



# National Gallery of Art

## Office of Press and Public Information

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## National Gallery of Art

### East Building

### Fact Sheet

<b>Site</b>	8.88 acres (boundaries: Pennsylvania Avenue NW, Third Street, Madison Drive, and the east end of the West Building at Fourth Street)
<b>Date Opened</b>	June 1, 1978 (exhibition areas) June 1976 (connecting link)
<b>Building Architect</b>	I.M. Pei & Partners, New York
<b>Date of Reopening of Galleries</b>	September 30, 2016
<b>Expansion/ Renovation</b>	<i>Concept Design:</i> Perry Y. Chin, Architect <i>Architect of record:</i> Hartman-Cox Architects
<b>Building Design</b>	<p><i>Background, 1930s</i></p> <p>The location and shape of the site posed several challenges. It was the last major undeveloped site on Pennsylvania Avenue, the inaugural route between the Capitol and the White House. This meant that any building constructed there would have to be of significant monumental scale. Any building on the plot had to: abide by setback lines established by the National Capital Planning Commission; observe the established heights of the cornice lines of both the Avenue and the Mall buildings (which are at different levels); and relate in scale, materials, and placement to the Gallery's West Building. Finally the structure had to be appropriate to its setting and simultaneously maintain a human scale so necessary for the enjoyment of works of art.</p> <p><i>Design Concept</i></p> <p>The design solution presented a simple diagonal subdivision of the available trapezoidal space into two triangles—a larger triangle, with its base facing the West Building and its exposed side bounded by Pennsylvania Avenue, and a right triangle, the base of which faces the Capitol and the exposed side of which is bounded by the Mall. A third triangle, a faceted glass roof, ties these primary elements together. The proportion of base to side in all isosceles triangles in the building, from the main skylight to the marble paving tiles, is 1 : 1.5.</p>

Although the center of the site lies to the south of the powerful central east-west axis of the West building, the towers of the East Building are designed to continue that axis and conform to the symmetry of the West Building's Fourth Street facade.

**Knife Edge** The precise building angle at its southwest corner is 19.47 degrees.

**Landscape Architect** Kiley, Tyndall, Walker, Vermont

*Original trees and shrubs north and south of the Plaza:*

Honey Locust (*Gleditsia triacanthos inermis*)  
Red Oak (*Quercus borealis*)  
American Holly (*Ilex opaca*)  
Saucer Magnolia (*Magnolia soulangeana*)  
Pink Azalea (*Rhododendron "Hinodegiri"*)  
Red Azalea (*Rhododendron "apple blossom"*)  
English Boxwood (*Buxus sempervirens "Kingsville Dwarf"*)

*Varieties of trees north, east, and south of the East Building:*

Willow Oak (*Quercus phellos*)  
Flowering Cherry (*Prunus vedoensis*)  
Pin Oak (*Quercus palustris*)

**Landscape  
Expansion/Rehabilitation**

Oculus, Washington, DC, and Sydney and Melbourne, Australia (sub-consultant to Hartman-Cox Architects), honoring original Kiley plan for grounds and site restoration.

*Roof Terrace*

Three *Chionanthus retusus* in three individual circular planters, inspired by trees in the interior Atrium. *Chionanthus retusus*, commonly called Chinese fringe tree, is native to China, Korea, and Japan.  
Five *Acer palmatum* "Moonfire" in the linear planter on the south side of the terrace to shade the granite bench. "Moonfire" is an upright red Japanese maple tree.

**Construction/  
Key Design  
Consultants** Began in 1971 with the construction of an underground connecting link between East and West Buildings, which opened in June 1976.

1978

<i>Builder</i>	Chas. H. Thompkins, Washington, DC
<i>Foundation</i>	Mueser, Rutledge, Wentworth & Johnson, New York
<i>Structural</i>	Weiskopf & Pickworth, New York
<i>Mechanical and Electrical</i>	Syska & Hennessy, New York

2016 Master Facilities Plan Work Area 9.1 (begun in 2014)

<i>Builder</i>	The Whiting-Turner Contracting Company
<i>Structural</i>	Thornton Tomasetti, Washington, DC
<i>Mechanical and Electrical</i>	URS, Washington, DC

## Materials

### *Foundation*

37 feet below grade; heavy foundation mat (6 feet thick), tie-down anchors and special waterproofing to resist the high water table pressure.

### *Marble*

The East Building is clad with Tennessee Pink Marble, from the same quarries that supplied the exterior marble of the West Building. Exterior blocks are 2 feet high by 5 feet wide and 3 inches thick. Marble blocks hang on high strength anodized aluminum supports from a concrete-and-brick-core wall averaging 12 inches thick.

### *Concrete*

Architectural concrete composed of white cement, a coarse pink aggregate, a fine white aggregate, and marble dust from the Tennessee quarries. The two largest poured-concrete beams, each extending approximately 200 feet, form soffits on the north and south sides of the building. Coffered ceilings were made in forms of a clear-grained fir crafted by cabinetmakers and joined and reinforced to ensure strength and precise surfaces.

### *Space Frame/Main Skylight*

225 feet long on two sides, 150 feet on the other, spanning 16,000 square feet—more than a third of an acre—80 feet above Concourse level; constructed of a 500-ton welded steel frame, aluminum and double-pane insulating glass, including laminated safety glass and special ultraviolet filters for art preservation. Aluminum sunscreen filters direct sunlight. Each tetrahedron in the main skylight is 30 feet by 45 feet. The space frame has built-in overhead electrical outlets for lighting works of art. A neoprene gutter system carries water runoff into a regular plumbing system. An electrical heating system melts snow.

*2016 Renovations and Additions*

Tower 1 and Tower 2 stairs: Tennessee Pink Marble, glass balustrades and stainless steel handrails with integrated lighting; acoustic plaster materials with glass laylights above at Tower level. Floors: Concourse: terrazzo. Mezzanine, Upper Level, and Tower Level: fumed quarter-sawn oak (same as West Building). Interior surfaces: Elevator, vestibules, and painted metal doors are metal clad, with silver automotive paint to match the original finish. Roof Terrace: Lac du Bonnet granite triangular pavers, planters and benches, and glass balustrade with a stainless steel handrail.

**Authorization/  
Funding**

When the National Gallery of Art was founded in 1937, Congress set aside for the Gallery's future use, a trapezoidal plot separated from the West Building by Fourth Street and bounded by Pennsylvania Avenue, Third Street, and Madison Drive. The plot, which derives from the original 18<sup>th</sup>- century L'Enfant plan for Washington, is the terminal point for all the buildings along the south side of Pennsylvania Avenue and the monumental buildings along the north side of the Mall.

Paul Mellon and Ailsa Mellon Bruce generously provided funds for the construction of the East Building.

2011-2014 Exterior marble recladding: federal appropriation

2016 Renovation: \$39 million federal appropriation for Master Facilities Plan Work Area 9.1; Expansion: \$30 million from Victoria P. Sant, Trustee emerita (Gallery president at the time of the gift); her husband Roger W. Sant, a member of the Gallery's Trustees' Council; Mitchell Rales, a member of the Gallery's Board of Trustees; his wife Emily Rales; and David M. Rubenstein, a member of the Gallery's Board of Trustees.

**Area of Site**

8.8 acres; set aside in 1937 at the request of Andrew W. Mellon for future expansion

**Square Footage**

1978 350,000 net usable

2016 362,250 net usable

**Building Height**

107'5" (32.74 meters) (grade at perimeter to highest parapet)

**Ceiling Height**

Concourse Galleries – 14'6"  
Ground Level – 10'  
Mezzanine – 14'  
Upper Level (Tower 1 and Tower 2) – 18'

Upper Level (North Bridge) – 14'  
Tower 1 – 23'6"  
Tower 2 – 23'6"  
Tower 3 – 25'4"

**Building Size**

Along Pennsylvania Avenue: 405 feet  
Along Fourth Street: 270 feet  
Along Third Street: 135 feet  
Along Madison Drive: 382 feet

**Skylights**

Area of skylights over Tower galleries: 6,150 square feet.  
New motorized horizontal roller shading system to further control level of daylight in new Tower galleries.

Area of main skylight over Atrium: 16,000 square feet.  
The space frame above the main Atrium is 225 feet long on two sides and 150 feet long on the third. Its welded steel frame weighs 500 tons. Each of the 25 tetrahedrons of the main skylight is 30 feet at its base and 45 feet on the two equal sides.

**Specifications/  
Drawings**

Information about the East Building original construction is maintained and preserved in the National Gallery of Art, Gallery Archives. Information about the renovations is located in the National Gallery of Art, Office of Architecture and Engineering

**Model**

Photographs of the original East Building model are located in the National Gallery of Art, Gallery Archives.

**Renovation/Repairs**

2011 Exterior recladding  
2016 Renovation and expansion (Work Area 9.1)

**Expansion**

2016 12,250 square feet of total additional space includes Roof Terrace and two skylit Tower galleries (Tower 1 and Tower 2). Construction of new floors in former Tower attic space above the original skylights for two new galleries with 23'6" ceiling height to new translucent glass skylight system above and state-of-the-art skylight system.

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