



Case Study Dallas County Water Treatment Plant

PROJECT SPECS

MBCI Products: NuRoof[®] Retrofit Roof System, BattenLok[®] HS Standing Seam Roof System

Location: Dallas, TX

Color: Champagne Metallic

Coverage: 36,000 sq. ft.

Engineer: Camp, Dresser & McKee, Inc., Fort Worth, TX

General Contractor: Archer Western Contractor, Arlington, TX

Roofing Contractor: Compass Building Systems, Dallas, TX

WHY MBCI?

MBCI provides customers quality metal products, superior service and competitive pricing. From a single manufacturing facility in 1976 to now the largest metal roof and wall panels' supplier in the nation, MBCI has grown tremendously with its customers' needs in mind. MBCI manufactures more than 90 different metal panel profiles, as well as performs meticulous testing and offers complete engineering and design capabilities, allowing MBCI to be capable and committed to supporting both the design and contractor communities from project conception through project completion.

Serving more than 32,000 people in the Highland and University Park area has made the Dallas County Water Treatment Plant a vital component of Dallas. Created in 1938, the DWT has grown from 50,000 acre-feet of water to 85,000 acre-feet of water to help support the growing community.

PROBLEM

It wasn't until 2004 when consulting began for upgrading the treatment facility, which concluded with the recommendation of adding a membrane filtration facility. In addition to plant upgrades, an analysis was conducted on the 60-year old building with a ballasted built-up roof which had extensive structural and attachment issues due to unknown subsurface conditions. There were concerns regarding existing degradation of the supporting subsurface and overloading of the existing structure.

Houston based metal wall and roofing company MBCI manufactured the metal panels used to construct the new roof on the Dallas County Water Treatment Plant. Roofing contractor Compass Building Systems chose MBCI's BattenLok[®] HS metal roof panel for the required lightweight framing and sheeting materials. BattenLok[®] HS is a high strength standing seam roof system that can be installed directly over purlins or bar joists. Using metal also allowed for a wide variety of color from which to choose. The DWT went with Champagne Metallic as their color of choice.

SOLUTION

For the retrofitted roof, Compass Building Systems chose MBCI's NuRoof[®] system which has the ability to "stick-frame" the supporting structure, facilitating an equal distribution of the imposed loads of the new retrofit system. The new retrofit roof added R-40 insulation value, allowing the building to increase its energy efficiency.

The extensive use of hips and dormers provided a residential appearance to what was once a very monolithic, industrial designed building. The use of color in the roof helped improve the aesthetics significantly. MBCI also had the ability to match the retrofit roof panels to the new membrane building roof.

Camp, Dresser & McKee, Inc. of Fort Worth, Texas, was the consulting engineer and Compass Building Systems of Dallas, was the roofing contractor on this project. Construction began in October 2010 and completed in March 2011. Since the construction began, the District has sold \$33 million in revenue bonds to fund the new facilities, including the roof renovation.