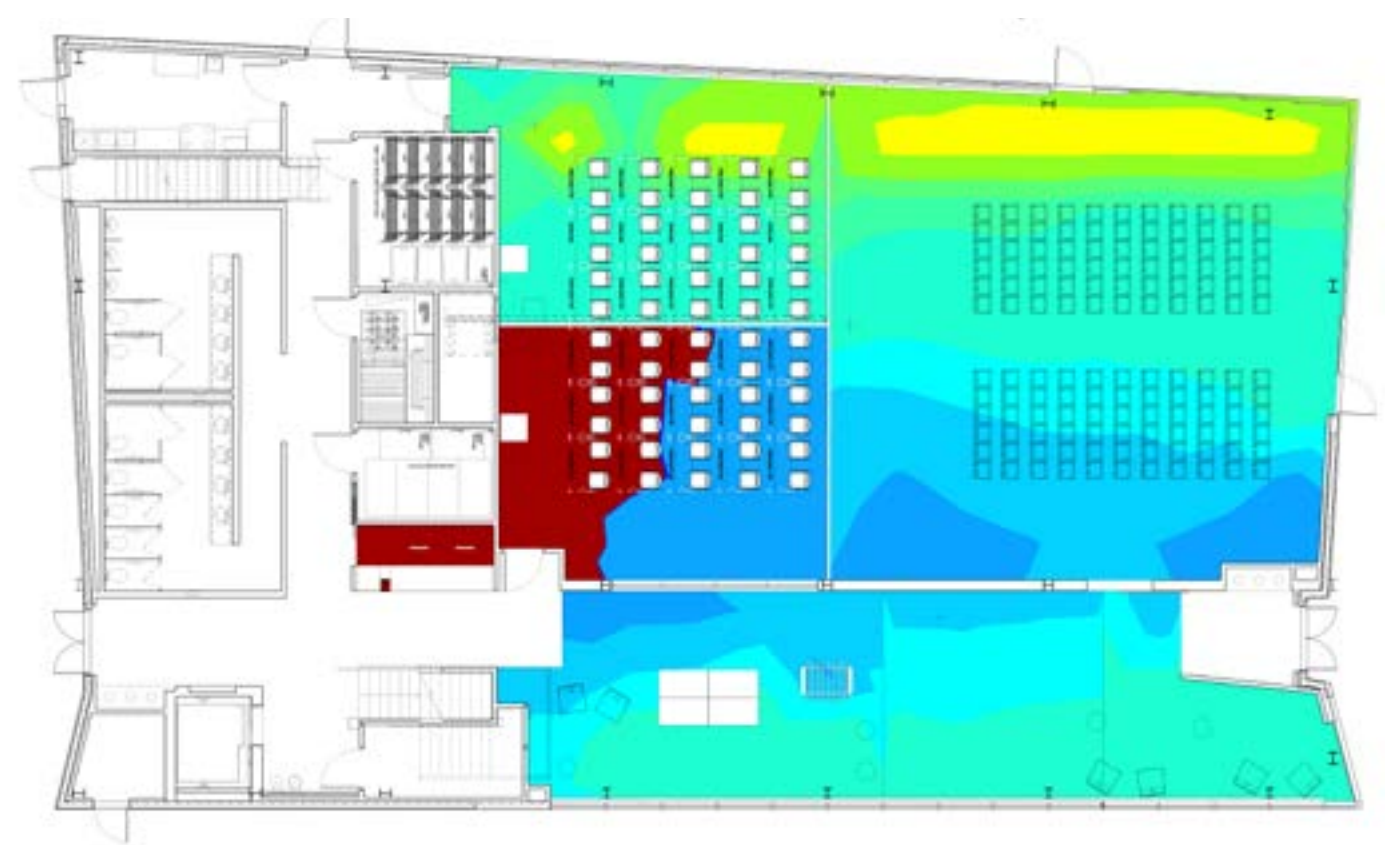


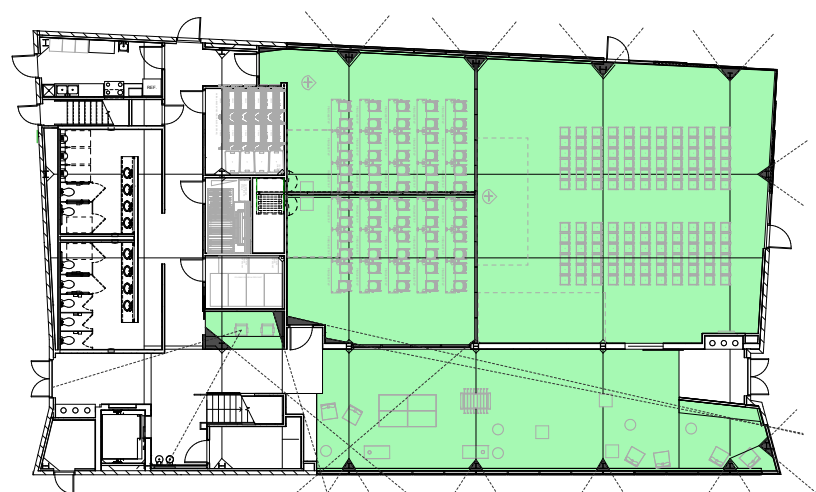
9:00 AM



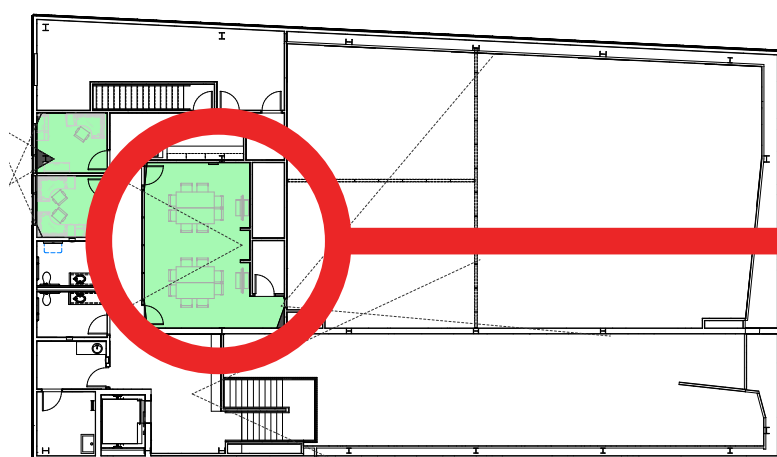
3:00 PM

Daylighting

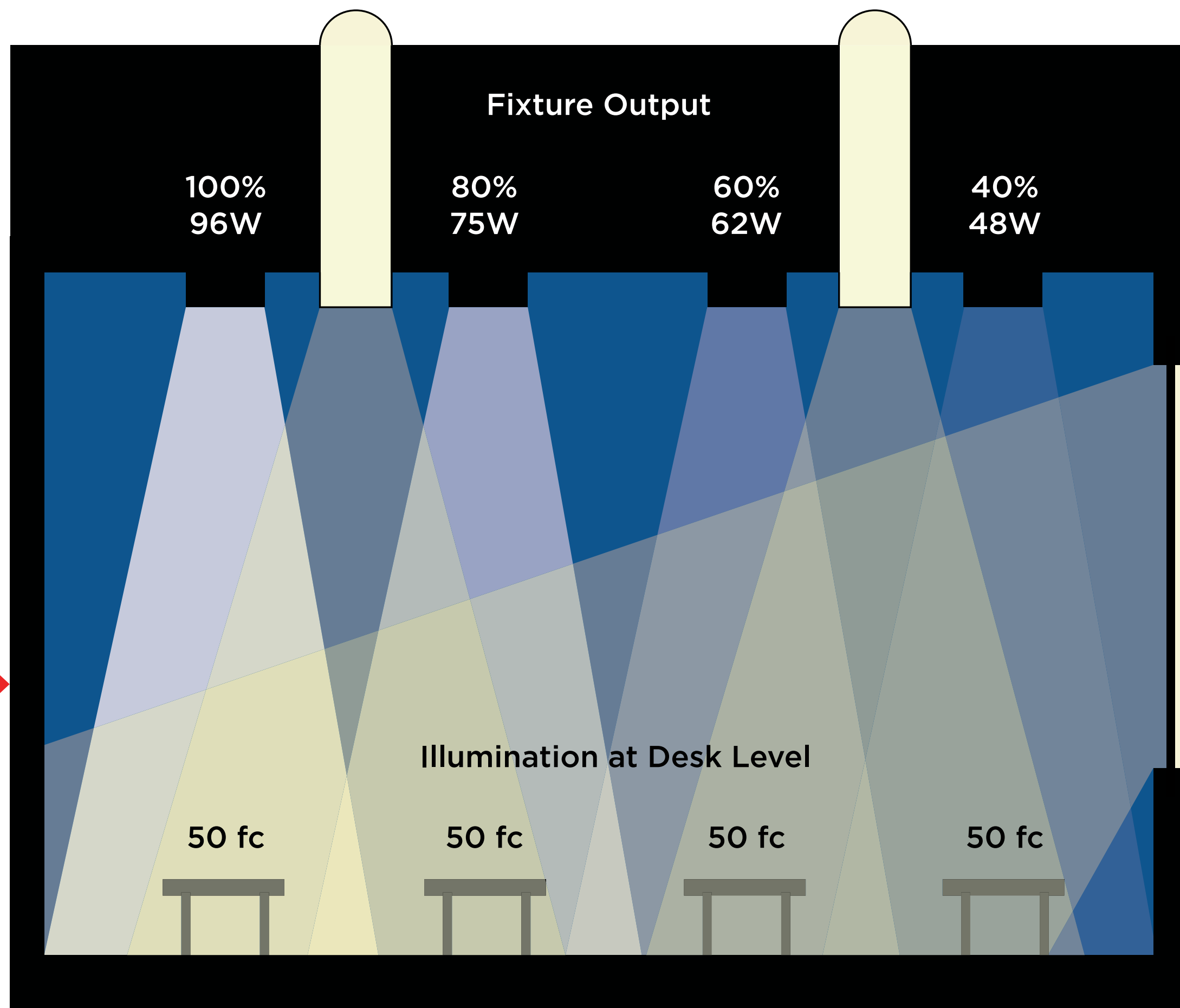
The NAU International Pavilion is designed to maximize daylight to reduce energy use. The perimeter windows are sized in proportion to the functional floor area so daylight can penetrate effectively into the study space. Where the depth of the room is too wide for vertical window daylight “solar tubular” skylights are used to create balanced daylight distribution.



1ST FLOOR

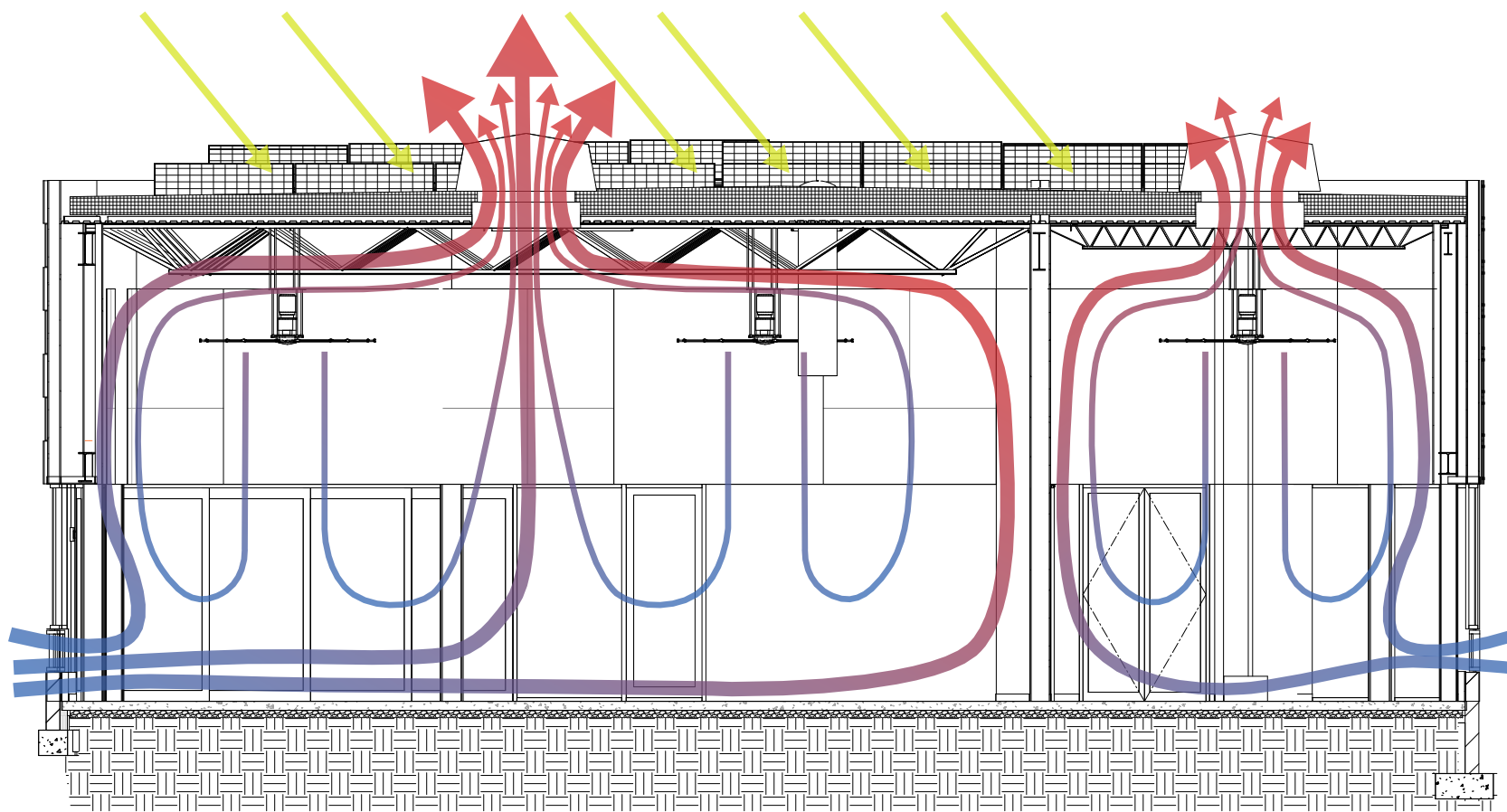


2ND FLOOR

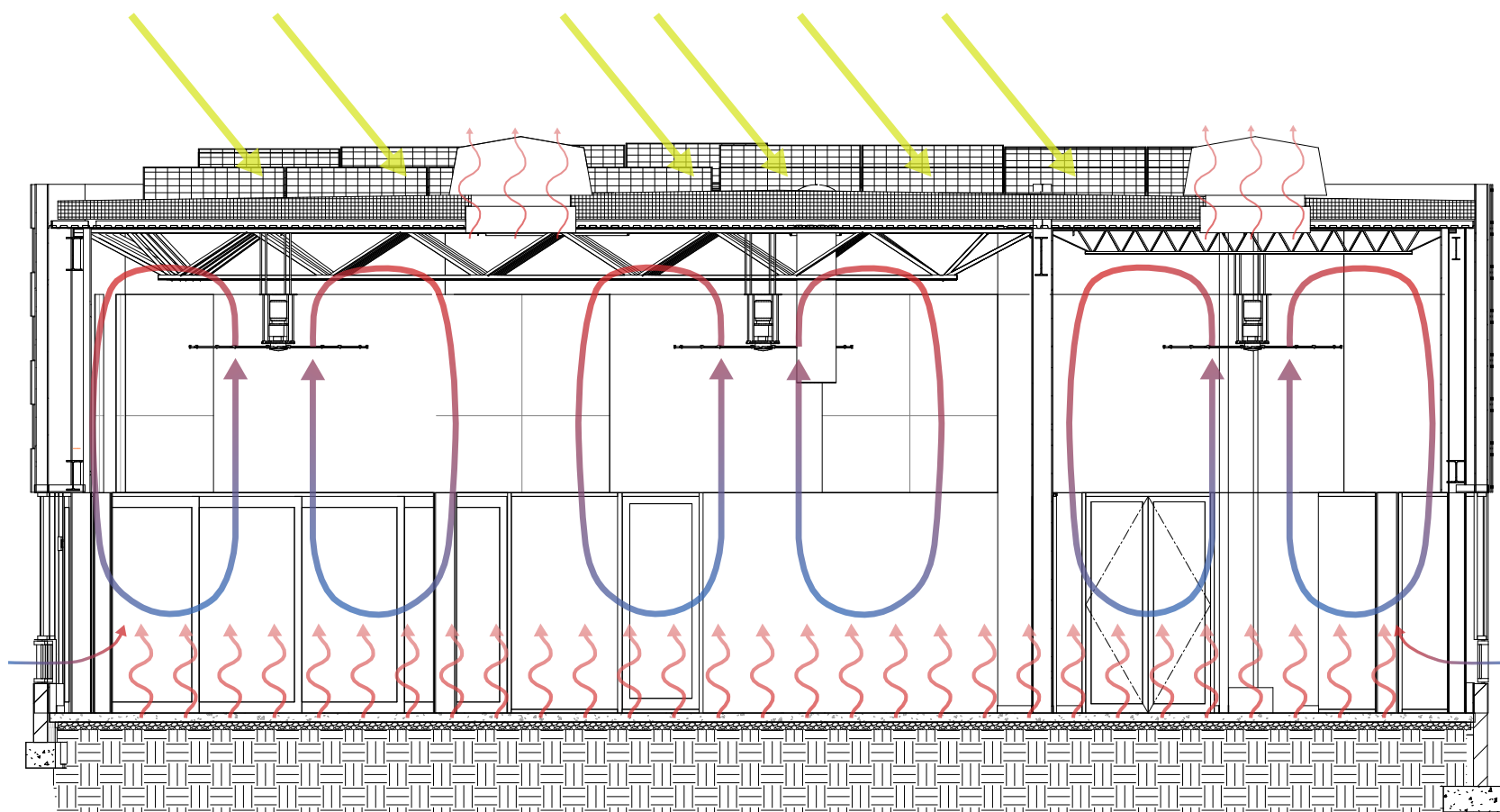


Daylight Harvesting

The second floor meeting rooms of the NAU International Pavilion are designed for daylight harvesting. The “solar tubular” skylights will provide natural light throughout the day. When there is natural daylight the electric powered lights are in the off mode. When there is cloud cover, the electric lights will brighten as needed to provide appropriate foot candles of light at the level of a typical work surface of 30” above finish floor.



SUMMER VENTILATION

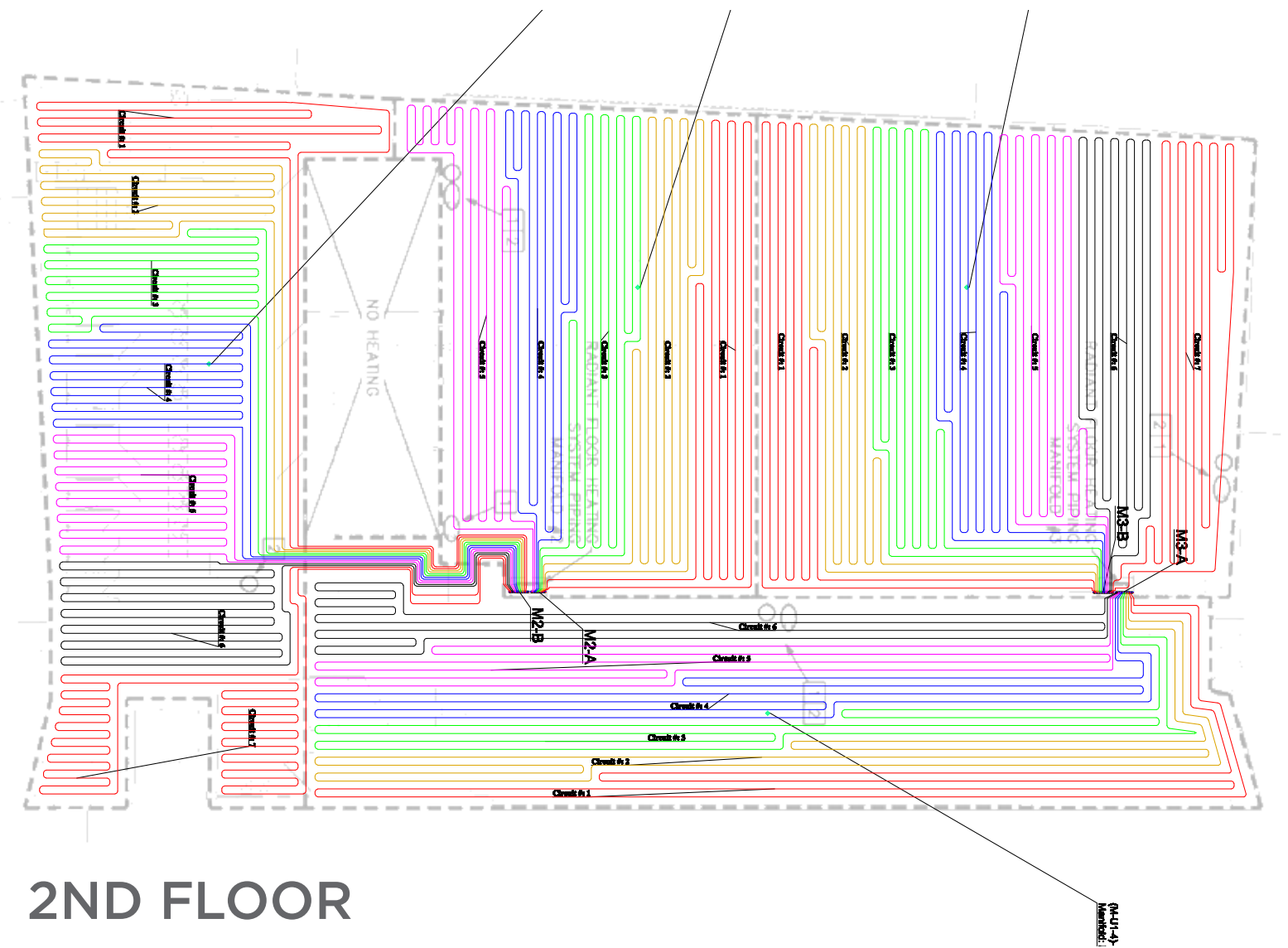
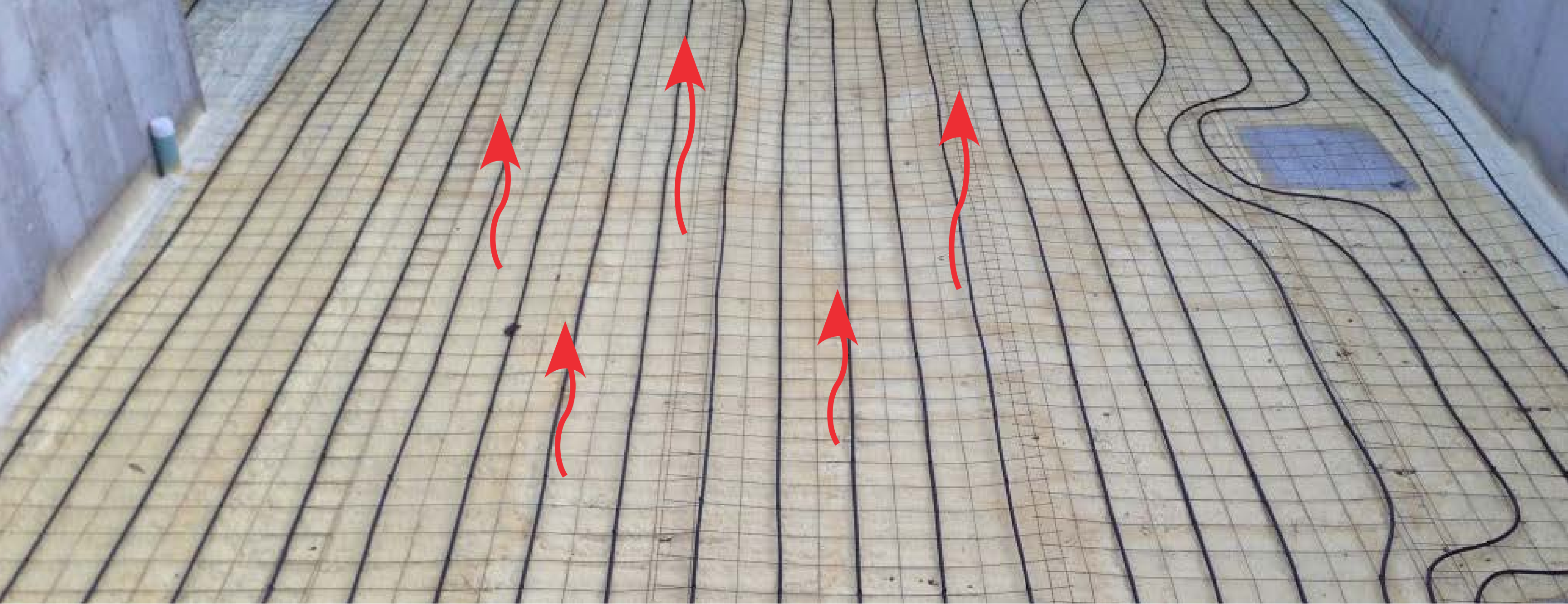


WINTER VENTILATION



Natural Ventilation and “Fan Assisted” Cooling

Flagstaff is located in a temperate climate zone and has natural and consistent air currents that can be utilized for cooling and fresh air. The pavilion is designed with a series of wall louvers located low along the wall that are interlocked with the very large louvers located in the ceiling. When the outside temperature is 75 degrees or higher, the side wall and ceiling louvers will open at the same time, creating a venturi effect of air currents through the occupied space. The ceiling fans are used when additional cooling is desired and will create air turbulence and movement which will increase a cooling effect and prevent hot air from stratifying in corners and along the wall. The fans will reverse at night to purge the hot air accumulated during the day. The purge happens until the room is the same temperature as the nighttime outside temperature. The system is connected to the NAU weather station. If extreme winds or dust are detected by the weather station, the building management system will keep the louvers closed to reduce particulates in the air.

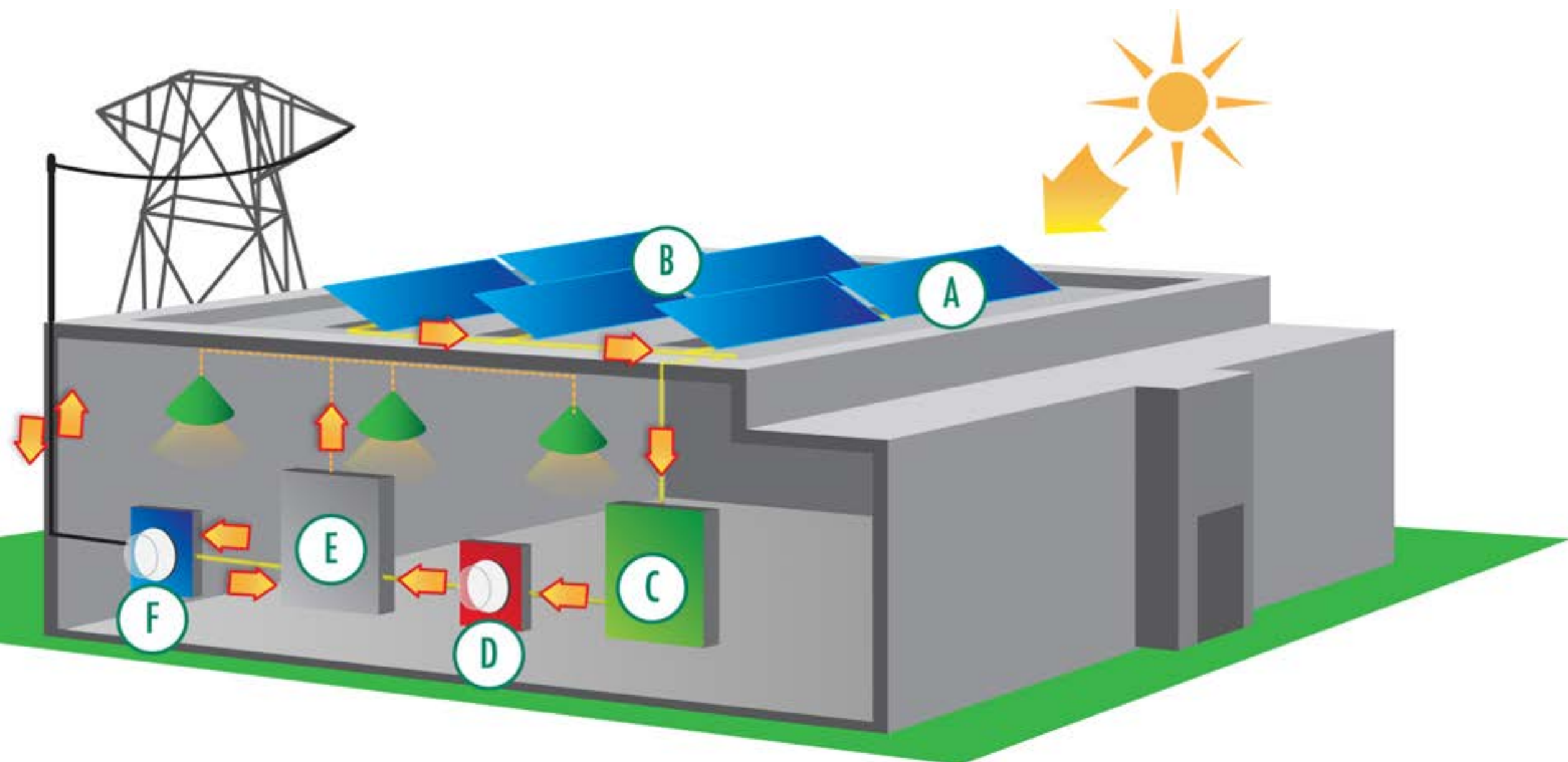


Radiant Heated Floors

Heating comfort will be from the in-floor radiant system throughout the building on the first and second floor. Hot water is heated in the gas powered boiler in the mechanical room and distributed through plastic tubing within the concrete slab floor. The tubing is organized in zones to provide different heating temperatures as required to accommodate the different exposures and locations within the building. For example: a zone by a window will provide more heat to increase comfort along the glass from the outside winter temperatures. The radiant heat system can be seen in the glass access panel manifold cabinet located in the north auditorium and the south flex lab.

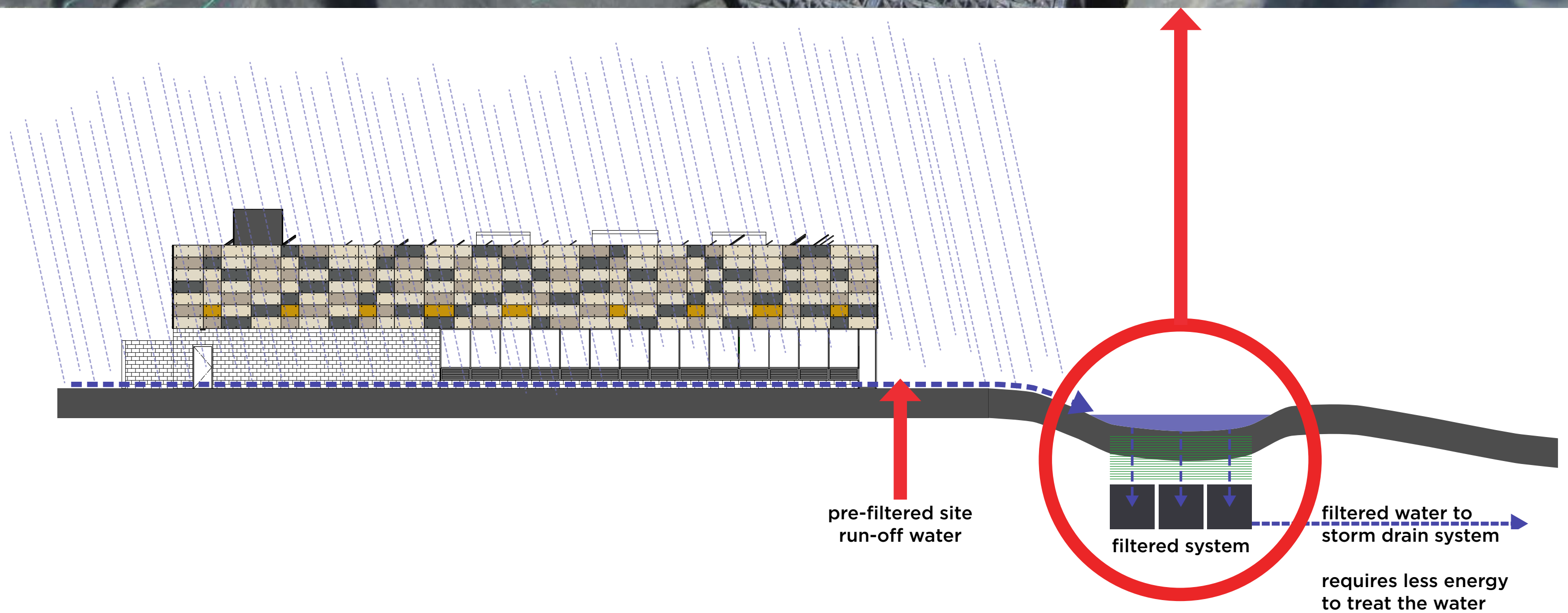


- A: Southern Exposure
- B: Solar Module
- C: Inverter
- D: Meter for PV Power
Generated
- E: Electric Service Panel
- F: Power Grid Meter



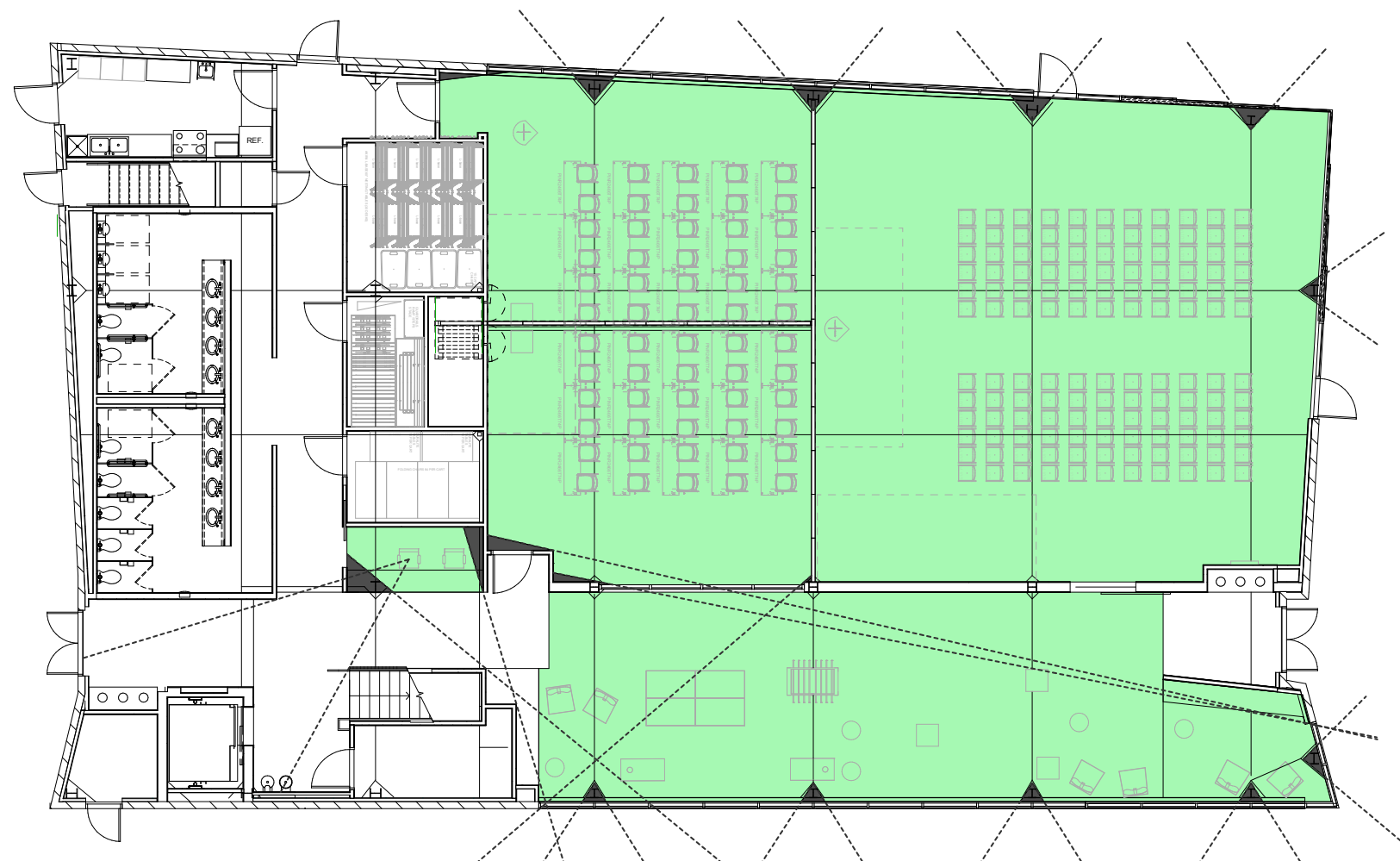
Solar Power and NetZero Power Use

Located on the roof of the NAU International Pavilion is a 35 kw solar panel array system. The building was designed to use less electricity than what can be generated from the solar array. What this means is the building will use less energy than what it can produce which will allow more power into the power grid for other uses on campus. The pavilion is the first NAU academic building to have a solar power system and is targeted for NetZero or better energy use performance.

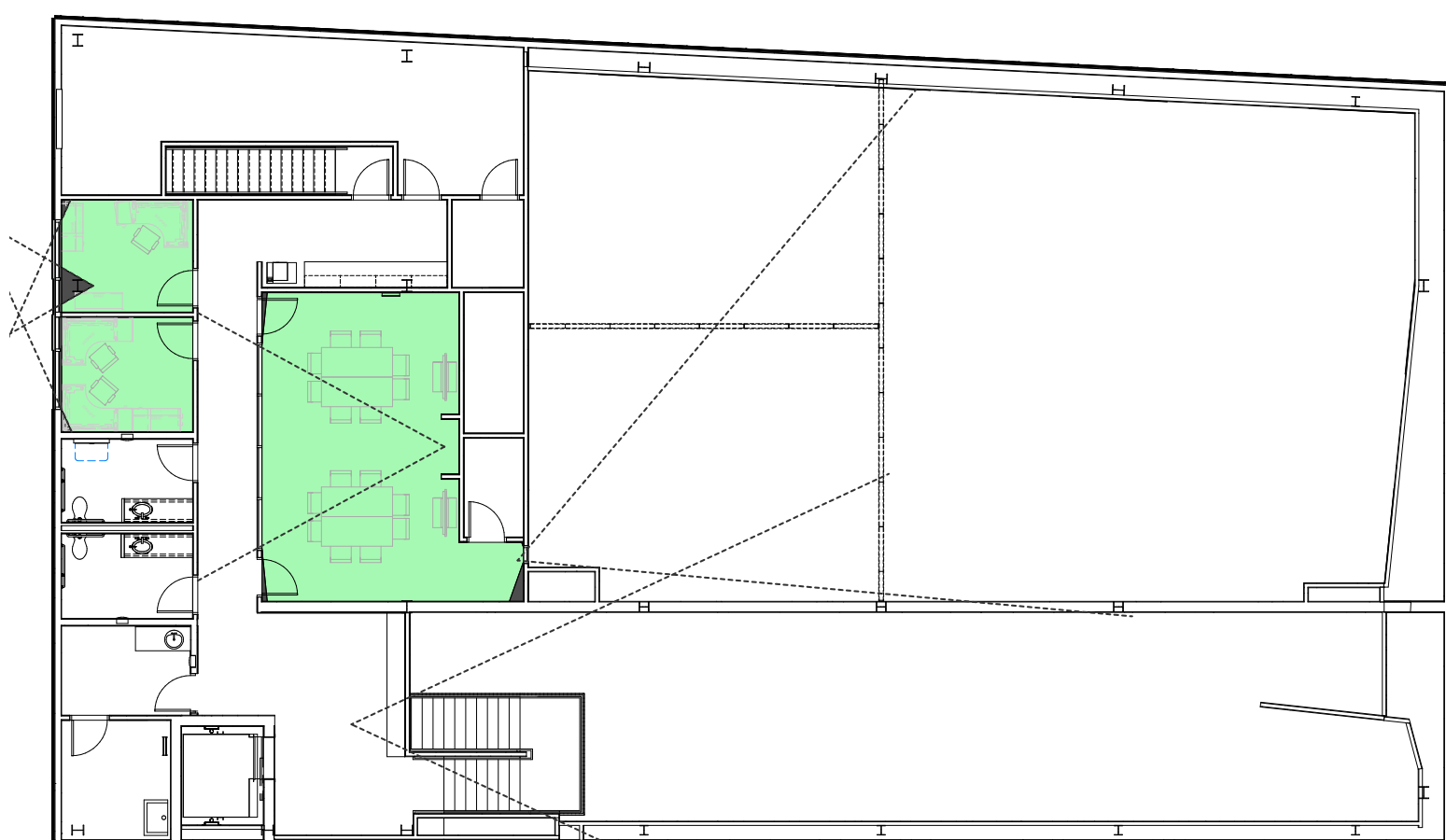


Storm Water Filtration

Located in the landscape area just north of the Pavilion plaza is a water filtration detention area. When it rains, water will hit the roof, ground and parking lot and flows toward storm water drain systems. When the water flows, it will gather particulates from the surfaces the water flows over, entering the drain system “dirty”. These contaminant particulates increase the energy required for water treatment. The NAU International Pavilion is designed to gather this water into the north detention area which will filter the water through a series of filter membranes and containment transfer vessels connected to the storm water system. Water that lands on the International Pavilion building and site will enter into the storm water drain system cleaner than the adjacent buildings without the filtration system, requiring less energy for water treatment.



1ST FLOOR



2ND FLOOR



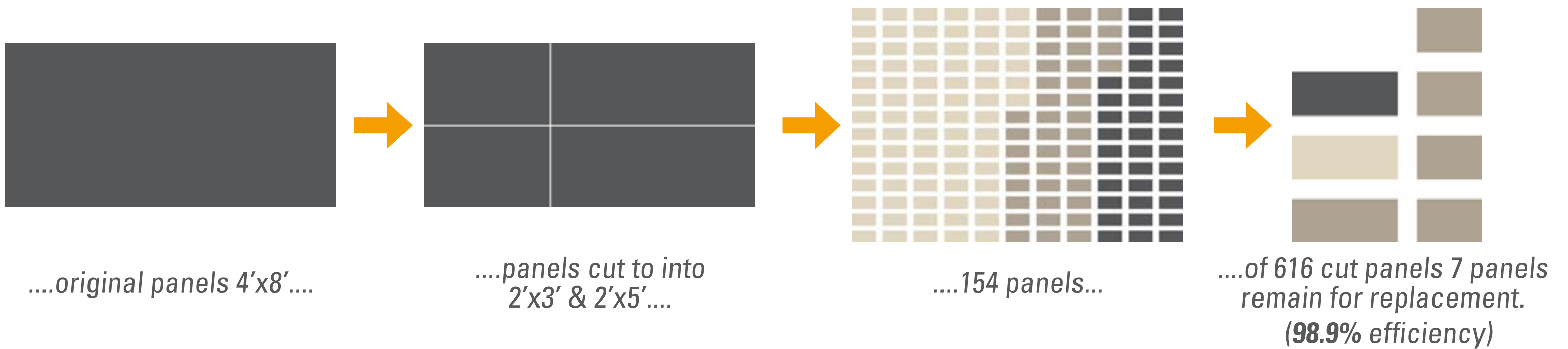
Views For Better Concentration

The NAU International Pavilion is designed to maximize external views towards the West, North and East and internal views from the activity area into the auditorium and flex labs and from the flex labs into the activity spaces. In addition, a dramatic long internal view from the second mezzanine study area into the activity area below is provided. The meeting rooms and offices on second level also have views created into the flex lab/auditorium below and to the south. Views increase visual relief from studying and other high concentration activities. The views help to prevent study fatigue and allow the brain to recharge between moments of higher concentration, increasing productivity.



Dark Sky

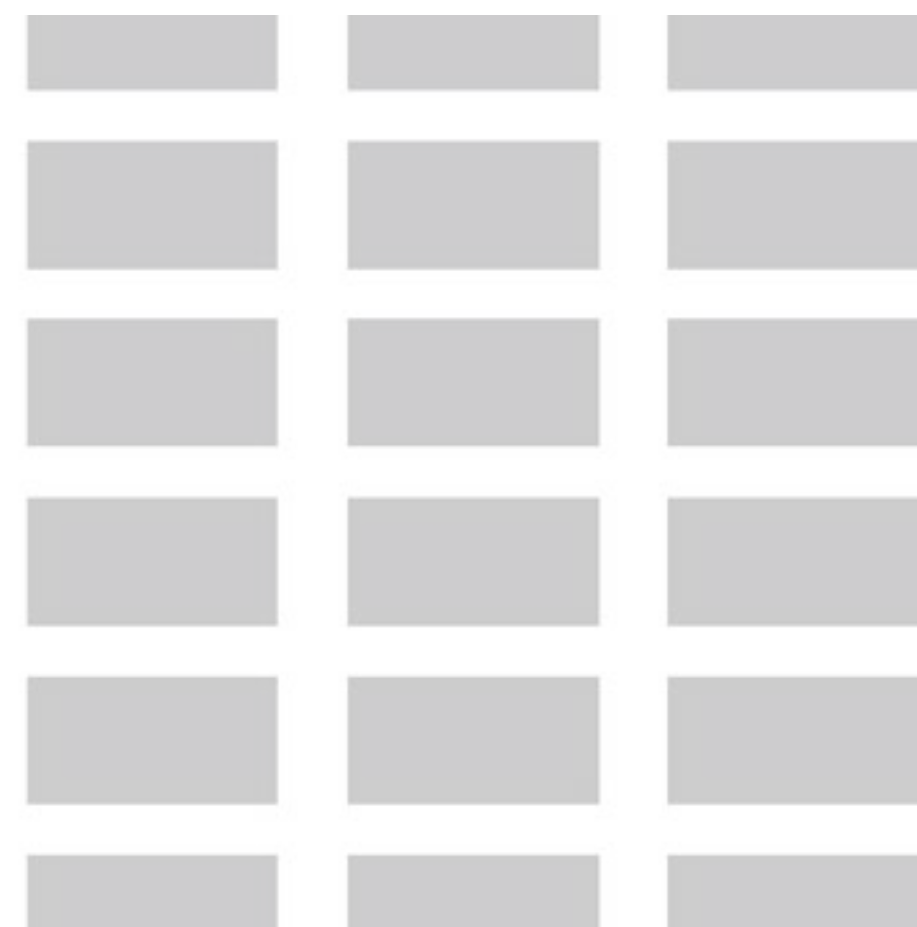
Narrative and Exhibits coming soon.



“ZERO WASTE” DESIGN

Reduced and Efficient Use of Materials

The exterior skin of the NAU International Pavilion was designed to be 98.9% efficient use of material. This means that the design allows for 1.1% of extra material not used on the exterior skin. The extra material is reserved as “attic” stock in case any panel needs replacement throughout the life of the building. Zero design material waste was achieved by designing the size of the panels to be cut from the standard stock panel into sizes that would cover the exterior envelope without material waste. The panel sizes were also determined based on two people being able to remove and replace a panel safely and with ease for any future maintenance. The exterior skin is a result of a balance between material zero waste, ease of maintenance and effective exterior enclosure. The exterior panels are an integrally colored composite cement panel system made of renewable and recycled content that will last the life of the building with nearly zero maintenance required.





....nations....



....people...



....we are all different.

INTERNATIONAL WITHOUT FLAGS

An Exterior Design of Engagement

The fundamental mission of NAU Center of International Education is to “engage”. The design goal for the NAU International Pavilion was to create a building as a physical representation of the engagement goals of CIE. The mission for the design team was to create an exterior image that projected a sense of international and cultural engagement and diversity without depending on the symbolism of flags. The exterior skin is the result of a “transformation” diagram from the mosaic color and collage of national flags overlaid with the mosaic of people from around the world into a warm tonal palette accented with amber LED backlit panels. The mosaic colors and the panels at different surface heights along the exterior skin help to symbolize our differences and connections. The backlit panels are provided to create a welcoming night experience and destination for the students as well as to back light the “untranslatable” words from the different cultures that attend NAU. These words will be temporarily displayed for special events over the backlit panels to help encourage dialogue though discussion of the words and meaning. The words and the exterior mosaic skin combined with the interior educational signs will act as a cultural decoder ring to encourage conversation and dialogue and enhance a better understanding of our global connections and education.