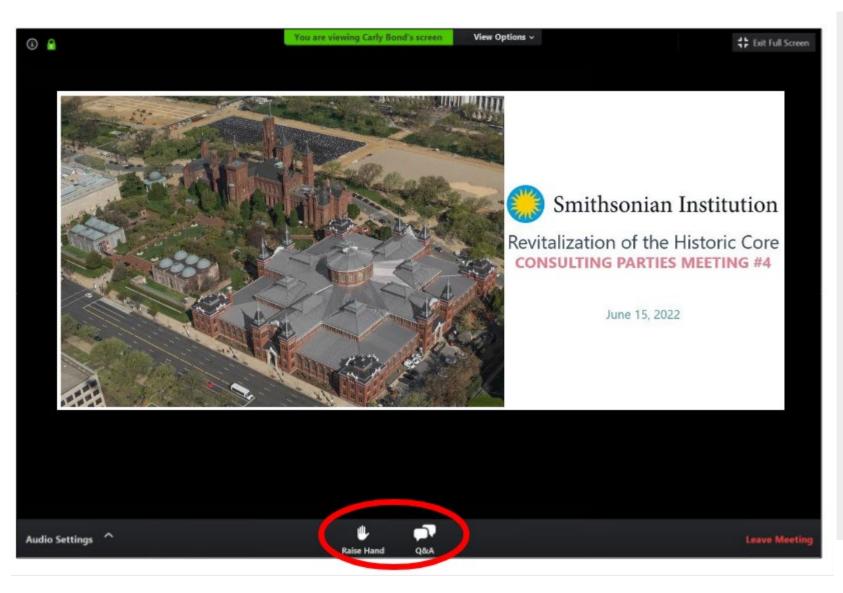
# Welcome!

## The meeting will begin momentarily.



#### How to Use Zoom Webinar:

- Zoom webinar will not permit access to your camera.
- Please submit comments/questions in writing through the Q&A function.
- Written comments/questions can be submitted at any time and will be answered or discussed at designated points during the meeting by the panelists.
- Click "Raise Hand" if you would like to speak your comments/questions at designated points with the panelists. A moderator will grant access to your device's microphone.





# Smithsonian Institution

## Revitalization of the Historic Core **CONSULTING PARTIES MEETING #4**

June 15, 2022

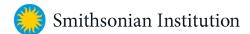
## **PANEL OF SPEAKERS**

## MODERATOR

Carly Bond, Historic Preservation Specialist, Smithsonian Facilities

## PRESENTERS / PANELISTS

Ronald S. Cortez, JD, MA, Under Secretary for Administration
Sharon Park, FAIA, Assoc. Director of Historic Preservation, Smithsonian Facilities
Ann Trowbridge, AIA, Associate Director for Planning, Smithsonian Facilities
Brenda Sanchez, FAIA, Sr. Design Manager, Smithsonian Facilities
Christopher Lethbridge, Architect/Program Manager, Smithsonian Facilities
Lauren Brandes, RLA, ASLA, Smithsonian Gardens
Matthew Chalifoux, FAIA, Sr. Historic Preservation Architect, EYP-Loring, LLC
Anthony Bochicchio, AIA, Project Manager, Silman
Faye Harwell, FASLA, Landscape Architect, RHI (Rhodeside and Harwell)

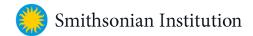


# AGENDA

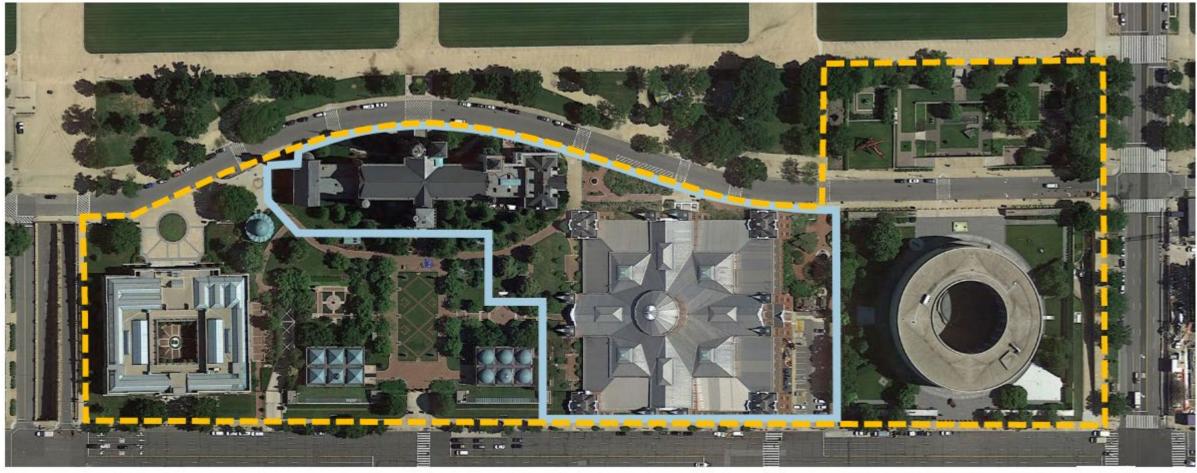
- Review RoHC Scope
- RoHC Scope Revitalize Castle
- Project Schedule
- Smithsonian Institution Building (SIB)
   Design Development
- SIB Monitoring Plan
- Next Steps

#### How to Use Zoom Webinar:

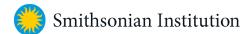
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#### **PROJECT SITE**







SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 5

N

#### REHABILITATION OF THE HISTORIC SMITHSONIAN INSTITUTION BUILDING AND ARTS & INDUSTRIES BUILDING



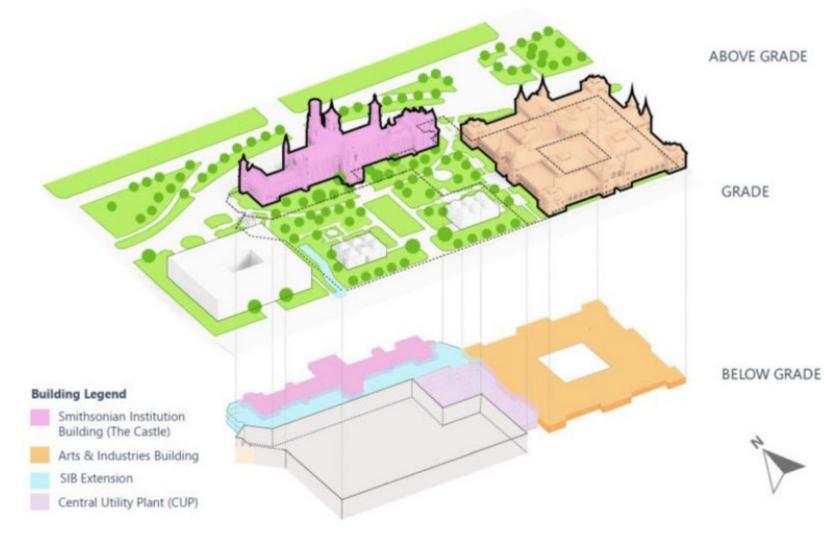
Rehabilitation of the historic buildings will address historic preservation issues, provide increased visitor access and use, and create interior environmental conditions that are appropriate for the programmed uses.

The rehabilitation of the buildings will focus on their periods of significance SIB (Castle): 1847- 1910 AIB: 1811- 1902



Smithsonian Institution

#### MODIFICATIONS TO THE SMITHSONIAN INSTITUTION BUILDING AND ARTS & INDUSTRIES BUILDING, BASEMENT LEVEL EXPANSION AND CENTRAL UTILITY PLANT



• The below grade construction will create areas for building systems and support spaces that will free up areas in the historic buildings for public uses.

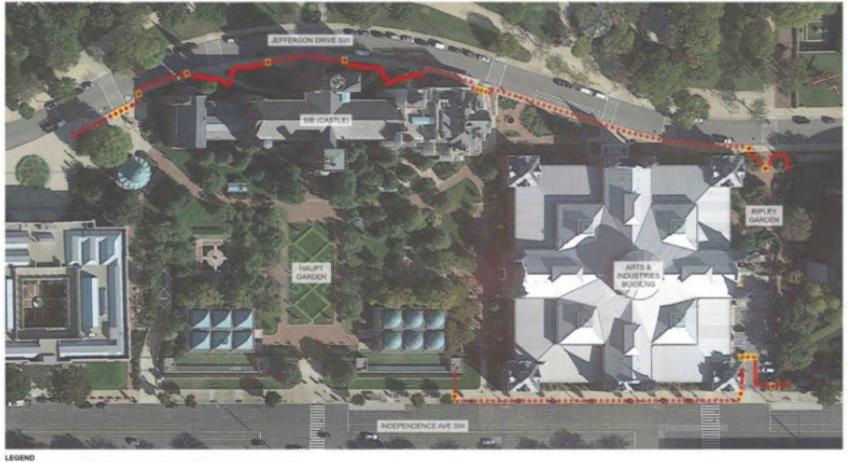
- The basement floor of the SIB (Castle) will be lowered approximately three feet to provide better space for public functions. Below the basement a mechanical level for equipment and systems routing will be created that aligns with the adjacent loading dock and B1 level.
- The Central Utility Plant (CUP) will initially serve the Historic Core but is sized to eventually serve all buildings in the South Mall Campus. The CUP will have two levels below grade with a smaller third level housing a rainwater harvesting cistern.
- A future public connection is enabled from the SIB (Castle) to the Quad on the B2 level.

#### BELOW GRADE CONSTRUCTION Schematic Design Layout



Smithsonian Institution

#### PERIMETER SECURITY Schematic Design Layout

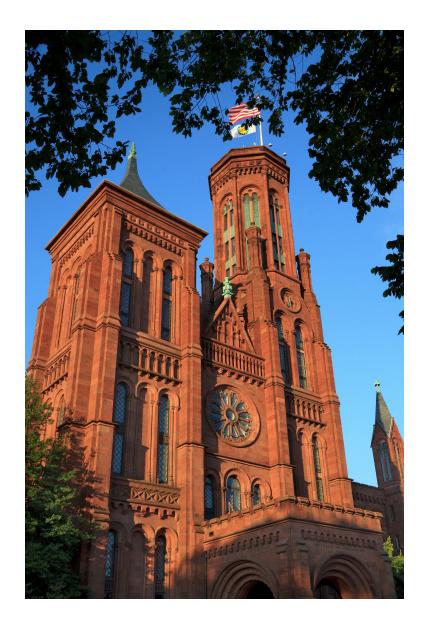


BOLLARDS 
 RETRACTABLE BOLLARDS

SECURITY WALL

- Bollards at curb to maximize security distance
- Utilize new and existing walls at Ripley Garden and SIB (Castle) North
- Retractable bollards at key locations to facilitate maintenance and emergency vehicle access

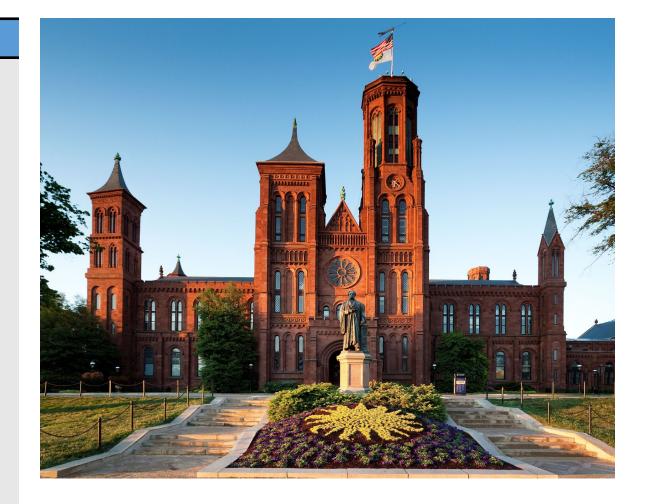
- Castle and AIB/Central Utility Plant will be separated into two projects
- AIB is under consideration for site selection for the two new SI museums – National Museum of the American Latino and Smithsonian American Women's History Museum
- RoHC Revitalize Castle scope design and construction will proceed first
- Portions of Castle will be available beginning in Spring 2026 for Semiquincentennial activities
- Castle may host exhibitions and events for SI and 2026 activities



# **RoHC Scope Change**

### Project 1 – Revitalize Castle Scope

- Enhanced Quad Loading Dock
- Castle B1 Service Connector
- Castle Mechanical Equipment and Distribution
   Level
- Quad Future B2 Public Connection
- Seismic Base Isolation and Control Joint
- Areaways, Egress Doors, Basement Windows
- Accessible Entrances
- Exterior Rehabilitation
- Interior Rehabilitation
- Blast Windows
- Roof Changes, Mechanical Vents, Elevator Penthouse/Dormer
- 4<sup>th</sup> Floor Egress
- Landscape around Castle
- Perimeter Security Jefferson Drive



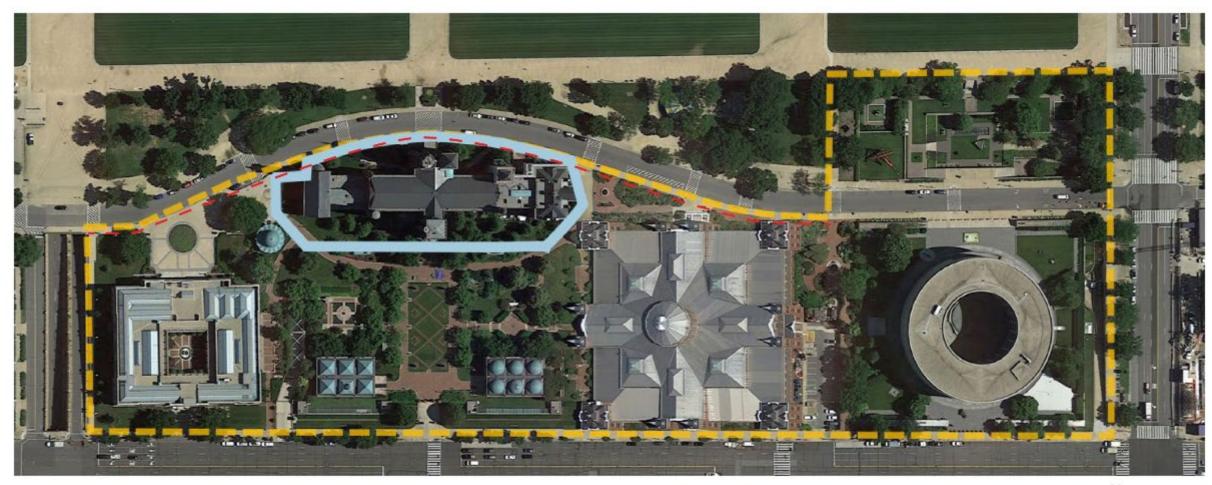
# **RoHC Scope Change**

### Project 2 – Arts & Industries Building Scope

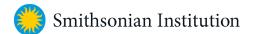
- AIB Revitalization
- Accessible Entrances
- Areaways
- Landscape around AIB
- Window Louvers and Rooftop Mechanical
- Central Utility Plant and Cooling Towers
- Perimeter Security Independence Avenue



**PROJECT SITE** 

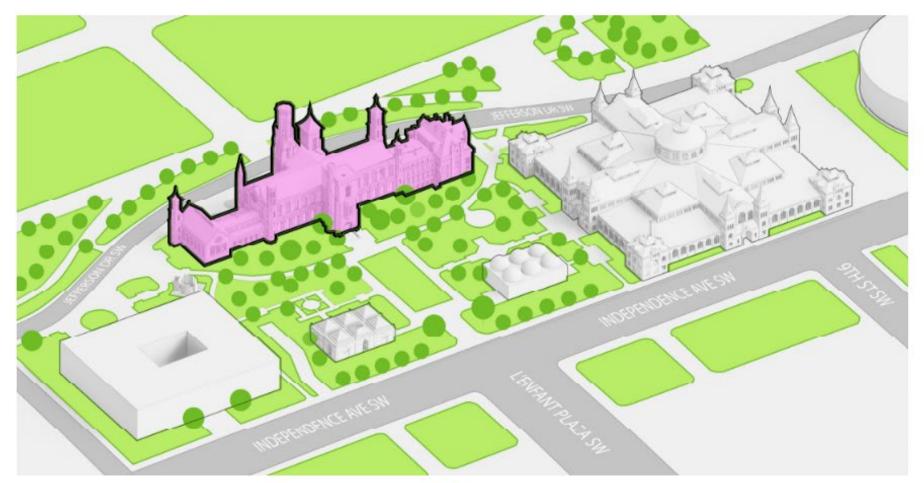






SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 13

**REHABILITATION OF THE SMITHSONIAN INSTITUTION BUILDING** 



Rehabilitation of the historic building will address historic preservation issues, provide increased visitor access and use, and create interior environmental conditions that are appropriate for the programmed uses.

The rehabilitation of the building will focus on the period of significance SIB (Castle): 1847-1910





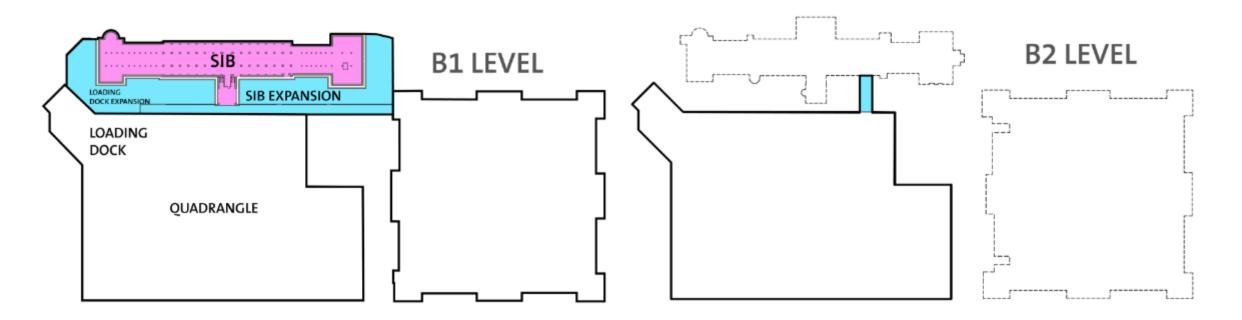
#### MODIFICATION TO THE SMITHSONIAN INSTITUTION BUILDING & BASEMENT LEVEL EXPANSION

- The below grade construction will create areas for building systems and support spaces that will free up areas in the historic building for public uses.
- The basement floor of the SIB (Castle) will be lowered approximately three feet to provide better space for public functions. Below the basement a mechanical level for equipment and systems routing will be created that aligns with the adjacent loading dock and B1 level.
- A future public connection is enabled from the SIB (Castle) to the Quad on the B2 level. This connection will become public under the future Quadrangle renovation project.





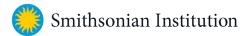
#### **BELOW GRADE CONSTRUCTION**



#### **Building Legend**



SIB Expansion



# **Questions or Comments**

### MODERATOR

**Carly Bond**, Historic Preservation Specialist, Smithsonian Facilities

#### PRESENTERS / PANELISTS

**Ronald S. Cortez**, JD, MA, Under Secretary for Administration **Sharon Park**, FAIA, Assoc. Director of Historic Preservation, Smithsonian Facilities

**Ann Trowbridge**, AIA, Associate Director for Planning, Smithsonian Facilities

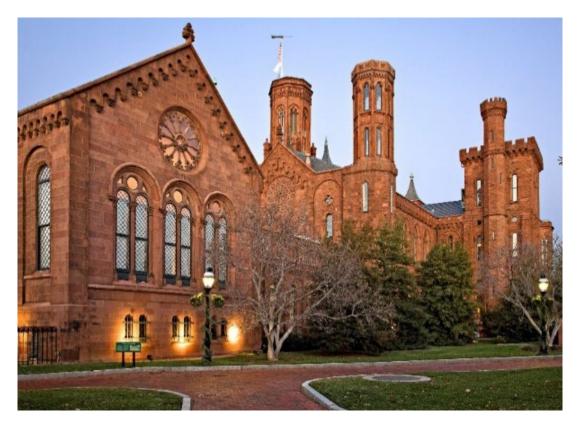
**Brenda Sanchez**, FAIA, Sr. Design Manager, Smithsonian Facilities

**Christopher Lethbridge**, Architect/Program Manager, Smithsonian Facilities

Lauren Brandes, RLA, ASLA, Smithsonian Gardens

**Matthew Chalifoux**, FAIA, Sr. Historic Preservation Architect, EYP-Loring, LLC

Anthony Bochicchio, AIA, Project Manager, EYP-Loring, LLC Nathan Hicks, PE, Senior Structural Engineer, Silman Faye Harwell, FASLA, Landscape Architect, RHI (Rhodeside and Harwell)

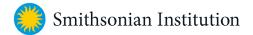


The following slides provide a reminder of the design development or updates for the following design actions:

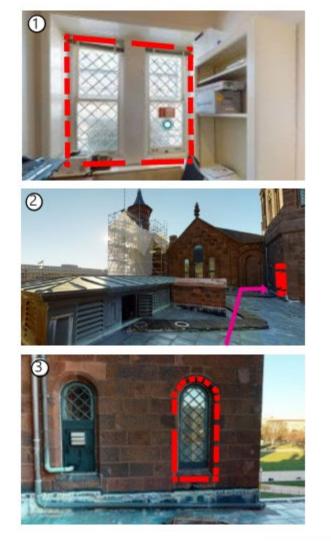
- 4th floor egress (CFA and NCPC approved)
- Elevator bulkhead east wing
- Roof Changes, Mechanical Vents, Elevator Penthouse/Dormer
- Castle Mechanical Equipment and Distribution Level
- Castle B1 Service Connector
- Quad Future B2 Public Connection
- Castle Window Replacement
- Exterior Rehabilitation
- Perimeter security alternatives Jefferson Drive
- Landscape around Castle
- Accessible Entrances
- Areaways, Egress Doors, Basement Windows
- Seismic design and exterior effects (seismic joint location diagram)

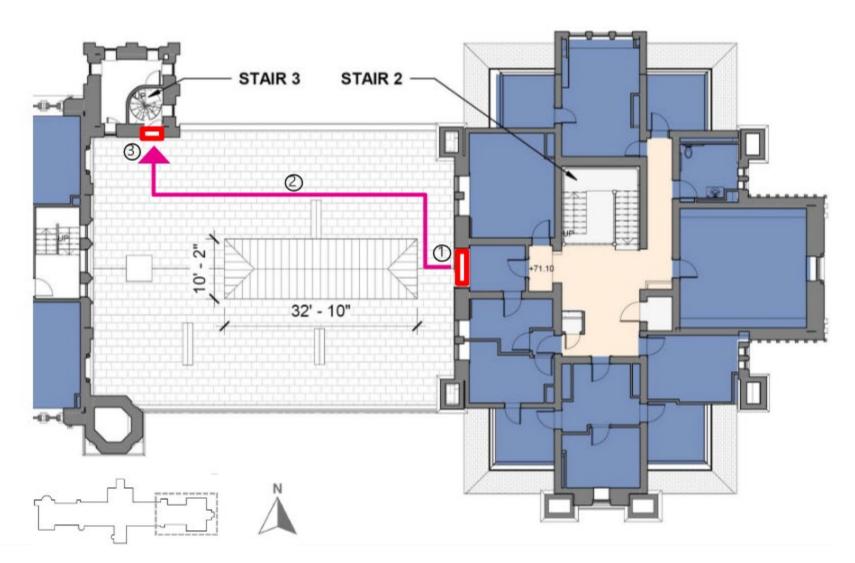


# **4<sup>TH</sup> FLOOR EGRESS**



# EAST RANGE 4<sup>TH</sup> FLOOR CORRIDOR – EXISTING CONDITIONS





EAST RANGE 4<sup>TH</sup> FLOOR CORRIDOR -**PREVIOUS DESIGN STUDY** 



Existing Louvered Penthouse

Option - Historic Rooftop Connector

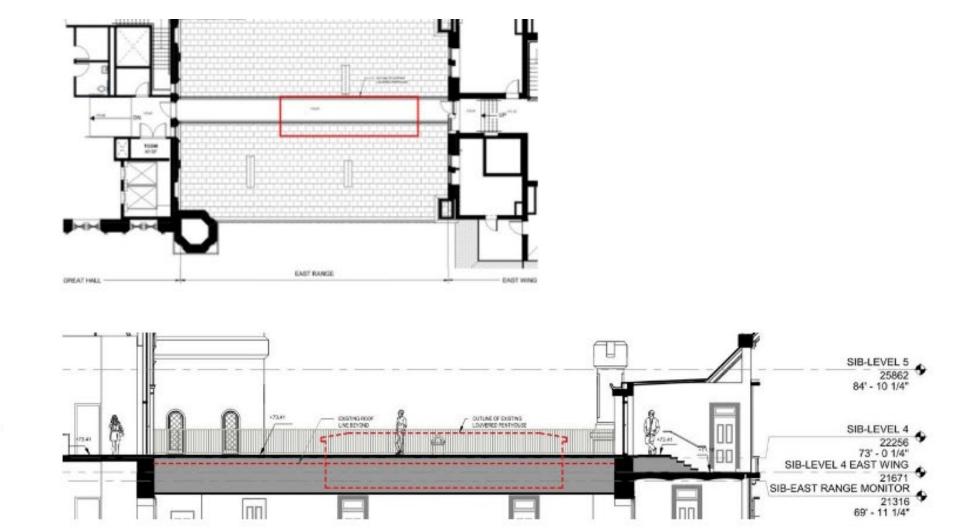
Option - Modern Rooftop Connector

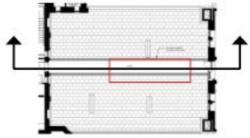
Proposed Rooftop Egress Walkway



#### EAST RANGE 4<sup>TH</sup> FLOOR CORRIDOR – PROPOSED DESIGN

NCPC and CFA reviewed

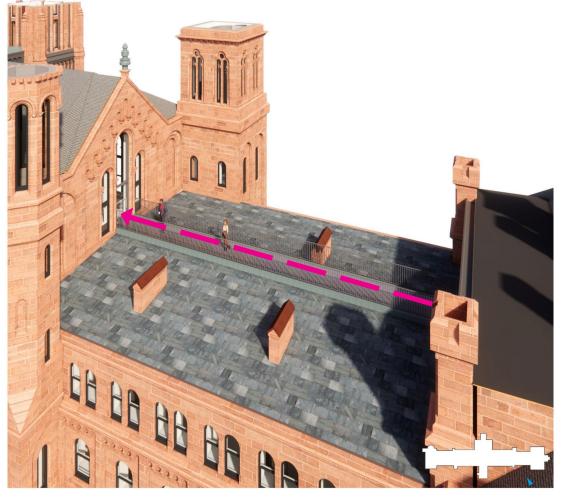




EAST RANGE 4<sup>TH</sup> FLOOR CORRIDOR – PROPOSED DESIGN



Southeast roof, existing egress path.

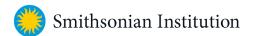


Southeast roof, proposed new egress connection.



EAST RANGE 4<sup>TH</sup> FLOOR CORRIDOR – PROPOSED DESIGN





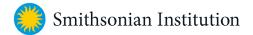
#### EAST RANGE 4<sup>TH</sup> FLOOR CORRIDOR – PROPOSED DESIGN

• Railing design under design development

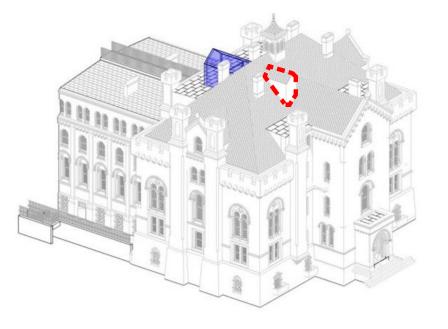




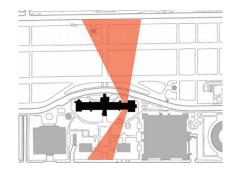
# **ELEVATOR AT EAST WING**



EAST WING ELEVATOR ROOF IMPACT PREVIOUS DESIGN



Southeast roof. Existing elevator penthouse to be removed (shown in dashed red lines).



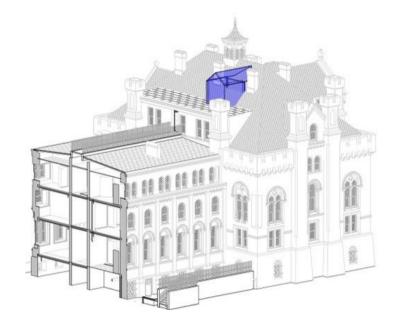
Smithsonian Institution



East wing from Haupt Garden.



Southeast roof. Existing elevator penthouse to be removed (shown in dashed red lines).



Southeast roof. New rooftop penthouse required for elevator overrun (shown in blue).



Southeast roof from Haupt Garden. New rooftop penthouse required for elevator overrun.

# EAST WING ELEVATOR ROOF IMPACT PROPOSED DESIGN

- Minimal penthouse apparent on the roof.
- Centered in the center of the roof to avoid impact to historic chimneys at the roof level.
- Existing elevator hoistway popup to be removed. Internal portion of hoistway can be used as utility riser.
- Cladding materials under design development



East wing from Folger Rose Garden.



East wing from Haupt Garden.

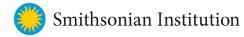


Southeast roof. Existing elevator penthouse to be removed (shown in dashed red lines).

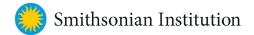


Southeast roof from Haupt Garden. New rooftop penthouse required for elevator overrun.

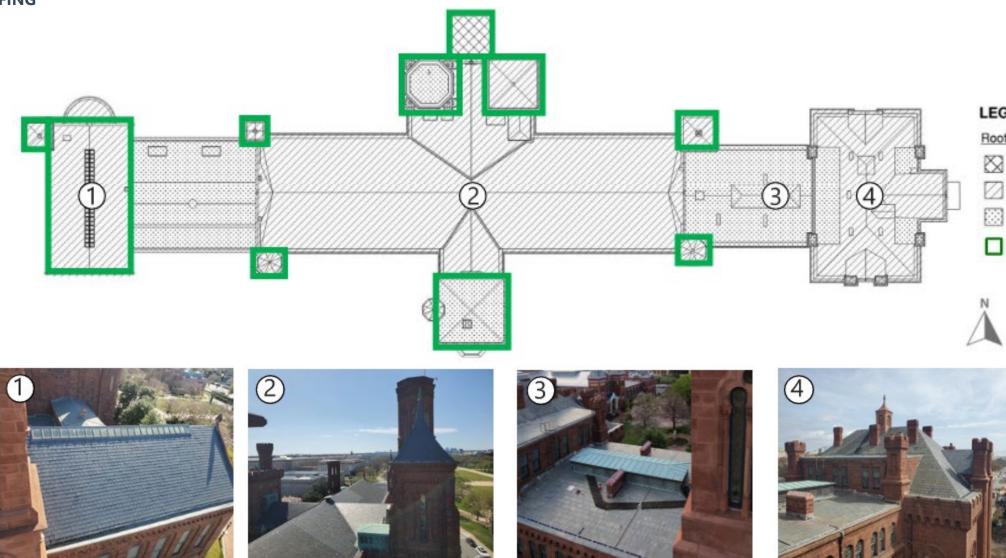




# **ROOF CHANGES**



ROOFING



#### LEGEND

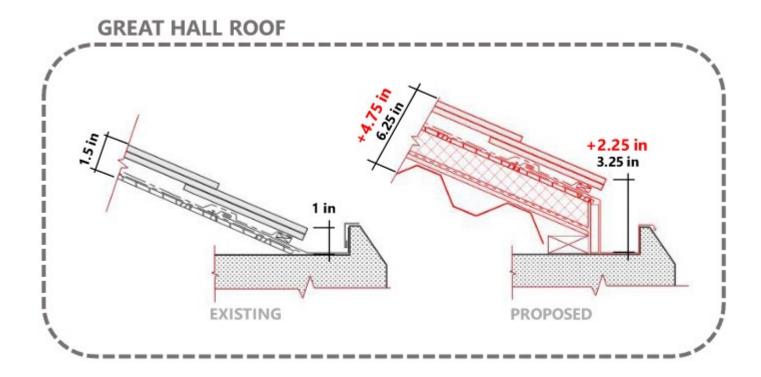
#### Roofing Type

Modified-Bitumen Roofing

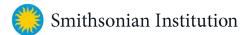
Slate Roofing

- Copper Roofing
- No Impact to Existing Thickness/Edge Detail Which Would be Visible from Grade

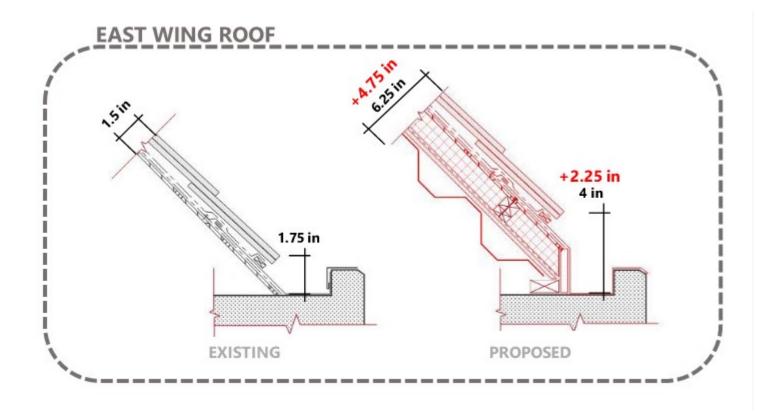
• Proposed dimensional change to accommodate insulation







• Proposed dimensional change to accommodate insulation



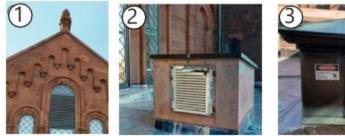




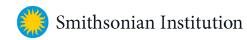
1000

**MECHANICAL SYSTEMS - OUTSIDE AIR AND EXHAUST** Existing Conditions

Overall roof plan, existing conditions



Great Hall roof East Wing roof louvers. East Range roof louvers. louvers.





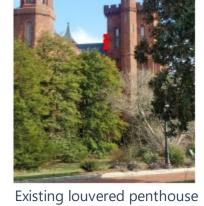
(5)

East Range roof louvers.



4

(6)





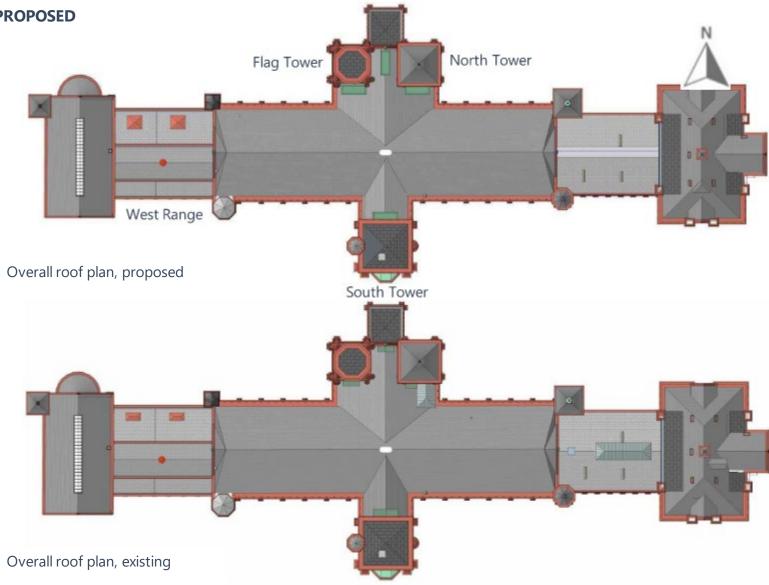
Existing copper clad Existing louve elevator penthouse behind located behin the North Tower. Tower.

Existing louvered penthous located behind the South Tower Existing louvered penthouse South Tower.

Tower. SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 33

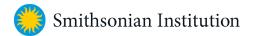
#### MECHANICAL SYSTEMS - OUTSIDE AIR AND EXHAUST PROPOSED

- West Range- Same location and height and width, deeper in plan
- Flag Tower- Slightly larger than existing in plan
- Between Flag and North Towers- Not visible, behind parapet wall
- **North Tower-** Replaces existing elevator penthouse, smaller than existing
- South Tower- Same size as existing

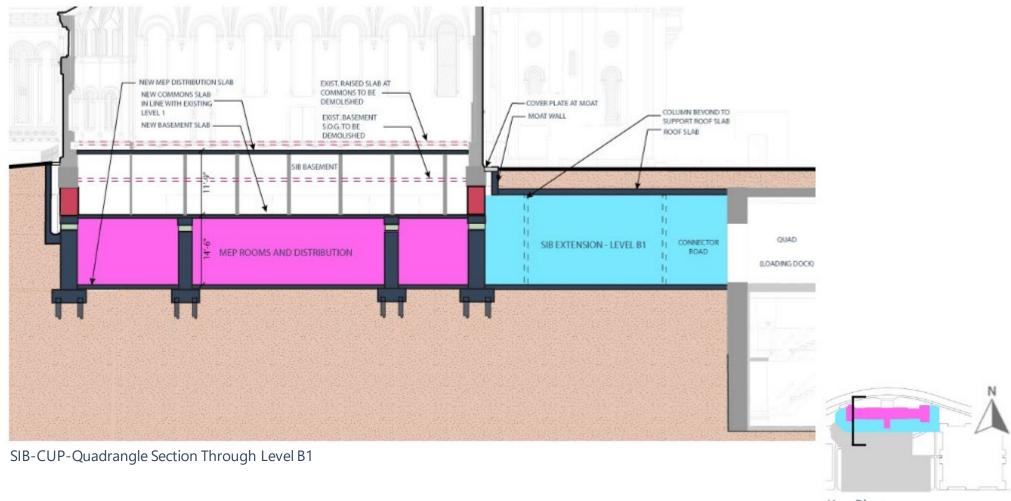




# MECHANICAL SYSTEMS AND DISTRIBUTION



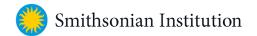
#### EXCAVATION BENEATH THE CASTLE FOR MECHANICAL SYSTEMS AND DISTRIBUTION



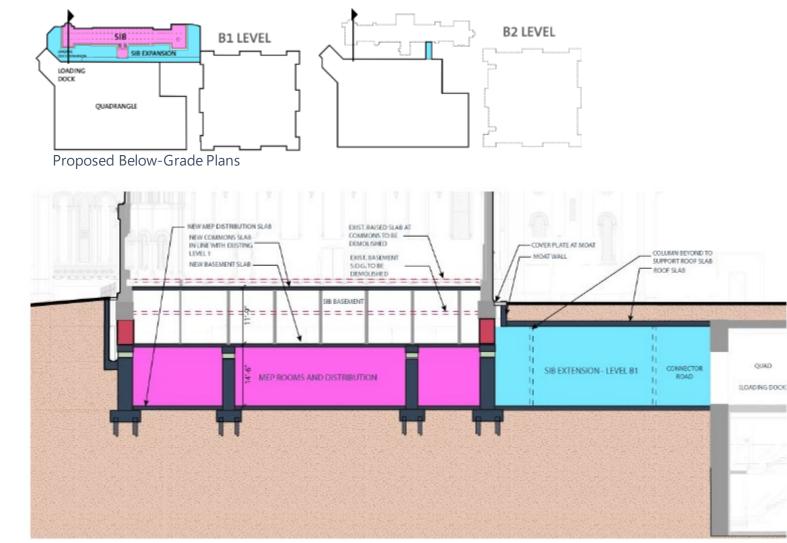
Key Plan



# **BELOW GRADE CASTLE EXPANSION AND POTENTIAL QUADRANGLE CONNECTION**



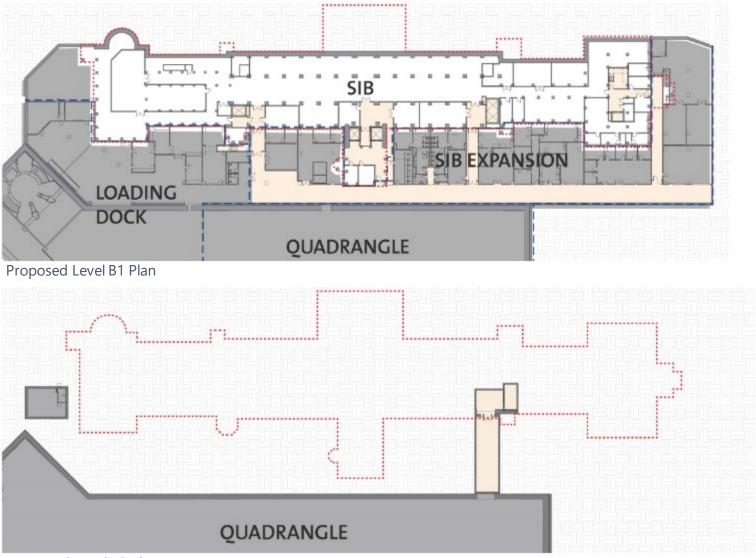
#### BELOW-GRADE – CASTLE EXPANSION (B1 LEVEL) AND CONNECTION TO QUADRANGLE (B2 LEVEL)



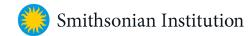
Below-Grade Section – Quadrangle, SIB, and SIB Extension



**BELOW-GRADE – CASTLE EXPANSION (B1 LEVEL) AND CONNECTION TO QUADRANGLE (B2 LEVEL)** 







**Program Legend** 

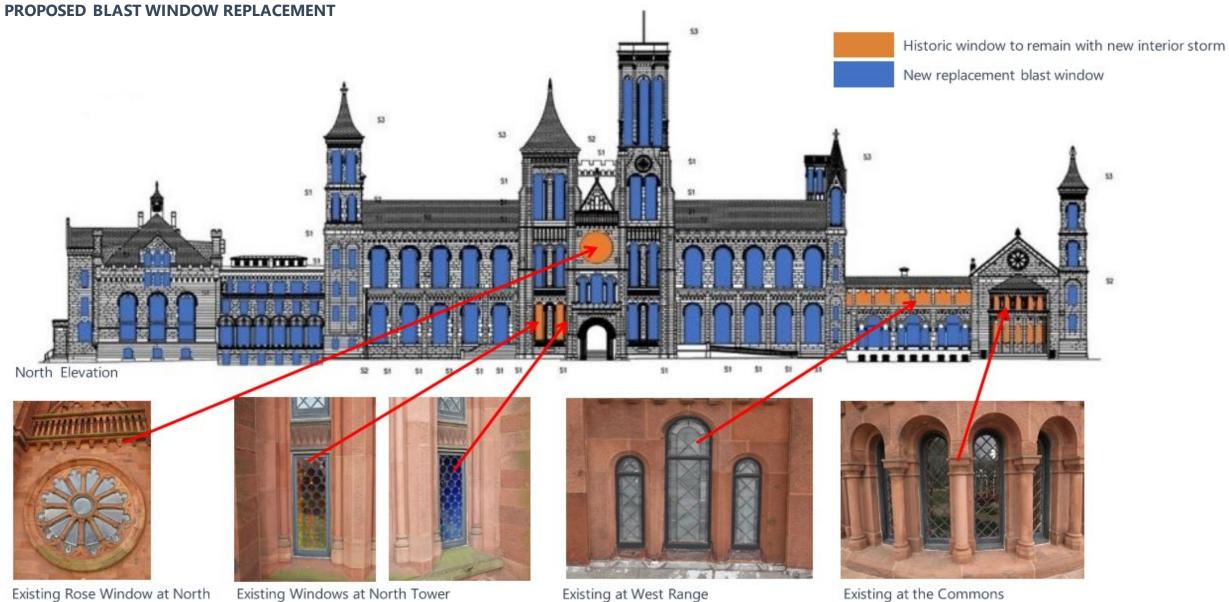
Expansion

Castle Footprint

SI Staff Circulation

## **CASTLE WINDOW REPLACEMENT**





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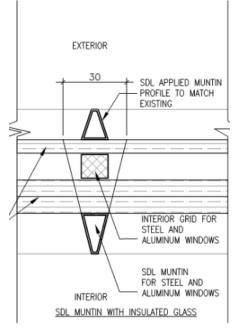
Existing windows a

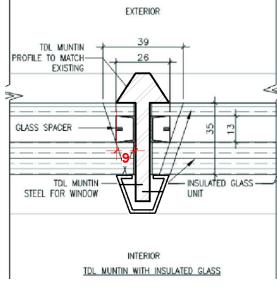
SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 41

## **CASTLE WINDOW REPLACEMENT**

True Divided Lites (TDL) vs Simulated Divided Lites (SDL)

- Blast windows will be steel or aluminum sash
- Steel windows offer thinner profiles and better ability to fit curved openings
- Historic window finish analysis pending





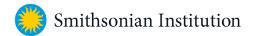
Simulated Divided Lite Muntin profile (dimensions in millimeters)

True Divided Lite Muntin Profile (dimensions in millimeters) Existing historic muntin profile at Commons (Apse)

Existing muntin profile (90s replacement) at Upper Great Hall windows



## **EXTERIOR MASONRY RESTORATION**



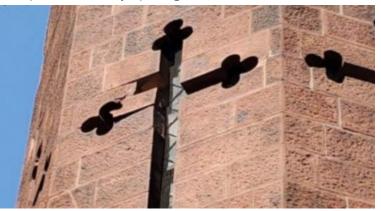
**EXTERIOR MASONRY RESTORATION** 



Example of Masonry Spalling & Detachment



Example of Masonry Spalling



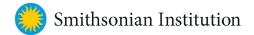
Example of Masonry Failure



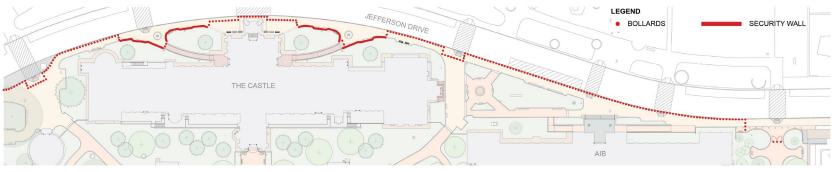
Stockpile of Sandstone



## **PERIMETER SECURITY**



#### **PERIMETER SECURITY – PREVIOUS CONCEPT**



PLAN



SECURITY WALL AT CASTLE



**BOLLARDS AT AIB** 

#### PREVIOUS CONCEPT AT JEFFERSON DRIVE

- The previously submitted strategy relied on bollards as security barriers along the curb of Jefferson Drive.
- Walls and raised planters were shown at the Castle flanking the North Tower and porte-cochère.
- At the Arts and Industries Building, the perimeter security features comprised mostly bollards at the curb.

#### **PERIMETER SECURITY – REVISED CONCEPT**

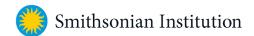


BOLLARDS

SECURITY WALL

#### **JEFFERSON DRIVE**

- The design has been updated per comments from consulting parties, including CFA and NCPC, to reduce the number of bollards and to minimize unnecessary grade changes and alterations to the Castle's setting.
- Proposed barriers are designed to minimize adverse impacts on the character of the National Mall and of the historic architecture along Jefferson Drive while also meeting the 2021 Interagency Security Committee Risk Management Process requirements.
- The design is informed by the National Capital Planning Commission's Urban Design Element of the Comprehensive Plan for the National Capital (2016), among other resources.



#### **PERIMETER SECURITY ELEMENTS**

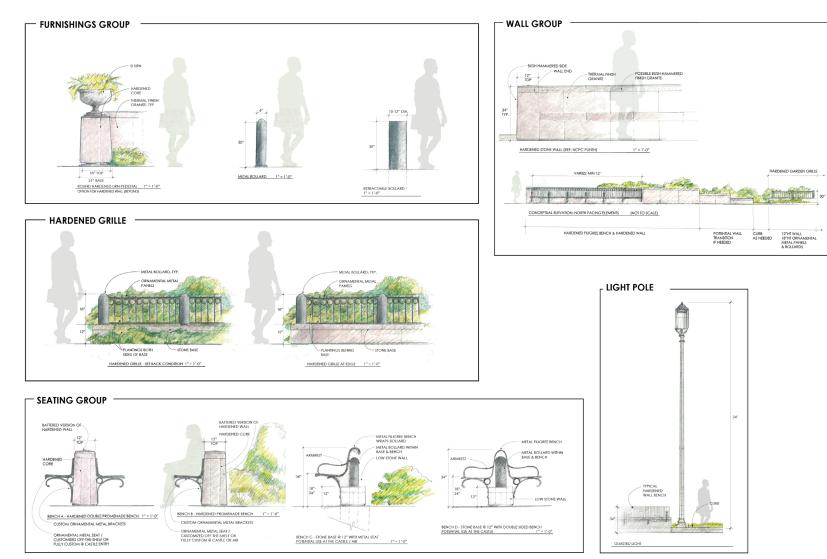


#### HISTORIC ARCHITECTURAL DETAILS

- Details from the site, from the architecture, and from Smithsonian Gardens Horticultural Artifacts Collection inspire and inform proposed perimeter security features.
- Pictured are existing fences at the Enid A. Haupt Garden and the Kathrine Dulin Folger Rose Garden, a cast stone lighting base and stone arched entryway at the AIB, a settee and arbor from the SG Collection, grille work at a window of the Freer Gallery of Art, and paving details.



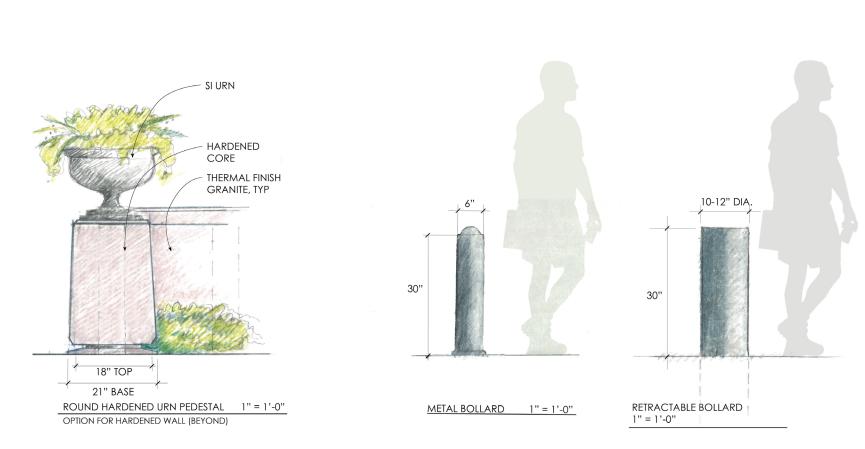
#### PERIMETER SECURITY ELEMENTS



#### **OVERVIEW**

- A collection of site furnishings, stone walls, strengthened seating elements, hardened ornamental metal grilles, and related objects.
- The materials will have a unified language of color, form, and texture.
- Generally, security features will be 30 inches to 34 inches in height spaced no more than four feet apart.
- The Olmsted light fixture, proposed for use along the south side of Jefferson Drive, is not considered a perimeter security feature, however it will be integrated into the perimeter security low stone walls in some locations.

#### **PERIMETER SECURITY ELEMENTS**

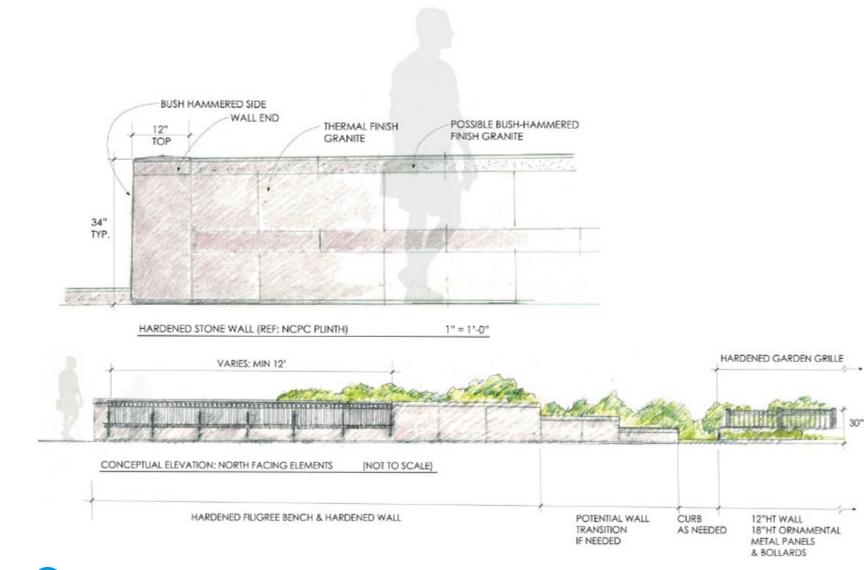


#### HARDENED OBJECTS

- Perimeter security objects include antiram bollards and hardened ornamental urn bases.
- Fixed bollards will be simple, metal bollards with articulated rounded tops.
- Retractable bollards will be required in areas where vehicular access may be needed.
- Bollards will be of similar color and finish for a cohesive appearance.
- Flanking the Castle's north tower, stone pedestals with hardened cores will be used for the display of objects from the Smithsonian Horticultural Artifacts Collection.

#### **PERIMETER SECURITY ELEMENTS**

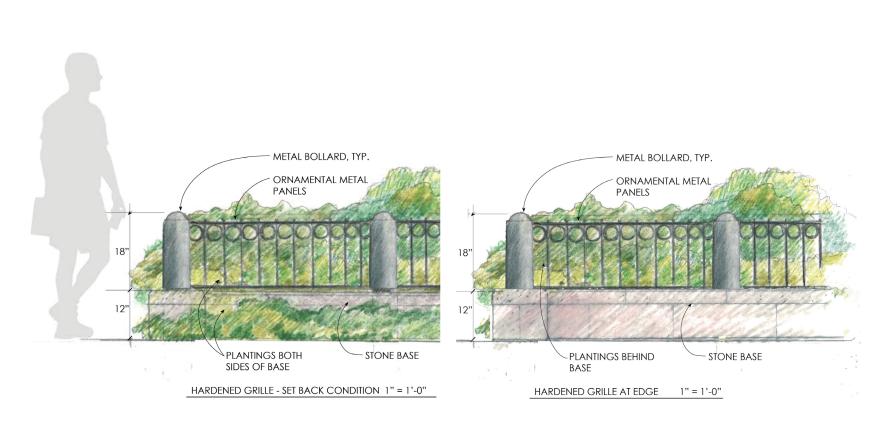
Smithsonian Institution



#### HARDENED STONE WALLS

- Hardened stone walls will serve as a unifying component of the perimeter security strategy.
- The walls will range in height from 12 inches to 34 inches and will follow the curves of Jefferson Drive and adjacent planted areas.
- Lower walls will support hardened grilles; taller walls will support seating and signage elements.
- The detailing of the granite walls is informed by bush-hammered stone features at the Castle. Thermal finishing is also being studied.
- Selection of granite alternatives and finishing will be undertaken during Design Development.

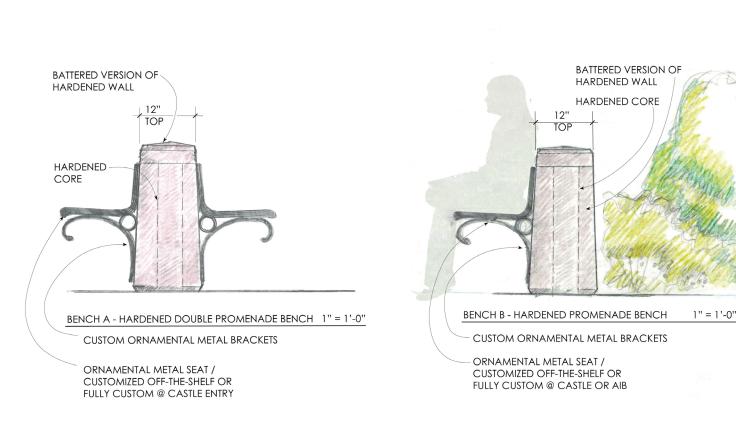
#### **PERIMETER SECURITY ELEMENTS**



#### HARDENED STONE WALLS WITH HARDENED GRILLES

- In many locations along Jefferson Drive, a 12-inch-tall stone wall will be employed as perimeter security.
- Walls will consist of granite finished to match that of the taller stone wall.
- Metal bollards incorporated into the wall, with a clear space between them of no greater than four feet.
- Ornamental metal panels will be erected between the bollards.
- Panels reflect the design of the fences that enclose the Haupt Garden, with metal pickets and circular accents. In the section west of the Castle, the accents are proposed to be diamonds to reflect detailing found at the Freer Gallery.

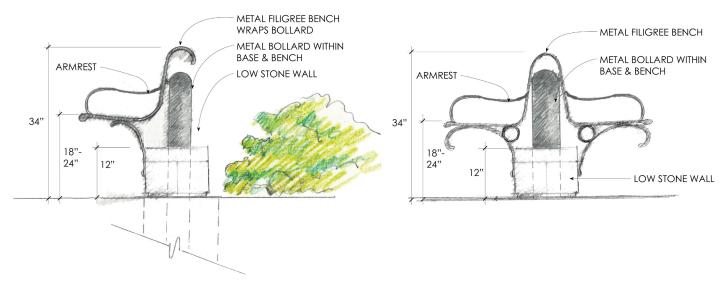
#### **PERIMETER SECURITY ELEMENTS**



#### HARDENED SEATING ELEMENTS

- Strengthened seating elements will comprise metal benches attached to the 34-inch-tall, hardened stone walls.
- These elements will be inserted at strategic locations along the entire length of the project to create a consistent and uniform aesthetic.
- The benches may be off-the-shelf or custom elements.
- A double-sided bench is anticipated at the porte-cochère entrance to the Castle.
   Single-sided bench units are suggested along planted areas.

#### **PERIMETER SECURITY ELEMENTS**



 BENCH C - STONE BASE @ 12" WITH METAL SEAT

 POTENTIAL USE AT THE CASTLE / AIB
 1" = 1'-0"

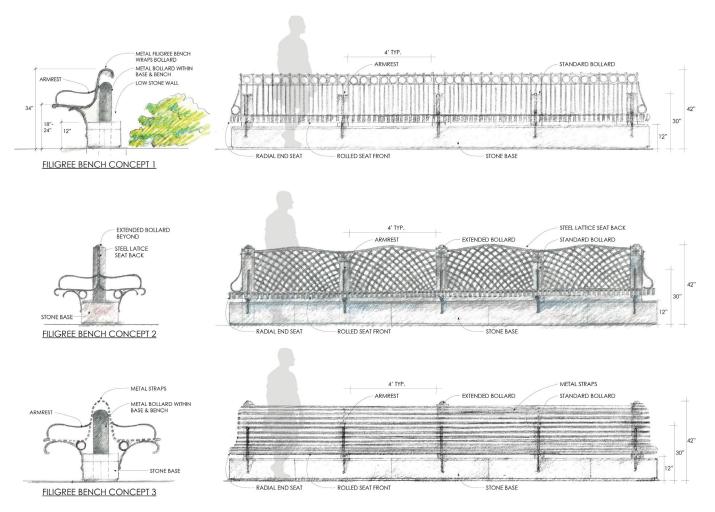
BENCH D - STONE BASE @ 12" WITH DOUBLE SIDED BENCH POTENTIAL USE AT THE CASTLE 1" = 1'-0"

#### HARDENED SEATING ELEMENTS

- Flanking both sides of the Castle's portecochère, alternative bench designs are being studied to provide greater transparency in this critical area.
- The alternatives consist of a low stone wall with metal bollards spaced to meet the security design criteria. Attached to the bollards and wrapping over top of them, a metal filigree bench will extend the full length of the low stone wall.
- The benches may face north to provide views of the National Mall or they may be designed to be double-sided, providing views of both the Mall and the Castle.



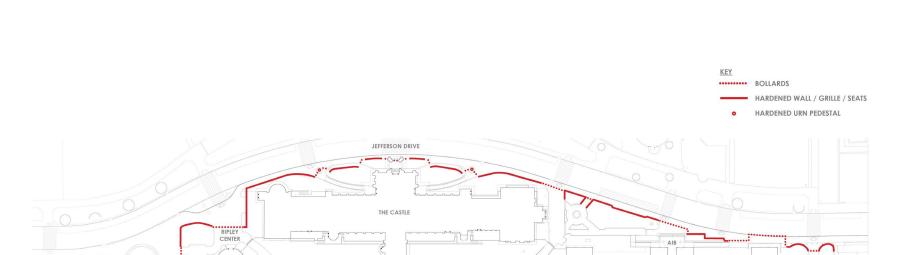
#### **PERIMETER SECURITY ELEMENTS**



#### HARDENED SEATING ELEMENTS

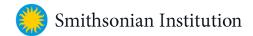
- The proposed filigree bench concepts incorporate bollards into the design. The armrests of the bench are associated with the locations of the bollards and will be spaced just over four feet apart (the bollards are four-feet clear from edge to edge).
- Alternative bench designs, such as the concepts pictured here, will be studied further during the Design Development phase of the project.

#### **PERIMETER SECURITY – 12TH STREET TO RIPLEY GARDEN**



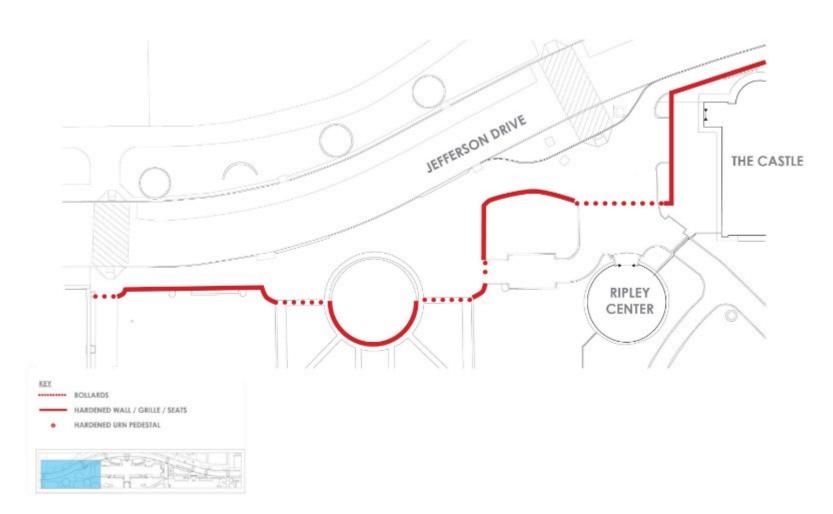
#### **OVERALL STRATEGY**

- A unified system of perimeter security interventions establish an appropriate setback from the buildings while providing integrated experience.
- The design is intended to balance protection of the historic buildings with the protection of pedestrians at key entry and queuing locations.
- Except where space prohibits, the perimeter security interventions will be placed at the back of the sidewalk that parallels the south side of Jefferson Drive, rather than at the curb. This provides the opportunity to integrate the various components of the perimeter security system with the hardscape and vegetated areas of the project area.
- At the east end of the project area, existing site walls at the Ripley Garden will be used as perimeter security elements.



**BUILDING PROTECTION FOCUS / SECURITY AS FURNITURE** 

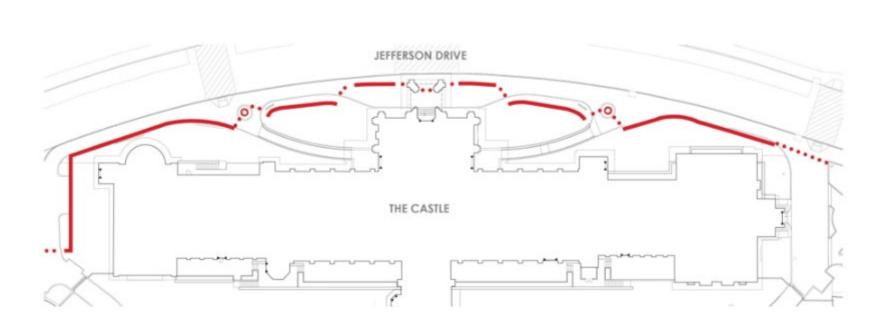
#### PERIMETER SECURITY – SITE FURNITURE AS BUILDING PROTECTION



#### FREER GALLERY TO THE CASTLE

- At the west end of the project area, the preferred strategy utilizes low stone walls and hardened grilles sited along an existing lawn panel at the back of the sidewalk.
- At the Freer Gallery forecourt, the existing planted circle and pavement will be retained, with a hardened grille located along the southern half of the planted circle.
- Retractable bollards accommodate controlled vehicular access to the Freer Gallery.
- A row of bollards will be inserted at the existing paved area to the west of the Castle.
- Where the paved area transitions to a planting bed at the base of the Castle, a low-stone wall and hardened grille will be installed.

#### PERIMETER SECURITY – SITE FURNITURE AS BUILDING PROTECTION



#### THE CASTLE

- Except for the area associated with the Castle's porte-cochère where setback from Jefferson Drive is minimal, the proposed interventions are located where the Jefferson Drive sidewalk transitions to the Smithsonian's planted areas.
- The interventions are a combination of low stone walls, hardened grilles, bollards, hardened urn bases, and custom seating elements.

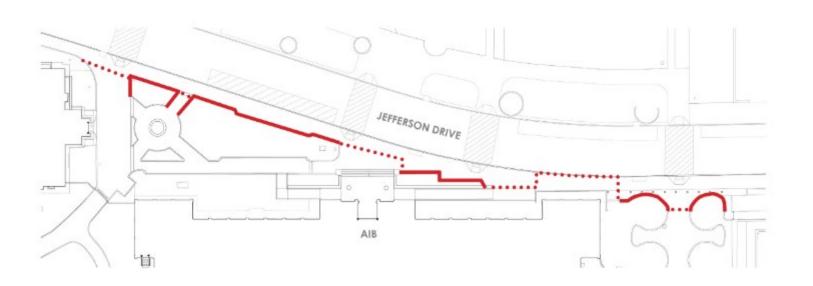


HARDENED WALL / GRILLE / SEATS

KEY

BOLLARDS

#### **PERIMETER SECURITY – SITE FURNITURE AS BUILDING PROTECTION**





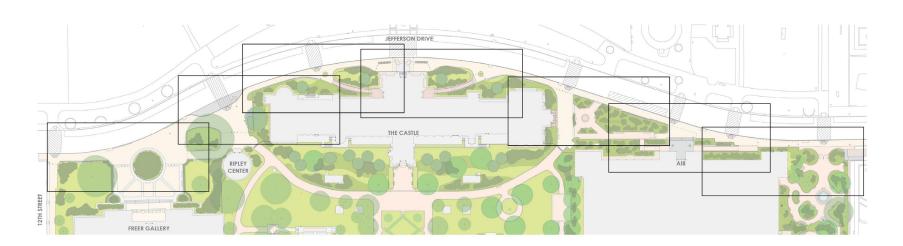
KEY



#### **CASTLE TO RIPLEY GARDEN**

- To the east of the Castle in front of the Arts and Industries Building (AIB), a mix of low stone walls with hardened grilles, hardened seating elements, and steel bollards will be employed.
- These elements will be located at the back of sidewalk and follow the existing geometries of much of the Folger Rose Garden.
- Due to the minimal setback of the east part of the AIB, a short array of metal bollards will be located at the curb.
- At the east end of the site, the existing masonry planter walls at the Mary Livingston Ripley Garden will serve as perimeter security elements.
- At the pedestrian entry to the Ripley Garden, retractable bollards and pedestrian gates will provide additional security.

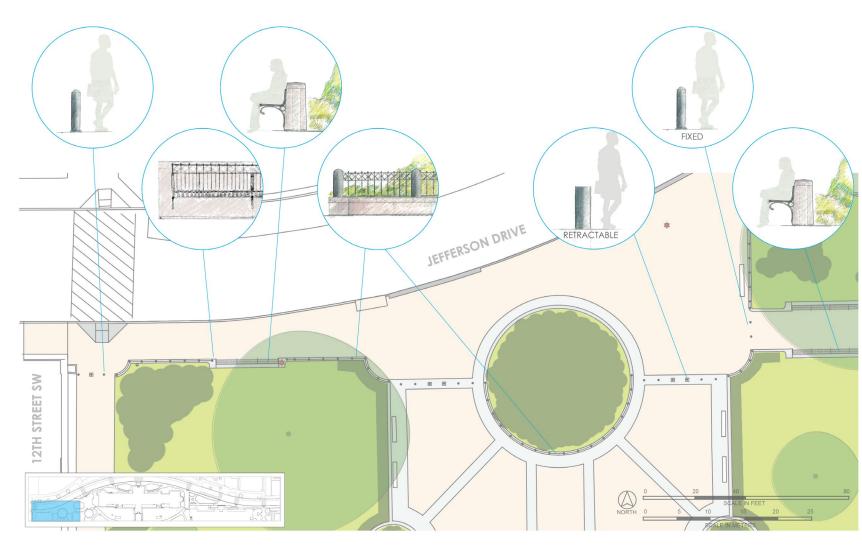
#### **PERIMETER SECURITY – 12TH STREET TO RIPLEY GARDEN**



#### **OVERALL PLAN**

- As an integrated and cohesive landscape intervention, the perimeter security elements will take the form of site furnishings and garden walls occurring along transition zones between hardscape and vegetated areas.
- These elements, sited to protect buildings, occupants, and queuing areas, will be incorporated into the streetscape as a series of landscape architectural interventions occurring at strategically selected, context sensitive transition zones.
- Graphic enlargements from west to east are shown on the following slides, which detail the various perimeter security elements as they will be used along the south side of Jefferson Drive.

#### **PERIMETER SECURITY – DETAILED PLANS**



#### **12th STREET TO THE FREER GALLERY**

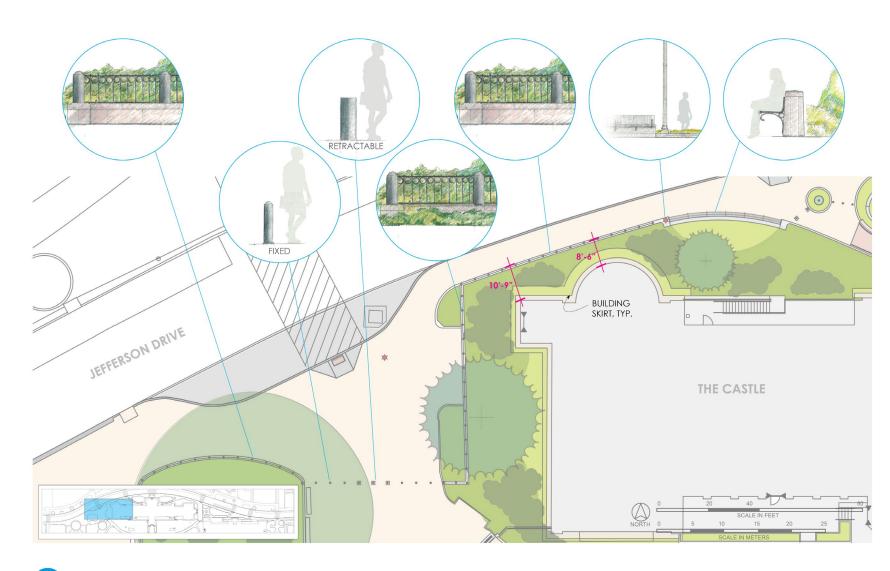
- From the parapet of the 12th Street Expressway, bollards will be employed at the sidewalk that leads from Jefferson Drive to Independence Avenue.
- At the existing lawn to the west of the Freer Gallery forecourt, a new low stone wall and hardened grille and a hardened seating element will be installed.
- A sequence of fixed and retractable bollards will be installed along a paving band aligned to the center of the planted circle in the forecourt.
- The planted circle will be retained, as will its existing curb on the north side; on the south side of the circle, a low stone wall with hardened grille will serve as perimeter security.

#### **RENDERED VIEW AT THE FREER GALLERY OF ART**





#### **PERIMETER SECURITY – DETAILED PLANS**

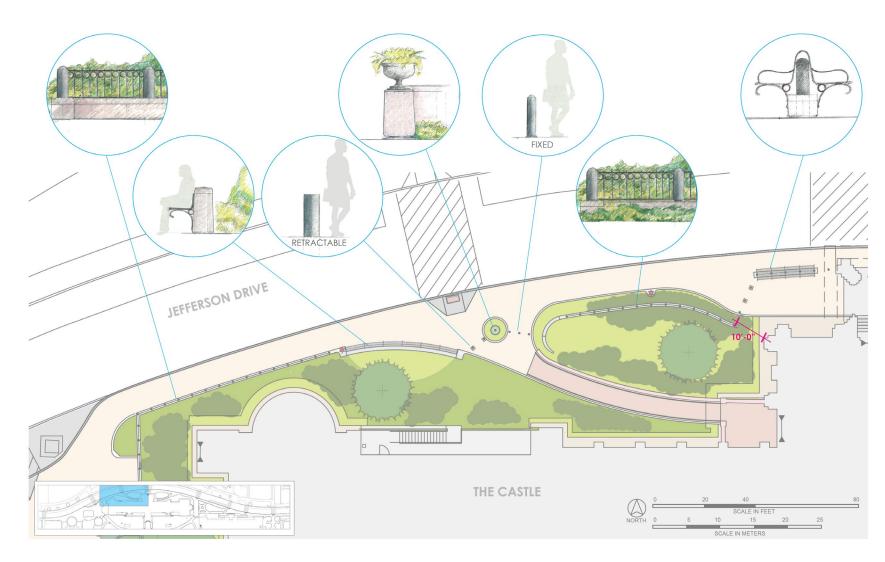


## FREER GALLERY OF ART TO THE CASTLE WEST

- Fixed and retractable bollards will be installed in the paved area to the west of the Castle.
- At the transition from the hardscaped area to the planting bed, a north-south low stone wall with hardened grille will be installed. It will extend to the sidewalk along the south side of Jefferson Drive where it will turn to the east.



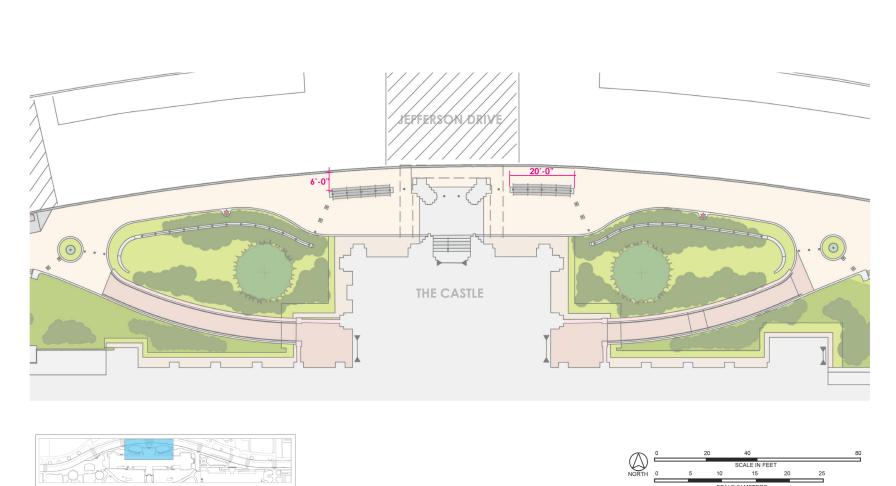
#### **PERIMETER SECURITY – DETAILED PLANS**



#### **CASTLE WEST**

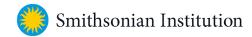
- A low stone wall with hardened grille and a hardened seating element will mark the transition from hardscape to vegetated areas, with plantings located to the south of the wall.
- A hardened pedestal in a planted circle will be installed. The hardened pedestal will function as a fixed bollard, with an urn placed atop it.
- Retractable bollards will be installed in this area to provide controlled access for routine maintenance vehicles.
- To the east of the pedestrian walkway to the North Tower, a low stone wall with hardened grille will follow the existing geometry modified to accommodate new seismic protection construction.

#### **PERIMETER SECURITY – DETAILED PLANS**

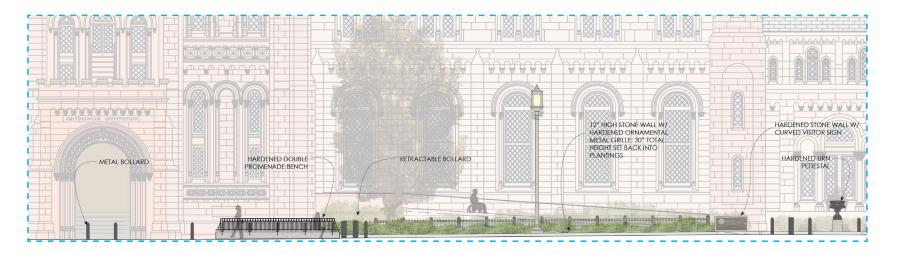


#### **CASTLE CENTER AND PORTE-COCHERE**

- Low stone walls with hardened grilles are installed within the planting beds, with low plantings to the north of the walls and slightly taller plantings to the south of them.
- The walls terminate at arcing, slightly taller walls that will be used for building signage, replacing existing freestanding signs.
- At the porte-cochère where standoff distance is minimal, a combination of fixed and retractable bollards and hardened seating elements will be used.
- Fixed bollards will be installed to provide protection of the porte-cochère columns.
- Flanking the east and west sides of the porte-cochère, freestanding walls with integrated hardened seating elements will be installed.

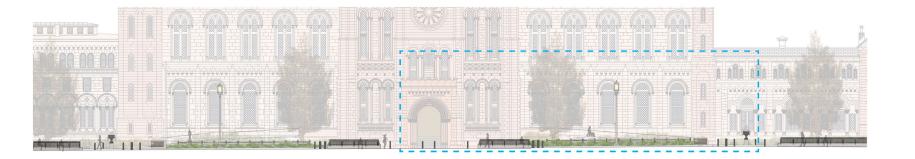


#### **PERIMETER SECURITY – DETAILED PLANS**



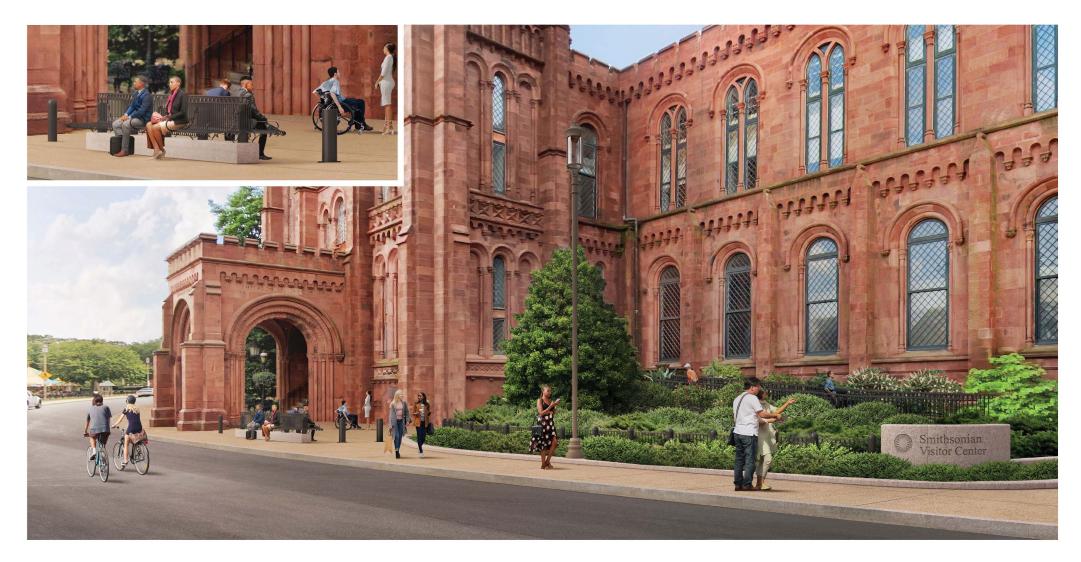
#### **CASTLE CENTER**

- Low stone walls with hardened grilles are set into the planted areas, with vegetation planted on both sides of them.
- Bollards are used only minimally to cross from the planted areas to the curb near the porte-cochère and at the pedestrian walks.
- Hardened benches and hardened urn bases serve as integrated perimeter security elements.



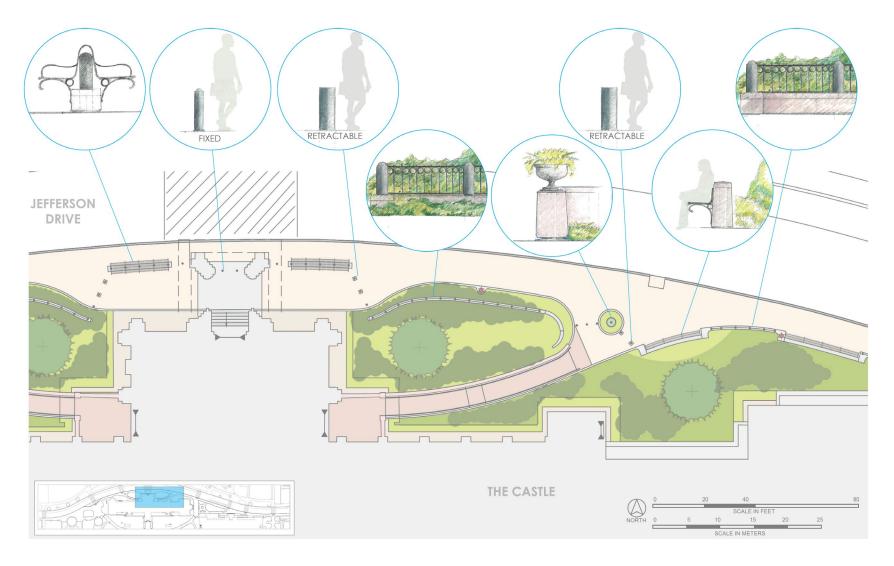
Smithsonian Institution

#### **RENDERED VIEW AT CASTLE CENTER**





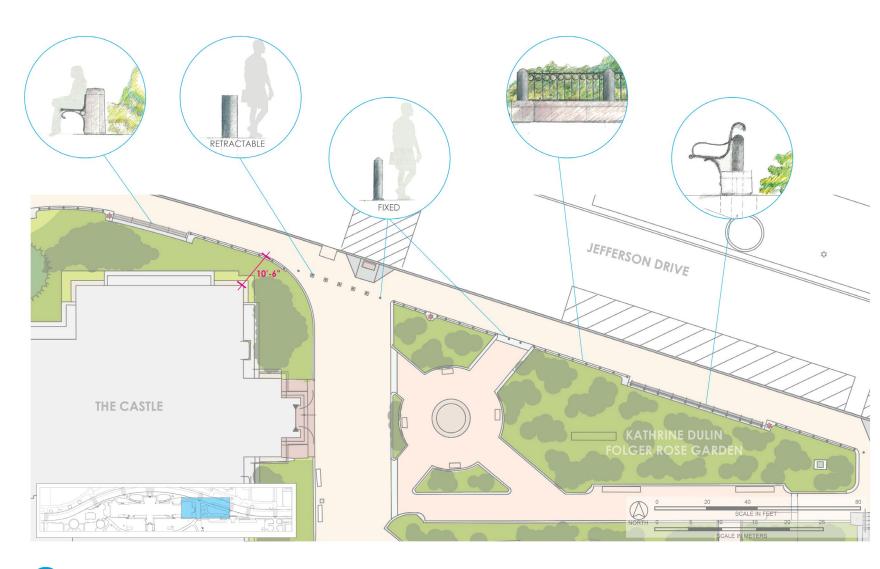
#### **PERIMETER SECURITY – DETAILED PLANS**



#### **CASTLE EAST**

- The perimeter security interventions to the east of the porte-cochère are like those to the west of it.
- Hardened seating elements, fixed and retractable bollards, wayfinding signage, a hardened urn pedestal, and low stone walls with hardened grilles are integrated into the landscape.
- The low stone wall to the south of the hardened urn pedestal will step down to meet the new cheek walls adjacent to the pedestrian walk that provides access to the east door of the North Tower.

#### **PERIMETER SECURITY – DETAILED PLANS**



#### **CASTLE EAST TO FOLGER ROSE GARDEN**

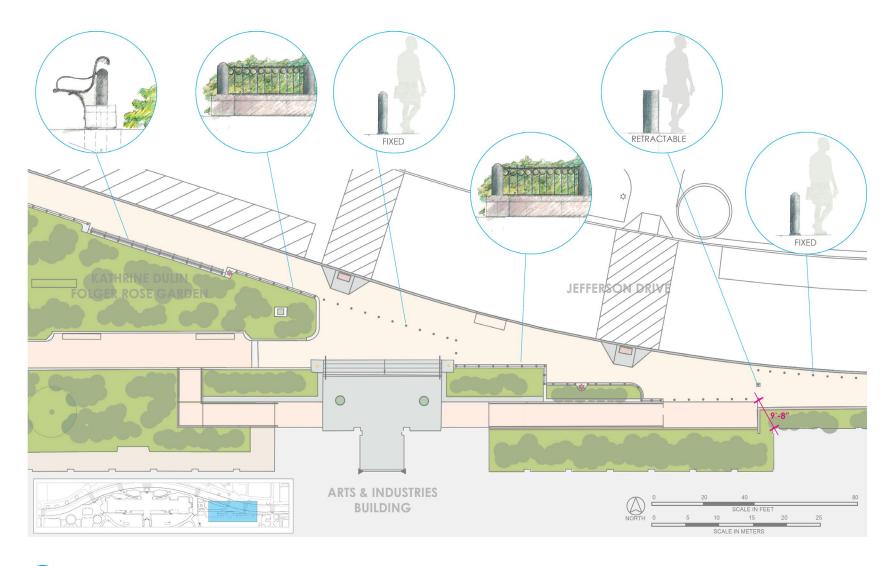
- Where the perimeter security elements extend east of the Castle, fixed and retractable bollards will be installed into the sidewalk that extends southward from Jefferson Drive to the Haupt Garden.
- At the triangular planting bed of the Folger Rose Garden, a low stone wall with hardened grille will replace an existing granite curb.
- Approximately midway along the low stone wall in the location of existing benches, a hardened seating element will be installed.

**RENDERED VIEW AT THE AIB** 





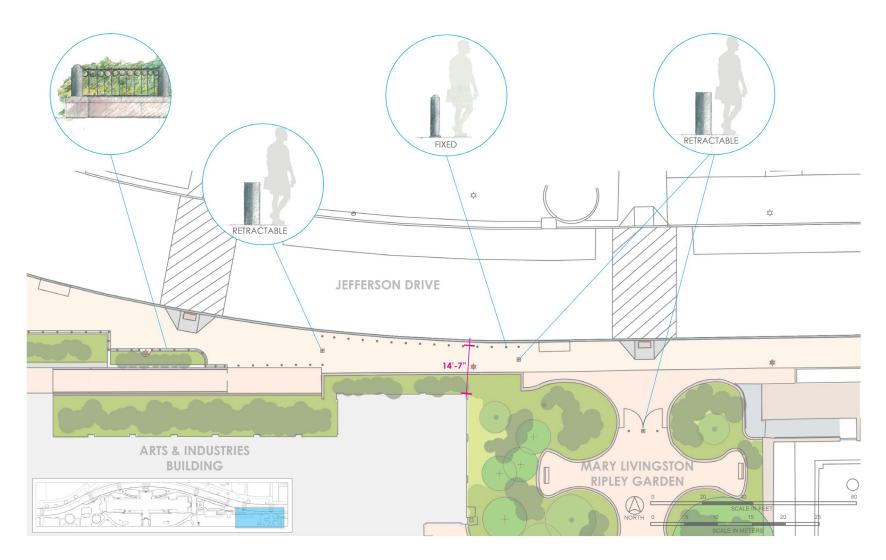
#### **PERIMETER SECURITY – DETAILED PLANS**



#### **ARTS AND INDUSTRIES BUILDING**

- Extending from the triangular planting bed, fixed and retractable bollards will be installed into the sidewalk adjacent to an existing curbcut and crosswalk.
- To the east of the AIB north entrance steps, a low stone wall with hardened grille will be installed, with plantings located to the south of it.
- Anti-ram bollards will be installed at the end of the proposed ramp that will provide access to the AIB north entrance from the east.

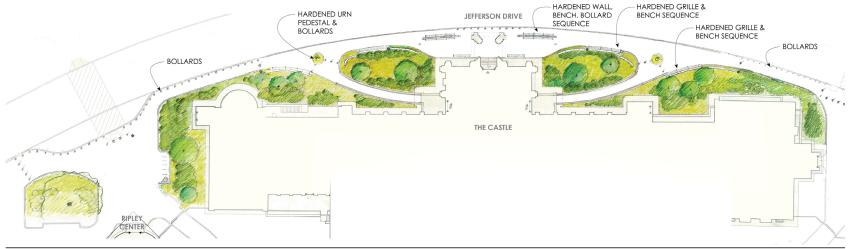
#### **PERIMETER SECURITY – DETAILED PLANS**



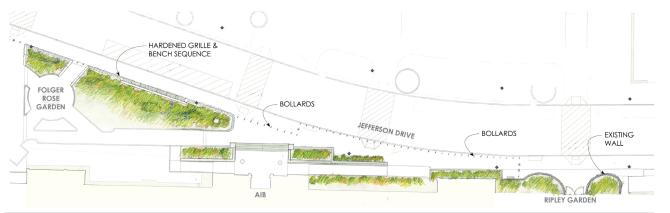
#### **AIB TO RIPLEY GARDEN WALL**

- Due to the minimal setback of the AIB from the Jefferson Drive curb, a short array of fixed and retractable bollards will be set along the curb.
- To the east of this array, the existing masonry walls of the Ripley Garden raised planting beds will serve as perimeter security elements. Minimal modifications to those walls will be required for this intervention.
- At the Ripley Garden, a new pedestrian gate and a combination of fixed and retractable bollards will be installed.

#### ALTERNATIVE STUDIES: PERIMETER SECURITY DETAILED PLANS



OVERALL SITE PLAN WEST - CASTLE

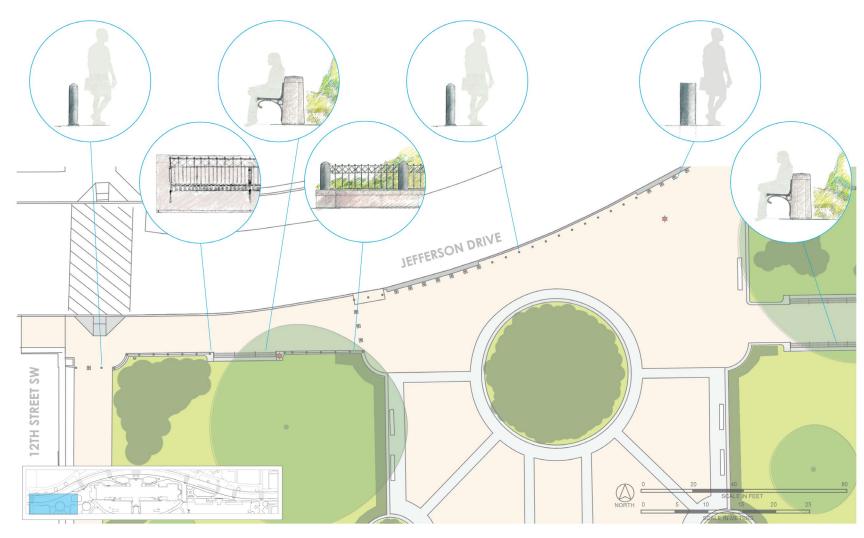


OVERALL SITE PLAN EAST - FOLGER ROSE GARDEN TO RIPLEY GARDEN

#### THE CASTLE TO THE RIPLEY GARDEN

- This option utilized more bollards at the curb in the area to the west of the Castle and adjacent to the AIB in the area east of the Folger Rose Garden triangular planting bed.
- The option also proposed hardened benches in the planted areas that flank the Castle's North Tower, connected to the hardened sign and hardened grille on low stone wall.
- This option is not preferred due to the predominance of bollards along the curb and the cluttered condition it would create at the Castle's planting beds.

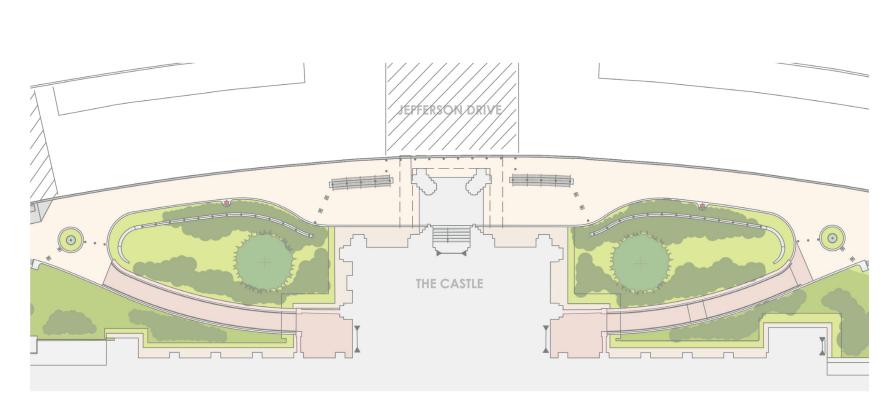
#### ALTERNATIVE STUDIES: PERIMETER SECURITY DETAILED PLANS



#### **12th STREET TO THE FREER GALLERY**

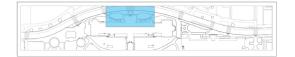
- An alternative study proposed locating bollards along the Jefferson Drive curb to the north of the Freer Gallery forecourt and planted circle.
- This option was developed to look at reserving more of the Freer Gallery forecourt for outdoor programming.
- The option is no longer being pursued because the preferred option, which uses low stone walls and grilles in lieu of bollards at the curb, decreases the overall visual and physical intrusions of the bollards while still accommodating pedestrian circulation and programmed activities.

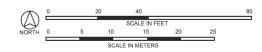
#### ALTERNATIVE STUDIES: PERIMETER SECURITY DETAILED PLANS



#### **CASTLE CENTER AND PORTE-COCHERE**

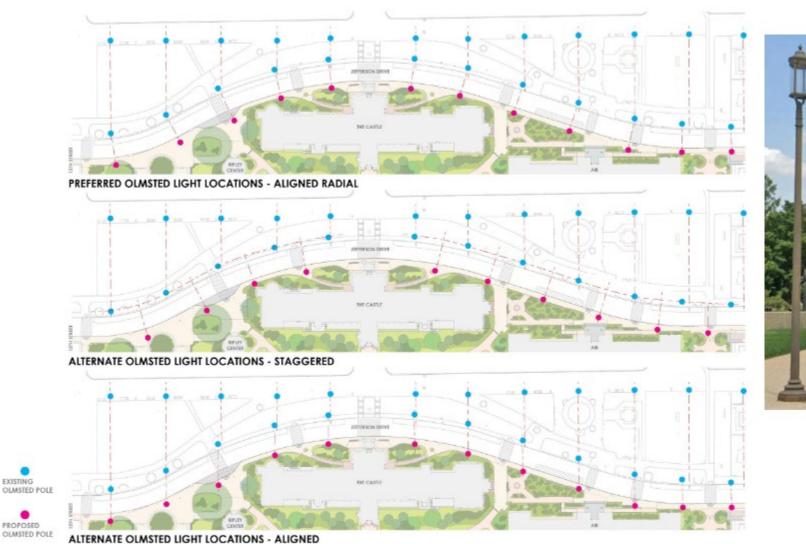
- In this study, an array of fixed bollards extends from the benches that flank the porte-cochère and then turns to follow the alignment of the curb to the north of it.
- Although this option keeps bollards outside of the porte-cochère, eastwest pedestrian circulation is impeded by the placement of bollards in the four-footwide clear zone that exists between the columns and the curb.







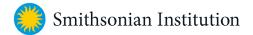
**OLMSTED LIGHT FIXTURE** 



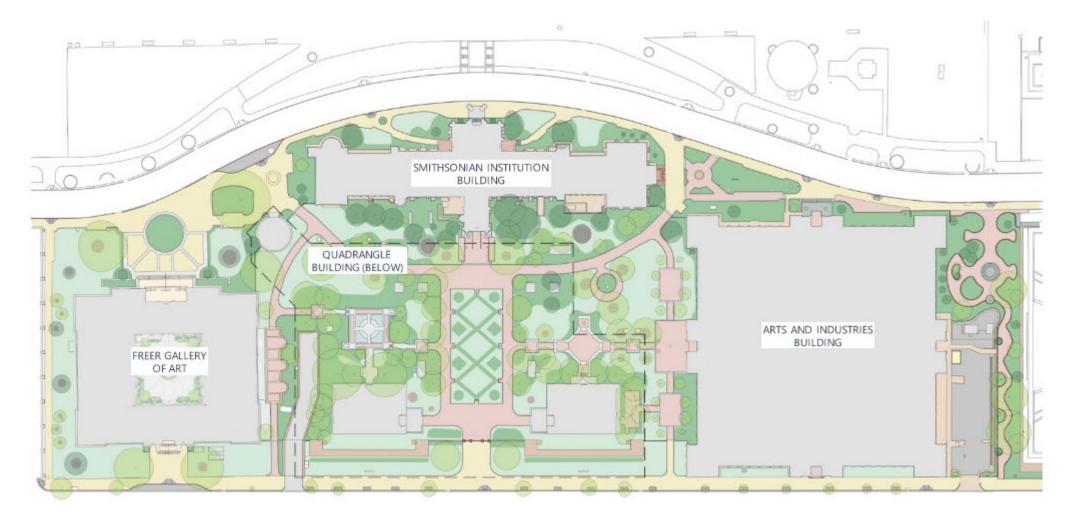
#### **OLMSTED LIGHT FIXTURE**

- Existing pole lighting along the south side of Jefferson Drive will be replaced with Olmsted fixtures in keeping with the lighting along the National Mall.
- Three main alternative alignments were studied.
- The preferred option employs an "aligned radial" configuration. This option integrates the fixtures most readily into the existing conditions and proposed improvements.
- · Other options studied were found to create conflicts in the landscape, especially in key areas of pedestrian circulation and in places where perimeter security elements are required.

EXISTING



#### **EXISTING PLANTING PLAN**



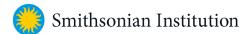




CASTLE FROM JEFFERSON DRIVE FACING SOUTHWEST

PLANTING AT NORTH TOWER WEST RAMP

CASTLE FACING NORTHWEST



#### **AREA OF POTENTIAL DISTURBANCE – RoHC REVITALIZE CASTLE**

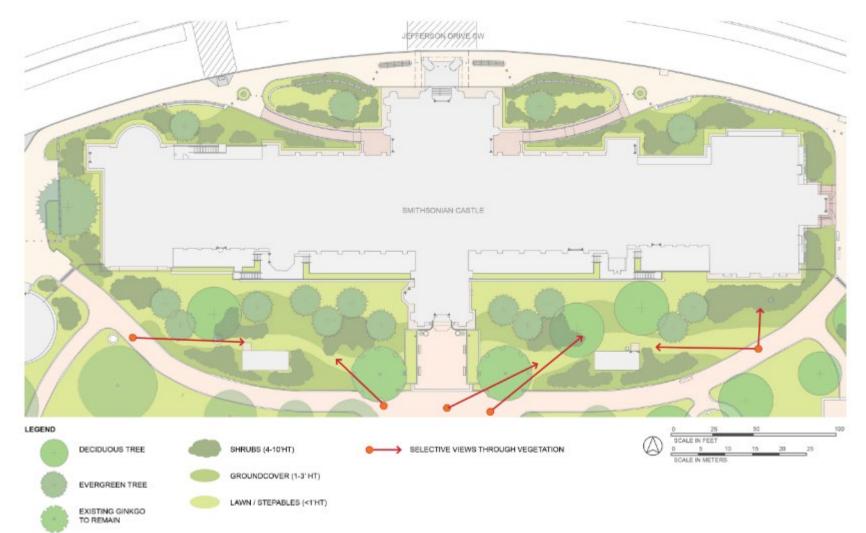




SCALE IN METERS

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PLANTING STRATEGY – SIB GARDENS



#### **Design Objectives**

- The proposed landscape design is focused on replacement of plantings to reestablish current landscape character as much as possible given below-grade structure and seismic interventions.
- Placement of trees reflects the Haupt Garden design by Sasaki and Lester Collins and provides views toward key features of building architecture.
- Taller vegetation is kept away from the building to allow for improved maintenance of the façade.
- Additional focus will be on meeting Smithsonian Institution initiatives for use of native plant species and introduction of pollinator species.
- The design will also utilize Smithsonian's guidelines for soils within its gardens.

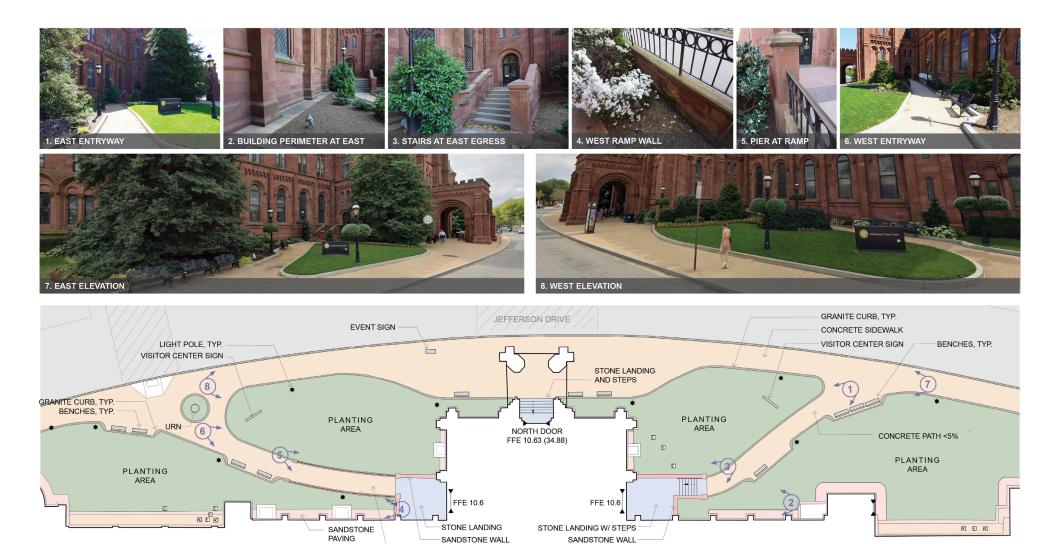
PLANTING STRATEGY – SIB AREAWAYS





#### ACCESSIBILITY IMPROVEMENTS – SIB NORTH ENTRANCE

**EXISTING CONDITIONS** 



-CONCRETE RAMP W/ HANDRAILS 7.5%

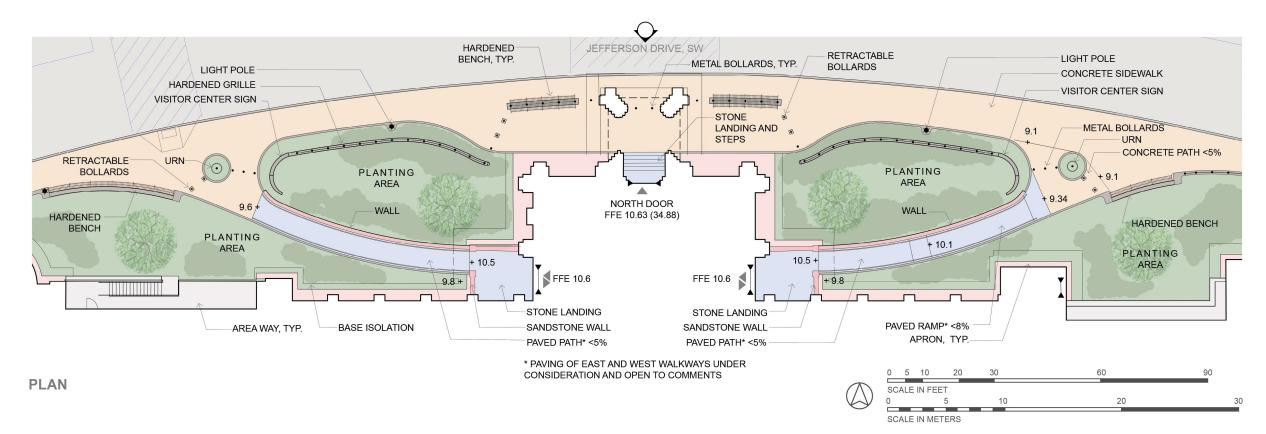


0 5 10 20 30 60 90 SCALE IN FEET 0 5 10 20 30 SCALE IN METERS



#### ACCESSIBILITY IMPROVEMENTS – SIB NORTH ENTRANCE

**PROPOSED CONCEPT** 





ACCESSIBILITY IMPROVEMENTS – SIB SOUTH ENTRANCE

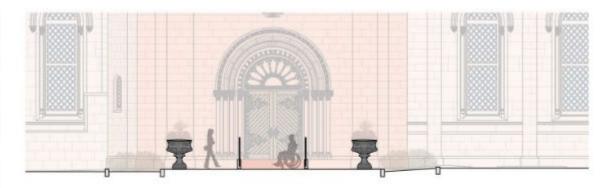
**EXISTING CONDITIONS** 

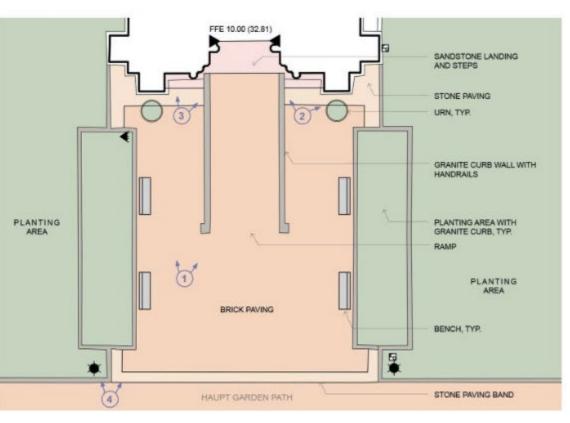


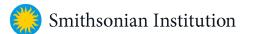








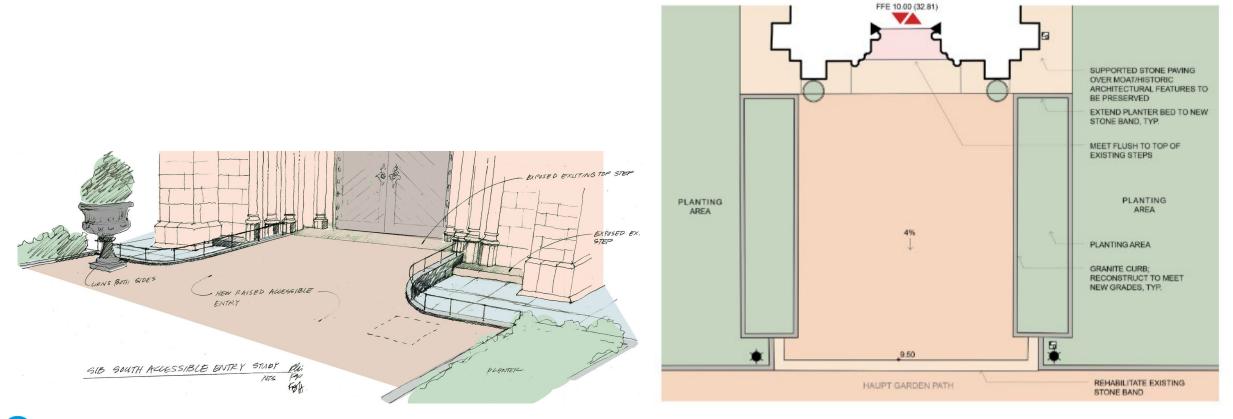




ACCESSIBILITY IMPROVEMENTS – SIB SOUTH ENTRANCE

PROPOSED CONCEPT





Smithsonian Institution

# **Questions or Comments**

## MODERATOR

**Carly Bond**, Historic Preservation Specialist, Smithsonian Facilities

### PRESENTERS / PANELISTS

**Ronald S. Cortez**, JD, MA, Under Secretary for Administration **Sharon Park**, FAIA, Assoc. Director of Historic Preservation, Smithsonian Facilities

**Ann Trowbridge**, AIA, Associate Director for Planning, Smithsonian Facilities

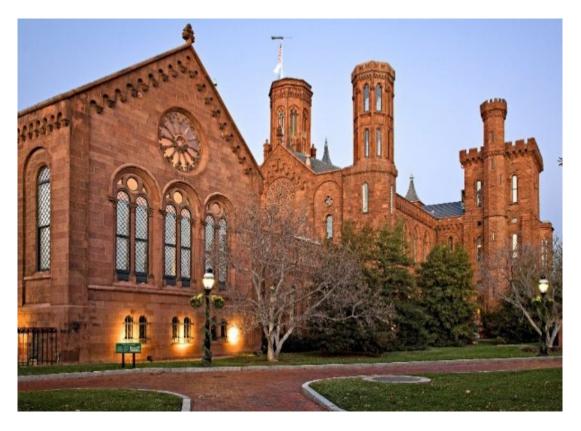
**Brenda Sanchez**, FAIA, Sr. Design Manager, Smithsonian Facilities

**Christopher Lethbridge**, Architect/Program Manager, Smithsonian Facilities

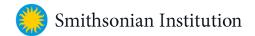
Lauren Brandes, RLA, ASLA, Smithsonian Gardens

**Matthew Chalifoux**, FAIA, Sr. Historic Preservation Architect, EYP-Loring, LLC

Anthony Bochicchio, AIA, Project Manager, EYP-Loring, LLC Nathan Hicks, PE, Senior Structural Engineer, Silman Faye Harwell, FASLA, Landscape Architect, RHI (Rhodeside and Harwell)

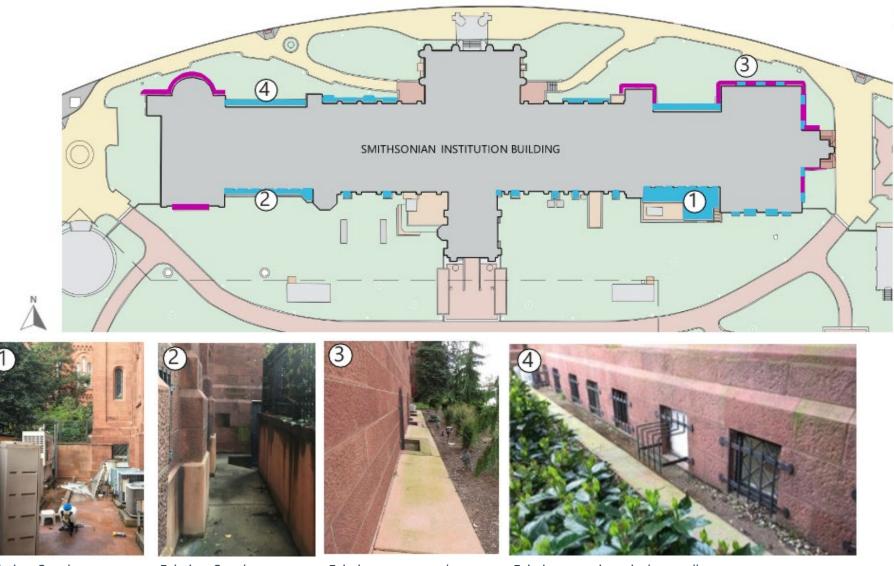


# **AREAWAYS**



#### **AREAWAYS- EXISTING**





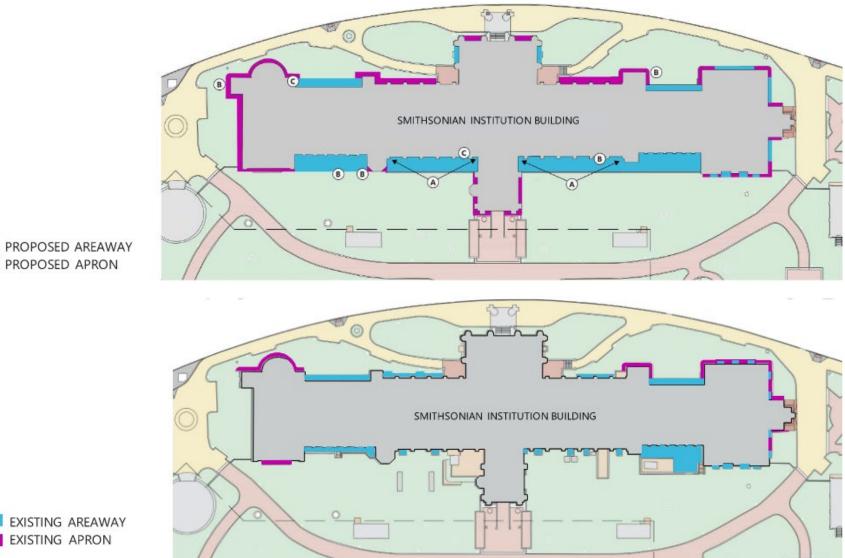
Existing Southeast areaway. Existing Southwest areaway.

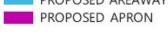
Existing apron and window well.

Existing exterior window well.



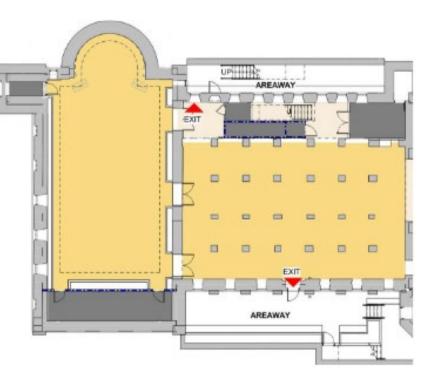
#### **PROPOSED AREAWAYS – SCHEMATIC DESIGN**



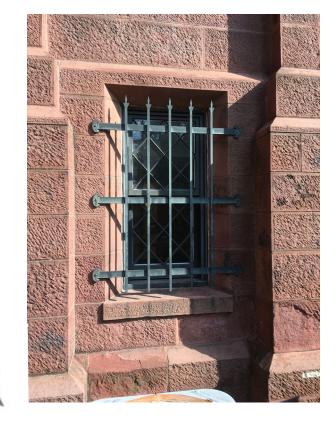




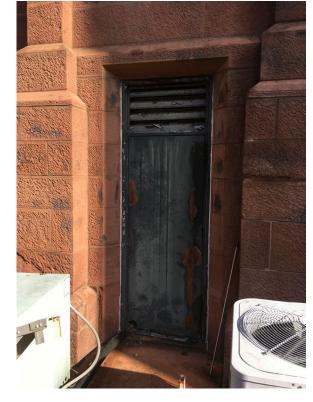
#### **NEW BASEMENT EGRESS DOORS**



Plan of egress doors at basement.



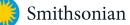
Existing window in south areaway.



Existing window in south areaway converted to a door.

#### **Project Scope**

- Several egress doors will be required at the basement level of the SIB. Exact locations are still pending.
- Windows on the building have been converted to doors through past projects. We anticipate following the same strategy for any new egress doors on the SIB.
- Treatment of the exterior wall will be reviewed at the next consultation meeting.

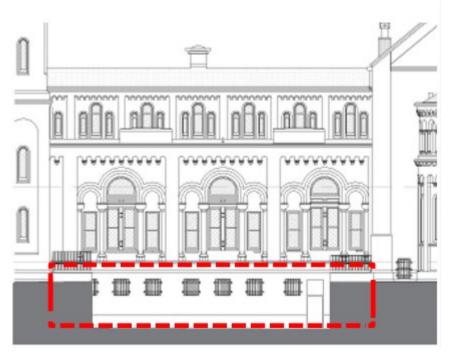


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**EGRESS DOORS – NORTH ELEVATION AT WEST RANGE** 



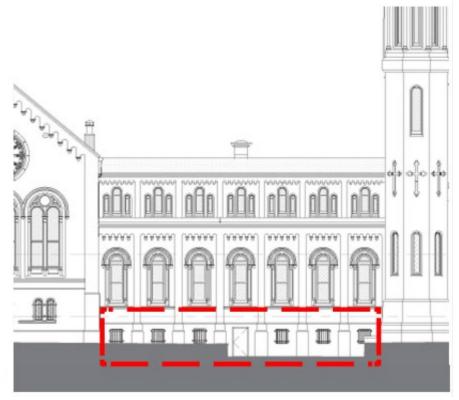
Existing windows.



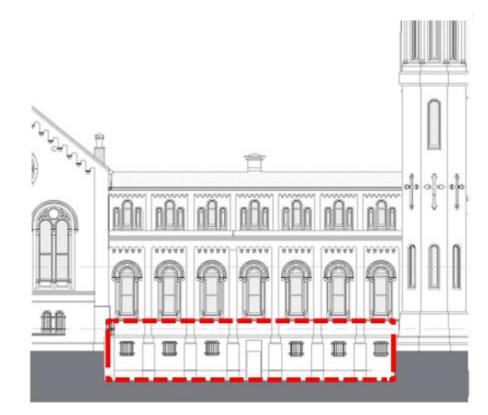
New egress door at proposed areaway.



**EGRESS DOORS – SOUTH ELEVATION AT WEST RANGE** 



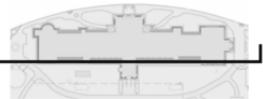
Existing windows and areaway door.

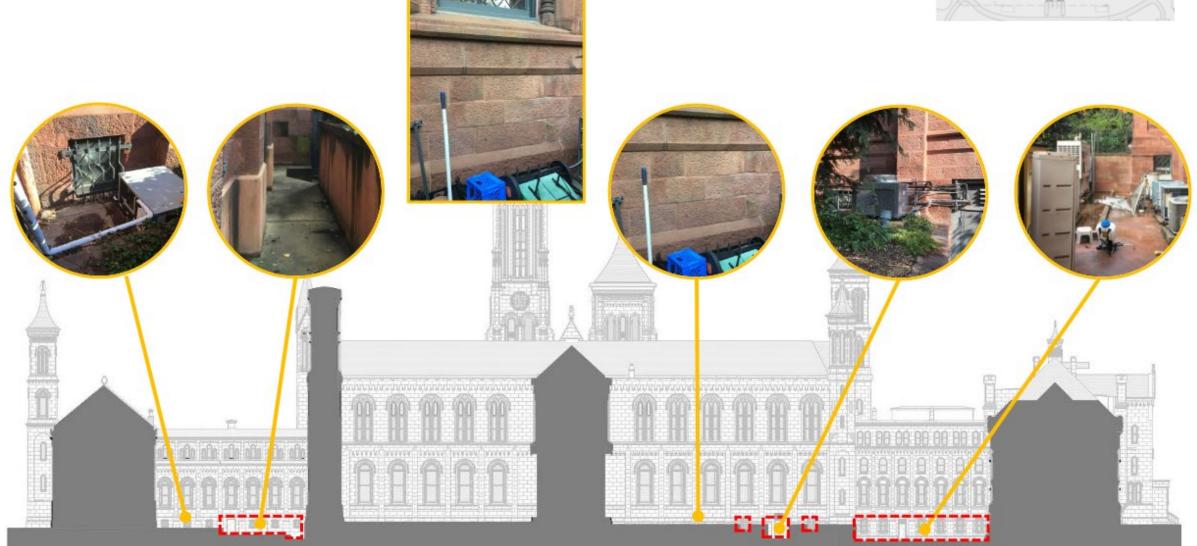


New door at existing door opening - opening has been modified (lowered) to match level of proposed areaway.



# **SMITHSONIAN INSTITUTION BUILDING (SIB)** SOUTH AREAWAYS – EXISTING

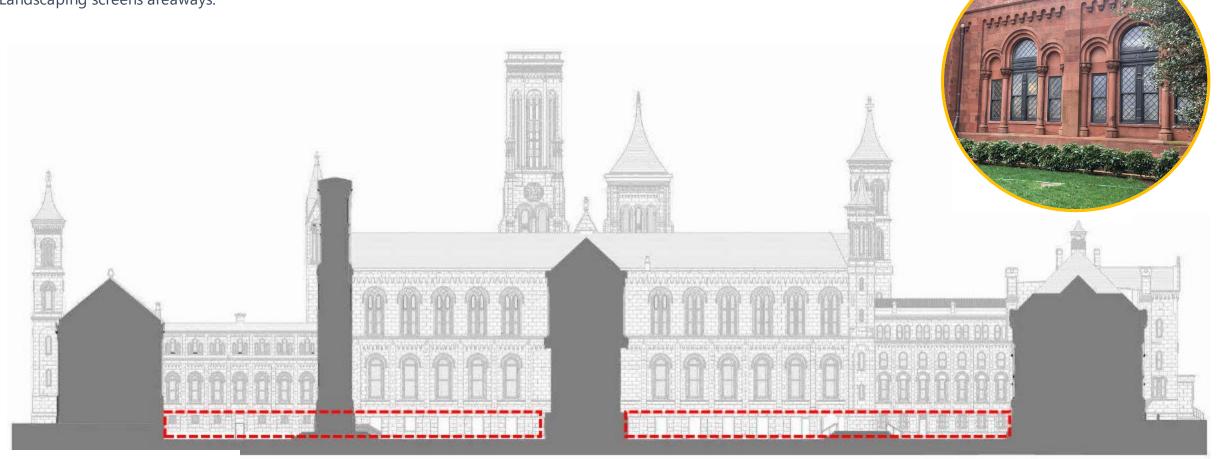


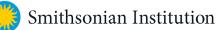


#### SOUTH AREAWAYS - PROPOSED

Multiple smaller areaways combined to regularize the existing areaways along the south side of the building.

Landscaping screens areaways.

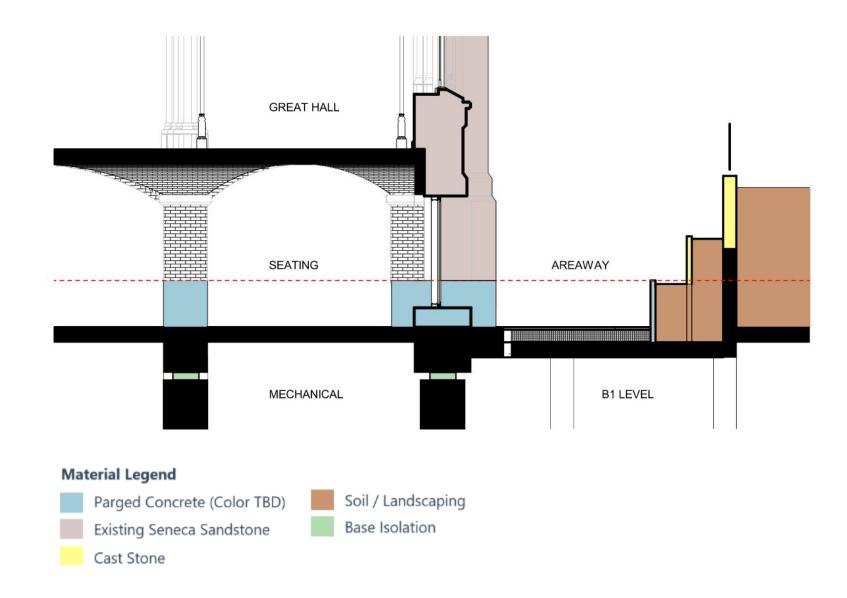


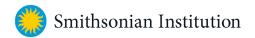


#### **AREAWAYS – PROPOSED SECTIONS**

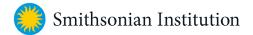
#### **Project Scope**

- The floor of the areaway is the roof of the new B1 level below grade.
- Areaway retaining wall flush or stepped.
- Railings for fall protection.
- Daylight studies will be done to show the impact of natural light in the basement.
- Seismic joint is conceptually incorporated into the areaway wall there are a variety of ways to integrate and conceal the joint
- Finish options under design development





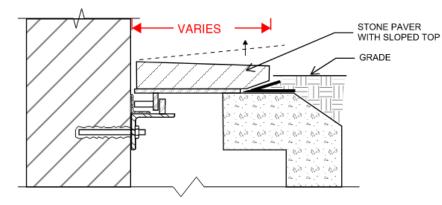
# **SEISMIC JOINT COVERS**



#### HORIZONTAL JOINT COVER MATERIAL EXAMPLES

#### **Project Scope**

- Seismic joint should be as continuous as possible.
- Cover plate width of 1'-6" is the goal. Cover plate width varies to accommodate the Castle's unique geometry.



MASONRY APRON



JOINT CAN BE INTEGRATED INTO PAVER SYSTEM





JOINT COVER TO BLEND IN WITH PUBLIC SIDEWALK

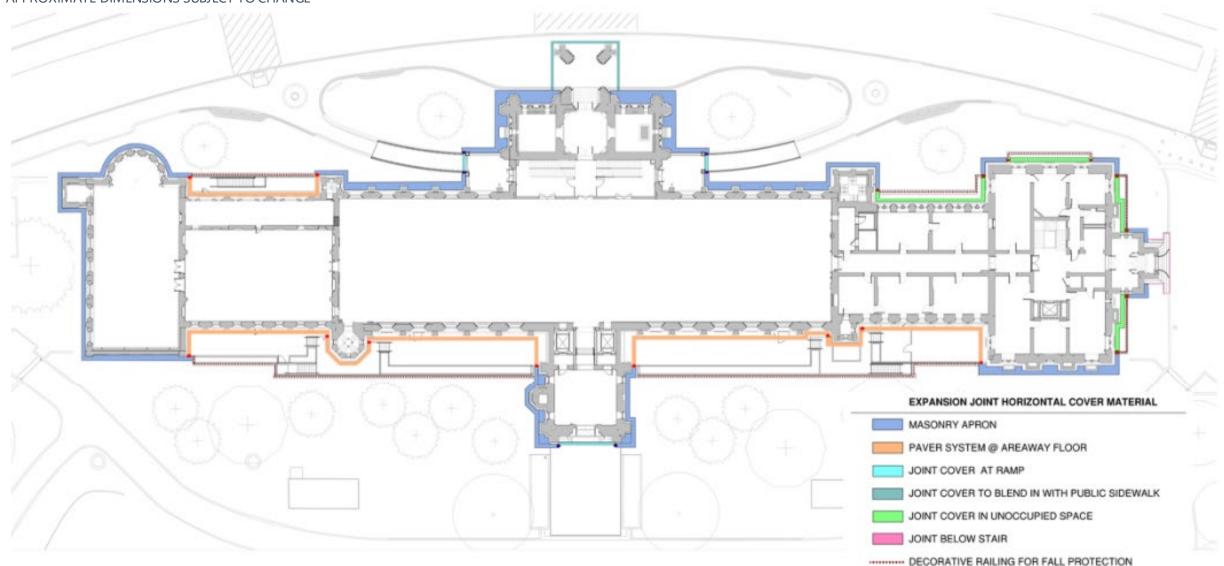


JOINT BELOW STAIR OR ARCHITECTURAL ELEMENT SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 98

VER AT RAMP Smithsonian Institution

#### STUDIES ON JOINT COVER MATERIALS – OVERALL PLAN

APPROXIMATE DIMENSIONS SUBJECT TO CHANGE



Smithsonian Institution

**STUDIES ON JOINT COVER MATERIALS** APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

COMMONS

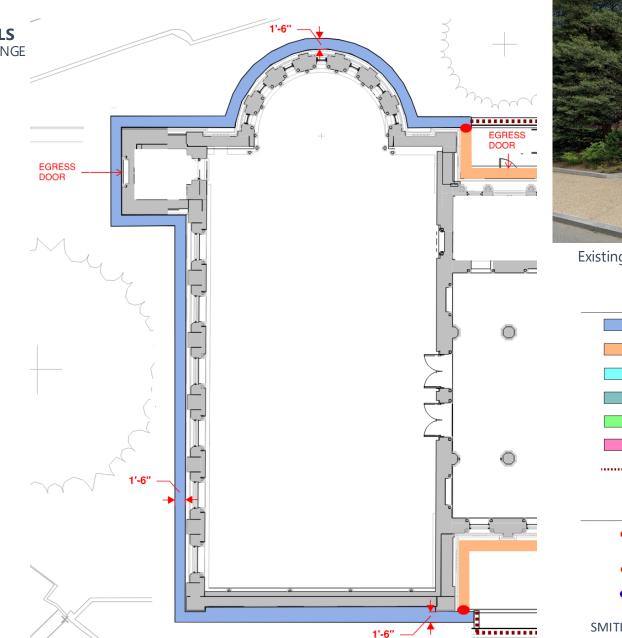


Existing Concrete Apron



Existina Commons Earess Door





Existing Elevation along Jefferson Drive

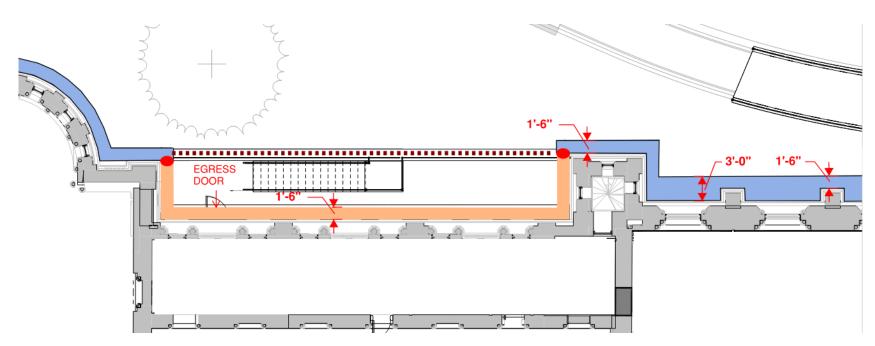


- VERTICAL TRANSITION IN OCCUPIED AREAWAY WALL MATERIAL
- VERTICAL TRANSITION IN UNOCCUPIED WINDOW WELL
- VERTICAL TRANSITION IN BRICK @ RAMP LANDINGS

SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 100

**STUDIES ON JOINT COVER MATERIALS** APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

WEST RANGE (NORTH)





Existing West Range

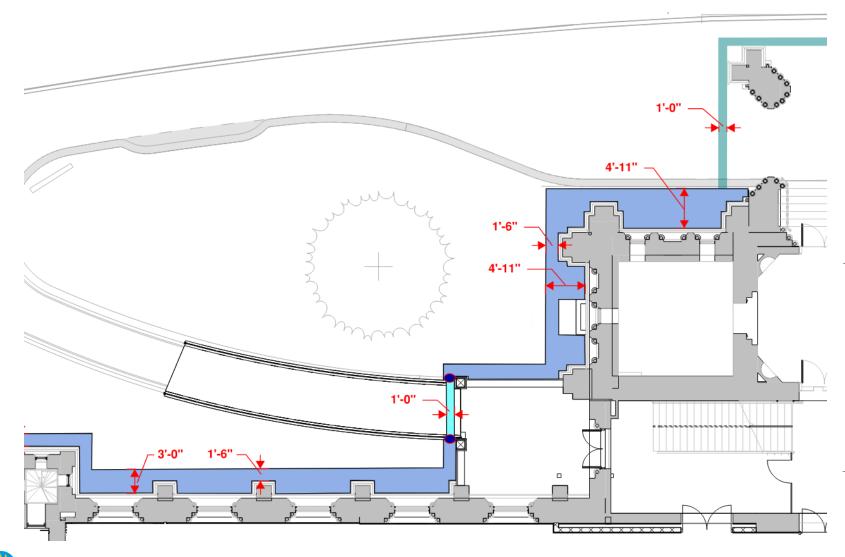


- VERTICAL TRANSITION IN OCCUPIED AREAWAY WALL MATERIAL
- VERTICAL TRANSITION IN UNOCCUPIED WINDOW WELL
- VERTICAL TRANSITION IN BRICK @ RAMP LANDINGS

#### STUDIES ON JOINT COVER MATERIALS

APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

#### **GREAT HALL (NORTHWEST)**



**Existing Entrance** 



Existing Apron at Entrance

#### EXPANSION JOINT HORIZONTAL COVER MATERIAL

- MASONRY APRON
- PAVER SYSTEM @ AREAWAY FLOOR
- JOINT COVER AT RAMP
- JOINT COVER TO BLEND IN WITH PUBLIC SIDEWALK
- JOINT COVER IN UNOCCUPIED SPACE
- JOINT BELOW STAIR
- DECORATIVE RAILING FOR FALL PROTECTION

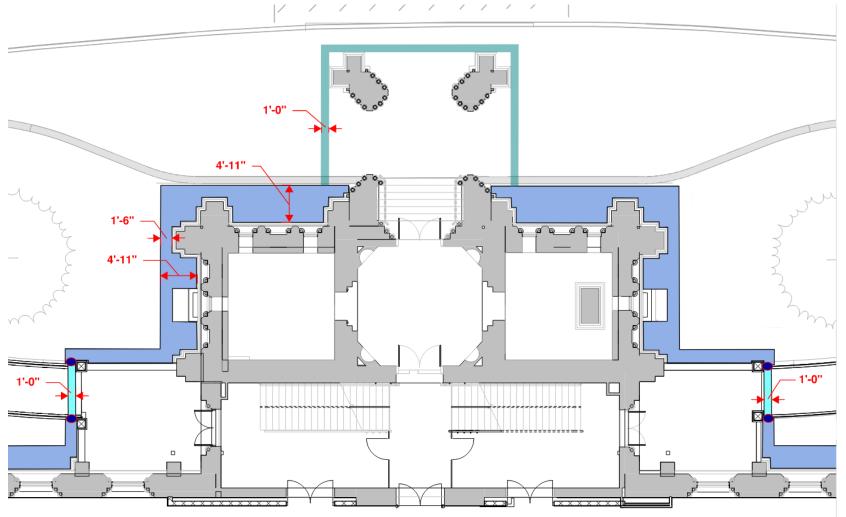
- VERTICAL TRANSITION IN OCCUPIED AREAWAY WALL MATERIAL
- VERTICAL TRANSITION IN UNOCCUPIED WINDOW WELL
- VERTICAL TRANSITION IN BRICK @ RAMP LANDINGS



#### STUDIES ON JOINT COVER MATERIALS

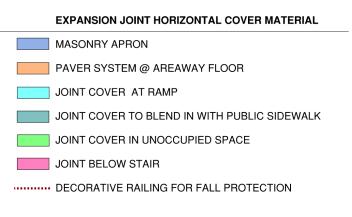
APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

#### **PORT COCHERE**





Existing Port Cochere



- VERTICAL TRANSITION IN OCCUPIED AREAWAY WALL MATERIAL
- VERTICAL TRANSITION IN UNOCCUPIED WINDOW WELL
- VERTICAL TRANSITION IN BRICK @ RAMP LANDINGS

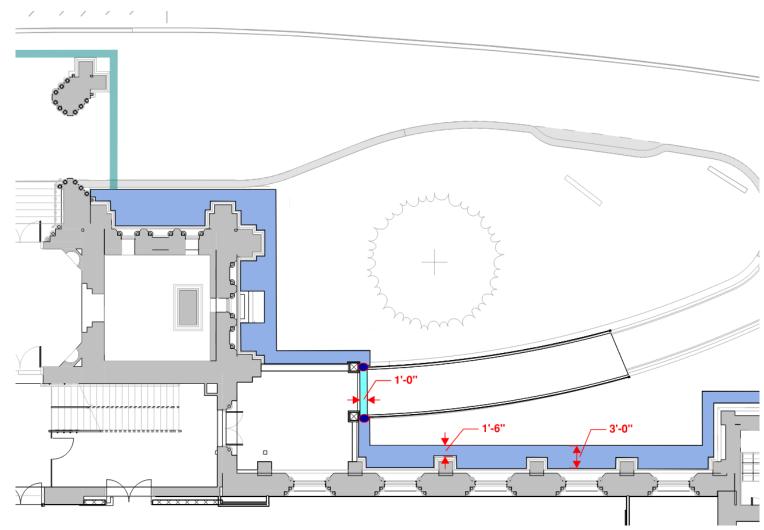


#### STUDIES ON JOINT COVER MATERIALS

Smithsonian Institution

APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

#### **GREAT HALL (NORTHEAST)**





Existing Entrance

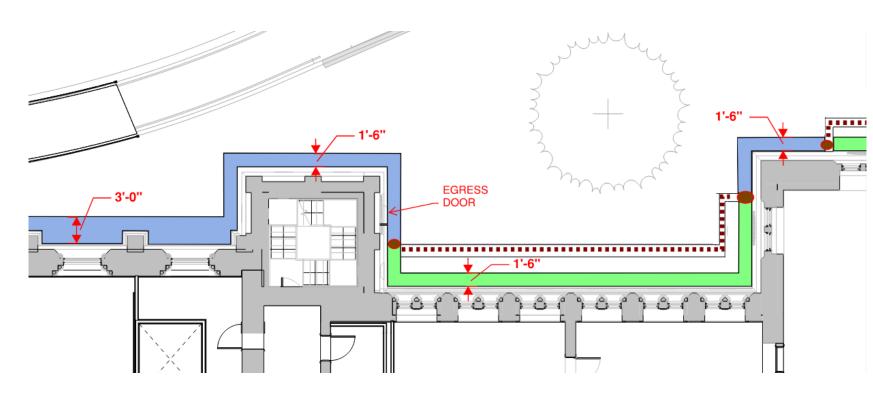
# EXPANSION JOINT HORIZONTAL COVER MATERIAL MASONRY APRON PAVER SYSTEM @ AREAWAY FLOOR JOINT COVER AT RAMP JOINT COVER TO BLEND IN WITH PUBLIC SIDEWALK JOINT COVER IN UNOCCUPIED SPACE

- JOINT BELOW STAIR
- DECORATIVE RAILING FOR FALL PROTECTION

- VERTICAL TRANSITION IN OCCUPIED AREAWAY WALL MATERIAL
- VERTICAL TRANSITION IN UNOCCUPIED WINDOW WELL
- VERTICAL TRANSITION IN BRICK @ RAMP LANDINGS

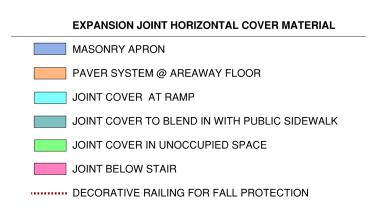
**STUDIES ON JOINT COVER MATERIALS** APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

EAST RANGE (NORTH)





Existing East Range



- VERTICAL TRANSITION IN OCCUPIED AREAWAY WALL MATERIAL
- VERTICAL TRANSITION IN UNOCCUPIED WINDOW WELL
- VERTICAL TRANSITION IN BRICK @ RAMP LANDINGS

**STUDIES ON JOINT COVER MATERIALS** 

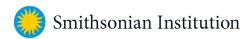
**EAST WING** 



Existing East Wing Apron



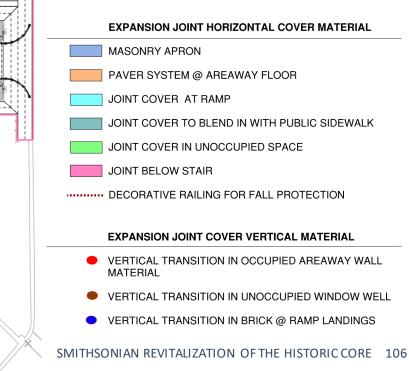
**Existing East Wing Conditions** 







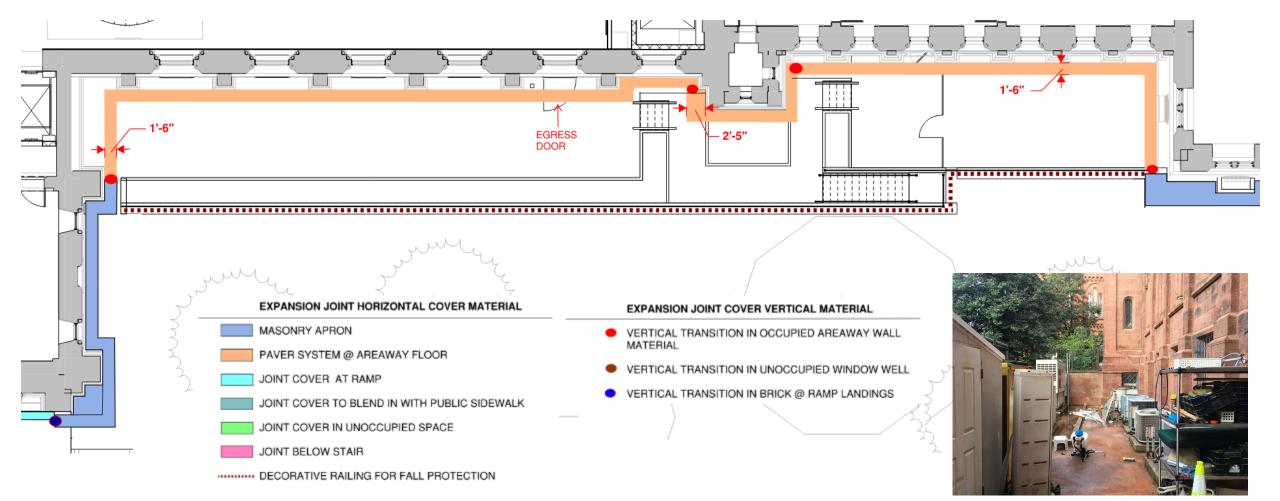
Existing East Wing Entrance



#### **STUDIES ON JOINT COVER MATERIALS**

APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

#### SOUTHEAST AREAWAY



**Existing South Areaway** 



**STUDIES ON JOINT COVER MATERIALS** APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

#### **SOUTH TOWER**

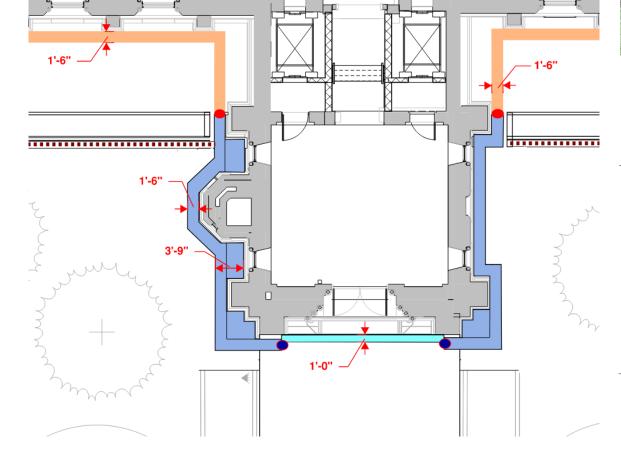


Existing South Tower Ramp



Smithsonian Institution

Existing South Towar Datail





**Existing South Tower Entrance** 



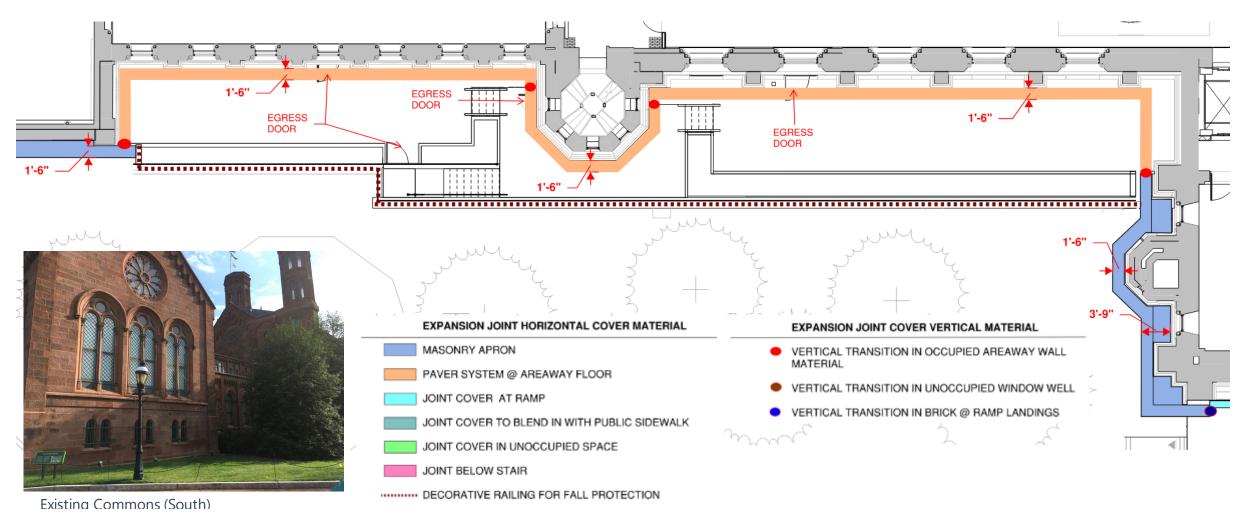
- VERTICAL TRANSITION IN OCCUPIED AREAWAY WALL MATERIAL
- VERTICAL TRANSITION IN UNOCCUPIED WINDOW WELL
- VERTICAL TRANSITION IN BRICK @ RAMP LANDINGS

## **SMITHSONIAN INSTITUTION BUILDING (SIB)**

#### **STUDIES ON JOINT COVER MATERIALS**

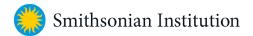
APPROXIMATE DIMENSIONS SUBJECT TO CHANGE

#### SOUTHWEST AREAWAY



Smithsonian Institution

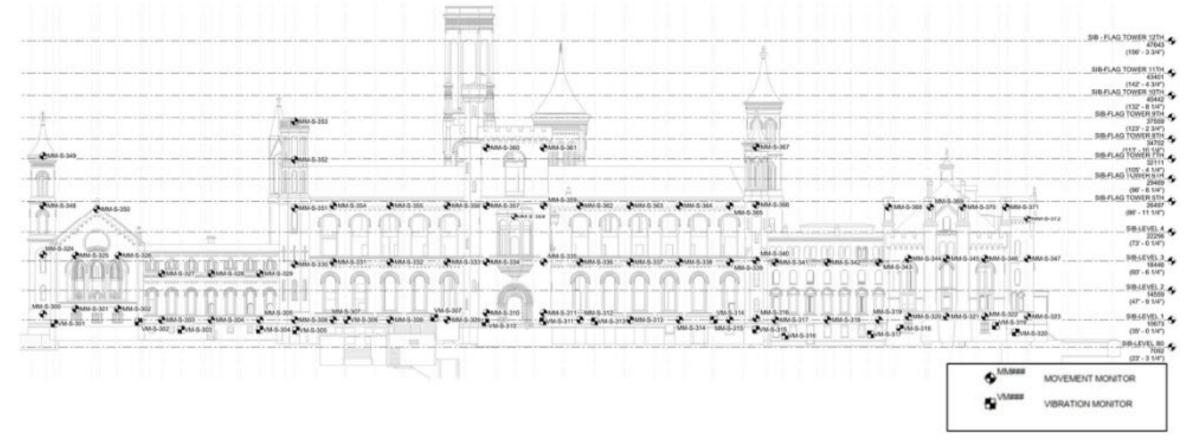
# **MONITORING SYSTEMS**



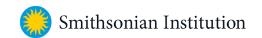
## **MONITORING SYSTEMS**

**SIB** Monitor Locations

- Installed summer 2022 in advance of construction to establish baseline of the building behavior during seasonal changes
- Critical requirement Complies with South Mall Programmatic Agreement Stipulation 7
- Monitoring continues through the construction project
- Vibration monitors are installed near ground level

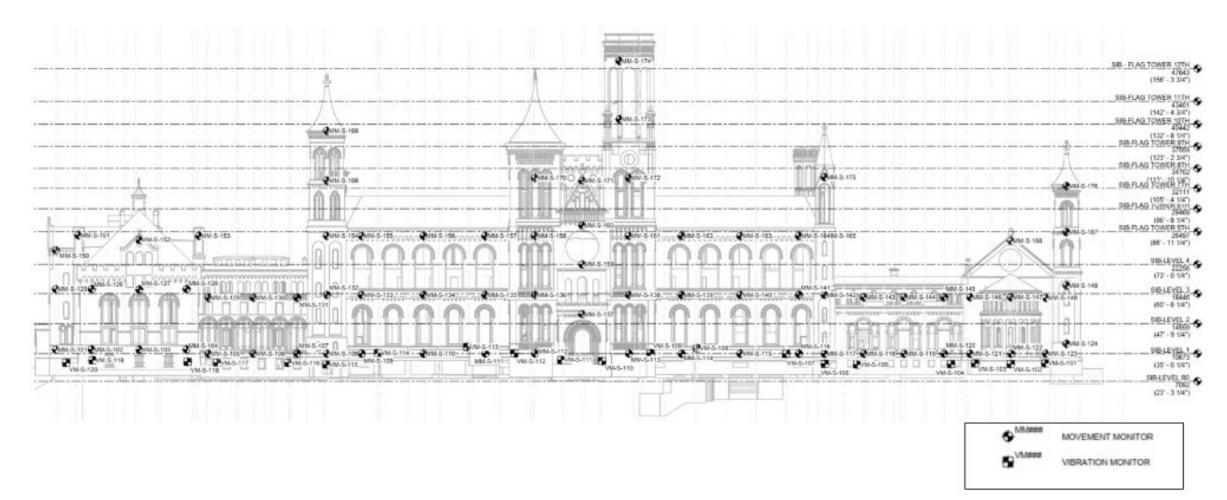


SIB South Elevation

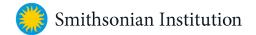


# **MONITORING SYSTEMS**

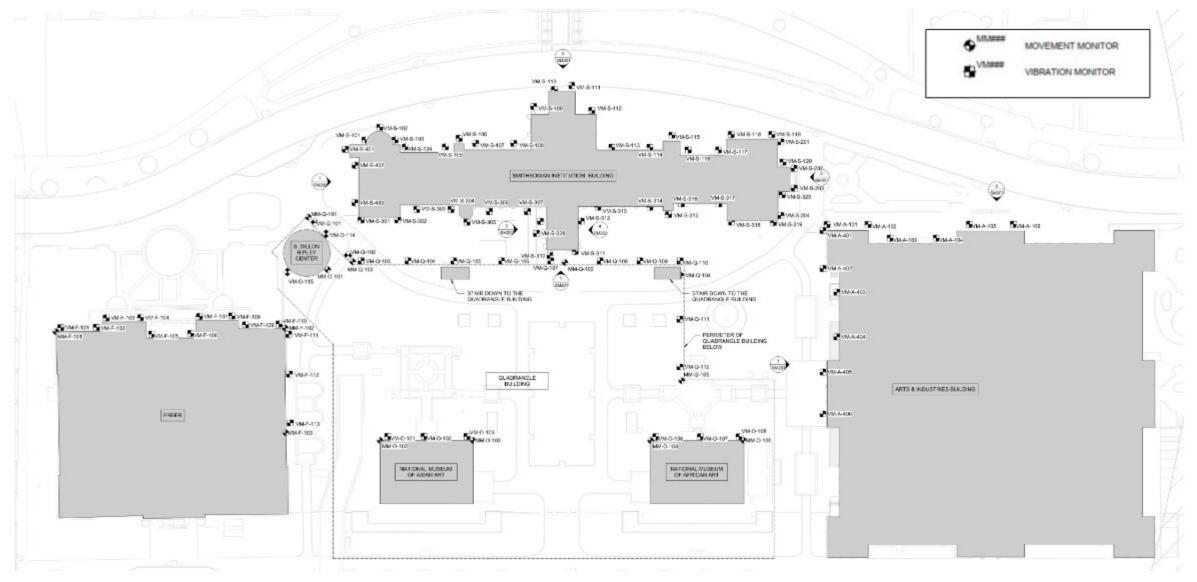
SIB Monitor Locations



SIB North Elevation

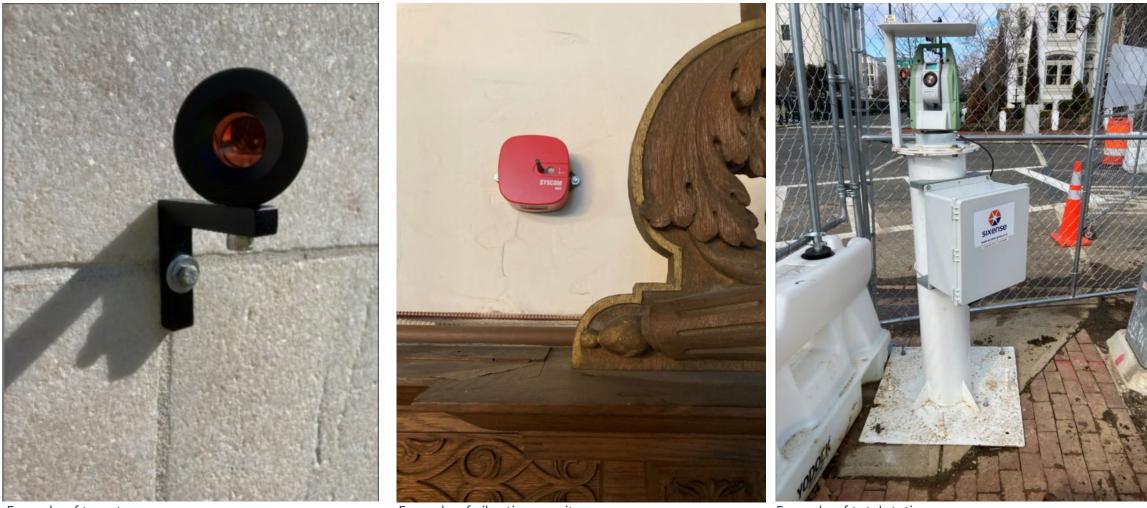


#### **MONITORING SYSTEMS** South Mall Campus Monitoring Plan





### **MONITORING SYSTEMS** Monitoring Devices



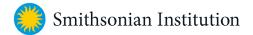
Example of target

Example of vibration monitor

Example of total station



# **PROJECT SCHEDULE**



# **RoHC Revitalize Castle - Project Schedule**

Milestone	Date
Castle Closes – Staff and Collections Moves Completed	February 2023
Castle Construction Start	March 2023
Portions of Castle Reopen for 2026 Activities	Spring 2026
Castle Façade and Public Access Area Construction Resumes	Fall 2026
Castle Construction Complete	2028

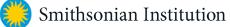




## **RoHC Revitalize Castle – Proposed Section 106 Consultation Schedule \***

Milestone	Projected Date	Meeting Content
Consulting Parties Meeting #5	Early September 2022	<ul> <li>Design Development</li> <li>Revised Assessment of Effects on Historic Resources (30-day review period)</li> <li>Mock-ups of Exterior Finish Treatments</li> </ul>
Consulting Parties Meeting #6	Late October 2022	<ul> <li>Finalize Assessment of Effects</li> <li>Consult on Mitigation Package</li> </ul>
Consulting Parties Meeting #7	December 2022	<ul> <li>Review Draft Memorandum of Agreement (30-day review period)</li> </ul>
Finalize and Execute Memorandum of Agreement	December 2022- February 2023	

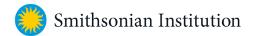
\* Subject to Change



# **RoHC Revitalize Castle – Additional Review**

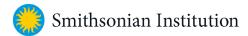
Milestone	Date
NCPC Revised Preliminary Review	July 7, 2022
CFA Revised Concept Review	July 21, 2022
Public Meeting on Castle Interiors	Fall 2022
CFA Final Review	January 2023
NCPC Final Review	February 2023





## **RoHC Revitalize Castle – Section 106 Overview**





# **RoHC Revitalize Castle – Section 106 Overview**

## Assessment of Effects on Historic Resources

- Assessment of Effects (AOE) last updated in January 2022 after **Consulting Parties** Meeting #3
- Review of updated AOE is planned for Consulting Parties Meeting #5
- All AOE versions available • on the project webpage

#### Revitalization of the Historic Core Assessment of Effects on Historic Resources

#### Criteria of Adverse Effect

This document provides an assessment of effects on historic resources associated with the Revitalization of the Historic Core (RoHC) project. Effect assessments are based on the criteria of adverse effect as defined in the implementing regulations of Section 106 of the National Historic Preservation Act (36 CFR Part 800). The criteria of adverse effect are defined as follows:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative (36 CFR § 800.5(a)(1)).

#### Project Background

This project provides a comprehensive rehabilitation of the Smithsonian Institution Building (Castle) and the Arts & Industries Building (AIB) to address physical deterioration, obsolete infrastructure and systems, non-compliance with building codes, construction of a below-grade Central Utility Plant (CUP) and enhanced loading dock that link and serve both buildings. The Castle and the AIB are National Historic Landmarks, individually listed in the National Register of Historic Places and the DC Inventory of Historic Sites, and are contributing elements of the National Mall Historic District listed in the National Register





Arts & Industries Building, North Elevat

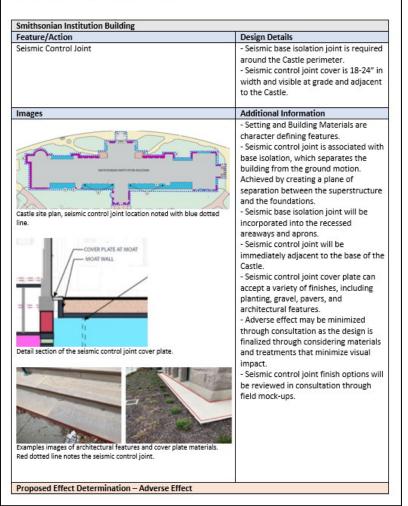
mithsonian Institution Building, South Elevation

January 2022

#### Smithsonian Institution Building – Character Defining Features \*

The Smithsonian Institution Building (Castle), designed by James Renwick, Jr., in the Romanesque Revival or Norman Revival style is nationally significant for associations with the history of science and scientific institutions, museums and education; for association with prominent American scientists (National Register Criterion A); as a premiere example of mid-19th century romantic architecture and as a seminal work of Renwick; and for incorporation of innovative fireproof floor construction methods (National Register Criterion C).

The period of significance for the Castle is 1847-1910, to reflect the period of time that best demonstrates significance and historic associations. This date range reflects the lengthy construction **Revitalization of the Historic Core** Assessment of Effects on Historic Resources January 2022

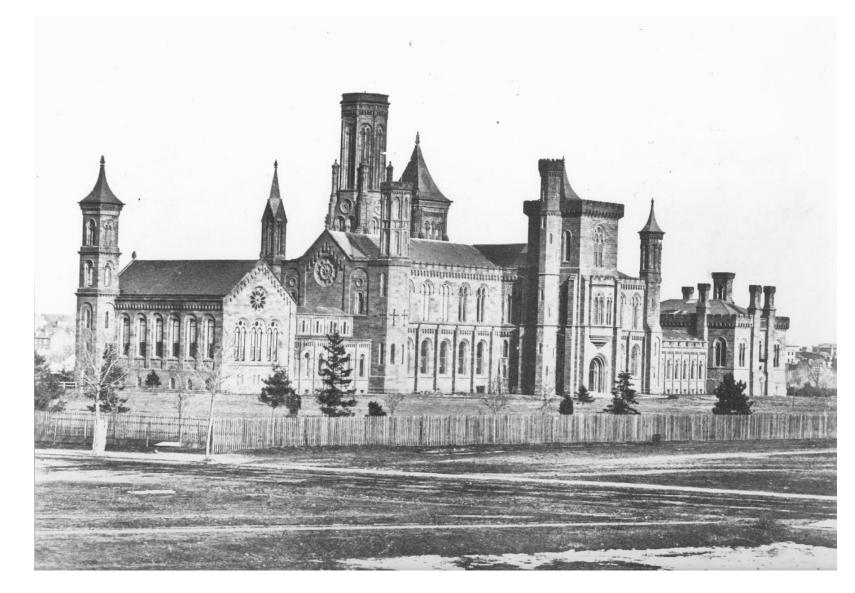


## **RoHC Revitalize Castle – Next Steps**

Comments are welcome in writing through July 15, 2022

Please submit comments to: <u>BondC@si.edu</u>

Please visit the project webpage: <u>https://www.sifacilities.si.e</u> <u>du/historic-core</u>





# **Questions or Comments**

### MODERATOR

**Carly Bond**, Historic Preservation Specialist, Smithsonian Facilities

#### PRESENTERS / PANELISTS

**Ronald S. Cortez**, JD, MA, Under Secretary for Administration **Sharon Park**, FAIA, Assoc. Director of Historic Preservation, Smithsonian Facilities

**Ann Trowbridge**, AIA, Associate Director for Planning, Smithsonian Facilities

Brenda Sanchez, FAIA, Sr. Design Manager, Smithsonian Facilities

**Christopher Lethbridge**, Architect/Program Manager, Smithsonian Facilities

Lauren Brandes, RLA, ASLA, Smithsonian Gardens

**Matthew Chalifoux**, FAIA, Sr. Historic Preservation Architect, EYP-Loring, LLC

Anthony Bochicchio, AIA, Project Manager, EYP-Loring, LLC Nathan Hicks, PE, Senior Structural Engineer, Silman Faye Harwell, FASLA, Landscape Architect, RHI (Rhodeside and Harwell)



