



Executive Director's Recommendation

Commission Meeting: July 7, 2016

PROJECT National Museum of Natural History - South Entrance Renovation 1000 Constitution Avenue, NW, Washington, DC	NCPC FILE NUMBER 7753
SUBMITTED BY Smithsonian Institution	NCPC MAP FILE NUMBER 1.24(38.00)44370
REVIEW AUTHORITY Federal Projects in the District per 40 U.S.C. § 8722(b)(1) and (d)	APPLICANT'S REQUEST Approval of comments on concept design
	PROPOSED ACTION Approve comments as requested
	ACTION ITEM TYPE Consent Calendar

PROJECT SUMMARY

The Smithsonian Institution has submitted concept plans to renovate the south entrance of the National Museum of Natural History. The museum is located along the National Mall and is generally bounded by the 9th Street Expressway on the east, Madison Drive on the south, the 12th Street Expressway on the west, and Constitution Avenue on the north. The primary purpose of the project is to provide an accessible pathway to the south entrance for visitors who cannot use stairs. The south entrance is the most heavily used entrance to the building and currently visitors are required to ascend monumental stairs with a raise of more than 10 feet to gain entry to the museum. Visitors who use mobility devices such as wheelchairs, walkers, canes, and those with strollers cannot climb the stairs and enter at the south entrance. Therefore, the proposed project would modify the south entrance to support a universal experience for all visitors through a gradual sloped walkway of less than 5% with an intermediate place to rest, and appropriate clearance for passages and turning.

The Smithsonian Institution is proposing a symmetrical switchback walkway for the south entrance that is sympathetic to the character of the Beaux Arts architecture of the building. The original stair and portico will remain substantially unchanged and the ramp will be sympathetic to the building's base in material and form. Perimeter security will be primarily integrated into the walls of the ramp with three new bollards proposed at the base of each ramp. The project also includes replacing the handrails. The existing handrails are not historic as they were added in the 1980s. The replacement handrails will match the handrail design used at the north entrance.

KEY INFORMATION

- The National Museum of Natural History opened in 1911 and is a contributing element to the National Mall Historic District.

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- The only accessible entrance for visitors who use mobility devices is located on the north side of the building from Constitution Avenue.
 - The south entrance of the museum is approximately 10 feet above the sidewalk and currently visitors need to climb stairs to enter the building.
 - The proposed symmetrical walkway at the south entrance will provide an accessible pathway while maintaining the character-defining stairs and portico of the building.
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RECOMMENDATION

The Commission:

Supports the preferred concept for a symmetrical switchback walkway at the south entrance of the National Museum of Natural History.

Recommends the Smithsonian Institution explore additional design solutions for the feature wall at the base of the walkway to reduce its scale and mass, and improve visibility of the historic building.

Requests information regarding circulation patterns surrounding the museum and how the Smithsonian will control the entry and exit sequence of the new walkway.

Requests the Smithsonian Institution:

- Explore alternatives to reduce the number of bollards at the base of the walkway; and
- Develop alternative bollard designs for the south entrance that take into account the architectural features of the existing building and proposed new symmetrical walkway.

Recommends lighting Scheme B as the preferred alternative to illuminate the new walkway as the lighting design allows the new walkway to stand as a complimentary element to the existing building.

PROJECT REVIEW TIMELINE

Previous actions	None
Remaining actions (anticipated)	– Preliminary and Final Review

PROJECT ANALYSIS

Executive Summary

The renovation of the south entrance of the National Museum of Natural History (NMNH) will provide an accessible sloped walkway for visitors who are not able to climb the existing monumental stairs. The south entrance is the most heavily used entrance to the building and is approximately 10-feet above the sidewalk level. Currently, the only accessible entrance is located on the north side of the building off of Constitution Avenue. As the site is 5 acres, it can be a long distance for visitors to travel who arrive from the south and are not able to climb the stairs. The concept design of the walkway as a symmetrical switchback ramp is sympathetic to the character of the Beaux Arts building and allows the existing stair and portico to remain relatively unchanged. While the design requires refinement, the overall approach respects the original building and balances historic preservation issues with accessibility needs. Staff is recommending that **the Commission support the preferred concept for a symmetrical switchback walkway at the south entrance of the National Museum of Natural History**

Analysis

The NMNH opened in 1911 and for a time was one of the largest public buildings in Washington, DC. The museum was the first building on the National Mall to reflect the ideals of the McMillan Plan. The four-story building is of steel-frame construction and has a granite façade. Its main elevation faces south toward the National Mall and features a central portico supported by six Corinthian columns. The Roman dome has a double shell construction. On either side of the central entrance are two symmetrical pavilions with eleven bays. On the north side of the building, the projecting entrance is flanked by symmetrical wings with nine bays. Both the north and south facades feature double-height windows with decorative rosettes. Between 1961 and 1965, the museum was expanded and symmetrical wings were constructed on the east and west elevations.

The building is a contributing element to the National Mall Historic District. The south portico and entry stairs are character-defining features of the building, and in order to avoid adverse effects to these elements, several options for an accessible walk were considered. Alternatives included an asymmetrical approach with one ramp on the west with a steeper incline and a switchback ramp on the east as well as a symmetrical curved ramp. Both of these alternatives would alter the character of the portico to a greater degree with the addition of a large upper plaza than the proposed scheme of a symmetrical switchback walkway. In addition to the portico and entry stairs, the building is defined by its neoclassical architectural details and overall symmetry. A symmetrical switchback walkway has a compact footprint, responds to the architectural details of the existing building, and minimizes potential adverse effects to the character-defining portico and entry stairs. The scale of the upper plaza is reduced with the symmetrical switchback walkway, thereby reducing impacts on the portico. In addition, a planting bed will be added between the historic bench on the lower plaza and the new upper plaza so that there is a transition between the historic and new elements. Staff recommends that the Commission support the Smithsonian's preferred concept for a symmetrical switchback walkway at the south entrance.

The concept design of the proposed walkway incorporates many of the same materials of the existing building including granite, bronze, and steel. The walkway walls will be faced in milford pink granite with a thermal finish. The use of milford pink granite is compatible with the base of the existing building which is the same material. To blend with the base of the building, the walkway walls will also feature horizontal banding with a honed finish. A 42-inch tall railing will be installed on top of the walkway walls. The design of the railing is based upon the double-height windows along the south façade and will be a medium toned metal of either satin painted steel or blasted aluminum. The walkway walls and railing also provides the required perimeter security and therefore eliminates the need for additional infrastructure. Several materials are under consideration for the paving including white mount airy granite, bethel white granite, exposed custom aggregates, jet mist granite as an accent band, and echo lake granite at the lower, intermediate, and upper landings.

At the base of the walkway, a feature wall just under 14-feet tall will include integrated signage. The feature wall will include a leather finish to distinguish it from the walkway walls. The height of the feature wall and its overall mass is out of scale with pedestrian environment. Staff is recommending the Smithsonian explore alternatives that break down the mass and scale of the wall. It may be preferable to lower the height of the feature wall and continue the railing across the top of the wall so that the walkway reads as one composition. Minimizing the height of the wall and continuing the railing would also increase the visibility of the historic building. Staff recommends that **the Commission comment that the Smithsonian explore additional design solutions for the feature wall to reduce its scale and mass, and improve visibility of the historic building.**

The symmetrical concept of the walkway and proposed material palette satisfies several historic preservation and design considerations, but questions remain related to circulation patterns and how visitors access the site. It is unclear if more visitors approach the museum from one direction over another. In addition, the Smithsonian has not indicated how it intends to control the use of the ramps or if one ramp will serve as an entry and the other as an exit. Staff recommends that **the Commission request information regarding circulation patterns surrounding the museum and how the Smithsonian will control the entry and exit sequence of the new walkway.**

As noted above, perimeter security is integrated into the new walls of the walkway and therefore minimizes the need for additional infrastructure. The existing perimeter security barrier that was installed in 2010 will be removed and replaced by the perimeter security integrated into the walkway walls. Three new bollards are proposed for the base of the walkway as the opening is just under 19-feet wide. While the bollards are spaced at 4-feet 11-inches on center and therefore arranged in a manner that allows an accessible pathway, reducing the number of bollards would reduce potential obstructions and improve visitors experience entering and exiting the museum. The width of the walkway opening is very generous and should that dimension be narrowed, fewer bollards would be required. Staff recommends that **the Commission request the Smithsonian Institution explore alternatives to reduce the number of bollards at the base of the walkway.**

The proposed project does not include any modifications to the existing bollards located at the Madison Drive curb in front of the main stair. The bollards cross the sidewalk perpendicularly at the west and east end of the stair. The Commission approved the location and design of the existing bollards in 2006. The bollards are cast stainless steel and the Smithsonian is proposing to use the identical bollard at the base of the walkway. It appears that the existing bollards have not weathered well and are in fair condition. With the current project, there is an opportunity to reconsider the design of the bollards and provide a barrier that is responsive to the character, architecture, and aesthetic context of NMNH. The bollards at the base of the walkway and the bollards in front of the south stair should be consistent in their design vocabulary and with the introduction of a new walkway that responds to the NMNH building, there is the potential to improve the appearance of these elements. Staff recommends that **the Commission request the Smithsonian Institution develop alternative bollard designs for the south entrance that take into account the architectural features of the existing building and proposed new symmetrical walkway.**

As part of the project, the non-historic planters and walls that run parallel to the Madison Drive sidewalk will be removed. A new planter will be provided directly adjacent to the sidewalk and will include two niches for vendor carts. By providing space for the vendors at the sidewalk level, the lower plaza level will be unencumbered and more space will be available for people to rest as they climb the stairs. The proposed plant palette includes understory perennials and ground covers along with American elm, river birch, and oak trees.

Two lighting schemes are under consideration for the new walkway. Scheme A includes dispersing lighting onto the ramp from the handrail with a thin in-ground strip light illuminating the feature wall. Scheme B also uses an in-ground strip light to illuminate the feature wall and proposes a new lighting fixture to mark the intermediate landing where there will be an integrated bench for visitors to rest. The new lighting fixture is a small-scale interpretation of the historic lighting fixture at the portico. Lighting Scheme B is a slightly softer or subdued design than Scheme A in that it does not highlight the walkway, but rather allows it to stand as a complimentary element to the existing building. Staff recommends that **the Commission recommend lighting scheme B as the preferred alternative to illuminate the new walkway.**

CONFORMANCE TO EXISTING PLANS, POLICIES AND RELATED GUIDANCE

Comprehensive Plan for the National Capital

The renovation of the south entrance of NMNH is consistent with policies in the Federal Elements of the *Comprehensive Plan for the National Capital*. Specific policies contained within the Visitors and Preservation and Historic Features Elements of the Comprehensive Plan support the concept plans.

National Historic Preservation Act

The Smithsonian Institution and NCPC both have a responsibility to comply with Section 106 of the National Historic Preservation Act. The Smithsonian Institution initiated consultation with the

District of Columbia State Historic Preservation Officer (DCSHPO) in December 2015. On June 16, 2016, the Smithsonian circulated the preferred concept of a symmetrical switchback ramp with other alternatives considered to the consulting parties for review and comment. Prior to the Commission's final review, the Smithsonian Institution will conclude the Section 106 consultation. DCSHPO has indicated informally that a symmetrical switchback ramp with minimal modifications to the existing stairs and portico and opportunities to refine design details will likely result in no adverse effect on historic properties.

National Environmental Policy Act

NCPC is responsible for compliance with the National Environmental Policy Act for the Commission's approval of the project. Prior to the Commission's preliminary review, staff will determine the appropriate level of environmental documentation required.

CONSULTATION

Coordinating Committee

The Coordinating Committee review the concept design at the June 15, 2016 meeting. The Committee forwarded the proposal to the Commission with the statement that it has been coordinated with all participating agencies. The participating agencies were: NCPC; the District of Columbia Office of Planning; the District of Columbia Department of Transportation, the General Services Administration; the District of Columbia State Historic Preservation Office; and the Washington Metropolitan Area Transit Authority.

U.S. Commission of Fine Arts

The US Commission of Fine Arts reviewed the project on June 16, 2016 and approved the concept design.

ONLINE REFERENCE

The following supporting documents for this project are available online:

- Submission Package

Prepared by Jennifer Hirsch
06/30/2016

POWERPOINT (ATTACHED)

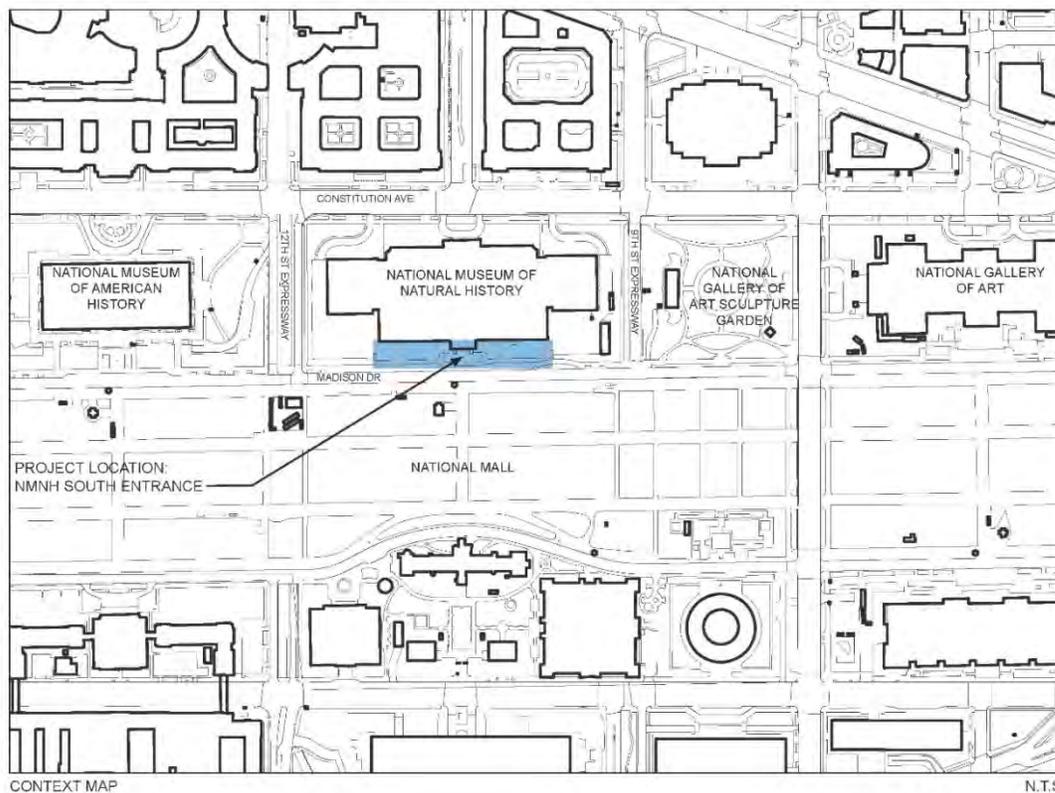
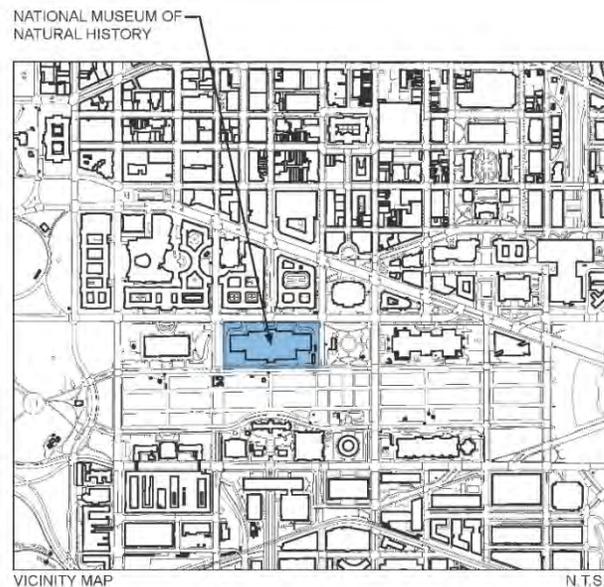
NCPC File #: 7753
National Museum of Natural History
South Entrance Renovation

1000 Constitution Avenue, NW
Washington, DC

Smithsonian Institution

Concept

Existing Conditions and Context NMNH Renovate South Entrance - Accessible Approach



VICINITY AND CONTEXT MAPS



Smithsonian
National Museum of Natural History



South Entrance, photo 1965



South Entrance, photo 1909



South Entrance, photo 1911



South Elevation View from the West, 1931



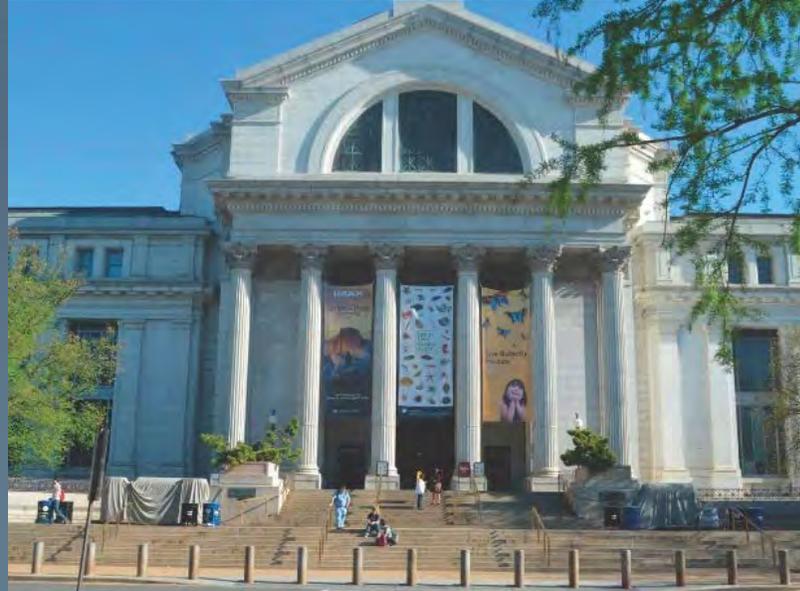
South Elevation View from the East, photo date unknown



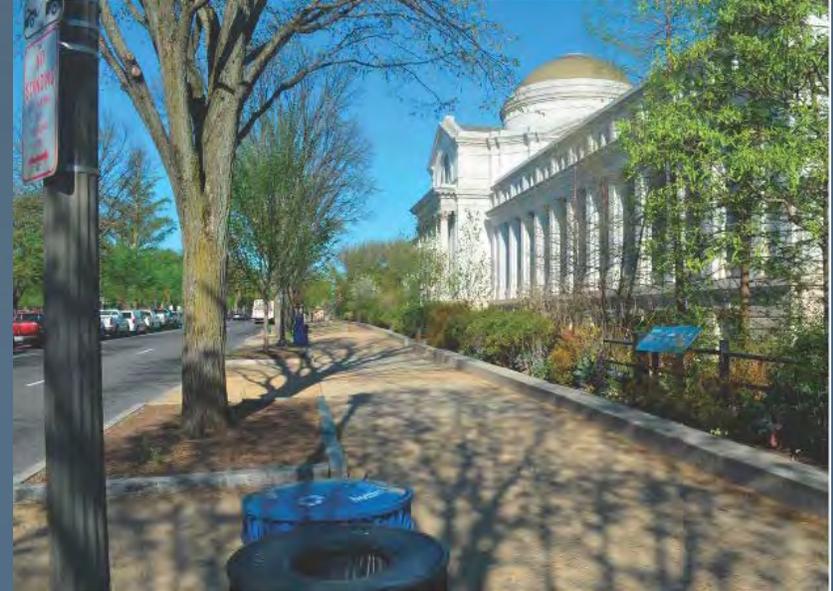
South Elevation View from the East, photo 1930



Approach from southwest



Approach from south



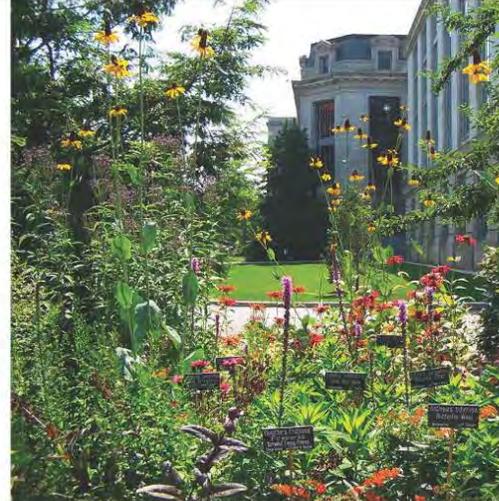
Approach from southeast



Perimeter

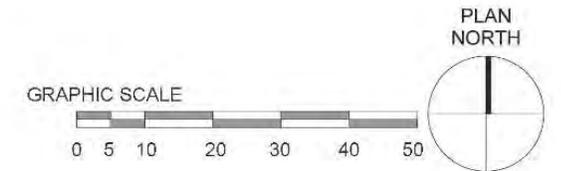


Urban Bird Habitat





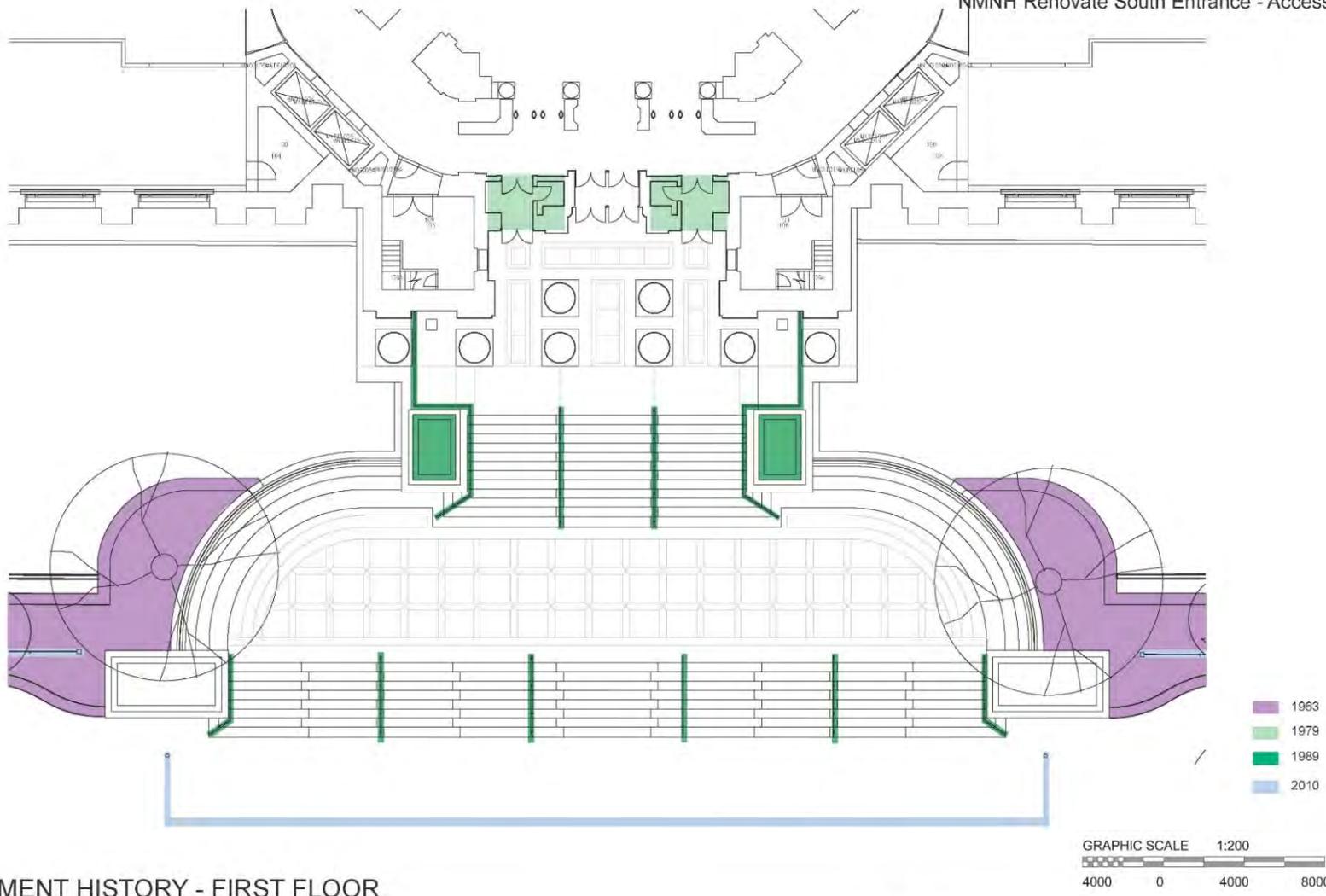
- Extent of Existing Portico
- Extent of Existing Planter and Wall (Planter to be removed)
- Existing Secure Barrier



EXISTING SITE PLAN

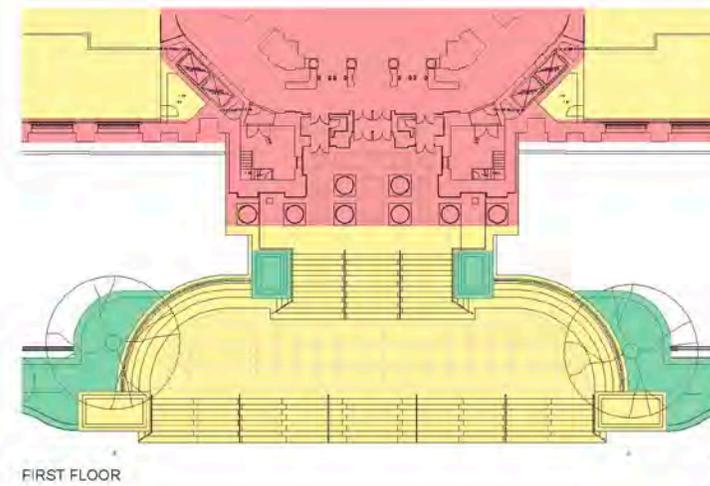
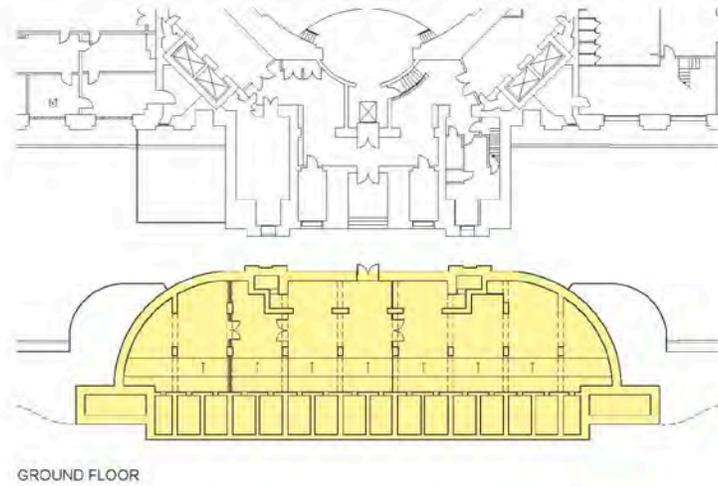
Existing Conditions and Context

NMNH Renovate South Entrance - Accessible Approach

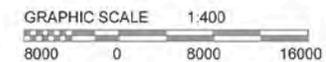


DEVELOPMENT HISTORY - FIRST FLOOR

Existing Conditions and Context NMNH Renovate South Entrance - Accessible Approach



- PRIORITY 1 - RESTORATION AREA
- PRIORITY 2 - REHABILITATION AREA
- PRIORITY 3 - RENOVATION AREA

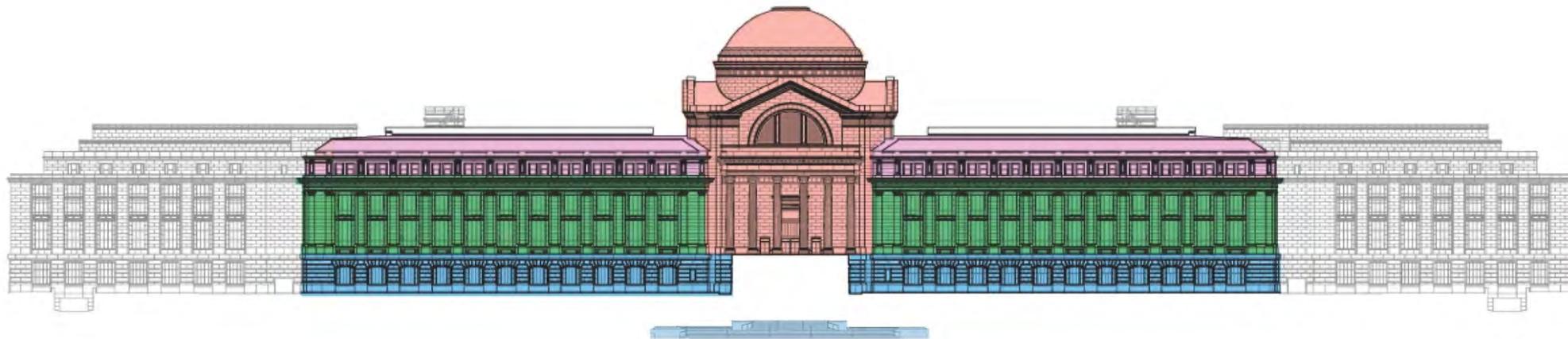


PRESERVATION PRIORITY PER FEASIBILITY STUDY



Existing Character Analysis

NMNH Renovate South Entrance - Accessible Approach



- Ornate detailing is localized at the south pavilion and rotunda.
- The galleries are defined by a strong base element, vertically articulated bays in the center, an attic level that is set back with horizontal proportions.
- Wings added later are set back from the historic facade with compatible detailing.

KEY

■	PORTICO (BETHEL GRANITE)
■	BASE AND STAIRS (MILFORD GRANITE)
■	GALLERIES (BETHEL GRANITE)
■	ATTIC (MOUNT AIRY GRANITE)
	COMPATIBLE MODERN ADDITIONS

DESIGN HIERARCHY - ELEVATION



Smithsonian
National Museum of Natural History

Existing Character Analysis

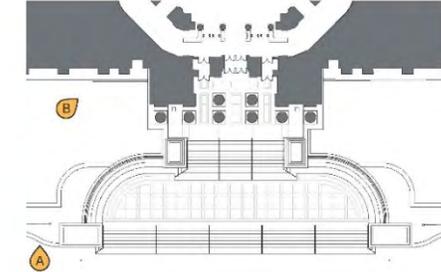
NMNH Renovate South Entrance - Accessible Approach



A GALLERY WINDOWS



B GALLERY WINDOWS



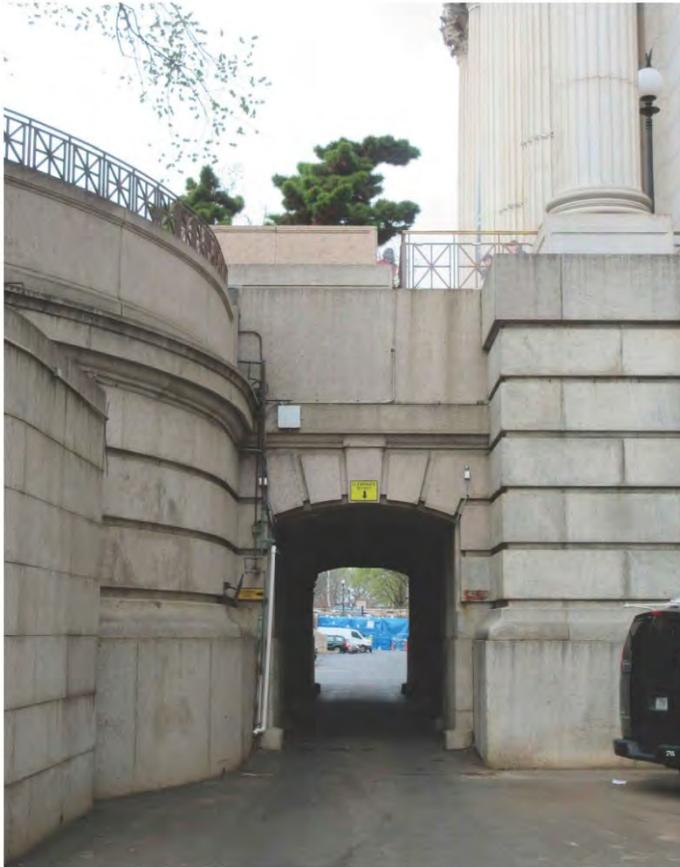
- Steel windows are set back from exterior facade.
- Metal detailing is inset in masonry openings.
- Gallery windows provide more light and openness to interior exhibit spaces.
- Windows at the attic and base are punched openings.

EXISTING CHARACTER FEATURES - GALLERIES AND ATTIC



Existing Character Analysis

NMNH Renovate South Entrance - Accessible Approach



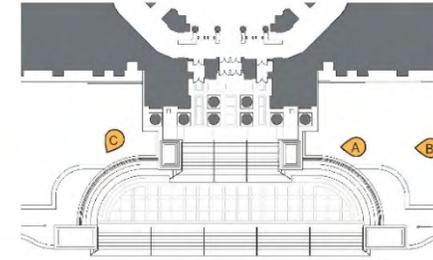
A CARRIAGEWAY



B GROUND LEVEL



C 1960s RETAINING WALL



- Substantial base at the ground level
- Horizontal banding at base
- Masonry columns and piers at entry level

EXISTING CHARACTER FEATURES - BASE

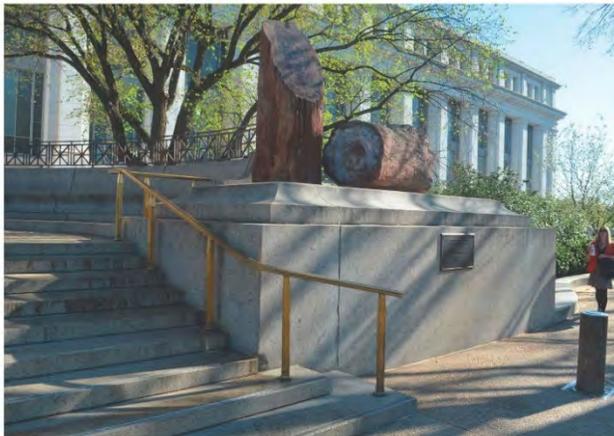


Existing Character Analysis

NMNH Renovate South Entrance - Accessible Approach



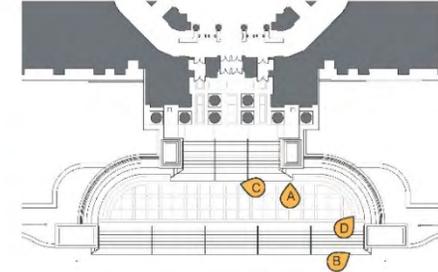
A UPPER PLINTH



B LOWER PLINTH



C TERRACE AND STEPS



- Plinths frame entrance
- Benches surround terrace to welcome visitors



D BENCH WALL

EXISTING CHARACTER FEATURES - SOUTH APPROACH



Existing Character Analysis

NMNH Renovate South Entrance - Accessible Approach



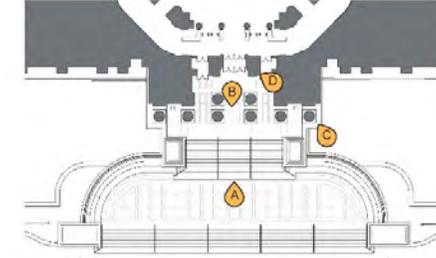
A PORTICO



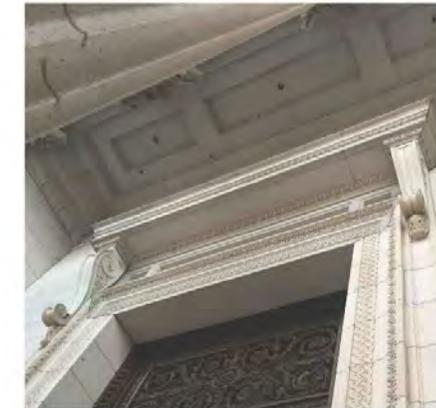
B COLUMN CAPITALS AND CEILING



C COLUMN BASE



- High level of ornamentation at Portico
- Simple granite bases support Corinthian columns
- Ornate metalwork is inset into masonry openings



D STONE SURROUND

EXISTING CHARACTER FEATURES - PORTICO



Smithsonian
National Museum of Natural History

Existing Character Analysis

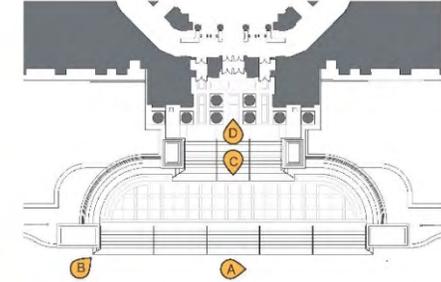
NMNH Renovate South Entrance - Accessible Approach



A SIDEWALK



B STAIR TREADS



- Public sidewalk uses exposed aggregate in concrete.
- Stair treads are solid Milford granite blocks.
- Terrace and Portico feature paving pattern of Milford and New Jersey Pink granites.



C TERRACE PAVING PATTERN



D PORTICO PAVING PATTERN

EXISTING CHARACTER FEATURES - PAVING



Existing Character Analysis

NMNH Renovate South Entrance - Accessible Approach



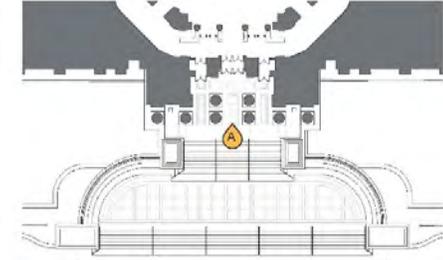
D HISTORIC ENTRANCE



E HISTORIC ENTRANCE



A HISTORIC ENTRANCE



- Historic security gates and surround frame entrance
- Ornate detailing highlights entrance



F HISTORIC ENTRANCE



B HISTORIC ENTRANCE



C HISTORIC ENTRANCE

EXISTING CHARACTER FEATURES - CAST IRON



Existing Character Analysis

NMNH Renovate South Entrance - Accessible Approach



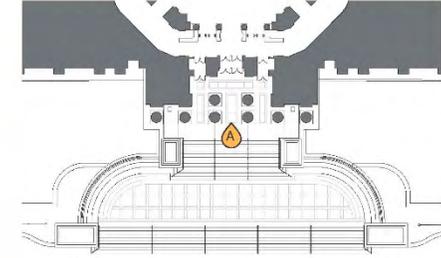
B BRONZE FRAME DETAIL



C BRONZE FRAME DETAIL



A HISTORIC ENTRANCE



- Ornate metal work inset in masonry opening
- Bronze detailing on historic door and frame continues behind cast iron screen

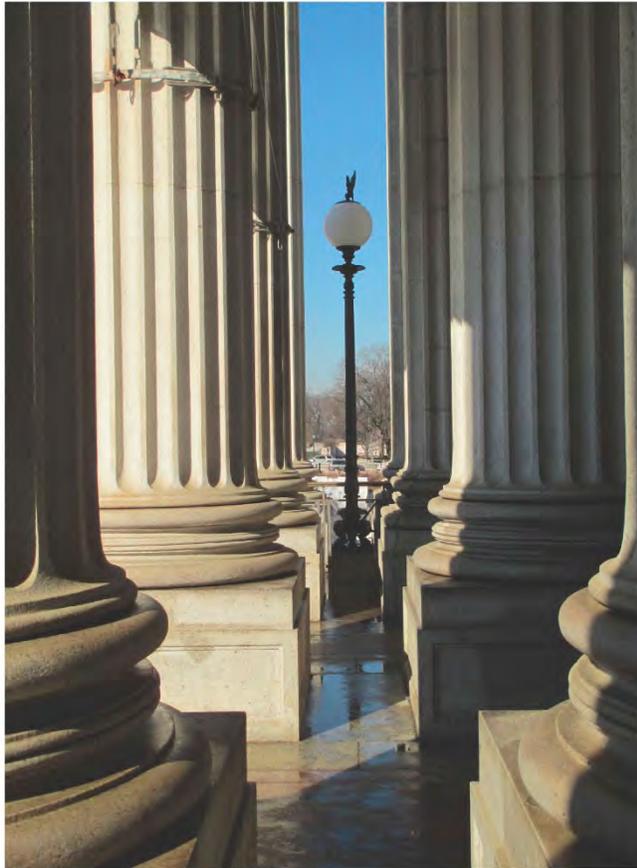
EXISTING CHARACTER FEATURES - BRONZE



Smithsonian
National Museum of Natural History

Existing Character Analysis

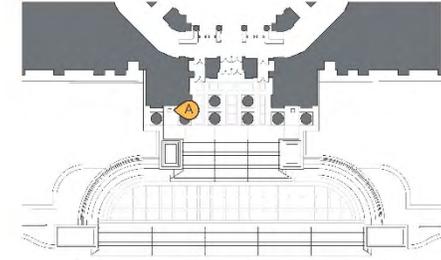
NMNH Renovate South Entrance - Accessible Approach



A HISTORIC LIGHT FIXTURE



B HISTORIC LIGHT FIXTURE BASE



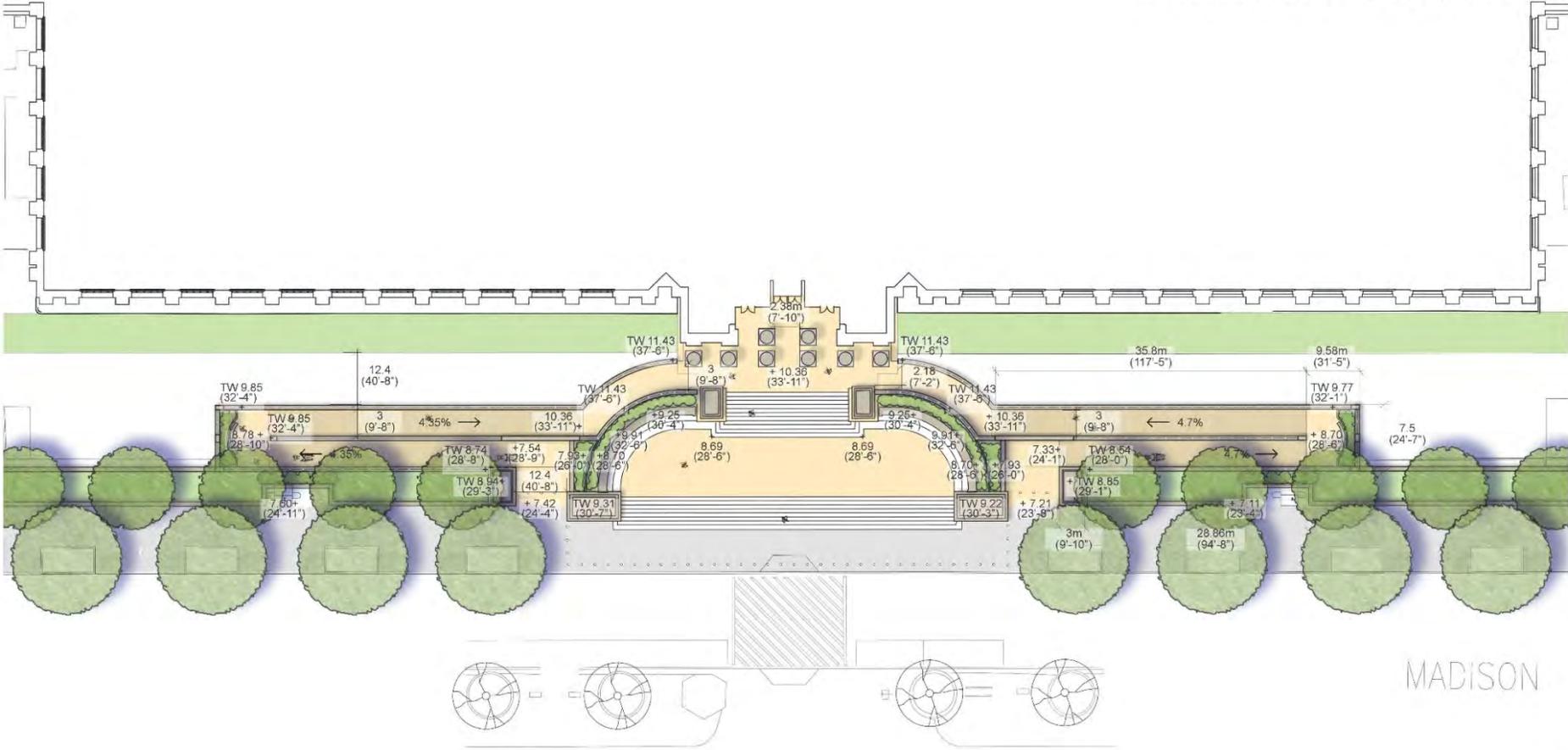
- Two historic light fixtures flank the portico
- Relocated from their original locations, flanking main entrance, with the addition of two new doors in 1979.

EXISTING CHARACTER FEATURES - LIGHTING



Proposed Scheme

NMNH Renovate South Entrance - Accessible Approach



SYMMETRICAL SWITCHBACK



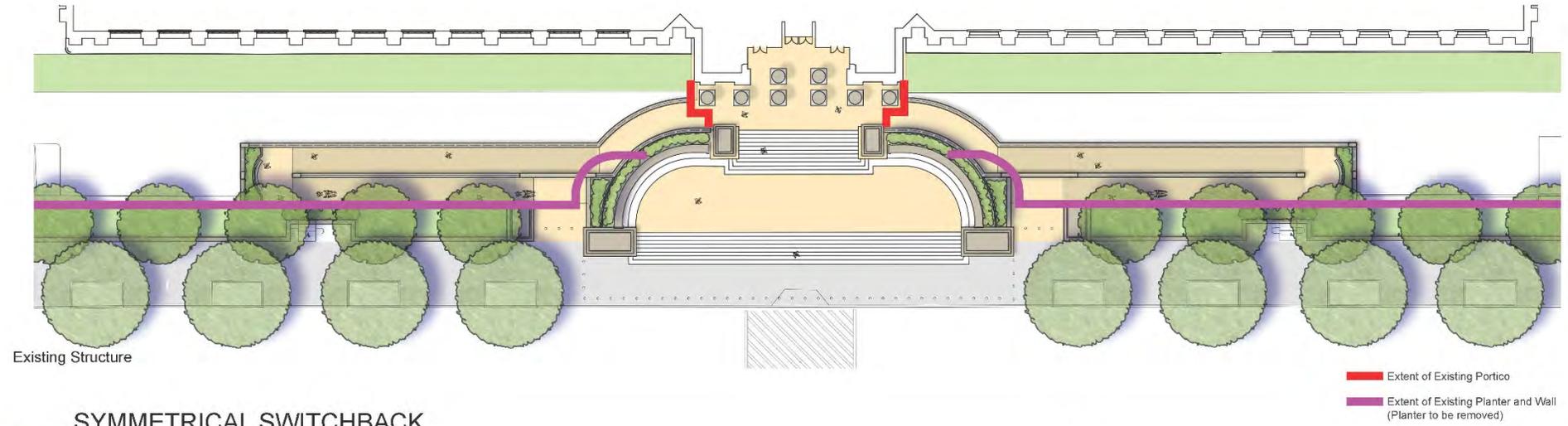
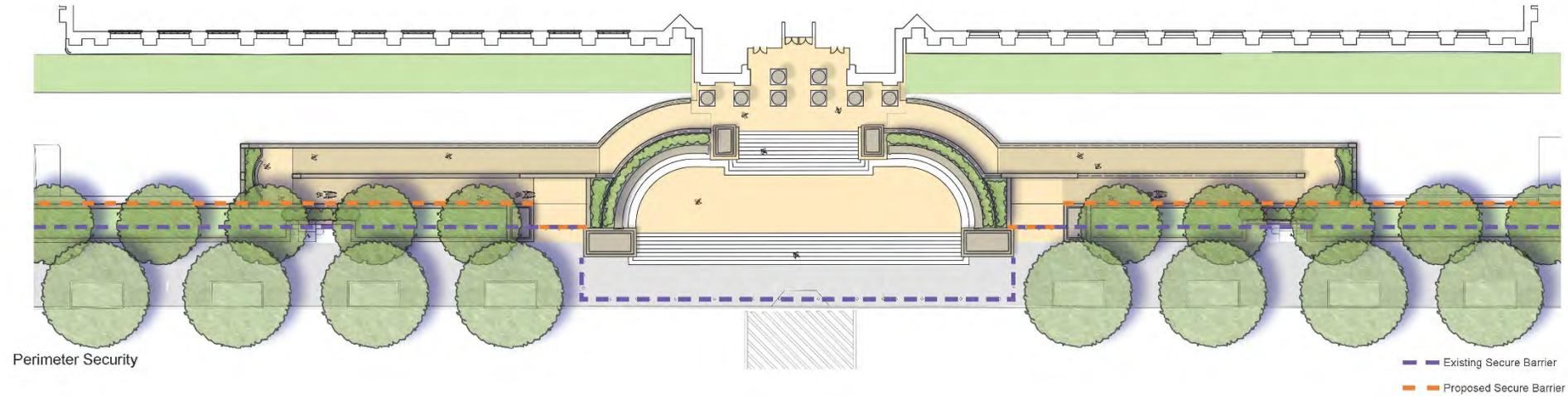
Smithsonian
National Museum of Natural History

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Proposed Scheme

NMNH Renovate South Entrance - Accessible Approach

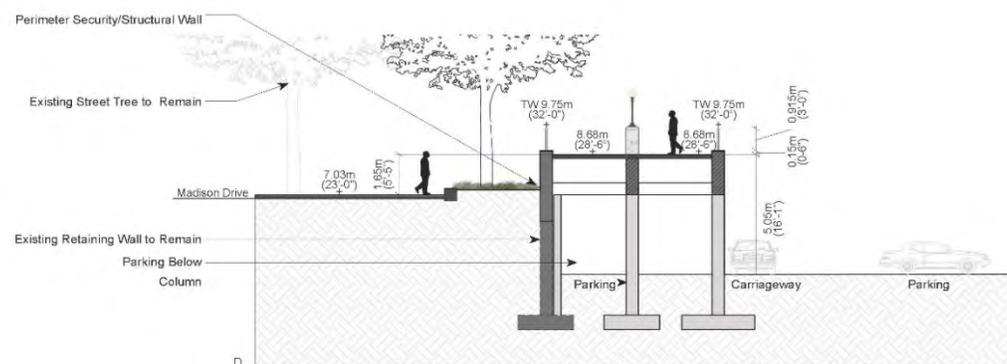
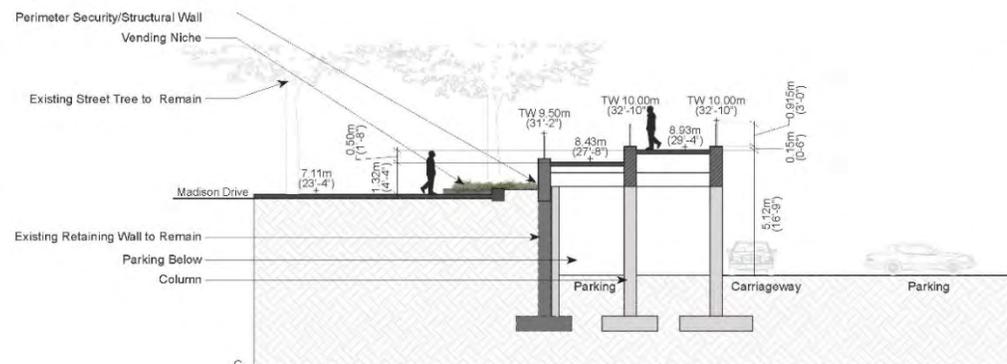
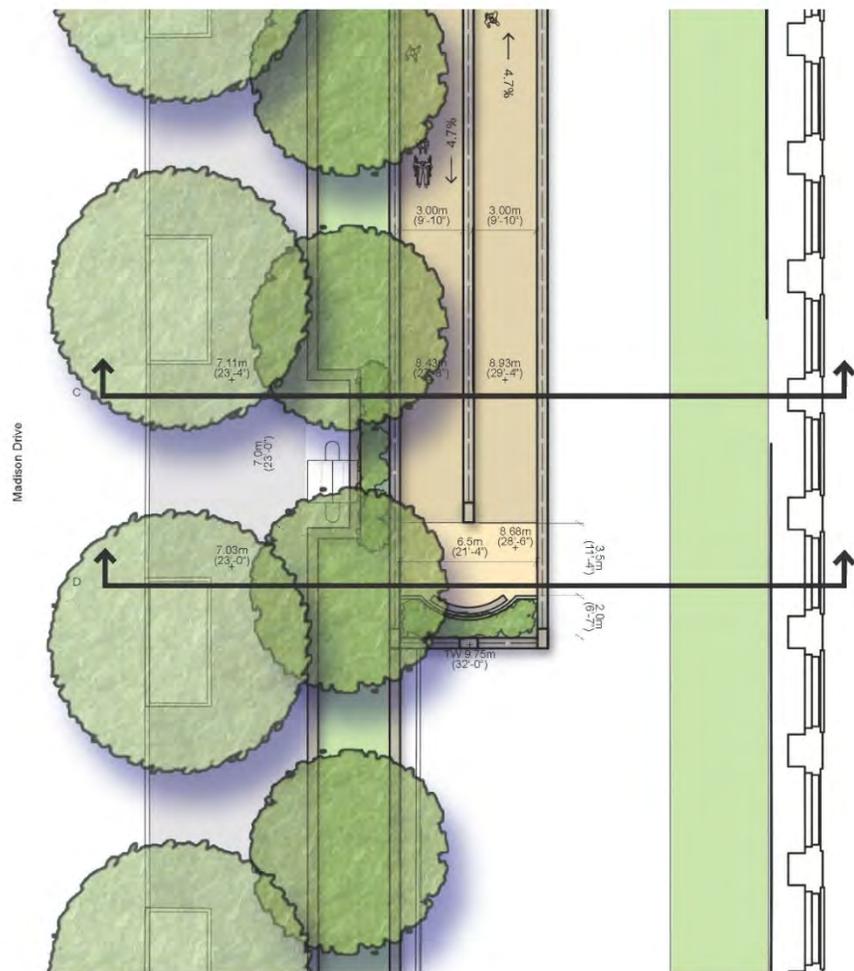


SYMMETRICAL SWITCHBACK



Proposed Scheme

NMNH Renovate South Entrance - Accessible Approach



TYPICAL WALKWAY SECTIONS



Proposed Scheme

NMNH Renovate South Entrance - Accessible Approach



Stone Veneer Wall / Accent Wall -
Milford Pink - Finish: Leather, Thermal,
Honed



Walk Paving -
Aggregate (specification can be
amended for desired effect)



Parking Below -
Pervious Grass Paving



Stone Veneer Wall / Accent Wall -
Bethel White - Finish: Thermal, Honed
(Alternative to Milford Pink)



Walk Paving Alternative -
White Mount Airy - Thermal Finish



Accent Paving Band -
Jet Mist Granite

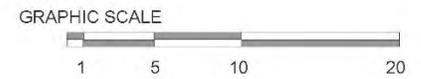
MATERIAL PALETTE





GRAPHIC SCALE
1 5 10 20

WEST WING ELEVATION



WEST FEATURE WALL ELEVATION

Proposed Scheme
NMNH Renovate South Entrance - Accessible Approach



PERSPECTIVE - LOOKING EAST



Proposed Scheme
NMNH Renovate South Entrance - Accessible Approach

Understory Perennials and Ground Covers



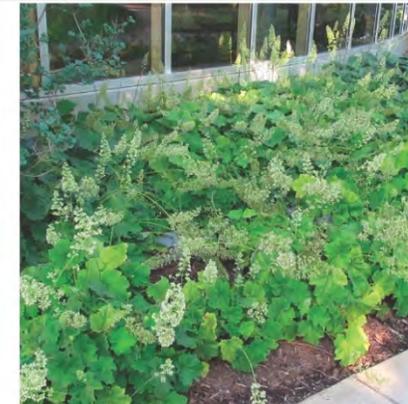
Geranium maculatum 'Espresso'



Oxalis violacea



Ligularia dentata 'Britt Marie Crawford'



Heuchera villosa 'Autumn Bride'

Shrubs



Prunus laurocerasus 'schipkaensis'



Calycanthus floridus



Ilex verticillata

PLANT PALETTE

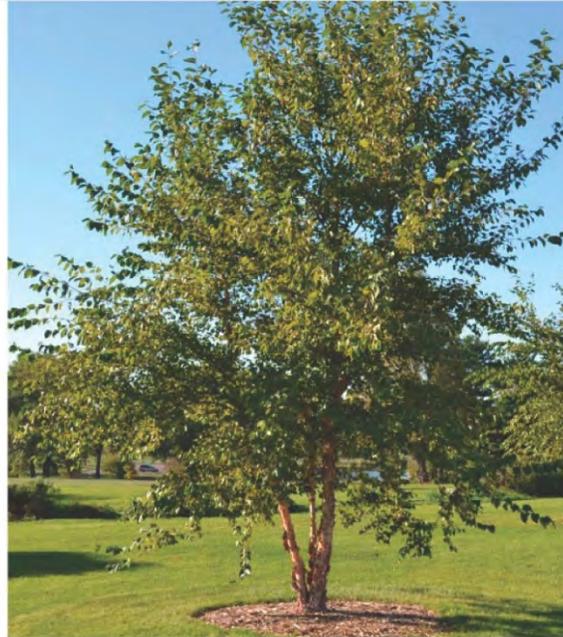


Proposed Scheme
NMNH Renovate South Entrance - Accessible Approach

Trees



Ulmus americana 'Princeton'



Betula nigra 'Heritage'



Quercus nuttallii 'Esplande'

PLANT PALETTE



Proposed Scheme
NMNH Renovate South Entrance - Accessible Approach



PERSPECTIVE - LOOKING WEST



Proposed Scheme

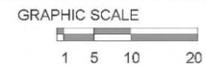
NMNH Renovate South Entrance - Accessible Approach



PERSPECTIVE - FROM PORTICO LOOKING EAST



Proposed Scheme
NMNH Renovate South Entrance - Accessible Approach



LIGHTING SCHEME A

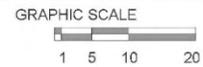


Smithsonian
National Museum of Natural History

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Proposed Scheme
NMNH Renovate South Entrance - Accessible Approach



LIGHTING SCHEME B



Smithsonian
National Museum of Natural History

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