



Project: **Air Mobility Command, Heritage Hall**  
Location: **Scott AFB, Illinois**  
Client: **U.S. Department of Defense**

## Showcasing Air Force History

Visitors to the U.S. Air Mobility Command (AMC) at Scott Air Force Base, Illinois, are greeted by aluminum finishes, with 1/5 scale models of 1929 aircraft soaring under a “cloud” lit by blue cathode ray tubes. Burns & McDonnell transformed the narrow, poorly lit corridor formerly leading to AMC headquarters to become Heritage Hall. A series of exhibits tracing Air Force history lead to “pocket theaters” with walls curved to mimic aircraft fuselages, where audiovisual presentations bring the AMC’s continuing mission to life. Perforated metal ceilings, aluminum pediment flooring, and special lighting continue the aircraft interior theme in the main exhibit space. Burns & McDonnell’s architectural and mechanical design also improved energy efficiency and met force protection and security requirements. “The goal to chronicle and depict our rich aircraft and air refueling heritages, which merged June 1, 1992, with the creation of AMC, was met,” says General John W. Handy, Commander U.S. Transportation Command and Air Mobility Command. The project received a U.S. Air Force 2006 Merit Award for Interior Design.

*For more information, contact Mark Everett, (618) 632-0354.*



Project: **Charles A. Strain WTP Improvements**  
Location: **Clifton, Colo.**  
Client: **Clifton Water District**

## Improving Water Treatment

The Clifton Water District was caught in a squeeze. A growing population pushed demand close to 8 million gallons per day (MGD) — and its water treatment plant had been de-rated from 12 MGD to 8 MGD due to increasingly stringent water quality regulations. Clifton’s water source is the Colorado River, where sediment levels can run so high after a thunderstorm that the water turns brown. The plant must reduce turbidity levels (a measure of suspended material such as clay and silt) as high as 60,000 units to the EPA standard of 0.30 units. Burns & McDonnell worked with the district to design and oversee construction of enhanced pretreatment facilities to reduce turbidity more efficiently and double the pretreatment capacity to 16 MGD. Two highly automated systems were designed for maximum value, safety and ease of operation, in a modular format that provided constructability and flexibility for future expansion up to 32 MGD. The new coagulant induction, flocculation and enhanced settling processes are so effective that pretreated water entering the plant for filtering already meets the EPA turbidity standard.

*For more information, contact Paul Fischer, (303) 721-9292.*

## Reducing Transportation Delays

The Illinois Tollway reached a milestone with completion of its open tolling conversion. The goal of the \$5.3 billion congestion-relief program was to provide every mainline plaza with barrier-free, high-speed toll collection within two years — on a thoroughfare carrying more than a million vehicles each day. Burns & McDonnell partnered with the tollway to coordinate the work of architects, engineers and tollway staff, and to develop efficient project delivery methods, including overlap of design, review and construction phases. The program began in 2005 with design and construction of a prototype collection plaza. The design featured open tolling lanes to reduce collection delays. The team met the deadline for program completion, with open tolling lanes available system-wide in just 22 months. The result: Illinois' mainline toll plazas are no longer a bottleneck. Instead, a safer transportation system saves motorists time and money and reduces air pollution. The project earned the ACEC 2007 Engineering Excellence Award in Illinois.

*For more information, contact Larry Milner, (630) 724-3211.*

## Extreme (Hangar) Make-over

To accommodate a client's new Boeing 767-200 ER aircraft, Burns & McDonnell designed a hangar and warehouse facility expansion at George Bush Intercontinental Airport in Houston. The enlarged hangar features all-new doors with balance magnetic switches, enhanced security surveillance and an upgraded fire suppression system. The system delivers 2¾ percent foam solution to eight high-expansion foam generators supported by the roof structure. The foam generators are sized to cover the hangar floor with three feet of foam in one minute, and are powered by a water reaction motor. The system includes two fire pumps, pump controllers, two 700-gallon injection storage tanks and two outdoor 40,000-gallon water storage tanks. The expansion program also included canopies over the delivery door and warehouse, upgrade of the existing generator system, new storm drainage and sanitary sewer, 30 parking slots, and replacement of the portland cement concrete apron.

*For more information, contact Randy Pope, (816) 822-3231.*



Project: **Open Tolling Program**

Location: **Chicago**

Client: **Illinois Tollway**



Project: **Aviation Facilities Upgrade**

Location: **Houston**

Client: **Confidential**