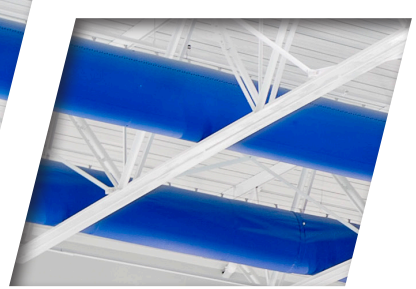

Martin Luther King Jr. Recreating and Aquatics Center

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CASE STUDY

Recreation and Aquatics Center
Martin Luther King Jr.

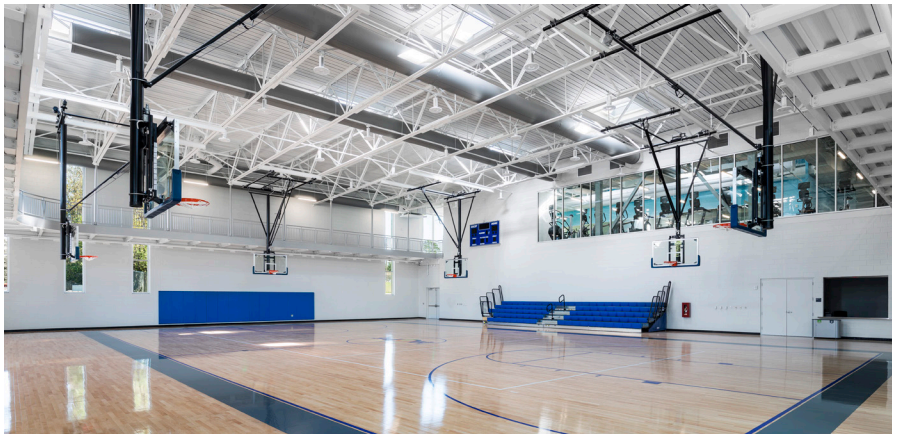
The City of Atlanta knew expectations would be high when it opened the Martin Luther King Jr. Recreation & Aquatic Center in late 2017.

Atlanta- Located between the King Memorial MARTA station and the Martin Luther King Jr. Historic District, it didn't just replace the previous public natatorium; it was intended to be a unifying focal point for Central Atlanta's growing neighborhoods, reflecting the shining legacy of its namesake.

"This state-of-the-art facility will offer recreational programming to residents of all ages and serve as an essential communal gathering space, said Atlanta Recreational Commissioner Amy Phuong. "It will embody what all our recreational facilities should look like in the future."

While the Martin Luther King Recreation & Aquatics Center incorporated a wide range of amenities—including a gymnasium, an elevated track, an outdoor terrace, a climbing wall, group fitness areas, a senior center and a computer room—the facility's centerpiece was the aquatics area. Not surprisingly, the products and materials used for the natatorium were chosen very carefully, particularly its HVAC system.

The unique functionality of indoor pools and natatoriums gives them a host of issues other public buildings don't have to deal with, including temperature, humidity and air quality management. After analyzing a number of potential approaches, the designers of the MLK Jr. Recreation & Aquatics Center decided to address those challenges by installing a network of anti-microbial fabric ductwork in the pool area. Made by DuctSox, this non-traditional approach would provide the City of Atlanta and its residents the best option in terms of aesthetics, air quality and maintenance.

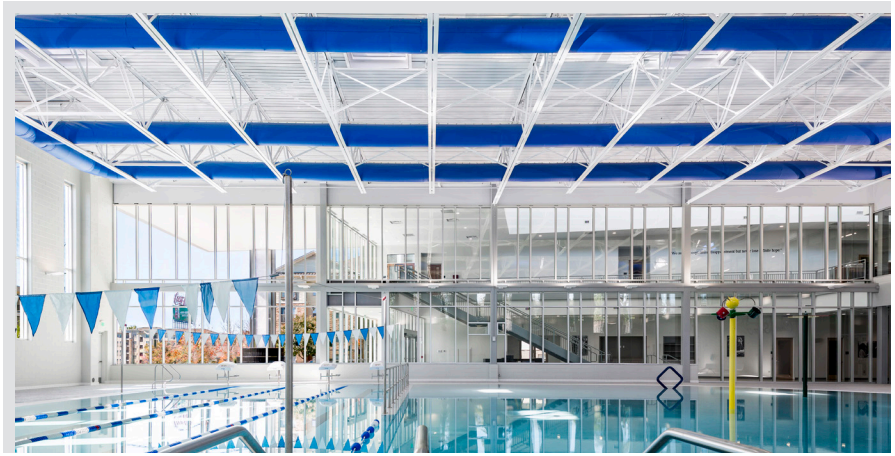


Aquatic airflow

Layout was essential when optimizing airflow for the aquatic center. The square natatorium space was fitted with a complete network of fabric ducts. A 52-inch round DuctSox duct extends into the space as the main inflow/outflow duct. This main duct then splits into two 40 inch-round fabric ducts, which both loop around the diameter of the natatorium space. Completing this network, five rows of 25 inch-round fabric ducts span the pool surface.

"Our pool space required consistent, efficient airflow," said Devin James, aquatics facility supervisor at MLK Jr. Aquatic Center. "Effectively managing chlorine odors and humidity in an indoor space is a huge challenge for aquatic centers."

Traditional metal ducts use diffusers placed several feet along the length of each duct. Unfortunately, this design creates hot and cold spots between the spaced diffusers, rather than the consistent, controlled environment that the aquatic center build needed. Alternatively, the DuctSox products chosen for this project feature an air-porous



fabric composition that allows for the entire duct to act as a diffuser, which eliminates hot and cold spots and creates an evenly distributed airflow. Fabric ducts also absorb sound, unlike metal.

"Our visitors have applauded the humidity and sound control in the pool," continued Devin James. "The fabric ducts absorb sound and control moisture so much better than metal ducts in my experience."

Look good, feel good

Airflow was not the only consideration when choosing fabric ducts. Cleanliness and appearance were equally important factors for the engineering team.

"Fabric ductwork was our insurance policy to make sure the environment stays clean and safe," said Tim Mercier, lead mechanical engineer on the project. "Metal ductwork is outdated and can cause serious health and safety risks in any aquatic centers."

Fabric ductwork systems handle humid, chlorinated environments better than aluminum or stainless-steel ducts, which produce rust when combined with chlorine vapors. Even worse, an oxide chalk coating can form around any aluminum-based duct, leaving unappealing smells and aesthetics in a space.

"Knowing the issues metal ducts can bring, DuctSox helped us guard against potential problems in the future," said Mike Rahm, project manager for contractor Tebarco Mechanical Corporation. "Adding the anti-microbial treatment for the fabric was a no-brainer."

The MLK Jr. Recreation and Aquatic Center chose DuctSox Sedona XM fabric, which is treated with antimicrobial agents to further guard against mold and mildew in the humid, pool environment. If the fabric does become dirty, each duct can be unzipped, taken down, and laundered.

Suspending the lightweight ductwork from the aquatic center ceiling, pool grade hardware was used to help prevent corrosion of critical components. Both the fabric and hardware will ensure that the aquatic center retains cleanliness and a like-new appearance for years to come.

Thanks in part to the energy efficient ductwork installation it used, the MLK Jr. Recreation and Aquatic Center project earned a LEED Gold Certification.

A complete production solution

The aquatic center was only one element of the overall project. The MLK Jr. Recreation Center also utilized fabric ductwork throughout the building's new fitness areas, including the gymnasium and weight room. Similar to the aquatic center environment, consistent airflow was essential to ensuring a comfortable, sanitary space for visitors.

Opting for a clean, white color in the various fitness and aquatic spaces, the engineering team also deployed DuctSox Skelecore technology, which provides an internal frame for the fabric ducts helping to maintain the inflated appearance regardless if airflow is present. This consistent aesthetic runs throughout the modern recreation facility, which checks off both the form and function requirements for the renovation.

For more information about the MLK Jr. Recreation and Aquatic Center and DuctSox, visit their websites at www.atlantaga.gov and www.ductsox.com.

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