SMITHSONIAN SOUTH MALL CAMPUS
DRAFT ENVIRONMENTAL IMPACT STATEMENT
PUBLIC HEARING

18 DECEMBER 2017
WAYS TO COMMENT

Written comments can be submitted to:

**NCPC**
Matthew Flis  
Senior Urban Planner  
National Capital Planning Commission  
Urban Design and Plan Review  
401 9th Street, NW Suite 500  
Washington, DC 20004

**Smithsonian**
Michelle Spofford  
Architect / Senior Planning Manager  
Smithsonian Institution  
Facilities Master Planning  
P.O. Box 37012, MRC 511  
Washington, DC 20013

**By email:**
Commentsonsouthmallcampus@si.edu

Comments on the Draft EIS must be submitted by Tuesday, January 16, 2018
MEETING AGENDA

1. Welcome and purpose of meeting  
   • National Capital Planning Commission

2. Overview of South Mall Campus Project  
   • Ann Trowbridge. Smithsonian Institution

3. Presentation of Alternatives, Potential Environmental Impacts  
   • Aran Coakley and Liz Estes. BIG team
     
   A. No Action Alternative  
      • Public Comment
   B. Common to all Alternatives and Dismissed Resources  
      • Public Comment
   C. Alternative B  
      • Public Comment
   D. Alternative D  
      • Public Comment
   E. Alternative F  
      • Public Comment

4. Conclusion / Next Steps  
   • National Capital Planning Commission
OVERVIEW OF SOUTH MALL CAMPUS PROJECT
GOALS AND OBJECTIVES

- Restore and renovate historic buildings
- Replace roofs and mechanical systems at the end of their useful life
- Improve access for persons with disabilities
- Improve circulation and connectivity within the campus and to the SW Ecodistrict and National Mall
- Improve visibility of Sackler & African Art entrances from the Mall and Castle
- Create expanded and linked centralized visitor and education spaces
- Provide additional museum and event space
- Establish a new central utility plant that reduces GHG emissions and energy cost
- Improve and expand underground loading space
- Update perimeter and building security
NATIONAL ENVIRONMENTAL POLICY ACT

UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) FEDERAL AGENCIES MUST:

• Prepare an environmental impact statement for actions that may have a significant environmental impact
• Consider alternative ways of meeting objectives
• Use a systematic, interdisciplinary approach in analyzing environmental impacts
• Factor environmental considerations into decisions
NEPA

Step 1: Initiate Project
- Develop Purpose and Need
- Conduct Agency Public Scoping
- Develop Alternatives

Step 2: Collect Data
- Analyze Existing Conditions

Step 3: Analyze Alternatives
- Analyze Environmental Impacts

Step 4: Public Review of Draft EIS
- Release Draft EIS
- Hold 60-day Comment Period
- Hold Public Hearing during Comment Period

Step 5: Final EIS
- Response to Comments on Draft EIS
- Prepare Final EIS

Step 6: Public Review of Final EIS
- Release Final EIS
- Hold 30-day Comment Period

Step 7: Record of Decision
- Draft Record of Decision
- Sign Record of Decision

We are Here
NATIONAL HISTORIC PRESERVATION ACT

UNDER SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT (NHPA):

- Federal agencies must consider the effects of their undertakings on historic properties listed, or eligible for listing in, the National Register of Historic Places.
Section 106 Process

Step 1: Initiate the Process
- Define the Undertaking
- Initiate Section 106
- Identify Consulting Parties
- Involve the Public

Step 2: Identify Historic Properties
- Define Area of Potential Effects (APE)
- Identify Historic/Cultural Resources

Step 3: Assess Adverse Effects
- Assess Effects on Historic Resources
- Apply Criteria of Adverse Effect

Step 4: Resolve Adverse Effects
- Avoid, Minimize, and/or Mitigate Adverse Effects
- Notify ACHP of Adverse Effects
- Create Resolution Document (MOA/PA)

Consultation with Consulting Parties
PRESENTATION OF ALTERNATIVES,
POTENTIAL ENVIRONMENTAL IMPACTS
SUMMARY OF ALTERNATIVES

NO ACTION ALTERNATIVE
ALTERNATIVE B
ALTERNATIVE D
ALTERNATIVE F
NO ACTION ALTERNATIVE
SUMMARY
NO ACTION ALTERNATIVE - BELOW GRADE
NO ACTION ALTERNATIVE - PURPOSE AND NEED

- Outdated mechanical systems repaired but not replaced with modern systems
- Visitor needs not adequately served
- No restoration of castle
- No improvements to campus circulation and wayfinding
- Inadequate loading
- Rooftops, including quad roof below garden, patched but not replaced
- Does not meet purpose and need
NO ACTION ALTERNATIVE

75% OF MUSEUM VISITORS ARRIVE FROM MALL

FROM MALL

JEFFERSON DRIVE

INDEPENDENCE AVENUE

FROM SOUTH
NO ACTION ALTERNATIVE

JEFFERSON DRIVE

NO CONNECTION BETWEEN VISITOR CENTER AND QUAD COMPLEX

NO BELOW GRADE CHANGES

LOADING  COLLECTIONS  MUSEUMS

OFFICE  COLLECTIONS

EDUCATION  OFFICE  MUSEUMS

LIMITED DAYLIGHT

INDEPENDENCE AVENUE
NO ACTION ALTERNATIVE IMPACTS
CULTURAL RESOURCES

LONG-TERM, MODERATE, ADVERSE IMPACT

- No major construction activities
- Minor repairs on the Quadrangle roof membrane, Castle and other cultural resources
- Lack of coordinated approach to stabilizing, repairing, and protecting cultural resources would make them vulnerable to continued deterioration or future seismic events
NO ACTION ALTERNATIVE

VISUAL RESOURCES

NO IMPACTS

• No above grade changes
• No permanent changes to views or visual resources within or in the vicinity of the project area
NO ACTION ALTERNATIVE

TOPOGRAPHY AND SOILS

OVERALL NEGLIGIBLE, SHORT-TERM, ADVERSE IMPACTS TO SOILS

• Temporary displacement of soils for repair of the existing roof membrane
• Possible ground disturbance to soils for repair to utilities
NO ACTION ALTERNATIVE

STORM WATER RESOURCES

NO NEW DIRECT IMPACTS
NEGLIGIBLE, SHORT-TERM, ADVERSE IMPACTS MINOR,
INDIRECT, LONG-TERM, ADVERSE IMPACTS

• No changes to existing stormwater system, amount of impervious
  surface, or amount of green space
• Limited ability to retain and filter stormwater
• Temporary disruption to soils during construction
NO ACTION ALTERNATIVE

AIR QUALITY

SHORT AND LONG-TERM, DIRECT, MINOR ADVERSE IMPACT.

- Construction activities would generate fugitive dust
- Emissions from construction vehicles would generate VOCs and Nitrous Oxides
- Disturbance to hazardous materials could become airborne
- Indoor air quality issues from the use of antiquated mechanical systems
SEISMIC VULNERABILITY

MAJOR, LONG-TERM, ADVERSE IMPACTS

- No seismic retrofits would be performed and buildings would remain vulnerable to seismic activity
- If future seismic events occur, Castle would likely experience damage
- Presents a risk to human life and economic impact in the event of future earthquake
NO ACTION ALTERNATIVE

HUMAN HEALTH AND SAFETY

LONG-TERM, BENEFICIAL IMPACTS
MINOR, SHORT- AND LONG-TERM, ADVERSE IMPACTS

• Asbestos and lead-based paint likely to be present in older South Mall Campus buildings
• Removal of asbestos and lead-based paint during basic building maintenance
• No safety or security upgrades would occur leaving South Mall Campus vulnerable to security breaches
• Seismic vulnerability of the Castle presents major risk to human life and an economic impact
NO ACTION ALTERNATIVE

GREENHOUSE GASES AND ENERGY CONSUMPTION

DIRECT AND INDIRECT, SHORT AND LONG-TERM, NEGLIGIBLE, ADVERSE IMPACTS

• Continued use of GSA steam/chilled water, existing mechanical systems
NO ACTION ALTERNATIVE

LAND USE PLANNING & POLICIES

NO DIRECT OR INDIRECT IMPACTS WOULD OCCUR

• No changes to the South Mall Campus layout, wayfinding, pathway configurations, or viewsheds
NO ACTION ALTERNATIVE

VISITOR USE & EXPERIENCE

MODERATE, LONG-TERM, DIRECT, ADVERSE IMPACT

- Continued access to museums and gardens within South Mall Campus
- No clear east-west pedestrian connection
- Wayfinding would not be improved
- No improved access and visibility from the National Mall
- No new amenities
- Short-term closures to exhibits for building maintenance
- SW Ecodistrict would increase visitorship, but visitor services would not be enhanced
UTILITIES

INDIRECT, LONG-TERM, MODERATE ADVERSE IMPACTS
DIRECT AND INDIRECT, LONG-TERM, MODERATE, ADVERSE IMPACTS

• Continual need to repair utilities and no new sustainability measures would be implemented
• Energy consumption may increase as systems continue to age and become less efficient
WASTE MANAGEMENT

NO DIRECT IMPACTS
MINOR, LONG-TERM, ADVERSE IMPACTS

• Collections delivery and distribution would continue to share space with food and waste streams, increasing the risk of damage or deterioration of collection items over time.
NO ACTION ALTERNATIVE

TRAFFIC AND TRANSPORTATION

NEGLIGIBLE, LONG-TERM, ADVERSE IMPACTS TO TRANSPORTATION AND TRANSIT NETWORK

- No site enhancements and no new vehicle trips
- No new bicycle, pedestrian or transit trips
- No consolidated loading dock South Mall Campus does not meet design criteria for servicing museums
# NO ACTION ALTERNATIVE - IMPACTS MATRIX

<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>No Action Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topography &amp; Soils</td>
<td>Minimal ground disturbance during routine repairs would result in direct and indirect short-term, negligible, adverse impacts.</td>
</tr>
<tr>
<td>Seismic Vulnerability</td>
<td>Direct, long-term, major, adverse impacts from lack of seismic protection.</td>
</tr>
<tr>
<td>Stormwater Resources</td>
<td>There would continue to be a limited ability to retain and filter stormwater resulting in an indirect, long-term, minor adverse impact would occur.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Construction activities during routine repairs would result in direct, short-term, minor, adverse impacts. Direct, long-term, minor, adverse impacts would occur from continued use of GSA steam and chilled water and existing mechanical systems.</td>
</tr>
<tr>
<td>Greenhouse Gases, Climate Change &amp; Energy Consumption</td>
<td>Direct and indirect, short and long-term negligible, minor, adverse impacts from continued use of GSA steam and chilled water and existing mechanical systems.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Direct, long-term, moderate, adverse impacts from minor repairs and potential seismic and blast vulnerability. Minor repairs and renovations would negatively impact the character and setting of resources undergoing the repair/renovations.</td>
</tr>
<tr>
<td>Visual Quality</td>
<td>Direct, short-term, negligible, adverse impacts due to minor renovations. There would be no indirect impacts.</td>
</tr>
<tr>
<td>Land Use Planning &amp; Policies</td>
<td>There would be no impacts under the No-Action Alternative.</td>
</tr>
<tr>
<td>Traffic and Transportation</td>
<td>There would be long-term, negligible, adverse impacts from development in the area. The No-Action Alternative would not add any traffic.</td>
</tr>
<tr>
<td>Visitor Use &amp; Experience</td>
<td>Direct, long-term, moderate, adverse impacts from lack of improvements to the South Mall Campus.</td>
</tr>
<tr>
<td>Human Health and Safety</td>
<td>Direct, long-term, minor, adverse impacts from the disturbance of hazardous materials and lack of security upgrades. Direct, long-term, minor, beneficial impact from removal of hazardous materials.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Continuing need to repair utilities would result in direct, long-term, minor, adverse impacts. Remaining on GSA steam and chilled water would result in indirect, long-term, moderate, adverse impacts to SI collections.</td>
</tr>
<tr>
<td>Waste Management</td>
<td>No impacts.</td>
</tr>
</tbody>
</table>
NO ACTION ALTERNATIVE COMMENTS
DISMISSED RESOURCES AND COMMON TO ALL IMPACTS
DISMISSED RESOURCES

- Geology
- Wildlife and vegetation
- Threatened and endangered species
- Groundwater and hydrology
- Surface water and wetlands
- Floodplains
- Coastal zone
- Archaeological resources
- Noise
- Community facilities and services
- Population and housing
- Economy and employment
- Environmental justice
COMMON TO ALL ALTERNATIVES - CULTURAL RESOURCES

NATIONAL MALL

Reinforced Quadrangle Roof Membrane
Replacement of the roof membrane will not adversely impact the contributing buildings. The roof cover treatment of the above-ground Quad pavilions and Haupt Garden will be designed separately by Sheetz/Blake.

Perimeter Security
Perimeter security has the potential to adversely impact the character of the Mall, including the relationship of buildings to the surrounding landscapes. Impacts will be further evaluated at time of project design.

New Loading Ramp
The new loading dock will be only minimally visible from the central Mall greenway and will create a negligible adverse impact.

CASTLE

Castle East Facade
Beneficial long-term impact

Castle Base Isolation
Beneficial long-term impact

Castle Seismic Bonding
Lifelines will be further evaluated at time of project design. This action will protect the Castle from potential seismic events, resulting in a beneficial long-term impact.

Castle Basement Floor Lining
Beneficial long-term impact

Castle Interior Restoration
Beneficial long-term impact

FREER GALLERY OF ART

East Accessible Entrance
Minor adverse impact

New Loading Ramp
Impacts will be further evaluated at time of project design.

HMSG

Hirshhorn Building Restoration
Beneficial long-term impact

Hirshhorn Sculpture Garden Walls
Beneficial long-term impact

AIB

Reopen AIB for Public Circulation
Beneficial long-term impact

Remove Surface Building Lofts and Expand Ripley Garden
Minor beneficial impact

Central Utility Plant
The location and extent of excavation varies by alternative. Impacts will be further evaluated at time of project design.

SMITHSONIAN QUADRANGLE

All Plan Components
All direct impacts described above for the Mall Historic District and its contributing buildings also apply to the Smithsonian Quadrangle Historic District.
### COMMON TO ALL ALTERNATIVES - VISUAL RESOURCES

<table>
<thead>
<tr>
<th>Area of Intervention</th>
<th>Action</th>
<th>Impacts on Visual Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freer Gallery, Hirshhorn Museum Building, and AIB</td>
<td>Minimal exterior alterations</td>
<td>Negligible, long-term negative impact</td>
</tr>
<tr>
<td>Castle</td>
<td>Castle rehabilitation, seismic upgrade, and basement expansion</td>
<td>Negligible, long-term negative impact</td>
</tr>
<tr>
<td></td>
<td>Visitor Center entrance</td>
<td>Potential for a minor, long-term, adverse impact. The specific intervention varies by alternative.</td>
</tr>
<tr>
<td>Quadrangle Building and Haupt Garden</td>
<td>Replacement of the Quadrangle Building roof membrane and Haupt Garden planting</td>
<td>Resulting impacts will be dependent on the final Haupt Garden design and the configuration and maturity of the new vegetation.</td>
</tr>
<tr>
<td></td>
<td>Removal of the Ripley Pavilion</td>
<td>Minor, long-term, beneficial impact.</td>
</tr>
<tr>
<td>Perimeter Security</td>
<td>Installation of perimeter security elements</td>
<td>This action has the potential to impede or alter visual relationships, especially between the South Mall Campus and the greater National Mall landscape and urban context. These impacts will be further evaluated at the time of project design.</td>
</tr>
</tbody>
</table>
COMMON TO ALL

TOPOGRAPHY AND SOILS

LONG-TERM, MINOR, ADVERSE IMPACTS FROM THE REMOVAL OF SOILS

- 20-30 feet of soils removed underneath Castle to underpin foundation, complete the seismic reinforcement/enhancement, and lower basement floor
- Some soil removal from Haupt Garden to fix Quadrangle Building roof membrane
- Excavation of Sculpture Garden and tunnel
- Removal of parking lot at AIB and loading area next to Freer Gallery would add soils where none exist
STORMWATER RESOURCES

DIRECT AND INDIRECT, SHORT-TERM, MINOR, ADVERSE IMPACTS DURING CONSTRUCTION
DIRECT AND INDIRECT, LONG-TERM, MODERATE, BENEFICIAL IMPACTS

- New Loading Ramp would increase impervious surface
- The change of the AIB surface parking lot and the Quadrangle loading would decrease the amount of impervious surface
- Once the Haupt Garden is restored – pervious pavers, bioretention areas, and additional plantings and green space would be added.
COMMON TO ALL

SEISMIC VULNERABILITY

DIRECT, SHORT-TERM, MINOR, ADVERSE IMPACTS
DIRECT, LONG-TERM, MAJOR, BENEFICIAL IMPACT

- Castle would be retrofitted using base isolation and traditional cross bracing methods
- Base isolation would limit forces a seismic event would have on a building. Limiting the forces would limit the number of cross braces that would be needed
COMMON TO ALL

HUMAN HEALTH & SAFETY

DIRECT, SHORT-TERM, MINOR, ADVERSE IMPACTS
DIRECT, LONG-TERM, MODERATE, BENEFICIAL IMPACT

• Disturbance of hazardous materials and safety hazards during construction
• Castle would be retrofitted using base isolation and traditional cross bracing methods
• Base isolation would limit forces a seismic event would have on a building. Limiting the forces would limit the number of cross braces that would be needed
COMMON TO ALL

AIR QUALITY

DIRECT, SHORT-TERM, MINOR ADVERSE IMPACTS
DIRECT AND INDIRECT, LONG-TERM, MINOR BENEFICIAL IMPACTS
INDIRECT, LONG-TERM, NEGLIGIBLE ADVERSE IMPACT

• Outdated mechanical systems would be replaced with modern, energy efficient units
• South Mall Campus would be removed from GSA steam/chilled water
• Central utility plant would use new energy efficient equipment, emissions controls, and natural gas
• Subject to DOE review to determine if new source permit needed
• Short-term impacts from construction, mitigated through control measures
• Negligible increase in vehicle emissions
COMMON TO ALL

GREENHOUSE GAS & ENERGY CONSUMPTION

DIRECT AND INDIRECT, LONG-TERM, NEGLIGIBLE, BENEFICIAL IMPACTS

- Improved mechanical systems
- Sustainable building design
- South Mall Campus would be removed from GSA steam/chilled water
- Central utility plant would use new energy efficient equipment, emissions controls, and natural gas with lower emissions
- There would be approximately a 39% reduction in CO2 emissions
- Short-term emissions from construction equipment mitigated through control measures
COMMON TO ALL

LAND USE PLANNING & POLICIES

DIRECT AND INDIRECT, LONG AND SHORT-TERM, MODERATE, BENEFICIAL IMPACTS

- Consistent with goals of the SW Ecodistrict Plan and National Mall Plan
VISITOR USE & EXPERIENCE

DIRECT, MODERATE AND INDIRECT, MINOR SHORT-TERM, ADVERSE IMPACTS.
LONG-TERM, BENEFICIAL, MAJOR IMPACTS.
INDIRECT, LONG-TERM, BENEFICIAL IMPACT.

• Visitorship to South Mall Campus expected to increase
• Centralized Visitor Center would enhance orientation and underground connections to Quad
• East-west connection between Freer and Hirshhorn would be improved
• Circulation, wayfinding, and visibility improvements within and outside the Campus would be improved
COMMON TO ALL

VISITOR USE & EXPERIENCE

DIRECT, MODERATE AND INDIRECT, MINOR SHORT-TERM, ADVERSE IMPACTS.
LONG-TERM, BENEFICIAL, MAJOR IMPACTS.
INDIRECT, LONG-TERM, BENEFICIAL IMPACT.

• New educational, museum, and event spaces
• Temporary closures and relocations during construction
• SW Ecodistrict would increase visitorship and visitor services would be enhanced
COMMON TO ALL

UTILITIES

DIRECT, LONG-TERM, MODERATE BENEFICIAL IMPACTS
INDIRECT, SHORT-TERM, MINOR, ADVERSE IMPACTS

• Complete replacement and upgrade of mechanical, electrical, water, sanitary, and stormwater infrastructure
• South Mall Campus would be removed from GSA steam/chilled water
• Increased demand for utilities mitigated by efficiency of central utility plant, energy-efficient lighting, modernized HVAC systems, skylights, low-flow plumbing fixtures, renewable energy systems, stormwater capture and reuse
• Reductions in energy and water supplies throughout the South Mall Campus
COMMON TO ALL

WASTE MANAGEMENT

DIRECT, SHORT-TERM, MINOR, ADVERSE IMPACTS
DIRECT, LONG-TERM, MODERATE, BENEFICIAL IMPACTS
INDIRECT, SHORT AND LONG-TERM, NEGLIGIBLE, ADVERSE IMPACTS

• Central loading facility would consolidate waste streams and increase efficiency of waste handling
• Waste streams, collections deliveries, other deliveries, and distribution would be separated
• Expanded composting, recycling, reuse, and return-to-vendor programs
• 80% of waste diverted from landfills
• Minimal short-term increase in construction waste, 50% would be diverted
TRANSPORTATION & TRAFFIC

DIRECT, LONG-TERM, NEGLIGIBLE, ADVERSE IMPACTS

• Additional vehicle trips would be generated
• Connectivity enhancements would reduce pedestrian demand on adjacent sidewalks.
• Bicycle, pedestrian, and transit trips expected to increase
TRANSPORTATION & TRAFFIC

DIRECT, LONG-TERM, NEGLIGIBLE, ADVERSE IMPACTS
DIRECT, LONG-TERM, NEGLIGIBLE, ADVERSE IMPACTS

• New loading dock would introduce a new curb cut but eliminates 2 uncontrolled driveways and have a net benefit to overall traffic operations and not generate new truck trips
• Visitor safety risks during construction would be mitigated through health and safety plan, signage, fencing
## COMMON TO ALL - IMPACTS MATRIX

<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>Elements Common to All Master Plan Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topography &amp; Soils</td>
<td>Exposure and disturbance of soils during construction would result in direct and indirect short-term, minor adverse impacts. Excessive would result in direct, short-term, long-term, minor, adverse impacts to previously disturbed soils and Campus's topography.</td>
</tr>
<tr>
<td>Seismic Vulnerability</td>
<td>Direct, short-term, minor, adverse impacts during construction due to increased vulnerability. Seismic upgrades would result in a direct, long-term, major, beneficial impact.</td>
</tr>
<tr>
<td>Stormwater Resources</td>
<td>Direct and indirect, short-term, minor, adverse impacts during construction. Direct and indirect, long-term, moderate, beneficial impacts from reduction of impervious surface and implementation of SWM.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Construction activities would result in direct, short-term, minor, adverse impacts. New mechanical systems and control utility plant would result in direct and indirect, long-term, minor, beneficial impacts. An increase in vehicular trips would result in indirect, long-term, negligible, adverse impact.</td>
</tr>
<tr>
<td>Greenhouse Gases, Climate Change &amp; Energy Consumption</td>
<td>Construction activities would result in direct, short-term, minor, adverse impacts. New mechanical systems and control utility plant would result in direct and indirect, long-term, negligible, beneficial impacts.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Construction activities would result in direct, short-term, moderate to major, adverse impacts. There would be long-term, minor, adverse impacts to the Four Gallery from the adaptation of the east wall. Blast protection, base isolation, and seismic bracing of the Castle would not result in adverse effects. Protecting the Castle from potential blast and set seismic events would result in a long-term beneficial impact. Lowering the basement floor of the Castle and restoring the Castle would result in long-term, beneficial impacts. Removing the parking lot at A&amp;B and restoring the next door to use would result in long-term, beneficial impacts. Restoring the Herndon Building and Plaza and replacing the garden walls would result in moderate, beneficial impacts. Removing the Quadrangle building roof membranes would result in moderate, beneficial impacts. The Dutch Windmill, the old guard house, and the sky porches would not adversely impact cultural resources. Perimeter security has the potential to have a long-term adverse adversely impact to the character of the National Mall.</td>
</tr>
<tr>
<td>Visual Quality</td>
<td>Direct, short-term, negligible, adverse impacts from construction activities. Direct, long-term, minor, adverse impact from new Visitor Center entrance. Removal of Ripley Pavilion and the addition of permanent security design would result in direct, long-term, minor, beneficial impacts because it would open views to the National Mall. Rehabilitation of the Castle would result in negligible, long-term, adverse impacts. There would be no indirect impacts.</td>
</tr>
<tr>
<td>Land Use Planning &amp; Policies</td>
<td>Direct and indirect, long and short-term moderate, beneficial impacts by complementing other planning efforts.</td>
</tr>
<tr>
<td>Traffic and Transportation</td>
<td>Would not result in additional vehicular, bicycle, pedestrian, or transit trips.</td>
</tr>
<tr>
<td>Visitor Use &amp; Experience</td>
<td>Direct and indirect, short-term, minor, adverse impacts from noise and excessive congestion. Direct, long-term, minor, beneficial impacts from Campus improvements.</td>
</tr>
<tr>
<td>Human Health and Safety</td>
<td>Direct, short-term, minor, adverse impacts from the disturbance of hazardous materials and safety hazards during construction. Direct, long-term, minor, and moderate, beneficial impact from removal of hazardous materials and installation of Campus security and blast protection. Direct.</td>
</tr>
</tbody>
</table>
## COMMON TO ALL - IMPACTS MATRIX

<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>Elements Common to All Master Plan Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term, major, beneficial impacts would result from security upgrades including blast protection, perimeter security elements, and visitor screening upgrades.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Direct, short-term, negligible, adverse impacts from temporary increase in utility demand. Direct and indirect, long-term, moderate, beneficial impact from overall reduction in utility use. Indirect, short-term, minor, adverse impacts from disruption to utilities.</td>
</tr>
<tr>
<td>Waste Management</td>
<td>Direct, short-term, minor, adverse impacts from increased waste generation during construction. Direct, long-term, moderate, beneficial impacts from streamlined waste management. Indirect, short-term and long-term, negligible, adverse impacts from waste generated on the South Mall Campus.</td>
</tr>
</tbody>
</table>
ALTERNATIVE B SUMMARY
ALTERNATIVE B

75% of Museum Visitors Arrive From Mall

FROM MALL

JEFFERSON DRIVE

FROM SOUTH

INDEPENDENCE AVENUE
ALTERNATIVE B - BELOW GRADE

LIMITED CONNECTION BETWEEN VISITOR CENTER AND QUAD MUSEUMS

EDUCATION CONTINUES TO BE DIFFICULT TO FIND

FACILITIES AND BACK OF HOUSE COLLECTIONS OCCUPY D1 LEVEL SPACES

LIMITED DAYLIGHT
ALTERNATIVE B - BASEMENT LEVEL 1

- Two Security points in Visitor center
- Conflicts between public museum visitors and back of house operations
- No improvements to below-grade museums
- Location of museum entry circulation cores do not allow for connection to the visitor center
ALTERNATIVE B IMPACTS
## Alternative B - Visual Resources

<table>
<thead>
<tr>
<th>Area of Intervention</th>
<th>Action</th>
<th>Impacts on Visual Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hirshhorn Museum and Sculpture Garden</td>
<td>Hirshhorn Plaza wall opening</td>
<td>Minor, long-term, adverse impact on the integrity and visual character of the plaza.</td>
</tr>
<tr>
<td></td>
<td>Hirshhorn Tunnel restoration</td>
<td>Minor, beneficial, long-term impact on the character of the resource.</td>
</tr>
<tr>
<td>Quadrangle Building and Haupt Garden</td>
<td>Quadrangle Building roof membrane replacement and Haupt Garden reconfiguration, including the in-kind replacement of planting and the addition of new exhaust and intake vents.</td>
<td>Potential for minor to moderate, long-term, adverse impact on the aesthetic character of this landscape. These impacts will be further evaluated at the time of project design.</td>
</tr>
</tbody>
</table>
LAND USE PLANNING & POLICIES

MINOR TO MODERATE, LONG-TERM, ADVERSE AND BENEFICIAL IMPACTS

• Minimal consistency with the Comprehensive Plan goal of pedestrian-oriented
development that adds vitality and visual interest to urban areas
• Minimal consistency with the SW Ecodistrict Plan goals for improved connections to
  open space
• Consistent with Comprehensive Plan's goals for preserving, protecting and
  rehabilitating historic properties
LAND USE PLANNING & POLICIES

MINOR TO MODERATE, LONG-TERM, ADVERSE AND BENEFICIAL IMPACTS

• Would restore and renovate historic buildings and minimize changes to above ground spaces consistent with the National Mall Plan’s cultural resource goals
• Additional program space and visitor amenities are consistent with National Mall Plan’s goal for civic stage and portions of visitor experience
• Visibility of museum entrances and consolidation of amenities is not keeping with the National Mall Plan’s goals for improved access and circulation and improved visitor experience
VISITOR USE & EXPERIENCE

MODERATE, DIRECT, LONG-TERM, BENEFICIAL
MODERATE, LONG-TERM, ADVERSE IMPACTS

• Small opening in Hirshhorn wall to enhance circulation
• Hirshhorn tunnel would be restored
• Removal of Ripley Pavilion better connects Visitor Center to Quad
• Relocation of NMAfA and Sackler entrances to the north reorients the museums
• Underground museum spaces would continue to be hidden
ALTERNATIVE B

HUMAN HEALTH & SAFETY

DIRECT, LONG-TERM, MODERATE, BENEFICIAL IMPACT

• Removal of hazardous materials and installation of Campus seismic and blast protection, perimeter security elements, and visitor screening upgrades
## ALTERNATIVE B - IMPACTS MATRIX

<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>Alternative B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topography &amp; Soil</td>
<td>Exposure and disturbance of soils during construction would result in direct and indirect short-term, minor, adverse impacts. Excavation would result in direct, short- and long-term, moderate, adverse impacts to previously disturbed soils and Campus topography.</td>
</tr>
<tr>
<td>Seismic Vulnerability</td>
<td>Direct, short-term, minor, adverse impacts during construction due to increased vulnerability. Seismic upgrades would result in a direct, long-term, major, beneficial impact.</td>
</tr>
<tr>
<td>Stormwater Resources</td>
<td>Direct and indirect, short-term, minor, adverse impacts due to stormwater runoff. Stormwater runoff management systems would result in direct, long-term, moderate, beneficial impacts.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Construction activities would result in direct, short-term, minor, adverse impacts. New mechanical systems and central utility plant would result in direct and indirect, long-term, minor, beneficial impacts. A minor increase in vehicular trips would result in a direct, long-term, negligible, adverse impact.</td>
</tr>
<tr>
<td>Greenhouse Gases, Climate Change &amp; Energy Consumption</td>
<td>Construction activities would result in direct, short-term, minor, adverse impacts. New mechanical systems and central utility plant would result in direct and indirect, long-term, negligible, beneficial impacts.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Construction activities would result in direct, short-term, moderate to major, adverse impacts. The small opening that would be inserted in the west plaza wall of the Hiramton would create, long-term, minor adverse impacts. Reopening the tunnel would result in long-term, beneficial impacts. Minor, long-term, adverse impact would result from the reconfiguration of the Haupt Garden. Reconfiguring the Quadrangle Building entrance would not have an adverse impact on cultural resources. Impacts to cultural resources associated with the creation of a new visitor center, central utility plant, sub-basement excavation of the Castle, and excavation for a new loading ramp would be evaluated at the time of project design. There would be no indirect impacts.</td>
</tr>
<tr>
<td>Visual Quality</td>
<td>Direct, short-term, negligible, adverse impacts from construction activities. Direct, long-term, minor adverse impacts from the creation of a small opening in the Hiramton Plaza and the reconfiguration of the Hiramton tunnel. Reconfiguration of the Haupt Garden would result in direct, long-term, minor to moderate adverse impacts. There would be no indirect impacts.</td>
</tr>
<tr>
<td>Land Use Planning &amp; Policies</td>
<td>Alternative B would have a minor to moderate, long-term, adverse impact in strengthening the connection of the South Mall Campus to the SRW Ecotrust. As it would continue to block out the neighborhood across Independence Avenue, SRW from within the site and continue to block views into the gardens and to the Castle from outside.</td>
</tr>
<tr>
<td>Traffic and Transportation</td>
<td>Direct, long-term, negligible, adverse impacts from a minor increase in vehicular trips. Direct, long-term, negligible, adverse impacts from a minor increase in bicycle, pedestrian, and transit trips.</td>
</tr>
<tr>
<td>Visitor Use &amp; Experience</td>
<td>Direct and indirect, short-term, minor, adverse impacts from noise and access disruptions. Direct, long-term, minor, beneficial impacts from Campus improvements.</td>
</tr>
<tr>
<td>Human Health and Safety</td>
<td>Direct, short-term, minor, adverse impacts from the disturbance of hazardous materials and safety hazards during construction. Direct, long-term, minor, and moderate, beneficial impact from removal of hazardous materials and installation of Campus seismic and blast protection. Direct, long-term, moderate, beneficial impacts would result from security upgrades including blast protection, perimeter security elements, and visitor screening upgrades. However, this alternative does provide adequate daylight for staff that would result in minor, long-term, adverse impacts.</td>
</tr>
</tbody>
</table>
## ALTERNATIVE B - IMPACTS MATRIX

<table>
<thead>
<tr>
<th>Resource/Topic</th>
<th>Alternative B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td>Direct, short-term, negligible, adverse impacts from temporary increase in utility demand. Direct and indirect, long-term, moderate, beneficial impact from overall reduction in utility use. Indirect, short-term, minor, adverse impacts from disruption to utilities.</td>
</tr>
<tr>
<td>Waste Management</td>
<td>Direct, short-term, minor, adverse impacts from increased waste generation during construction. Direct, long-term, moderate, beneficial impacts from streamlined waste management. Indirect, short and long-term, negligible, adverse impacts from waste generated on the South Mall Campus.</td>
</tr>
</tbody>
</table>
ALTERNATIVE B
COMMENTS
ALTERNATIVE D
SUMMARY
ALTERNATIVE D - SCOPE ABOVE GRADE
ALTERNATIVE D - SCOPE BELOW GRADE
ALTERNATIVE D - PURPOSE AND NEED

- Large amount of excavation below castle
- Hirshhorn walls not retained
- ADA accessibility
- Enhanced visitor center amenities
- Improved campus circulation and wayfinding
- Additional program space
- Consolidated delivery
- Museum entries increased visibility
- Improved below grade daylight
- Enhanced utilities
- Garden lacks intimate space
- Removal of Renwick gates
- Grade change in front of castle
ALTERNATIVE D - ABOVE GRADE

75% of museum visitors arrive from mall

FROM MALL

JEFFERSON DRIVE

THE DIP

FROM ECODISTRICT

INDEPENDENCE AVENUE
ALTERNATIVE D IMPACTS
### ALTERNATIVE D - CULTURAL RESOURCES

#### NATIONAL MALL
- **Reconfigure Haupt Garden**: Major, long-term adverse impact
- **Central Utility Plant**: Exhaust and intake vents will be integrated into the Haupt Garden landscaped area with potential for adverse impacts. Impacts will be evaluated at time of project design.
- **Quad Museum Pavilions**: Major, long-term negative impact
- **Quad Skylights**: Moderate, long-term negative impact; impacts will be further evaluated at time of project design.
- **Grade Changes Across Project Area**: Modifications to existing grades throughout the South Mall Campus have the potential to impact contributing Mallview sheds. These impacts will be further evaluated at the time of project design.

#### CASTLE
- **Castle Sub-Basement Expansion**: Moderate, long-term negative impact
- **Visitor Center Entrance**: Major, long-term negative impact

#### SOUTH MALL CULTURAL LANDSCAPE
- **Reconfigure Haupt Garden**: Major, long-term adverse impact

#### SMITHSONIAN QUADRANGLE
- **All Plan Components**: All direct impacts described above for the Mall Historic District and its contributing buildings also apply to the Smithsonian Quadrangle Historic District.

### HMSG
- **Hirshhorn Plaza Walls**: Major, long-term negative impact
- **Hirshhorn Plaza Tunnel**: Moderate, long-term negative impact
- **Neo Galleries Beneath Sculpture Garden**: Major, long-term negative impact

### L'ENFANT PLAN
- **Grade Changes in Quadrangle**: The proposed grade changes have the potential to negatively impact the contributing fourth street vista of the Castle. These impacts will be further evaluated at the time of project design.

### Legend
- **DESTRUCTION:** Demolition
- **RENOVATION/RESTORATION:** Renovation/Restoration
- **EXISTING EXCAVATION:** Existing Excavation
- **RECONFIGURATION:** Reconfiguration
- **NEW CONSTRUCTION:** New Construction
### ALTERNATIVE D - VISUAL RESOURCES

<table>
<thead>
<tr>
<th>Area of Intervention</th>
<th>Action</th>
<th>Impacts on Visual Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hirshhorn Museum and Sculpture Garden</td>
<td>Hirshhorn Plaza wall lowering</td>
<td>Removal of large portions of the plaza walls would diminish the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>quality of the plaza as a self-contained space, improving views</td>
</tr>
<tr>
<td></td>
<td></td>
<td>but also diminishing its aesthetic character, resulting in a net</td>
</tr>
<tr>
<td></td>
<td></td>
<td>adverse impact.</td>
</tr>
<tr>
<td></td>
<td>Sculpture Garden reconfiguration to create</td>
<td>Raising the Sculpture Garden would alter the intimate nature of</td>
</tr>
<tr>
<td></td>
<td>high-ceilinged galleries below</td>
<td>the existing Sculpture Garden landscape and has the potential to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>impede the north-west view along the 8th Street axis, resulting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>in a long-term, moderate, adverse impact.</td>
</tr>
<tr>
<td>Castle</td>
<td>Visitor Center “dip” entrance</td>
<td>Changes proposed to the Hirshhorn Sculpture Garden have the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>potential to indirectly impact the principal, east-west National</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mall viewshed. Although the changes proposed would not</td>
</tr>
<tr>
<td></td>
<td></td>
<td>impede on the central greensward, the changes may alter extant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>landscape features, including mature trees, which would result</td>
</tr>
<tr>
<td></td>
<td></td>
<td>in a minor, long-term, adverse impact to the continuity of that</td>
</tr>
<tr>
<td></td>
<td></td>
<td>visual resource.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Major, long-term, adverse impact to the integrity of the resource.</td>
</tr>
</tbody>
</table>


### Alternative D - Visual Resources

<table>
<thead>
<tr>
<th>Area of Intervention</th>
<th>Action</th>
<th>Impacts on Visual Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quadrangle Building and Haupt Garden</td>
<td>Extensive reconfiguration of Quadrangle Building and Haupt Garden, including the replacement of the museum pavilions and skylights in new locations.</td>
<td>This action carries both beneficial and adverse effects. The visual quality of the campus would benefit by improving the visibility of the museum pavilions from the National Mall, in addition to expanding the viewshed from 10th Street, SW and along Independence Avenue. Conversely, this change has the potential to alter the secluded and intimate character of the Haupt Garden as compared to its environs, resulting in a moderate, long-term, adverse impact.</td>
</tr>
<tr>
<td>Quadrangle Building roof membrane and planting replacement, including the addition of new exhaust and intake vents.</td>
<td>Haupt Garden reconfiguration has the potential to create a minor to moderate, long-term, adverse impact on the aesthetic character of this landscape.</td>
<td></td>
</tr>
</tbody>
</table>
LAND USE PLANNING & POLICIES

MODERATE, DIRECT, LONG-TERM, BENEFICIAL IMPACT

- Strengthens connection to SW Ecodistrict and increases views to gardens and Castle from outside
- Consistent with goals for pedestrian-oriented development and improved connections to public space
- Would eliminate greatest number physical elements between the National Mall, South Mall Campus and SW Ecodistrict promoting the goals of the Comprehensive Plan and SW Edodistrict
LAND USE PLANNING & POLICIES

MODERATE, DIRECT, LONG-TERM, BENEFICIAL IMPACT

- Not fully consistent with urban design or historic preservation elements of Comprehensive Plan
- Includes additional program space and improves visibility of museum entrances consistent with National Mall Plan's goals for improved visitor experience, improved access
VISITOR USE & EXPERIENCE

MODERATE, LONG-TERM, BENEFICIAL IMPACTS

• Visitorship expected to increase
• North, east, and west walls of Hirshhorn Plaza would be removed to provide greater accessibility to Hirshhorn Museum and Sculpture Garden
• Hirshhorn Tunnel would be reopened and expanded to all access from the museum to the garden
• New below-grade galleries would provide space for large exhibitions
• Removal of Sackler, NMAfA, and Ripley Pavilions would better connect Visitor Center to Quadrangle and better visibility to National Mall
HUMAN HEALTH & SAFETY

DIRECT, LONG-TERM, MODERATE, BENEFICIAL IMPACT

• From removal of hazardous materials and installation of Campus seismic and blast protection, perimeter security elements, and visitor screening upgrades
# ALTERNATIVE D - IMPACTS MATRIX

<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>Alternative D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topography &amp; Soils</td>
<td>Exposure and disturbance of soils during construction would result in direct and indirect short-term, minor, adverse impacts. Excavation would result in direct, short, and long-term, major, adverse impacts to previously disturbed soils and Campus Topography.</td>
</tr>
<tr>
<td>Seismic Vulnerability</td>
<td>Direct, short-term, minor, adverse impacts during construction due to increased vulnerability. Seismic upgrades would result in direct, long-term, major, beneficial impact.</td>
</tr>
<tr>
<td>Stormwater Resources</td>
<td>Direct and indirect, short-term, minor, adverse impacts during construction. Direct and indirect, long-term, moderate, beneficial impacts from reduction of impervious surface and implementation of SWM.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Construction activities would result in direct, short-term, minor, adverse impacts. New mechanical systems and central utility plant would result in direct and indirect, long-term, minor, beneficial impacts. A minor increase in vehicular trips would result in an indirect, long-term, negligible, adverse impact.</td>
</tr>
<tr>
<td>Greenhouse Gases, Climate Change &amp; Energy Consumption</td>
<td>Construction activities would result in direct, short-term, minor, adverse impacts. New mechanical systems and central utility plant would result in direct and indirect, long-term, negligible, beneficial impacts</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Construction activities would result in direct, short-term, moderate to major, adverse impacts. Sub-basement excavation of the entire Castle would create a long-term, moderate, adverse impact. Below-grade ‘dip’ entrance to the Visitor Center would result in direct, long-term, major adverse impacts to the Castle. Relocation of the entrance to the gardens and removal and replacement of the Quadrangle Museum Pavilion would result in direct, long-term, major, adverse impacts by improving visibility. Direct, long-term, major adverse impacts from the removal of wall of the Hyneman. Major, indirect, long-term impacts from the changes to the Hyneman Sculpture Garden and the reconfiguration of tunnel would result in moderate, long-term, adverse impacts. Removal of the pavilions would result in a long-term, major, adverse impact to the Quadrangle building. Removal and replacement of skylights would result in a long-term, moderate adverse impact. Impacts to cultural resources associated with the creation of a central utility plant would be evaluated at the time of project design. There would be no indirect impacts.</td>
</tr>
</tbody>
</table>
# ALTERNATIVE D - IMPACTS MATRIX

<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>Alternative D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Quality</td>
<td>Direct, short-term, negligible, adverse impacts from construction activities.</td>
</tr>
<tr>
<td></td>
<td>Below-grade 'dip' entrance to the Visitor Center would result in direct, long-term, major adverse impacts to the Castle.</td>
</tr>
<tr>
<td></td>
<td>Reconfiguration of the Haupt Garden would result in direct, long-term, beneficial impacts by improving visibility and long-term, minor to moderate, adverse impacts by altering the secluded nature of the Garden and the addition of vents for the central utility plant.</td>
</tr>
<tr>
<td></td>
<td>Direct, long-term, minor adverse impacts from the removal of plant walls at the Hirsthorn and the raising of the Sculpture Garden would result in moderate, long-term, adverse impacts.</td>
</tr>
<tr>
<td></td>
<td>Moderate, indirect, long-term impacts from the changes to the Hirsthorn Sculpture Garden.</td>
</tr>
<tr>
<td>Land Use Planning &amp; Policies</td>
<td>A moderate, long-term, beneficial impact would occur by strengthening the connection of the South Mall Campus to the SW Ecodistrict and would increase views into the gardens and to the Castle from outside. It would be consistent with the SW Ecodistrict goals for a pedestrian-oriented development and improved connection to public space. Due to impacts to the historic character of the South Mall Campus, the alternative may not be fully consistent with the Urban Design or Historic Preservation Elements of the Comprehensive Plan. It would involve and renovate historic buildings consistent with the National Mall Plan's cultural resource goals.</td>
</tr>
<tr>
<td>Traffic and Transportation</td>
<td>Direct, long-term, negligible, adverse impacts from a minor increase in vehicle trips.</td>
</tr>
<tr>
<td></td>
<td>Direct, long-term, negligible, adverse impacts from a minor increase in bicycle, pedestrian, and bus trips.</td>
</tr>
<tr>
<td>Visitor Use &amp; Experience</td>
<td>Direct and indirect, short-term, minor, adverse impacts from noise and access disruptions. Direct, long-term, moderate, beneficial impacts from Campus improvements.</td>
</tr>
<tr>
<td>Human Health and Safety</td>
<td>Direct, short-term, minor, adverse impacts from the disturbance of hazardous materials and safety hazards during construction. Direct, long-term, minor, and moderate, beneficial impacts from removal of hazardous materials and installation of Campus seismic and blast protection. Direct, long-term, major, beneficial impacts would result from security upgrades including blast protection, perimeter security elements, and visitor screening upgrades.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Direct, short-term, negligible, adverse impacts from temporary increase in utility demand.</td>
</tr>
<tr>
<td></td>
<td>Direct and indirect, long-term, moderate, beneficial impact from overall reduction in utility use.</td>
</tr>
<tr>
<td></td>
<td>Indirect, short-term, minor, adverse impacts from disruption to utilities.</td>
</tr>
<tr>
<td>Waste Management</td>
<td>Direct, short-term, minor, adverse impacts from increased waste generation during construction.</td>
</tr>
<tr>
<td></td>
<td>Direct, long-term, moderate, beneficial impacts from streamlined waste management.</td>
</tr>
<tr>
<td></td>
<td>Indirect, short and long term, negligible, adverse impacts from waste generated on the South Mall Campus.</td>
</tr>
</tbody>
</table>
ALTERNATIVE D
PUBLIC COMMENTS
ALTERNATIVE F SUMMARY
ALTERNATIVE F WAS DEVELOPED IN RESPONSE TO PUBLIC COMMENTS
ALTERNATIVE F - BELOW GRADE

MINIMIZED EXTENT OF EXCAVATION BENEATH CASTLE

LEVEL CONNECTION TO CASTLE

INCREASE IN BELOW GRADE NATURAL DAYLIGHT

JEFFERSON DRIVE

EDUCATION

VISITOR CENTER

EVENT

MUSEUMS

LOAD

COLLECTIONS

OFFICE

MUSEUMS

INDEPENDENCE AVENUE
**ALTERNATIVE F - BELOW GRADE**

**CONSOLIDATED SCREENING AT VISITOR CENTER ENTRY**

**CLEAR CONNECTION BETWEEN CASTLE, VISITOR CENTER, AND MUSEUMS**

**CONNECTION OF VISITOR AMENITIES AND INSTITUTIONAL PROGRAMMED SPACE**

**BENEFITS:**
- Improvement and expansion of educational program
- Flexible event space
- Visitor Center connects Castle basement and Quad
- Central MEP plant
- Increased natural light below grade
ALTERNATIVE F IMPACTS
ALTERNATIVE F - CULTURAL RESOURCES

NATIONAL MALL

<table>
<thead>
<tr>
<th>Object</th>
<th>Impact Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconfigure Haupt Garden</td>
<td>Moderate, long-term negative impact. Adverse impact has been minimized by retaining the garden’s like quality of the existing Haupt Garden and repurposing existing features in the garden.</td>
</tr>
<tr>
<td>Central Utility Plant</td>
<td>Exhaust and intake vents will be integrated into the Haupt Garden landscape with potential for adverse impacts. Impacts will be assessed at time of project design.</td>
</tr>
<tr>
<td>Quad Museum Pavilions</td>
<td>Major long-term negative impact.</td>
</tr>
<tr>
<td>Quad Skylights</td>
<td>Moderate, long-term negative impact. Impacts will be further evaluated at time of project design.</td>
</tr>
<tr>
<td>Grade Changes Across Project Area</td>
<td>Modifications to existing grades throughout the South Mall Campus has the potential to impact contributing Mall viewsheds. Impacts will be further evaluated at time of project design.</td>
</tr>
</tbody>
</table>

CASTLE

<table>
<thead>
<tr>
<th>Object</th>
<th>Impact Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castle Sub-Basement Expansion</td>
<td>Impacts will be further evaluated at time of project design.</td>
</tr>
<tr>
<td>Visitor Center Entrance</td>
<td>The entrance has the potential to adversely impact the character and setting of Castle. Impacts will be further evaluated at time of project design.</td>
</tr>
</tbody>
</table>

SOUTH MALL CULTURAL LANDSCAPE

<table>
<thead>
<tr>
<th>Object</th>
<th>Impact Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconfigure Haupt Garden</td>
<td>Moderate, long-term negative impact. Adverse impact has been minimized by retaining the garden’s like quality of the existing Haupt Garden and repurposing existing features in the garden.</td>
</tr>
</tbody>
</table>

SMITHSONIAN QUADRANGLE

<table>
<thead>
<tr>
<th>Component</th>
<th>Impact Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Plan Components</td>
<td>All direct impacts described above for the Mall Historic District and its contributing buildings also apply to the Smithsonian Quadrangle Historic District.</td>
</tr>
</tbody>
</table>
## ALTERNATIVE F - VISUAL RESOURCES

<table>
<thead>
<tr>
<th>Area of Intervention</th>
<th>Action</th>
<th>Impacts on Visual Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hirshhorn Museum and Sculpture Garden</td>
<td>Hirshhorn Plaza wall opening</td>
<td>Minor, long-term, adverse impact to the integrity of the resource and visual character of the plaza.</td>
</tr>
<tr>
<td></td>
<td>Sculpture Garden reconfiguration to create high-ceilinged galleries below</td>
<td>Raising the Sculpture Garden would alter the intimate nature of the existing Sculpture Garden landscape and has the potential to impede the north-west view along the 8th Street axis, resulting in a long-term, moderate, adverse impact.</td>
</tr>
<tr>
<td>Castle</td>
<td>Visitor Center entrance</td>
<td>Changes proposed to the Hirshhorn Sculpture Garden have the potential to indirectly impact the principal, east-west National Mall viewshed. Although the changes proposed would not impede on the central greensward, the changes may alter extant landscape features, including mature trees, which would result in a minor, long-term, adverse impact to the continuity of that visual resource. Moderate, long-term, adverse impact to the integrity of the resource</td>
</tr>
<tr>
<td>Area of Intervention</td>
<td>Action</td>
<td>Impacts on Visual Resources</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Quadrangle Building</td>
<td>Extensive reconfiguration of Quadrangle Building and Haupt Garden,</td>
<td>This action carries both beneficial and adverse effects. The visual quality of the campus would benefit by improving the visibility of the museum pavilions from the National Mall, in addition to expanding the viewshed from 10th Street, SW and along Independence Avenue. Conversely, this change has the potential to alter the secluded and intimate character of the Haupt Garden as compared to its environs, resulting in a moderate, long-term, adverse impact.</td>
</tr>
<tr>
<td>and Haupt Garden</td>
<td>including the replacement of the museum pavilions and skylights in new locations.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quadrangle Building roof membrane and planting replacement, including the addition of new exhaust and intake vents.</td>
<td>Reconfiguration of the Haupt Garden—including the addition of exhaust and intake vents supporting the Central Utility Plant—has the potential to create a minor to moderate, long-term, adverse impact on the aesthetic character of this landscape. This impact has been minimized by retaining the garden-like quality and certain features of the existing Haupt Garden, which would result in a similar aesthetic character as exists today.</td>
</tr>
</tbody>
</table>
ALTERNATIVE F - SOILS AND TOPOGRAPHY
LAND USE PLANNING & POLICIES

MODERATE, LONG-TERM, BENEFICIAL IMPACT

• Like Alternative D - Strengthens connection to SW Ecodistrict and increases views to gardens and Castle from outside
• Consistent with goals of the SW Ecodistrict and Comprehensive Plan for pedestrian oriented development and improved connections to public space
• It is more consistent with Urban Design and Historic Preservation Elements of Comprehensive Plan
• Consistent with National Mall Plan
VISITOR USE & EXPERIENCE

MAJOR, LONG-TERM, BENEFICIAL IMPACTS

• Visitorship expected to increase
• Small opening in Hirshhorn wall to enhance circulation
• Hirshhorn Tunnel would be reopened and expanded to allow access from the museum to the garden
• New below-grade galleries would provide space for large exhibitions
VISITOR USE & EXPERIENCE

MAJOR, LONG-TERM, BENEFICIAL IMPACTS

• Removal of Sackler, NMAfA, and Ripley Pavilions would better connect Visitor Center to Quadrangle and provide better visibility to National Mall
• Haupt Garden would be maintained at grade and Parterre kept
• Haupt Garden would be expanded to improve circulation and day lighting; and incorporate intimate and teaching gardens
HUMAN HEALTH & SAFETY

DIRECT, LONG-TERM, MODERATE, BENEFICIAL IMPACTS

• Removal of hazardous materials
• Installation of Campus seismic and blast protection, perimeter security elements, and visitor screening upgrades
<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>Alternative F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topography &amp; Soils</td>
<td>Exposure and disturbance of soils during construction would result in direct and indirect, short-term, minor, adverse impacts. Excavation would result in direct, short and long-term, moderate, adverse impacts to previously disturbed soils and Campus topography.</td>
</tr>
<tr>
<td>Seismic Vulnerability</td>
<td>Direct, short-term, minor, adverse impacts during construction due to increased vulnerability. Seismic upgrades would result in a direct, long-term, major, beneficial impact.</td>
</tr>
<tr>
<td>Biowetland Resources</td>
<td>Direct and indirect, short-term, minor, adverse impacts during construction. Direct and indirect, long-term, moderate, beneficial impacts from reduction of impervious surface and implementation of SWM.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Construction activities would result in direct, short-term, minor, adverse impacts. New mechanical systems and central utility plant would result in direct and indirect, long-term, minor, beneficial impacts. A minor increase in vehicular trips would result in an indirect, long-term, negligible, adverse impact.</td>
</tr>
<tr>
<td>Greenhouse Gases, Climate Change &amp; Energy Consumption</td>
<td>Construction activities would result in direct, short-term, minor, adverse impacts. New mechanical systems and central utility plant would result in direct and indirect, long-term, negligible, beneficial impacts.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Construction activities would result in direct, short-term, moderate to major, adverse impacts. The new Visitor Center entrance may result in long-term, moderate, adverse impacts to the Castle. The email opening that would be mounted on the west plaza wall of the Hirshhorn would create long-term, minor adverse impacts. Major, indirect, long-term impacts from the changes to the Hirshhorn Sculpture Garden and the reconfiguration of tunnel would result in moderate, long-term, adverse impacts. Reconfiguration of the Haupt Garden and removal and replacement of the Quadrangle Museum planters would result in direct, long-term, major, adverse impacts for improving visibility. Removal of the pavilions would result in a long-term, major, adverse impact to the Quadrangle building. Removal and replacement of skylights would result in a long-term, moderate adverse impact. Projects to cultural resources associated with the creation of a new Visitor Center, central utility plant, subsurface excavation of the Castle, and excavation for a new loading ramp would be evaluated at the time of project design. There would be no direct impacts.</td>
</tr>
<tr>
<td>Visual Quality</td>
<td>Direct, short-term, negligible, adverse impacts from construction activities. Below-grade entrance to the Visitor Center would result in direct, long-term, moderate adverse impacts to the Castle. Reconfiguration of the Haupt Garden would result in direct, long-term, beneficial impacts by improving visibility and long-term, minor to moderate, adverse impacts by altering the secluded nature of the Garden and the addition of vents for the central utility plant. Direct, long-term, minor adverse impacts from the creation of a small opening in the Hirshhorn Plaza and the raising of the Sculpture Garden would result in minor to moderate, long-term, adverse impacts. Minor, indirect, long-term impacts from the changes to the Hirshhorn Sculpture Garden.</td>
</tr>
<tr>
<td>Land Use Planning &amp; Policies</td>
<td>A moderate, long-term, beneficial impact would occur by strengthening the connection of the South Mall Campus to the SW Ecodistrict as it would continue to block out of the neighborhood across Independence Avenue. SW from within the site and would increase views into the gardens, and to the Castle from outside. Alternative F is consistent with the Comprehensive Plan and SW Ecodistrict goals for pedestrian-oriented development and for improved connections to public space, and the most consistent with the Urban Design and Historic Preservation Elements of the Comprehensive Plan. It would restore and renovate historic buildings consistent with the National Mall Plan’s cultural resource goals.</td>
</tr>
<tr>
<td>Traffic and Transportation</td>
<td>Direct, long-term, negligible, adverse impacts from minor increase in vehicular trips. Direct, long-term, negligible, adverse impacts from a minor increase in bicycle, pedestrian, and transit trips.</td>
</tr>
</tbody>
</table>
## ALTERNATIVE F - IMPACTS MATRIX

<table>
<thead>
<tr>
<th>Resource</th>
<th>Topic</th>
<th>Alternative F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitor Use &amp; Experience</td>
<td>Direct and indirect, short-term, minor, adverse impacts from noise and access disruptions. Direct, long-term, major, beneficial impacts from Campus improvements.</td>
<td></td>
</tr>
<tr>
<td>Health and Safety</td>
<td>Direct, short-term, minor, adverse impacts from the disturbance of hazardous materials and safety hazards during construction. Direct, long-term, minor, and moderate, beneficial impact from removal of hazardous materials and installation of Campus seismic archload protection.</td>
<td>Direct, long-term, major, beneficial impacts would result from security upgrades, including glass protection, perimeter security elements, and visitor screening upgrades.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Direct, short-term, negligible, adverse impacts from temporary increase in utility demand. Direct and indirect, long-term, moderate, beneficial impact from overall reduction in utility use.</td>
<td>Indirect, short-term, minor, adverse impacts from disruption to utilities.</td>
</tr>
<tr>
<td>Waste Management</td>
<td>Direct, short-term, minor, adverse impacts from increased waste generation during construction. Direct, long-term, moderate, beneficial impacts from streamlined waste management.</td>
<td>Indirect, short-term, long-term, negligible, adverse impacts from waste generated on the South Mall Campus.</td>
</tr>
</tbody>
</table>
ALTERNATIVE F
PUBLIC COMMENTS
CUMULATIVE IMPACTS
CUMULATIVE IMPACTS

CULTURAL RESOURCES

• The No-Action Alternative, in combination with other past, present and future projects, would contribute to the overall adverse cumulative impacts to cultural resources from the lack of a coordinated approach to the protection, maintenance, and stabilization of cultural resources.

• In all of the Master Plan Alternatives, the degree of change proposed for cultural resources of the South Mall Campus, in combination with past, present and future projects would have a major adverse cumulative impact.

• With Alternative B, in addition to the actions common to all Master Plan Alternatives, changes to the Quadrangle Building and Haupt Garden would contribute to an overall moderate adverse cumulative impact.
CULTURAL RESOURCES

• The cumulative impacts associated with Alternative D would be similar to those discussed under Alternative B; however, they would be more intensified due to the greater degree of change to the overall site and change in grade.
• Cumulative impacts associated with Alternative F would be similar to those under Alternative B, but more intensified due to the degree of change to the overall site. However, this impact would be slightly less than Alternative D because Alternative F maintains the existing plain of the Quadrangle and the Haupt Garden.
CUMULATIVE IMPACTS

VISUAL QUALITY

• The lack of a coordinated approach to the protection, maintenance, and stabilization of cultural resources under the No-Action Alternative, in coordination with other past, present and future projects would result in long-term, adverse cumulative impacts to the views and vistas surrounding the South Mall Campus.

• Past, present and future projects would change views and vistas. The Master Plan Alternatives would contribute to the long-term, adverse impacts to these views and vistas. The greater degree of change would be more intensified under Alternatives D and F. The altering of the existing grades of the Haupt Garden and Hirshhorn Sculpture Garden under Alternatives D and F would create an overall moderate, long-term, adverse cumulative impact to these landscapes.
CUMULATIVE IMPACTS

SOILS

• The South Mall Campus Master Plan could potentially contribute to short-term, indirect, adverse, cumulative impacts to soils due to increased soil erosion during construction.
• The District of Columbia is already an intensely developed urban area, the overall long-term, adverse, cumulative impacts would be negligible.
SEISMIC VULNERABILITY

- The impacts of the proposed seismic improvements would be localized to the South Mall Campus. No cumulative impacts would result.
STORMWATER RESOURCES

- The South Mall Campus Master Plan could potentially contribute to short-term, indirect, adverse, cumulative impacts to stormwater due to increased soil erosion during construction activities in the area.
- The South Mall Campus Master Plan would contribute to the indirect, long-term, major, beneficial cumulative impacts to stormwater in the District by retaining stormwater onsite to the maximum extent practicable.
CUMULATIVE IMPACTS

AIR QUALITY

• Construction of present and future development projects near the South Mall Campus would generate fugitive dust and emissions from construction activities and equipment resulting in a cumulative, short-term, adverse impact to air quality.

• The installation or gradual replacement of mechanical systems with new, efficient units in existing buildings would reduce the potential effect new sources of emissions would have on air quality, resulting in a long-term, beneficial cumulative impact.
CUMULATIVE IMPACTS

TRAFFIC AND TRANSPORTATION

- Construction of present and future projects would cause an increase in traffic on the local roadway network. The Master Plan, in combination with these projects would add slightly to the overall adverse cumulative impact.
CUMULATIVE IMPACTS

GREENHOUSE GASES AND ENERGY CONSUMPTION

• The South Mall Campus in combination with other plans will result in long term, beneficial cumulative impacts as buildings/facilities are upgraded by decreasing the amount of energy use and improving the way energy produced thereby decreasing their contribution to localized emissions.
CUMULATIVE IMPACTS

LAND USE PLANNING AND POLICIES

• By enhancing walkability, removing physical and visual barriers, and extending the civic qualities of the National Mall to the south, the South Mall Campus Master Plan would contribute to the goals common with other planning efforts in the area resulting in moderate, long-term, beneficial cumulative impacts.
CUMULATIVE IMPACTS

HUMAN HEALTH AND SAFETY

• The various phases of the Master Plan would affect the human health and safety of the South Mall Campus. Construction of present and future projects could occur at the same time resulting in short-term, adverse cumulative impacts.
• The overall cumulative impact of past, present, and future planning efforts and projects in the area would be long-term and beneficial to human health and safety.
CUMULATIVE IMPACTS

UTILITIES

• The various phases of the Master Plan could disrupt utilities of neighboring properties of the South Mall Campus. Construction of present and future projects could occur at the same time resulting in short-term, adverse cumulative impacts.
• All of the present projects and planning efforts, in combination with the Master Plan would ultimately reduce demand for energy and water supplies and lessen the burden on utility providers in the region resulting in beneficial cumulative impacts to utilities.
CUMULATIVE IMPACTS

WASTE MANAGEMENT

• The construction waste generated under the Master Plan Alternatives would contribute to the short- and long-term, adverse, cumulative impacts of construction waste, but the additional impacts would be negligible compared to the overall volume of waste generated in the area.

• The overall cumulative impacts to waste management from present and future actions would be long-term and beneficial. The South Mall Campus would contribute to these long-term, beneficial cumulative impacts.
CUMULATIVE IMPACTS
PUBLIC COMMENTS
CONCLUSION / NEXT STEPS
NEXT STEPS

- Public Review of Draft EIS  
  November 17, 2017 – January 16, 2018  
  (60-day review)

- Public Hearings  
  December 11, 2017 (5:00-7:00PM)
  December 18, 2017 (10:00AM-12:00PM)

- Concept Master Plan Hearing  
  January 4, 2018

- Concept Master Plan presentation to the CFA  
  January 18, 2018

- Presentation to DDOT Public Space Committee  
  January 2018

- Consulting Parties Meeting 10 – Programmatic Agreement  
  January/February 2018

- Publication of Final EIS  
  March 14 – April 13, 2018

- NCPC Preliminary Master Plan Hearing  
  March 2018

- NCPC Final Master Plan Hearing  
  May 2018

- Record of Decision  
  June 2018
WAYS TO COMMENT

Written comments can be submitted to:

**NCPC**
Matthew Flis  
Senior Urban Planner  
National Capital Planning Commission  
Urban Design and Plan Review  
401 9th Street, NW Suite 500  
Washington, DC 20004

**Smithsonian**
Michelle Spofford  
Architect/ Senior Planning Manager  
Smithsonian Institution  
Facilities Master Planning  
P.O. Box 37012, MRC 511  
Washington, DC 20013

**By email:**
Commentsonsouthmallcampus@si.edu

Comments on the Draft EIS must be submitted by Tuesday, January 16, 2018