

# National Air and Space Museum

## Major Systems / Exterior Envelope Revitalization Project

### CLADDING EVALUATION UPDATE

**Basis of Design: 3" Thick Tennessee Pink Marble**  
(formal name is Holston Limestone)



#### Pros:

- Matches existing exterior cladding in kind (warm color tone and fine linear veining pattern modulates scale of monolithic façade) and intended to match NGA West Building
- Matches existing interior wall cladding that will remain
- High density limestone meets durability requirements with thickness at 3" and properly detailed wall section
- Stone has 100+ year longevity

**National Museum of American History (1964)**  
Holston Limestone ("Tennessee pink marble")

**National Gallery of Art**  
West Building (1937-1941); East Building (1978)  
Holston Limestone ("Tennessee pink marble")



**National Air and Space Museum (1976)**  
Holston Limestone ("Tennessee pink marble")

#### Cons:

- Additional production time over alternative stones

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**ST CLAIR LIMESTONE**

**Pros:**

- Fine, linear veining pattern comparable to TN Pink
- High density, durable limestone (100+ year stone longevity)
- Production time feasible

**Cons:**

- Light gray color tone does not match existing pink tone

*Other limestone considered (Silver Shadow)  
found to be too soft for use at building base*



**ECHO LAKE GRANITE**

**Pros:**

- Pink tone (when dry) comparable to TN Pink
- High density, durable granite (100+ year stone longevity)
- Production time feasible

**Cons:**

- Fine, linear veining pattern not present (very busy swirling texture that is less compatible with interior Tennessee Pink)
- Darkens considerably when wet



**ULTRA HIGH PERFORMANCE CONCRETE (UHPC)**

**Pros:**

- Color and tone customizable
- High density and durable
- Production time feasible
- Can incorporate recycled aggregate salvaged from existing cladding

**Cons:**

- Manufactured material relatively new – longevity promising but as yet unproven
- Man-made appearance may not be compatible with monumental, iconic buildings on the National Mall

*Other man-made materials considered:  
Engineered (sintered) stone; metals such as titanium. Longevity of these newer materials as yet unproven.*

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#### COLONIAL ROSE GRANITE

##### Pros:

- Pink tone comparable to TN Pink
- High density, durable granite (100+ year stone longevity)
- Bands of color accents could be arranged in a horizontal orientation
- Production time feasible
- Resistant to blue green algae and pollutants

##### Cons:

- Fine, linear veining pattern not present



Colonial Rose Granite Mock-up - NASM

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#### Colonial Rose Granite – Precedent Images



National Gallery of Art East Building Roof Terrace, Washington, DC. Completed in 2016. Colonial Rose Granite is the stone on the right and bottom of the image, with TN Pink visible at left.



BYU Museum of Art, Provo, UT. Completed in 1993.



National Japanese American Memorial, Washington, DC. Completed in 2000.

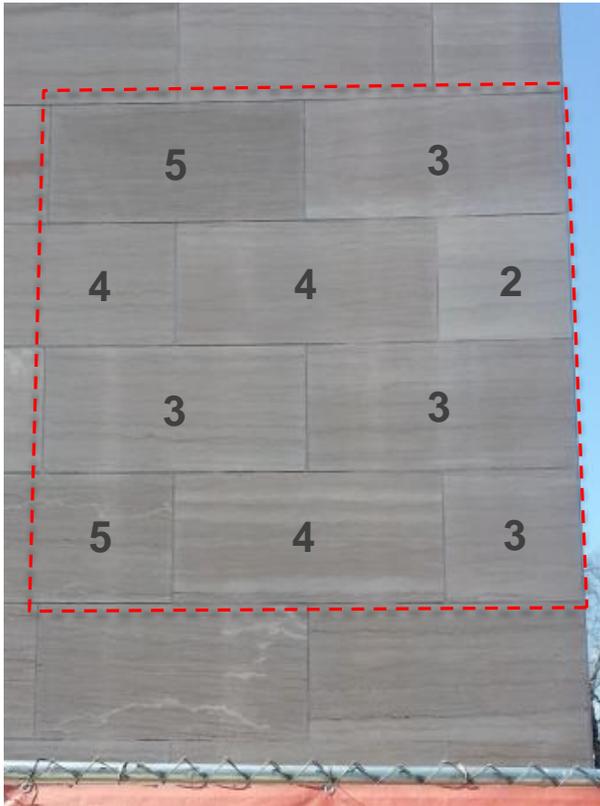


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### CLADDING EVALUATION UPDATE

**Existing TN Marble  
East Elevation**



**TN Marble Mockup  
North & East Elevations**



**TN Marble Mockup  
South & West Elevations**



### TENNESSEE MARBLE COLOR RANGE KEY

**1. Light Pink**

**2. Medium Pink**

**3. Dark Pink**

**4. Light Cedar**

**5. Medium Cedar**

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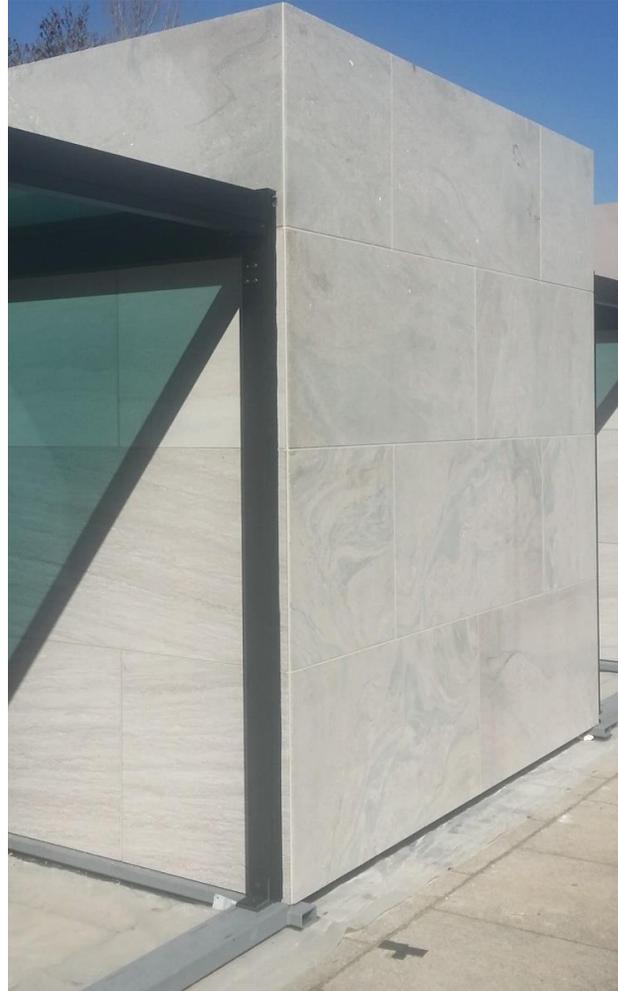
## Major Systems / Exterior Envelope Revitalization Project

### CLADDING EVALUATION UPDATE

**St Clair Mockup  
South & East Elevations**



**Echo Lake Mockup  
South & West Elevations**



**UHPC Mockup  
South & West Elevations**

