

CASE STUDY

ACOUSTICAL CEILINGS FROM BPB

Celotex[®] BRAND

CLASSIC MINERAL CEILING SYSTEMS

Baroque™ High NRC with PlastiGard™



The unique five-sided World Trade Center in Baltimore is located beside the permanent mooring of the USS Constellation, the Navy's last floating Civil War vessel.

WORLD TRADE CENTER BALTIMORE, MD

Project: The World Trade Center
Location: Baltimore, MD
Architects: Pei, Cobb, Freed and Partners,
New York, NY
Distributor: Strober Materials,
Upper Marlboro, MD

Five-Sided Tower Benefits From the Unique Features of BPB Ceiling Panels

The World Trade Center in Baltimore is the tallest pentagonal building in the world, and provides breathtaking views of Baltimore and its popular Inner Harbor at 423 feet from its observation level and dining area.

The world-renowned architectural firm of Pei, Cobb, Freed and Partners of New York City designed the unique building with its fifth corner positioned in the water of the Chesapeake Bay like a ship's prow.

"The building draws inspiration from the specific circumstances of its site," said Lead Designer Henry N. Cobb. "It stands apart from center city congestion and is visible, like a beacon, from all sides—hence its multidirectional form."

The project required the razing of dilapidated piers that were replaced with a promenade along the reclaimed Inner Harbor to such attractions as the National Aquarium, Maryland Science Center and the USS Constellation Maritime Museum.

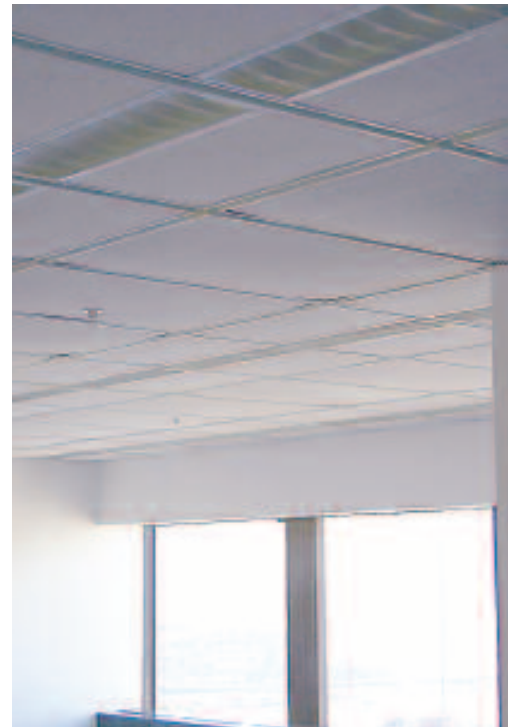
"By creating significant civic spaces and by giving expression to the drama inherent in the meeting of the city and the sea, the World Trade Center restores the Inner Harbor to its historic role as Baltimore's central focus," Cobb said.

The office tower's unique shape is repeated throughout the interior as each of the 27 floors of office space has a hallway that is also in a pentagonal shape. This required a number of custom designed components, including the acoustical panels from BPB.

According to BPB's Ceiling Systems Manager, David Todd, the building owner was seeking a manufacturer with the capacity to make a custom sized product and a distributor large enough to keep the odd sizes in its inventory.

In order to maintain a clean and attractive décor for both existing and new tenants, the building owner must maintain an inventory of panels for the 640,000 sq. ft. of ceilings within the building. They chose BPB because the company is one of the largest manufacturers in the industry and the local distributor, Strober Materials, has a solid reputation for customer service.

In addition to the supply issue, the specifiers chose Baroque™ acoustical panels with PlastiGard™ from BPB's Celotex® Brand because of its durability and excellent sound absorption rating.



The classic design of the Celotex® Brand Baroque™ ceiling panels complements the breathtaking views of Baltimore and the Chesapeake Bay from the waterfront World Trade Center.



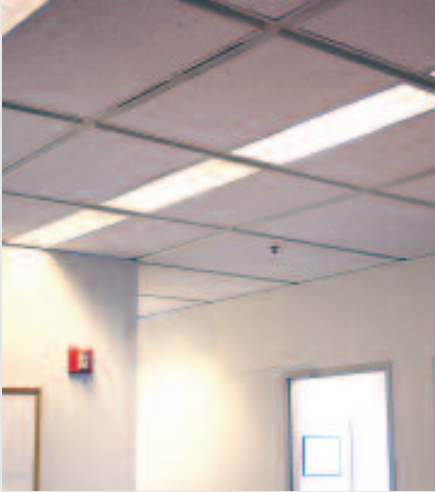
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CASE STUDY

THE WORLD TRADE CENTER *continued*



Routine maintenance to a building's lighting fixtures, AC ducting and other components involves the frequent removal of ceiling panels. Celotex Brand® Baroque™ High NRC acoustical ceiling panels with the optional PlastiGard™ finish are durable and easy to clean.

"The manufacturers of competing brands have historically produced a high Noise Reduction Coefficient (NRC) ceiling panel at the expense of durability," Todd explained.

"BPB is one of the lone manufacturers of ceiling systems that can combine both features," he added. "Ceilings in an office setting demand durability and washability, but must also provide speech privacy. You get both with the Baroque™ High NRC ceilings."

Where speech privacy is important, ceiling panels should have a high sound transmission loss rating with a Ceiling Attenuation Class (CAC) of 35 or higher, and sound absorption ratings with a NRC of .55 to .70.

BPB offers various ceiling panels with different levels of CAC, which measures the amount of sound passing through, and NRC, which measures the amount of noise the panel can absorb.

The Baroque™ panels also give ceiling systems the strength contractors need when cutting custom-sized panels to accommodate special architectural features and shapes. The contractor needs panels that stay strong as they are cut into smaller sizes, and are tough enough to withstand movement through the plenum during mounting into a metal suspension grid.

The building management knows that every time a panel section is removed from a ceiling for routine maintenance of the ducts or wiring within the plenum, durability is an issue. The Baroque™ panels combine industry leading durability with a high Noise Reduction Coefficient, all at a competitive cost for the budget-conscious building team.

The World Trade Center (WTC) Building Management typically refurbishes office space for every new tenant, often replacing ceiling panels along with carpeting and other décor items. Strober Materials, based in Upper Marlboro, Maryland, maintains an inventory of spare ceiling panels, many of which are custom cut because of the building's unique shape.

The PlastiGard™ acrylic scrubbable finish option chosen by WTC Management further extends the life of the ceiling panels because they can be easily cleaned as part of a maintenance regime. By going with the PlastiGard™ protection, the maintenance manager can avoid the application of paints and coatings on the ceiling panels that can reduce the original acoustical and fire retardant properties of the product.

A sustainable ceiling is good for the environment as restoring ceiling panels to their original luster means less replacing of panels, and that equals fewer panels going to the landfill. The cleaner the panel, the better the light reflectance, which means less dependency on indoor lighting and reduced energy costs.

The high light reflectance of the Baroque™ panels, in conjunction with the I.M. Pei-designed building, with its floor-to-ceiling windows, create the opportunity for daylighting. The high light reflectance maximizes the use of daylight even in offices where small amounts of daylight can penetrate the interior, giving nearly any workplace a fresher and more placid atmosphere.

BPB representatives can assist building teams with information on how to achieve LEED Green Building Rating System credits for new or existing buildings with the Celotex Brand acoustical ceilings systems.



Cleaner panels mean better light reflectance, which means less dependency on indoor lighting and reduced energy costs. BPB's Celotex® Brand acoustical ceiling panels with the PlastiGard™ acrylic coating are easy to keep clean and offer excellent sound absorption.

For more information and samples, contact:

USA

BPB America Inc.
5301 West Cypress St., Suite 300
Tampa, FL 33607
Toll-Free: +1-866-427-2872
Fax: 1-800-829-1422
Email: crc@bpb-na.com
Web: www.bpb-na.com

Canada

BPB Canada Inc.
Architectural Products
Sales Division
6715 Ogdendale Road S.E.
Calgary, Alberta T2C 2A4
Toll-Free: +1-866-427-2872
Fax: 1-800-829-1422
Email: crc@bpb-na.com
Web: www.bpb-na.com



Ceiling Tile Product Specifications

	Item Number	Nominal Size (Inches)	Edge Detail	NRC	CAC	LR
Baroque™ High NRC w/PlastiGard	BET-457 DP	24 x 24 x 3/4	Trim	.70	35	.81