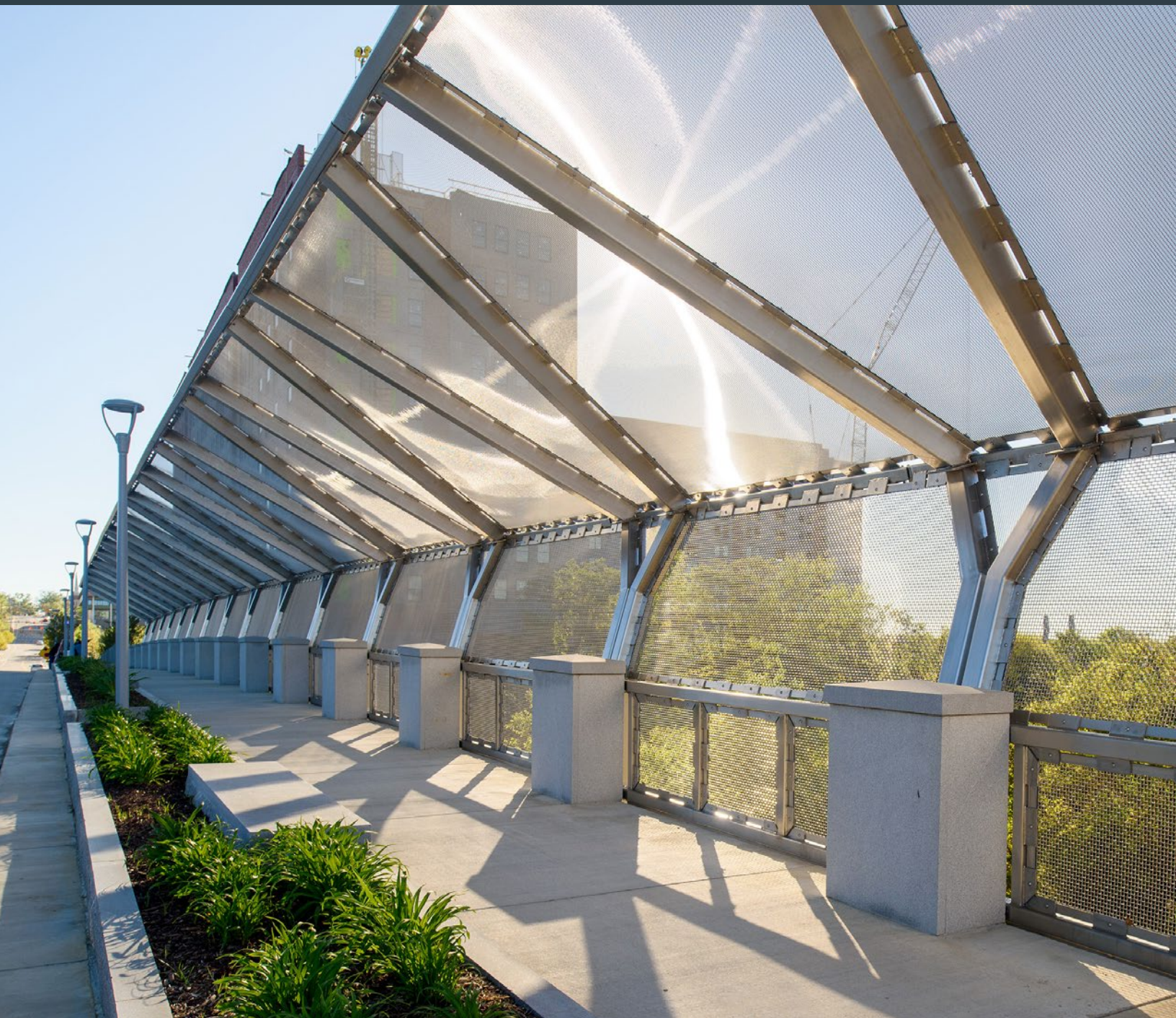
Case study

GREENE STREET BRIDGE

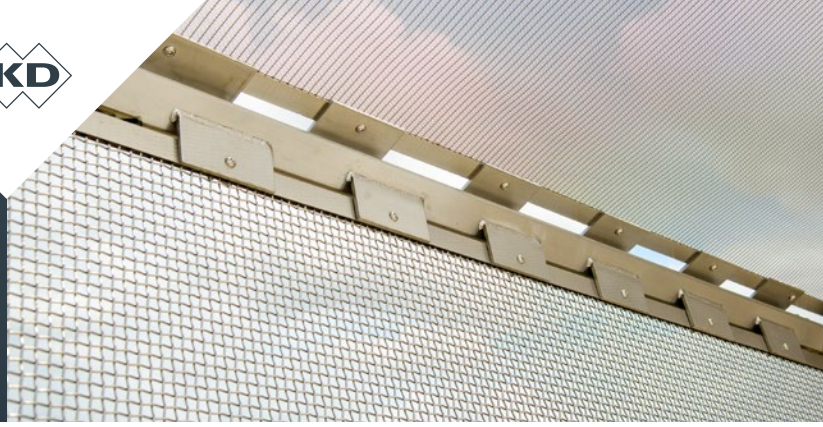


PROJECT DETAILS

Owner
University of South Carolina

Architect
HDR Architects

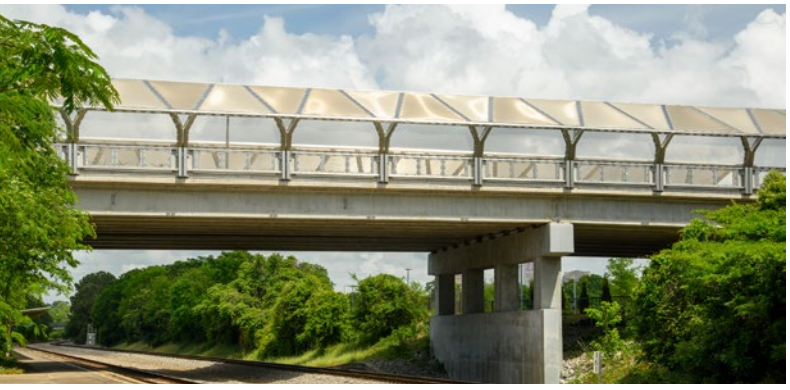
Mesh Type
Capella | Delta 16



METAL FABRIC PROVIDES SAFETY AND SHADE TO A VITAL MULTI-USE BRIDGE

For years, the University of South Carolina in Columbia, S.C., had a traffic issue. Train tracks and a railroad crossing would interrupt commuters making their way down Greene Street near Colonial Life Arena, a multipurpose facility that is home to the university men's and women's basketball teams. Students would complain that passing trains, some of them very long, would make them late or force them to miss classes entirely.

A plan emerged to connect the arena with nearby Union Street by way of a bridge designed for pedestrians, bicycles, and vehicles. It would eliminate the need for a railroad crossing and open up the area for those needing a more direct and efficient walk to classes or events.



HDR Architects was engaged to create a design for the Greene Street Bridge that would offer a path to walk, bike, or drive while making a visual statement. It also had to adhere to the university's expectation of being healthy, clean, and safe.

One goal was to protect pedestrians and bicyclists from the intense South Carolina sun, while also ensuring their safety. Stainless steel metal fabric became the material of choice for the bridge due to its durability and permanence, recyclability, and low-maintenance qualities. Combining GKD's Capella and Delta 16 metal fabrics was ideal for sun shading and providing the required safety and security.

"The shape of the material and its transparency was selected to be in line with building code standards," says Andy Franks, GKD-USA regional sales manager. "Using stainless steel metal fabric in a winged fashion presented a structural load challenge, but the project team utilized a connection to the structural steel that is visually appealing, meets building codes and minimized the amount of material, and therefore costs."

The design team worked closely with GKD to provide the necessary shading in the intended shape while minimizing loading and panel deflection as much as possible. By using a fully mitered corner that is brushed and blended on each panel frame, GKD was able to produce panel sections that are nearly seamless matches with adjoining sections. The result is a finished appearance that is completely unique to the bridge. Opened in December of 2022, the bridge has freed up the flow of pedestrian traffic as expected and added a signature landmark that helps enhance the beauty of the campus.

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