the challenge:

The newly constructed National Water Center features a “river” that snakes its way through the facility’s ceiling. It was formed by creating a separation between the center’s suspended drywall ceiling and its acoustical ceiling. Light coves around the perimeter of both ceilings function as the “river’s” banks.

Original plans called for the coves to be built of drywall. However, acoustical contractor, Keith Yeager, believed this would be extremely time-consuming and difficult. “Studs and drywall would take forever,” he says, “because of the need to frame it, hang it, tape it, and sand it. Considering the extremely curved nature of the coves, it also would have been almost impossible not to have cracks or flat spots in the drywall, especially since the radius changed every few feet.”

the solution:

To solve the problem, Yeager designed coves using Axiom® aluminum perimeter trim from Armstrong Ceiling Systems, all of which had to be custom made because of the complexity of the curves.

Three different sized coves – 18”, 12”, and 6” – were required. All consisted of multiple components. The most complex was the 18” cove which required five elements – a 12” piece of vertical trim to which a 6” piece of trim was attached, a 4” piece of horizontal trim, another 6” piece to form the upturn, and a small wall angle to create a lip on which the horizontal trim sits. In total, 400 feet of 18” coves were installed, 480 feet of 12” coves, and 250 feet of 6” coves.

To make the job easier and faster, each section of cove was given a letter and each of its components, a number. Armstrong Ceiling Systems then packaged each section and its pieces in a separate crate. “When you have to attach so many custom-made components to each other, it helped to have all the pieces in the same package,” Yeager explains.

Once installation began, job superintendent, Tim Thomas, notes construction of the coves using Axiom trim was accomplished in half the time as drywall. “We probably saved two months in time,” he says. “And, there are no cracks or flat spots. Considering the curves and lengths of the spans, this would not have been possible with drywall.”