2008 Livable Buildings Award
Center for the Built Environment, UC Berkeley

Prior Recognition:

AIA Ohio Design Award, Honor Award, Interior Design, 2007

Contract Interiors Award, Restoration, 2007

AIA Ohio Design Award, *Merit Award 2006*

AIA Cleveland Historic Resources Committee, *Preservation Award 2006*

Cleveland Restoration Society, *Preservation Award, Trustees Award for Preservation Achievement, 2006*

Ohio Historic Preservation Office, *Preservation Merit Award 2005*

AIA Cleveland, Honor Award 2005

Builders Exchange, *Award for Craftsmanship 2005*

HOWARD M. METZENBAUM U.S. COURTHOUSE

Cleveland, Ohio

National Register of Historic Places since 1974
Sustaining Cleveland's Public Treasure: Merging Sense of Place with Modern Purpose

Owner: U.S. General Services Administration
Architect, M/E Engineer: Westlake Reed Leskosky
Construction Manager as Contractor: Dick Corporation
Structural Engineer: Barber & Hoffman, Inc.

Project Narrative

Making Preservation Work:
Integrating Historic Preservation and Sustainability

"The GSA's objective is to modernize the building and make it fully functional and equipped to serve well into its second century. At the same time, we want to preserve its remarkable art and architecture for future generations to enjoy."

— Pam Wilczynski,
Project Manager, U.S. General Services Administration, Region 5

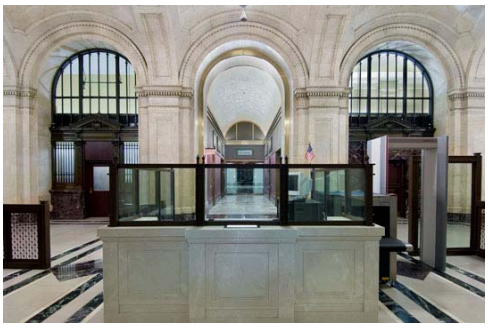
The Howard M. Metzenbaum U.S. Courthouse

Historically Preserved, Functionally Improved, Environmentally Advanced

Rather than increasing the size of the newly constructed Carl B. Stokes U.S. Courthouse in Cleveland, Ohio to accommodate the bankruptcy courts, GSA decided to renovate and expand the city's monumental Metzenbaum Courthouse which was currently underutilized, and to use the renovated space to consolidate several Federal tenants from leased spaces scattered around the city. The resulting renovation is a brilliant accommodation of both the preservation of the original courthouse, built in 1910, and the requirements of modern jurisprudence. This remarkable achievement has resulted in more than 14 awards for design, historic preservation, engineering and environmental stewardship.

Often the most effective strategy for sustainability is to creatively redesign currently occupied space. In the case of this Cleveland landmark, the designers successfully introduced modern functionality into the existing historic footprint. Central to their strategy was the adaptation of the original five-level courtyard into functional space, repurposing it as far more than just a light-well. The courtyard now houses the security screening area, which was not only designed to blend beautifully with the original architecture, but also did not require the use of space on the highly sought-after first floor. It also allows more logical—and safer—movement within the building by using a portion of the courtyard's former volume for new circulation balconies. Finally, to prevent heating and cooling loss through the walls and windows surrounding the courtyard, an impressive glass skylight now caps the space, dramatically reducing the building's energy use.

The $51 million rehabilitation project is an exemplary model linking historic preservation with sustainability. One of the first historic rehabilitation projects to receive LEED-NC certification in Ohio, the Metzenbaum U.S. Courthouse represents a groundbreaking approach that integrates sustainability and



preservation. The Metzenbaum's exemplary performance heightened LEED awareness in its community and also among historic preservation projects pursuing LEED certification. This achievement, recognized by LEED reviewers, earned an Innovation in Design credit for green building education. The project has been widely published, recognized with preservation awards, and presented as a case study in national preservation, including the National Trust Preservation Conference in Portland, OR and environmental organizations.

The historic nature of the structure made it necessary for the design team, Westlake Reed Leskosky Architects, to balance the sometimes conflicting needs of modern convenience with the preservation of the building's original grandeur. Toward that end they tucked mechanical chases and risers into no longer used chimneys. They removed the drop ceilings that had been built to contain ductwork for the 1960's-era air conditioning, and in the process, revealed the original ceilings, and ornate plasterwork. The architects' mechanical engineer also succeeded in locating a demand control ventilation system in the attic. This ingenious solution solves the design problem of placing modern equipment and improves the mechanical function by introducing more outside air into the building when concentrations of CO_2 reach undesirable levels. The strategy not only reduced costs but also created a more comfortable productive workplace. The project reinstalled restored murals and rebuilt an original chandelier to accommodate low-energy lamps. Other reused materials include hardware, grills, wood doors, glazed brick, and marble from the basement to patch floors and wainscots.

A key functional change in the renovation is the separation of public and private circulation. The conversion of the original light well — an open shaft of unused exterior space — into a sky-lit, enclosed Light Court, solves circulation problems and increased security requirements, and allows the historic corridor system to be allocated to active tenant use. At the first floor level, a new vaulted passage, created in the spirit of Brunner's work, links the grand marble lobby with the new atrium.

Accessibility is improved through two new stairways and two elevators. A new ADA entrance ramp at the main entrance is sensitively inserted behind the existing decorative metal balustrade along the front of the building, preserving the

"In this magnificent, restored, historic court house, GSA women and men work hard every day to meet the complex needs of a busy post-modern court while carefully preserving this treasure of its past."

— The Honorable Lesley Wells, United States District Court, Northern District of Ohio

integrity of the landmark's historic façade.

GSA's renovation of the Metzenbaum Courthouse proves that buildings designed and built in the past can gain new life through the application of the same thought, concern and ingenuity that originally produced them.

An independent survey of building occupants by the University of California – Berkeley's Center for the Built Environment demonstrates an exceptional level of enthusiasm for the project as a work environment. Overall, occupant satisfaction with the building scored in the 86th percentile of surveyed buildings. No attribute of indoor environmental quality—acoustic quality, air quality, cleanliness and maintenance, thermal comfort and lighting—ranked below the 73rd percentile of all surveyed buildings.

The great nineteenth century English architecture critic, John Ruskin, said, "When we build, let us think that we build forever." Recognizing both the beauty of the past and the needs of the present, GSA has, more than a century later, heeded Ruskin's advice.

Building Performance

In the groundbreaking study, "Assessing Green Building Performance, A Post Occupancy Evaluation of 12 GSA Buildings", the Metzenbaum Courthouse operating costs were 23% lower than the industry baseline. Building CO_2 equivalent emissions were 34% below baseline. Building energy use intensity (EUI) was 22% below the CBECS regional average.

GSA was notified in September 2008 that the Metzenbaum Courthouse has earned the EnergyStar® designation.

Metrics	Annual Performance Measurements		Annual Reporting Metrics	
	Water Use (gal)	*537,849*	Gallons per occupant	*2,169*
	Process Water Use (gal)	-	Water Cost per occupant	*$5.36*
	Outdoor Water Use (gal)	-	Gallons per GSF	*2.14*
	Water Cost	*$1,330*	Water Cost per GSF	*$0.01*
	Energy Star Score	*82*	Energy Use (kBTU) per GSF	*84*
	Energy Cost	*$21,123*	Energy Cost per GSF	*$1.79*
			Energy Emissions per building (metric tons CO_2 equiv)	*2,440*
	General Maintenance Cost	*$111,329*	General Maint Cost per RSF	*$0.60*
	Janitorial Services Cost	*$270,476*	Janitorial Services Cost per RSF	*$1.46*
	Grounds Maintenance Cost	*$3,100*	Grounds Maint Cost per RSF	*$0.02*
	Quantity of Maint Requests	*684*	Ratio of Maint Requests to Total Maintenance Jobs	*0.46*
	Quantity of Prev Maint Jobs	*805*		
	Solid Waste Generated (tons)	*24*	Solid Waste (lb) per occupant	*1.83*
	Solid Waste Cost	*$3,067*	Solid Waste Cost per RSF	*$0.02*
	Quantity Recycled (tons)	*3*	Solid Waste Cost per occupant	*$21.45*
	Recycling Cost	*-$101*	Ratio of Recycled to Solid Waste weight	*0.12*
	Survey # of Invitees	*95*		
	Survey # of Respondents (n)	*54*	Survey Return Rate	*57%*
	Commute Miles per occ (avg)	*26*	Commute Emissions per occ (metric tons CO_2 equiv)	*0.79*
	Commute fuel per occ (avg gal)	*86*		

Additional Information

LEED-NC

Howard M. Metzenbaum US Courthouse
LEED® Project # 84
LEED Version 2 Certification Level: Certified
4/19/2006

29 Points Achieved — Possible Points: **69**

Certified 26 to 32 points Silver 33 to 38 points Gold 39 to 51 points Platinum 52 or more points

6 Sustainable Sites — Possible Points: 14

Y			
Y	Prereq 1	**Erosion & Sedimentation Control**	
1	Credit 1	**Site Selection**	1
1	Credit 2	**Urban Redevelopment**	1
1	Credit 3	**Brownfield Redevelopment**	1
1	Credit 4.1	**Alternative Transportation**, Public Transportation Access	1
1	Credit 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1
	Credit 4.3	**Alternative Transportation**, Alternative Fuel Refueling Stations	1
	Credit 4.4	**Alternative Transportation**, Parking Capacity	1
	Credit 5.1	**Reduced Site Disturbance**, Protect or Restore Open Space	1
	Credit 5.2	**Reduced Site Disturbance**, Development Footprint	1
	Credit 6.1	**Stormwater Management**, Rate and Quantity	1
	Credit 6.2	**Stormwater Management**, Treatment	1
1	Credit 7.1	**Landscape & Exterior Design to Reduce Heat Islands**, Non-Roof	1
	Credit 7.2	**Landscape & Exterior Design to Reduce Heat Islands**, Roof	1
	Credit 8	**Light Pollution Reduction**	1

4 Water Efficiency — Possible Points: 5

Y			
1	Credit 1.1	**Water Efficient Landscaping**, Reduce by 50%	1
1	Credit 1.2	**Water Efficient Landscaping**, No Potable Use or No Irrigation	1
	Credit 2	**Innovative Wastewater Technologies**	1
1	Credit 3.1	**Water Use Reduction**, 20% Reduction	1
1	Credit 3.2	**Water Use Reduction**, 30% Reduction	1

3 Energy & Atmosphere — Possible Points: 17

Y			
Y	Prereq 1	**Fundamental Building Systems Commissioning**	
Y	Prereq 2	**Minimum Energy Performance**	
Y	Prereq 3	**CFC Reduction in HVAC&R Equipment**	
2	Credit 1.1	**Optimize Energy Performance**, 20% New / 10% Existing	2
1	Credit 1.2	**Optimize Energy Performance**, 30% New / 20% Existing	2
	Credit 1.3	**Optimize Energy Performance**, 40% New / 30% Existing	2
	Credit 1.4	**Optimize Energy Performance**, 50% New / 40% Existing	2
	Credit 1.5	**Optimize Energy Performance**, 60% New / 50% Existing	2
	Credit 2.1	**Renewable Energy**, 5%	1
	Credit 2.2	**Renewable Energy**, 10%	1
	Credit 2.3	**Renewable Energy**, 20%	1
	Credit 3	**Additional Commissioning**	1
	Credit 4	**Ozone Depletion**	1
	Credit 5	**Measurement & Verification**	1
	Credit 6	**Green Power**	1

6 Materials & Resources — Possible Points: 13

Y			
Y	Prereq 1	**Storage & Collection of Recyclables**	
1	Credit 1.1	**Building Reuse**, Maintain 75% of Existing Shell	1
1	Credit 1.2	**Building Reuse**, Maintain 100% of Existing Shell	1
1	Credit 1.3	**Building Reuse**, Maintain 100% Shell & 50% Non-Shell	1
1	Credit 2.1	**Construction Waste Management**, Divert 50%	1
	Credit 2.2	**Construction Waste Management**, Divert 75%	1
	Credit 3.1	**Resource Reuse**, Specify 5%	1
	Credit 3.2	**Resource Reuse**, Specify 10%	1
1	Credit 4.1	**Recycled Content**	1
	Credit 4.2	**Recycled Content**	1
1	Credit 5.1	**Local/Regional Materials**, 20% Manufactured Locally	1
	Credit 5.2	**Local/Regional Materials**, of 20% Above, 50% Harvested Locally	1
	Credit 6	**Rapidly Renewable Materials**	1
	Credit 7	**Certified Wood**	1

7 Indoor Environmental Quality — Possible Points: 15

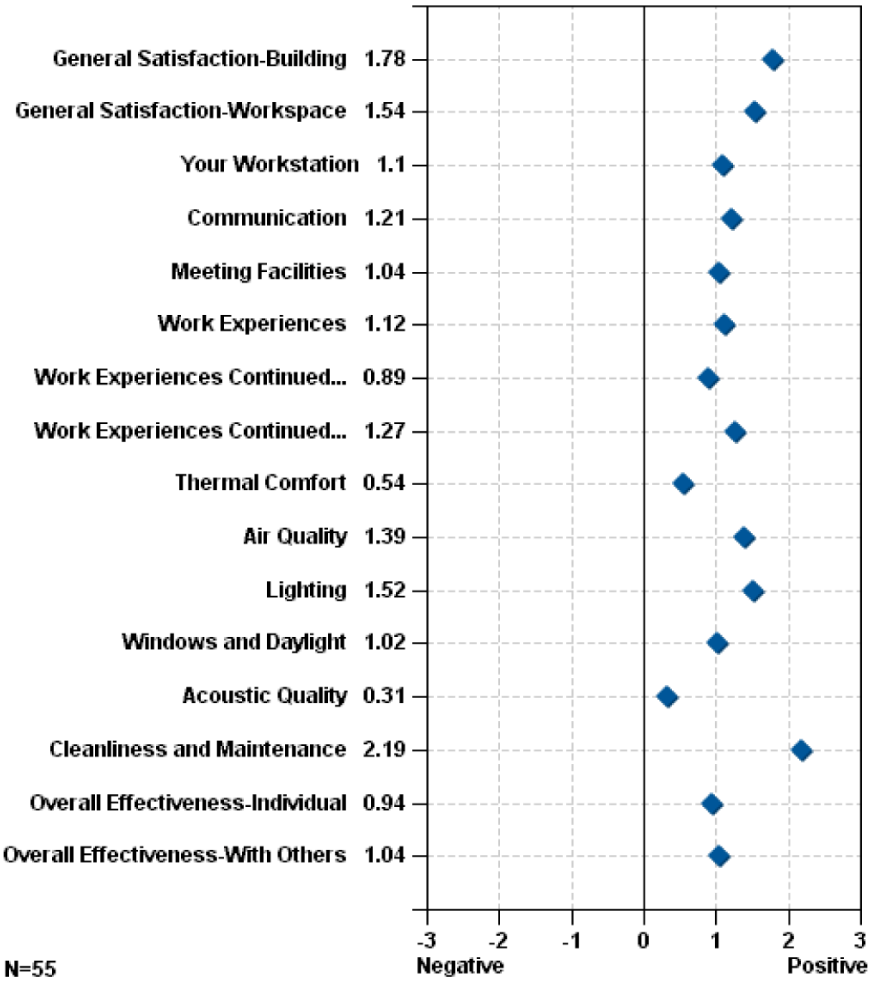
Y			
Y	Prereq 1	**Minimum IAQ Performance**	
Y	Prereq 2	**Environmental Tobacco Smoke** (ETS) **Control**	
1	Credit 1	**Carbon Dioxide** (CO_2) **Monitoring**	1
	Credit 2	**Increase Ventilation Effectiveness**	1
1	Credit 3.1	**Construction IAQ Management Plan**, During Construction	1
1	Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1
1	Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1
	Credit 4.2	**Low-Emitting Materials**, Paints	1
1	Credit 4.3	**Low-Emitting Materials**, Carpet	1
	Credit 4.4	**Low-Emitting Materials**, Composite Wood	1
	Credit 5	**Indoor Chemical & Pollutant Source Control**	1
	Credit 6.1	**Controllability of Systems**, Perimeter	1
	Credit 6.2	**Controllability of Systems**, Non-Perimeter	1
1	Credit 7.1	**Thermal Comfort**, Comply with ASHRAE 55-1992	1
1	Credit 7.2	**Thermal Comfort**, Permanent Monitoring System	1
	Credit 8.1	**Daylight & Views**, Daylight 75% of Spaces	1
	Credit 8.2	**Daylight & Views**, Views for 90% of Spaces	1

3 Innovation & Design Process — Possible Points: 5

Y			
1	Credit 1.1	**Innovation in Design**	1
1	Credit 1.2	**Innovation in Design**	1
	Credit 1.3	**Innovation in Design**	1
	Credit 1.4	**Innovation in Design**	1
1	Credit 2	**LEED® Accredited Professional**	1

Occupant Satisfaction Survey

Of the 105 occupants in the building, 95 were invited to respond to the UC Berkeley Center for the Built Environment occupant satisfaction survey. 55 responded. The results indicated that occupants of the Metzenbaum Courthouse are much more satisfied with their building than average (86th percentile). In all of the key measurements—acoustic quality, air quality, cleanliness and maintenance, thermal comfort and lighting—Metzenbaum occupants scored above the 73rd percentile of the CBE buildings survey or better.

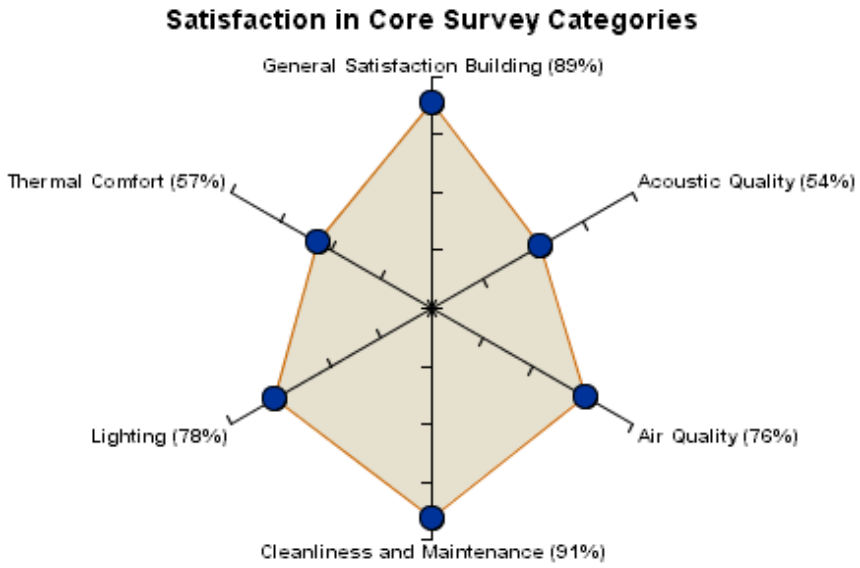


OH0033ZZ SPOT 2007 - Howard M. Metzenbaum U.S. Courthouse

Building Scorecard

Survey Dates: 7/25/2007 through 8/17/2007

Center for the Built Environment
University of California, Berkeley



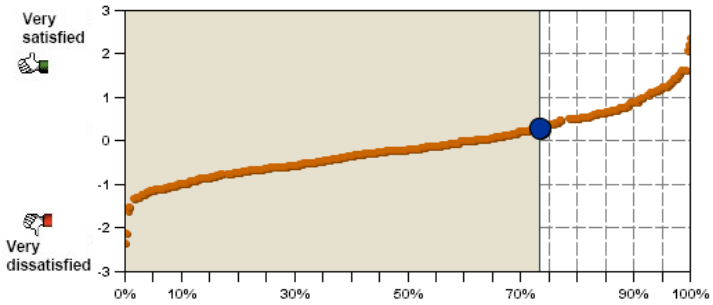
CBE

1.2 Category Mean vs. Benchmark

Performance of OH0033ZZ SPOT 2007 - Howard M. Metzenbaum U.S. Courthouse in core survey categories

Acoustic Quality

73%
Percentile

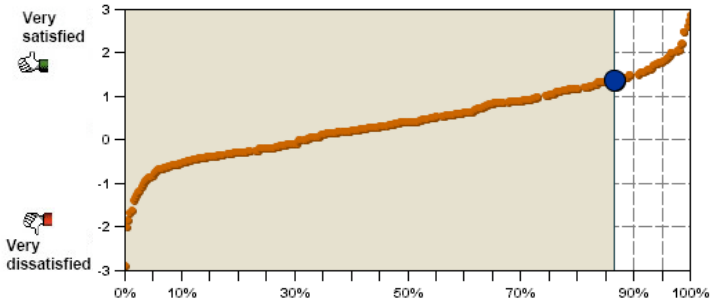


0.31
Mean Response

54%
Satisfied

Air Quality

86%
Percentile

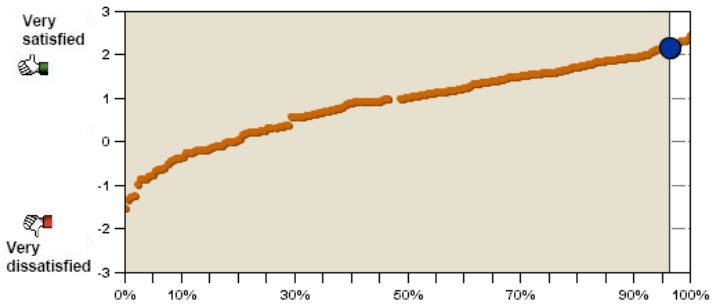


1.39
Mean Response

76%
Satisfied

Cleanliness and Maintenance

96%
Percentile

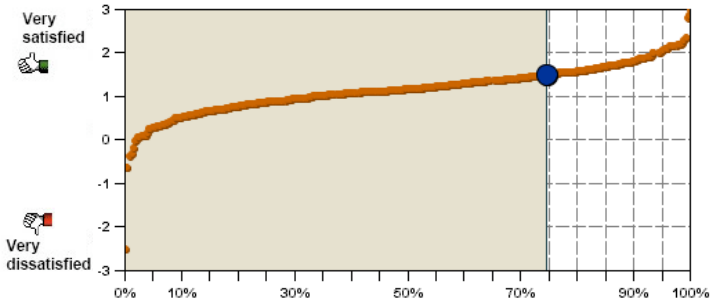


2.19
Mean Response

91%
Satisfied

Lighting

75%
Percentile



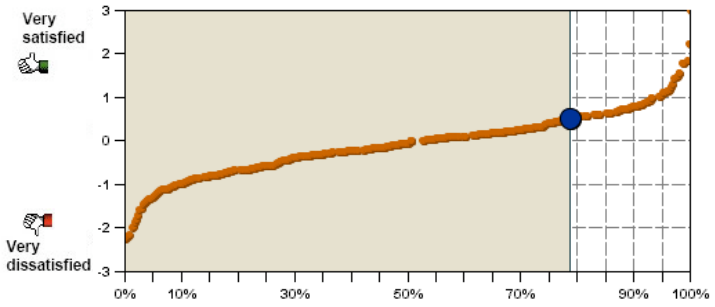
1.52
Mean Response

78%
Satisfied

Performance of OH0033ZZ SPOT 2007 - Howard M. Metzenbaum U.S. Courthouse in core survey categories

Thermal Comfort

79%
Percentile



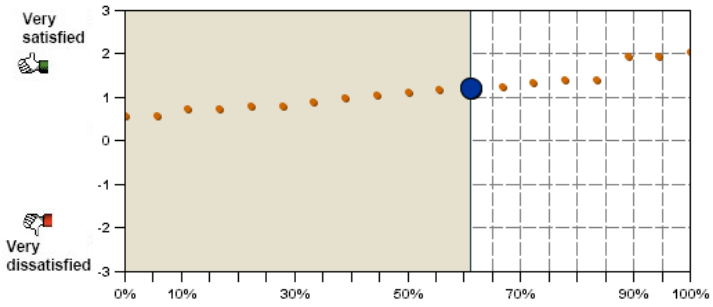
0.54
Mean Response

57%
Satisfied

Performance of OH0033ZZ SPOT 2007 - Howard M. Metzenbaum U.S. Courthouse in additional survey categories

Communication

61%
Percentile

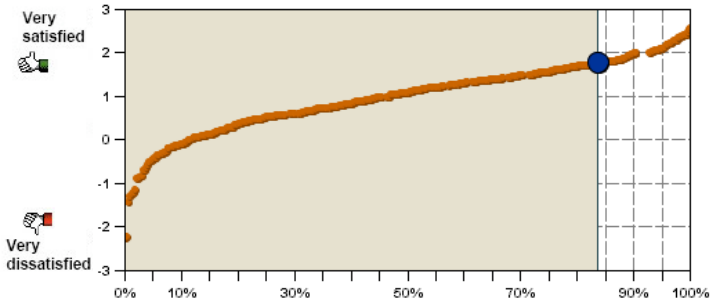


1.21
Mean Response

73%
Satisfied

General Satisfaction-Building

84%
Percentile

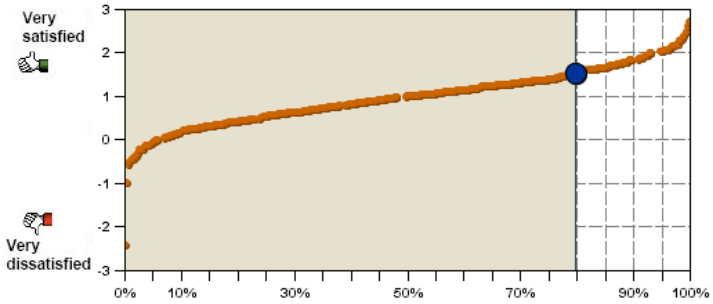


1.78
Mean Response

89%
Satisfied

General Satisfaction-Workspace

80%
Percentile

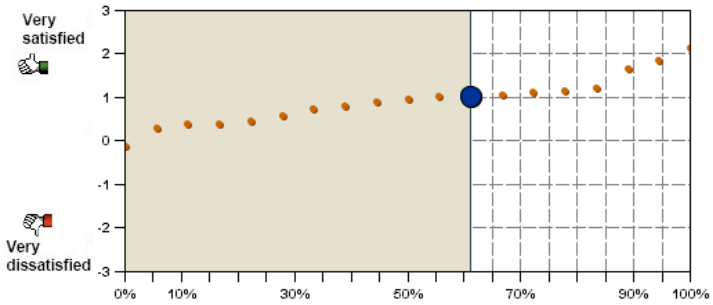


1.54
Mean Response

83%
Satisfied

Meeting Facilities

61%
Percentile



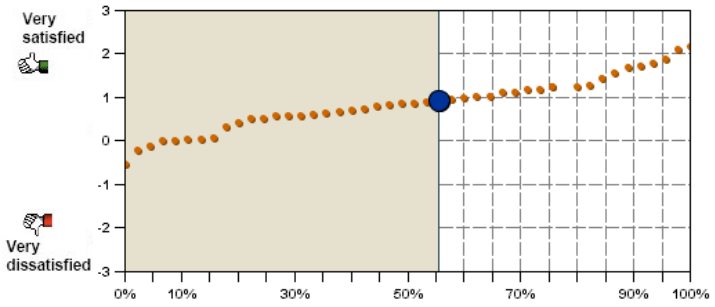
1.04
Mean Response

71%
Satisfied

Performance of OH0033ZZ SPOT 2007 - Howard M. Metzenbaum U.S. Courthouse in additional survey categories

Overall Effectiveness -Individual

56%
Percentile

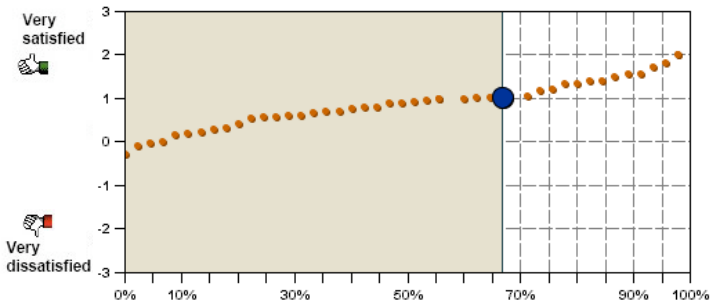


0.94
Mean Response

64%
Satisfied

Overall Effectiveness -With Others

67%
Percentile

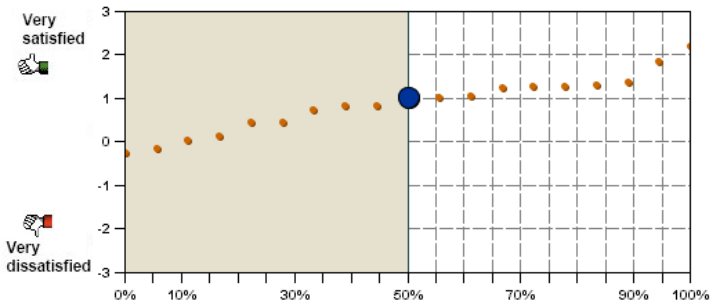


1.04
Mean Response

67%
Satisfied

Windows and Daylight

50%
Percentile

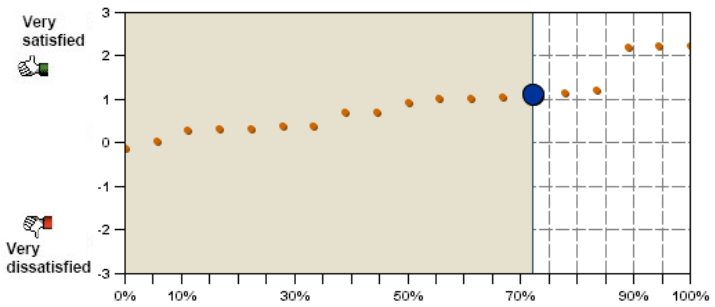


1.02
Mean Response

65%
Satisfied

Work Experiences

72%
Percentile



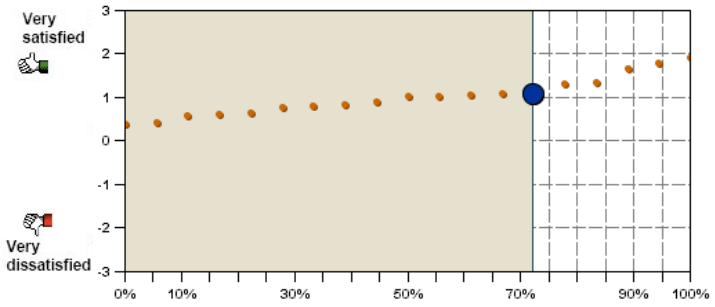
1.12
Mean Response

68%
Satisfied

Performance of OH0033ZZ SPOT 2007 - Howard M. Metzenbaum U.S. Courthouse in additional survey categories

Work Experiences Continued...

72%
Percentile

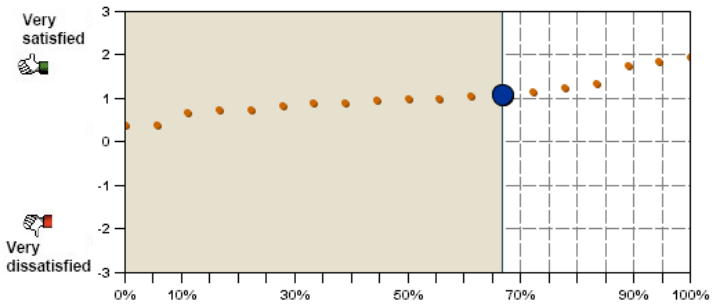


1.11
Mean Response

71%
Satisfied

Your Workstation

67%
Percentile



1.1
Mean Response

74%
Satisfied

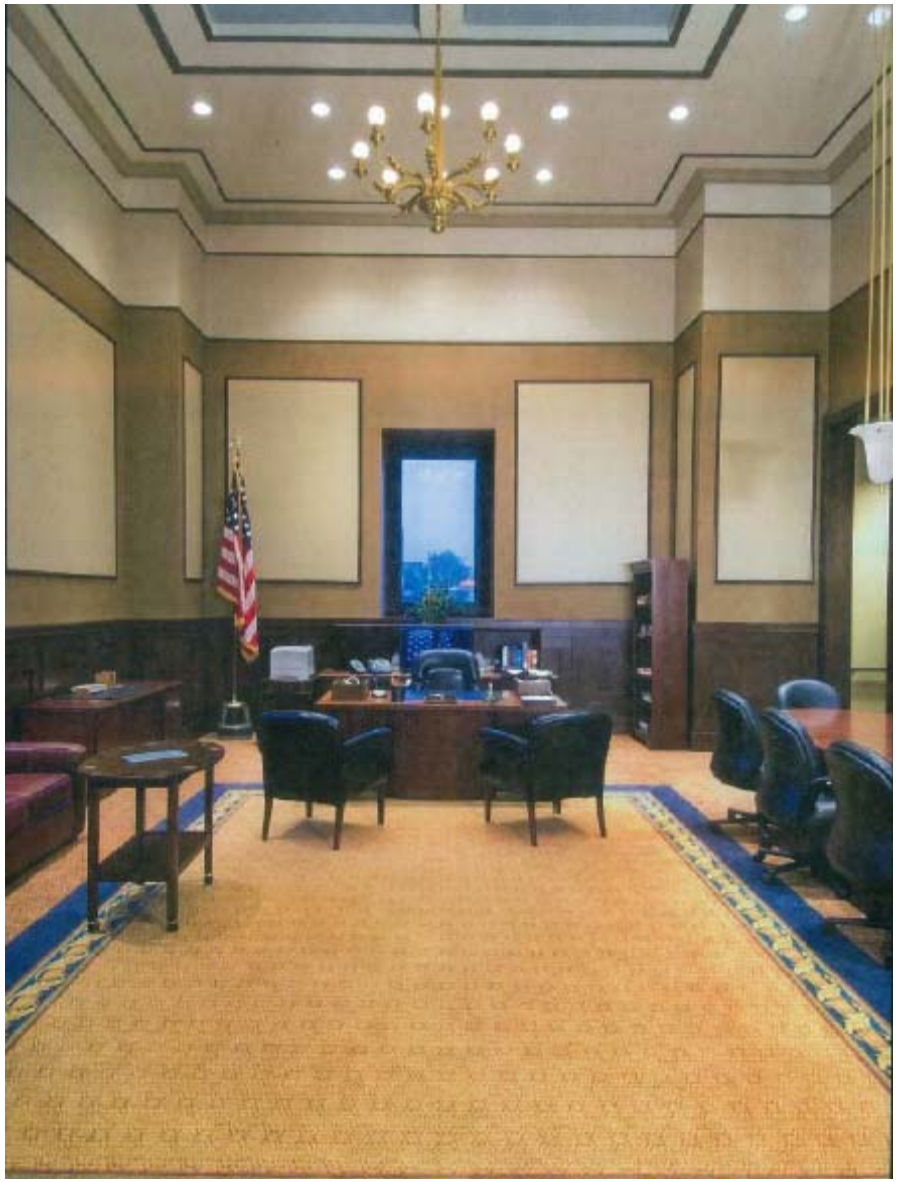
Project Images

Courtyard Before Renovation

Courtyard After Renovation

Courtrooms Before Renovation

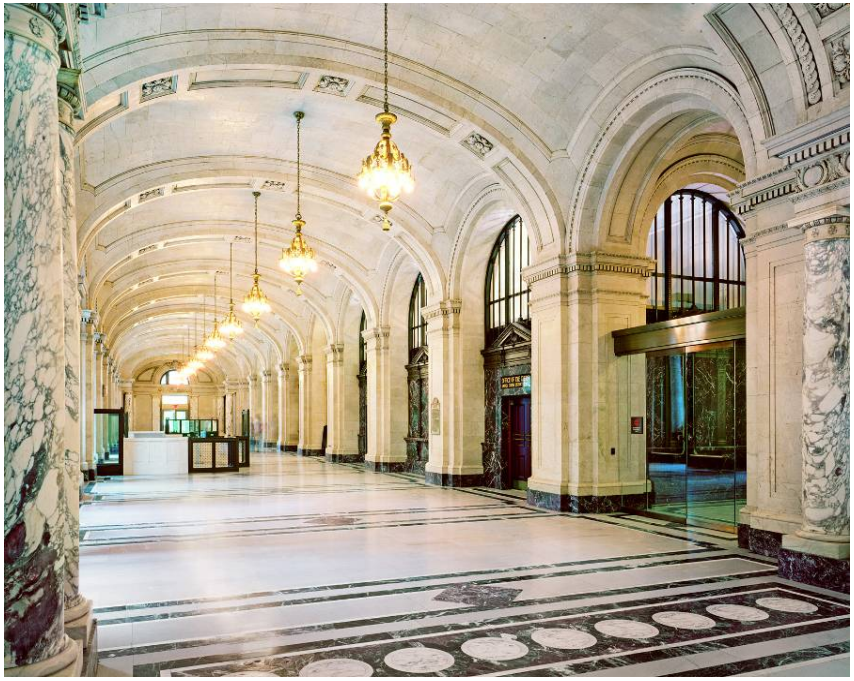
Courtrooms – After Renovation

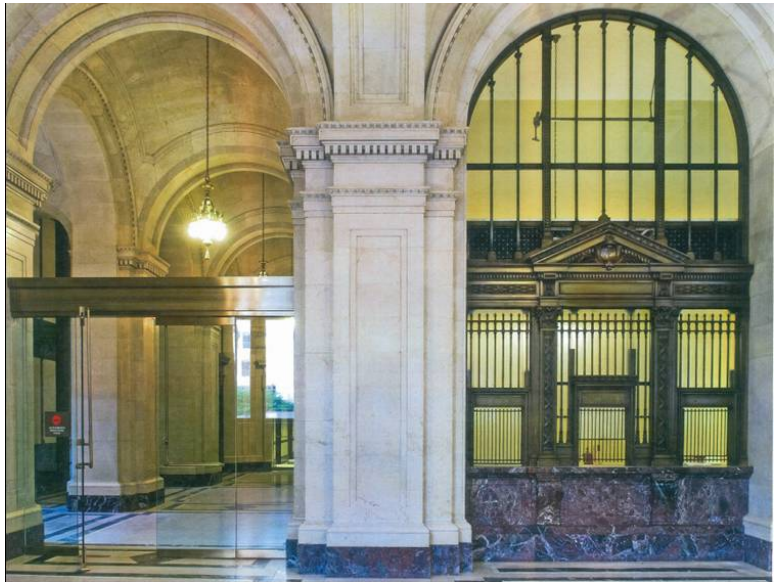


Courtrooms – After Renovation

Courtrooms – Details After Renovation

Courtrooms – Ancillary Spaces After Renovation

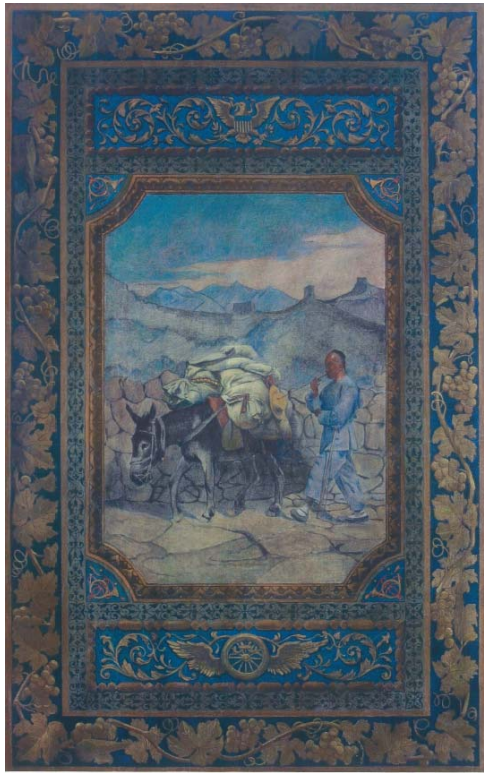




Restored Lobby Spaces After Renovation

Spaces Before Renovation

Spaces After Renovation



Architectural and Art Details – Before and After Restoration

Project Credit Information

Project **Metzenbaum U. S. Courthouse**
Cleveland, Ohio

Owner ***U.S. General Services Administration***
Region 5
230 South Dearborn Street
Chicago, Illinois

Pam (Wilczynski) Howe, Project Manager
Nick Gicale, Assistant Project Manager
Samantha Mehal, Contracting Officer
Gerald Deptolla, Contracting Officer's Representative

Historic Preservation:
Regina Nally, GSA Regional Historic Preservation Officer

Lowell Black, Certified Fire Protection Engineer
John Nudo, Fire & Life Safety Specialist
Jim Stewart, Elevator Specialist

Art in Architecture/Fine Arts:
Caroline A. Sachay, Regional Fine Arts Officer
Alicia D. Weber, Fine Arts Program, GSA Center for Design Excellence and the Arts

Katherine Lease, Property Manager
David Overholt, Property Management Program Specialist
Metzenbaum US Courthouse

Dan Allen, DLA Services, On Site GSA Representative

Mark Doran, Control Solutions, Independent Scheduler

Architect, Mechanical/Electrical Engineer **Westlake Reed Leskosky**
Cleveland, Ohio
216-522-1350 t
216-522-1357 f
pwest@wrldesign.com

Paul E. Westlake, Jr., FAIA, Principal in Charge, Lead Designer
Philip LiBassi, AIA, Principal
Vince Leskosky, AIA, Principal
Ronald A. Reed, FAIA, Principal
George Regula, Project Manager

Support Team:
Philip Schroeder, AIA, Associate

Robert A. Mather, AIA, Associate Principal
Howard Traub
Matt Janiak
Larry Hennessey, AIA
Christopher Watkins
Monica Green, AIA, CSI, CCS, Associate Principal, Specifications
Bruce Wolf, AIA, Construction Administration
Fonda Hosta, ASID, Interior Design

Engineering:
Matt Murphy, PE, Mechanical Engineer
Steve Lieber
Robert Smolinski, P.E., Associate, Electrical
Joe Borzyn

Construction Manager as Contractor **Dick Corporation**
Pittsburgh, PA

Ronald J. Cortes, Senior Project Estimator
Bill West, Project Manager
Steve Thompson, Superintendent
Jim Gruntz, MEP Coordinator
Kevin Toth, Project Engineer

Structural Engineer **Barber & Hoffman, Inc.**
Cleveland, Ohio

Cost Estimating **Project & Construction Services**
Cleveland, Ohio

Code Consultant **Rolf Jensen**
Chicago, Illinois

Security Consultant **Schiff & Associates, Inc.**
Bastrop, Texas

Blast Consultant **Hinman Associates**
San Francisco, California

Art Conservation Laboratory **McKay Lodge Fine Arts Conservation Laboratory, Inc.**
Oberlin, Ohio

Robert G. Lodge, President
Stefan Dedecek, Conservator of Paintings

Conservation study of Ornamental Paint **EverGreene Studios, Inc.**
New York

Restorer of Ornamental Paint	**John Canning Studio** Cheshire, Connecticut
Skylight Manufacturer	**Supersky**
Photographer	**Kevin Reeves Photography**