

the challenge:

Located at the nexus of Temple University's main campus, the new 220,000-square-foot Charles Library serves as a central point of intersection between students, faculty, staff, and the surrounding community.

"An early goal of the project design was as an organizing element and a way to pull students to the center of the library from multiple parts of the campus," said Snohetta project manager Chad Carpenter. "The goal was also for the physical space of the library to be a collector and be a warm, comforting place that everybody would understand as the center of campus."



Project | *Charles Library at Temple University*
Location | *Philadelphia, PA*
Architect | *Snohetta/Stantec*
Product | *Custom WoodWorks® Panelized Linear System*

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the solution:

Three arched entrances lined with linear western red cedar panels continue into the lobby from the exterior and form a three-story domed atrium featuring a variety of different curves and intersections. The central dome in the atrium features a curved oculus that allows light to filter into the lobby from the uppermost floor.

When designing the atrium, Snohetta chose the custom WoodWorks® Panelized Linear System from Armstrong Ceiling & Wall Solutions because of the inherent flexibility of the solid western red cedar panels. "Western red cedar has three qualities that made a big difference in the domes," said Carpenter. "It's suitable for use outside, so the inside and outside can be the same wood. It's flexible, so it's not particularly hard to bend, and it has an incredible variation in color tone."

The unique geometry that characterizes each of the domes was achieved by gently bending the custom 2' x 10' wood panels and installing them in a custom curved framing system. "The primary dome is a revolved ellipsoid which allowed it to be made out of a limited number of different panels," he explained. "The rest of the system was made out of single-curvature geometries, which allowed them to be made using the same shaped panel."

The precision of the manufacturing process was key to the clarity of the ceiling design, he added.

The oculus is the only area of the ceiling where the panels are not bent. "The oculus is the place where the curvature is the tightest in one direction but the planks themselves are all straight," said Carpenter. "The curvature is only in the backer."

The installation of the oculus was very complex, requiring a high level of skill on the part of the ceiling contractor. "If you were to point to a place where the contractor really leaned into the craft for that particular product, it would be right there," he said.