



Executive Director's Recommendation

Commission Meeting: April 6, 2017

PROJECT National Museum of Natural History – South Entrance Renovation 1000 Constitution Avenue, NW, Washington, DC	NCPC FILE NUMBER 7753
	NCPC MAP FILE NUMBER 1.24(38.00)44517
SUBMITTED BY Smithsonian Institution	APPLICANT'S REQUEST Approval of final site development plans
REVIEW AUTHORITY Federal Projects in the District per 40 U.S.C. § 8722(b)(1) and (d)	PROPOSED ACTION Approve final site development plans
	ACTION ITEM TYPE Consent Calendar

PROJECT SUMMARY

The Smithsonian Institution has submitted final site development 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 that rise 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 therefore cannot use 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 with an intermediate place to rest, and appropriate clearance for passaging and turning.

The Smithsonian Institution (SI) 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 responds to the building's base in material and form. Perimeter security will be primarily integrated into the walls of the ramp with new bollards proposed at the base of each ramp. The project also includes replacing the existing stair handrails. These are not historic as they were added in the 1980s. The replacement handrails will match the design used at the north entrance. The Commission has previously reviewed the concept and preliminary plans for the proposed improvements.

KEY INFORMATION

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

RECOMMENDATION

The Commission:

Approves the final site development plans for a symmetrical switchback walkway at the south entrance of the National Museum of Natural History, located at 1000 Constitution Avenue, NW in Washington, DC.

PROJECT REVIEW TIMELINE

Previous actions	July 2016 – Comments of Concept Plans December 2016 – Preliminary Approval
Remaining actions (anticipated)	– None

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 along Constitution Avenue. The site is five acres in size, and therefore it can be a long distance for visitors to travel who arrive from the south and are not able to climb the stairs. The symmetrical switchback ramp is sympathetic to the character of the Beaux Arts building and allows the existing stair and portico to remain relatively unchanged. In response to the Commission's comments at preliminary review, SI has further refined elements of the design, including the handrails, material palette and stormwater strategy. These modifications have improved the design, and balanced historic preservation concerns with accessibility needs. As such, staff recommends **the Commission approve the final site development plans for a symmetrical switchback walkway at the south entrance of the National Museum of Natural History, located at 1000 Constitution Avenue, NW in Washington, DC.**

Project Background

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. During the concept review, the Commission supported the Smithsonian's preferred concept for a symmetrical switchback walkway at the south entrance and provided several comments.

Project Revisions

At preliminary review, the Commission approved the project and provided three comments regarding the proposed design. In response, the applicant has made several modifications. First, the Commission requested that the design of the handrails and stone base be further refined to reduce their visual prominence and increase compatibility with the historic museum building. In general, a simpler design approach is appropriate as it preserves the visual prominence of the historic museum building and allows the ramps to be complementary features. The applicant has

therefore simplified the masonry detailing of the ramp to be less prominent than previously proposed. In particular, only one stone (Lake Placid granite) is used, with subtle alternating coursing that relates to the coursing of the existing building. Simple letter is engraved into the stone at the entry to each ramp, indicating "Smithsonian Institution" and "National Museum of Natural History."

The guardrails have also been refined, while retaining their original grass-like form. In particular, the picket spacing has been increased to the maximum permitted by code and the inflection point for each grass "blade" has been shifted higher on the panel. The combined effect is a more transparent railing system that retains its reference to nature. Staff supports these changes.

Secondly, the Commission recommended a lighting approach that is complementary to the historic museum building, while providing appropriate levels of illumination for safety and accessibility. The proposal includes three elements: linear LED lighting integrated into the ramp handrail; linear LED lighting located beneath the benches and signage; and lantern features located at the portion near the ramp landing. The applicant has provided additional drawings and renderings that confirm the lighting will remain subdued while preserving the prominence of the museum building. As such, staff supports the lighting approach.

Finally, the Commission requested that SI prepare a stormwater management plan consistent with Federal and local requirements. The applicant has responded with a stormwater management strategy consistent with both District of Columbia Department of Energy and Environment (DOEE) and federal Energy Independence and Security Act of 2007 requirements. The plan includes the integration of two bioretention areas within the parking court. The planted areas will collect rainwater from the terrace and upper walkways. Water will be filtered and released slowly into the stormwater system. Staff finds this strategy to be functional and compatible with the context.

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 proposed plans.

National Historic Preservation Act

The Smithsonian Institution and NCPC have an independent responsibility to satisfy the requirements of Section 106 of the National Historic Preservation Act. Following consultation with NCPC staff and the District of Columbia State Historic Preservation Office (DC SHPO), the Smithsonian determined that the project would not adversely affect historic properties. The Smithsonian initiated consultation with the DC SHPO in December 2015. On March 3, 2017, the

DC SHPO concurred with the Smithsonian's determination stating "We consider the revised wall coursing to be much improved and, although we continue to advocate for a more traditional approach, we believe the "grass-like" handrails have been simplified enough to avoid an adverse effect." NCPC has elected to designate the Smithsonian Institution as lead agency pursuant to 36 CFR § 800.2(a)(2) to satisfy the Commission's Section 106 responsibility.

National Environmental Policy Act

NCPC is responsible for compliance with the National Environmental Policy Act (NEPA) for the Commission's approval of the project. Staff has evaluated the submission and has determined that approval of the project meets NCPC's categorical exclusion §8(C)(2) of the Commission's Environmental and Historic Preservation Policies and Procedures. This categorical exclusion applies to the repair, replacement, and routine installation of components such as windows, doors, roofs; and site elements such as site or building identification signs, sidewalks, patios, fences, retaining walls, curbs, or gates. Prior to applying this categorical exclusion, NCPC staff determined that no extraordinary circumstances were present as required by the Commission's NEPA procedures.

CONSULTATION

Coordinating Committee

The Coordinating Committee reviewed the final site development plans at their March 15, 2017 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 National Park Service; the District of Columbia Office of Planning; the District of Columbia Department of Transportation; the DOEE; the General Services Administration; the District of Columbia State Historic Preservation Office (DCSHPO); and the Washington Metropolitan Area Transit Authority.

U.S. Commission of Fine Arts

The US Commission of Fine Arts (CFA) first reviewed the project on June 16, 2016 and approved the concept design. A revised concept design was reviewed on October 20, 2016. At that time, CFA "expressed general support for the configuration and operation of the proposed access ramps, commenting favorably on what they characterized as an elegant design. However, they made several suggestions for refining the design of the figural metal railing panels along the ramps, observing that the proposed punched fabrication method would make the naturalistic grass pattern appear unsuitably flat. They recommended further study of this element, possibly developing a less figural design that is more appropriate with the likely fabrication method." The CFA reviewed the proposal again on November 17, 2016.

On March 16, 2017, the CFA approved the final plans, and indicated their appreciation for the evolution of the design. The CFA also requested the applicant further investigate, in coordination with staff, the transition and termination of the guard and handrails at the portico, details regarding the handrail assembly and the planting colors.

ONLINE REFERENCE

The following supporting documents for this project are available online:

- Submission Package
- Project Summary

Prepared by Matthew Flis
03/30/2017

POWERPOINT (ATTACHED)

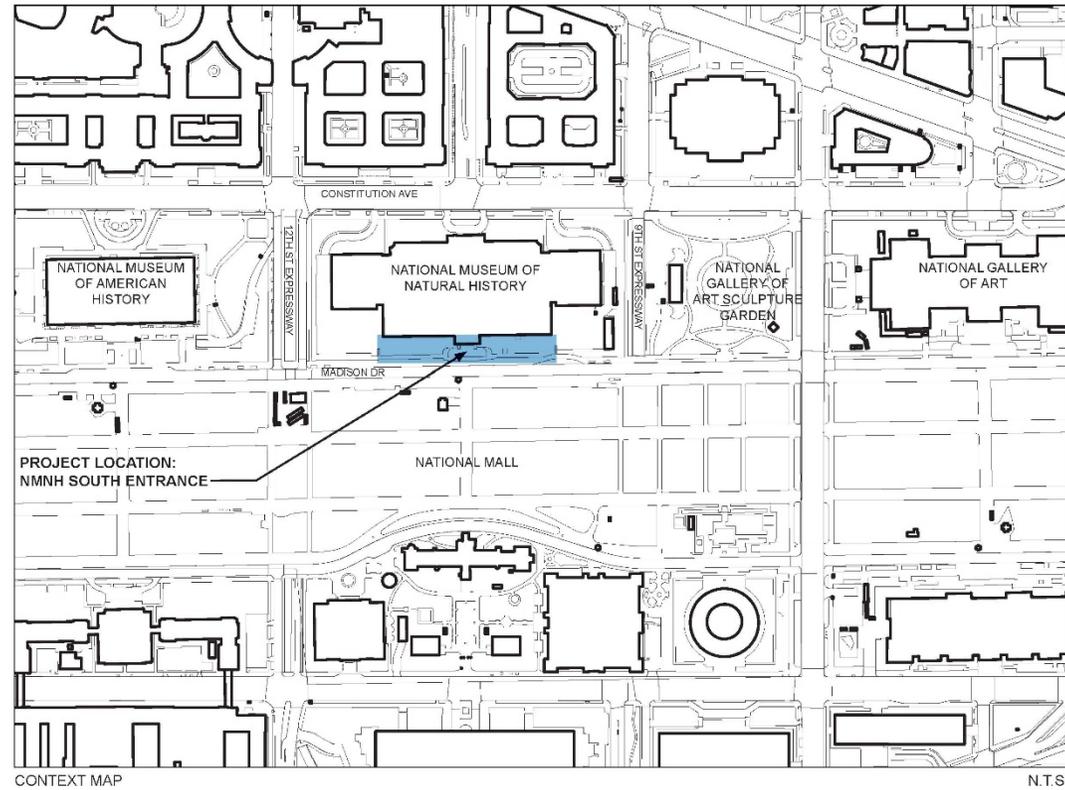
NCPC File #: 7753
National Museum of Natural History
South Entrance Renovation

10th and Constitution Avenue
Washington, DC

Smithsonian Institution

Final Site Development Plans

Existing Conditions and Context NMNH Renovate South Entrance - Accessible Approach



VICINITY AND CONTEXT MAPS

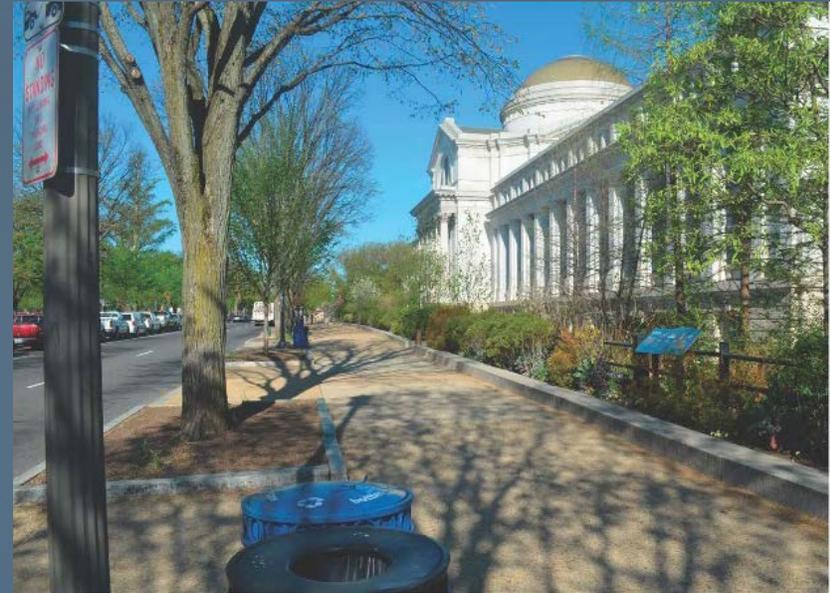




Approach from southwest



Approach from south



Approach from southeast



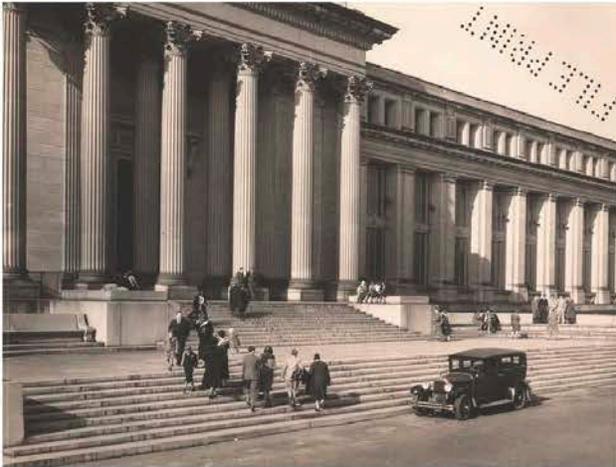
South Entrance, photo 1965



South Entrance, photo 1909



South Entrance, photo 1911



South Elevation View from the West, 1931



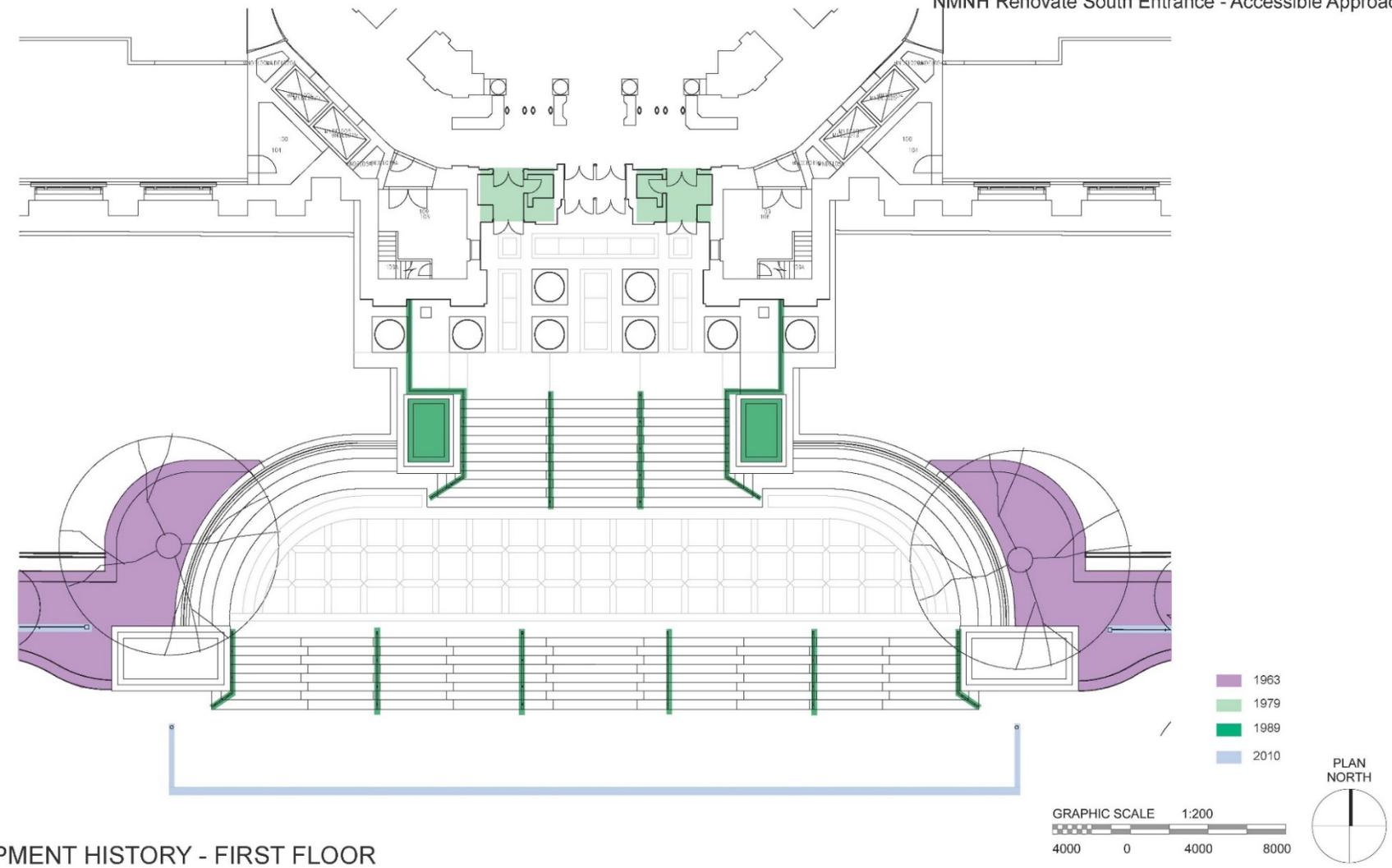
South Elevation View from the East, photo date unknown



South Elevation View from the East, photo 1930

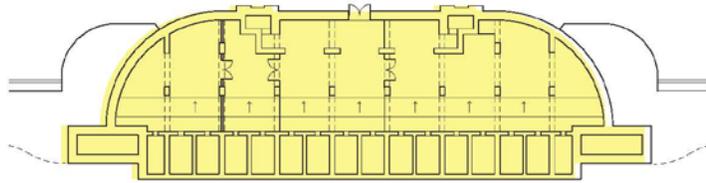
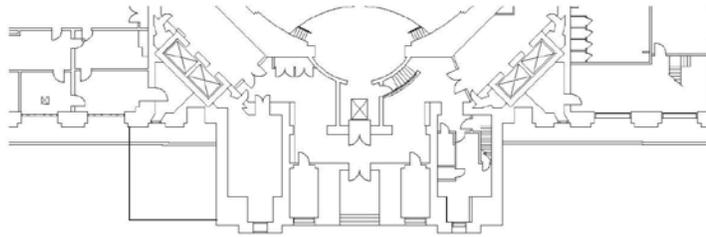
Existing Conditions and Context

NMNH Renovate South Entrance - Accessible Approach



DEVELOPMENT HISTORY - FIRST FLOOR

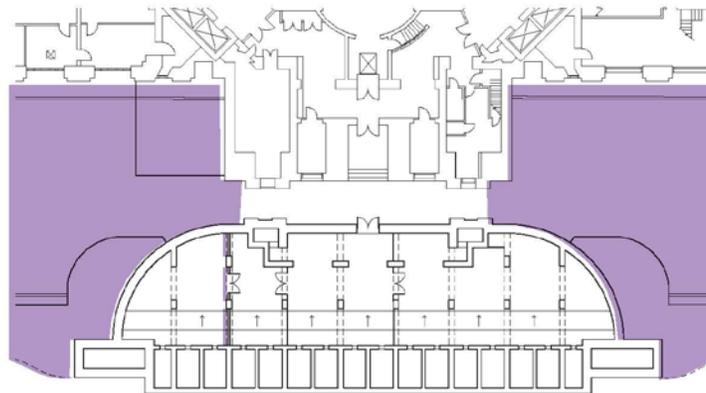
PRESERVATION PRIORITY PER FEASIBILITY STUDY



GROUND FLOOR

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

DEVELOPMENT HISTORY

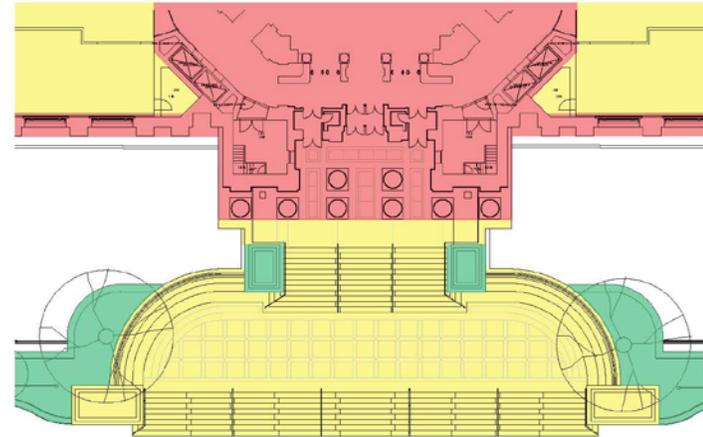


GROUND FLOOR

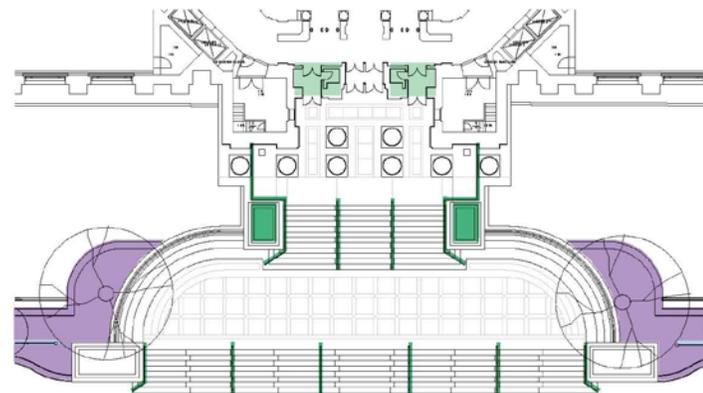
- 1963
- 1979
- 1989
- 2010

Existing Conditions and Context

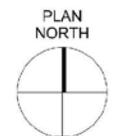
NMNH Renovate South Entrance - Accessible Approach



FIRST FLOOR

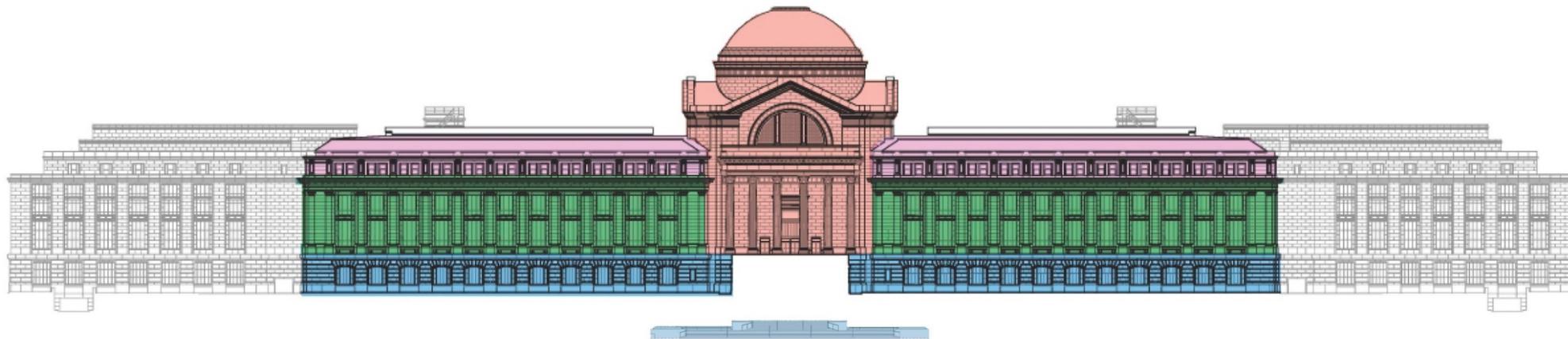


FIRST FLOOR



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.

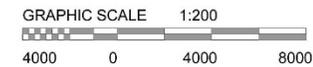
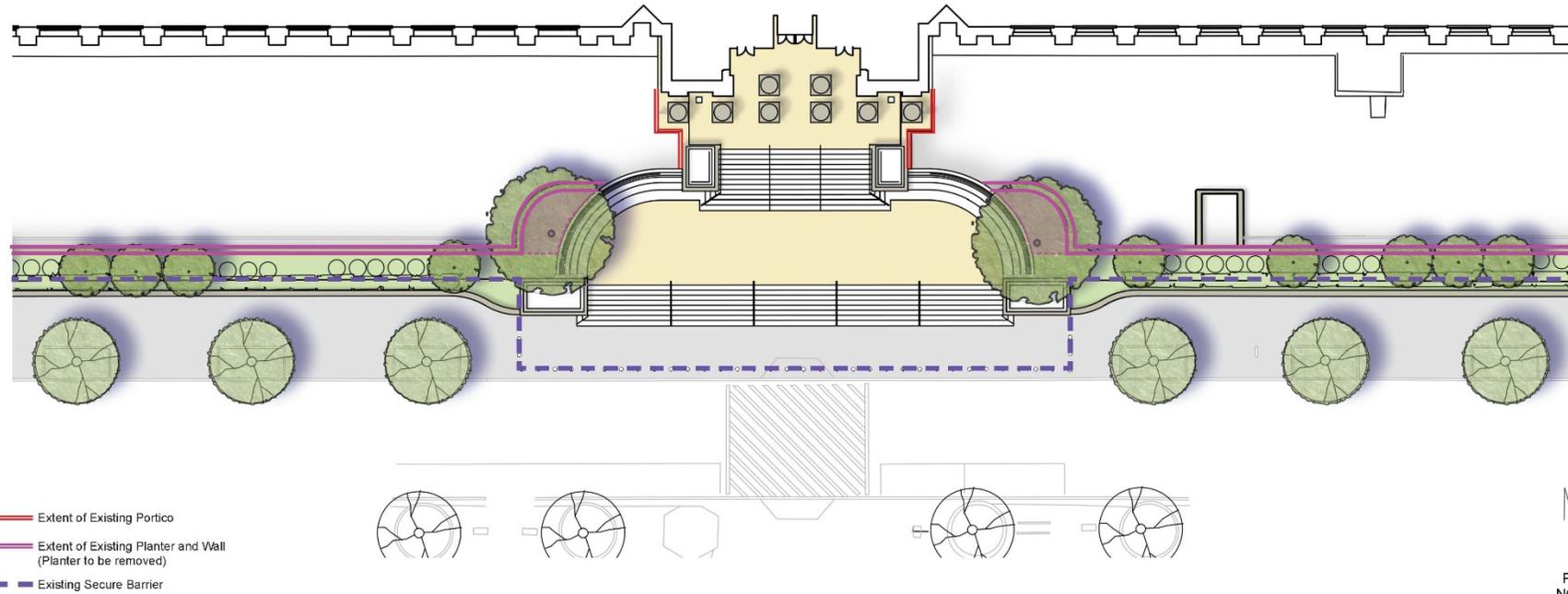
KEY

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

DESIGN HIERARCHY - ELEVATION



Existing Conditions and Context NMNH Renovate South Entrance - Accessible Approach



EXISTING SITE PLAN



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



SYMMETRICAL SWITCHBACK

Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



SOUTH ELEVATION



Smithsonian
National Museum of Natural History

Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



SOUTH-ENLARGEMENT



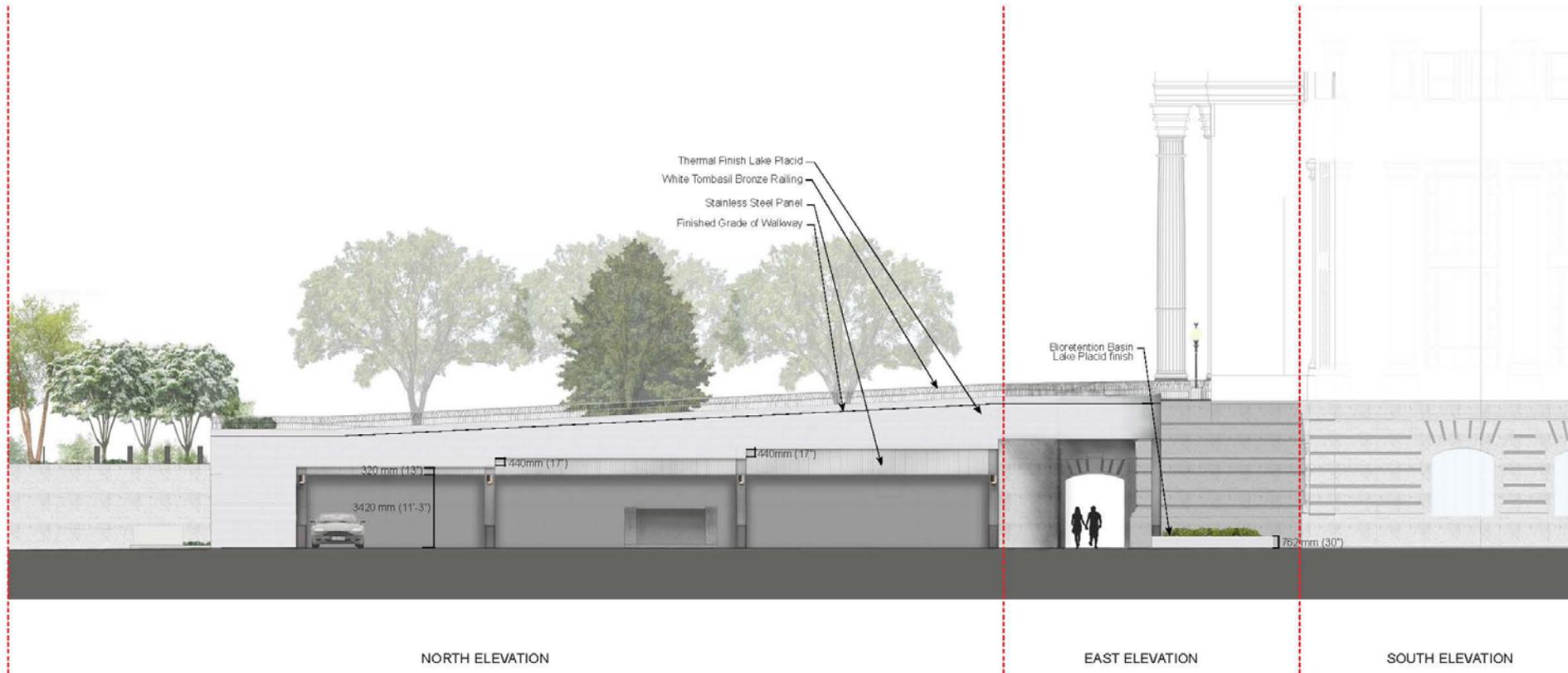
Smithsonian
National Museum of Natural History

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Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach

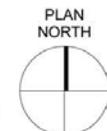
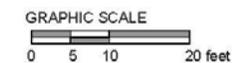
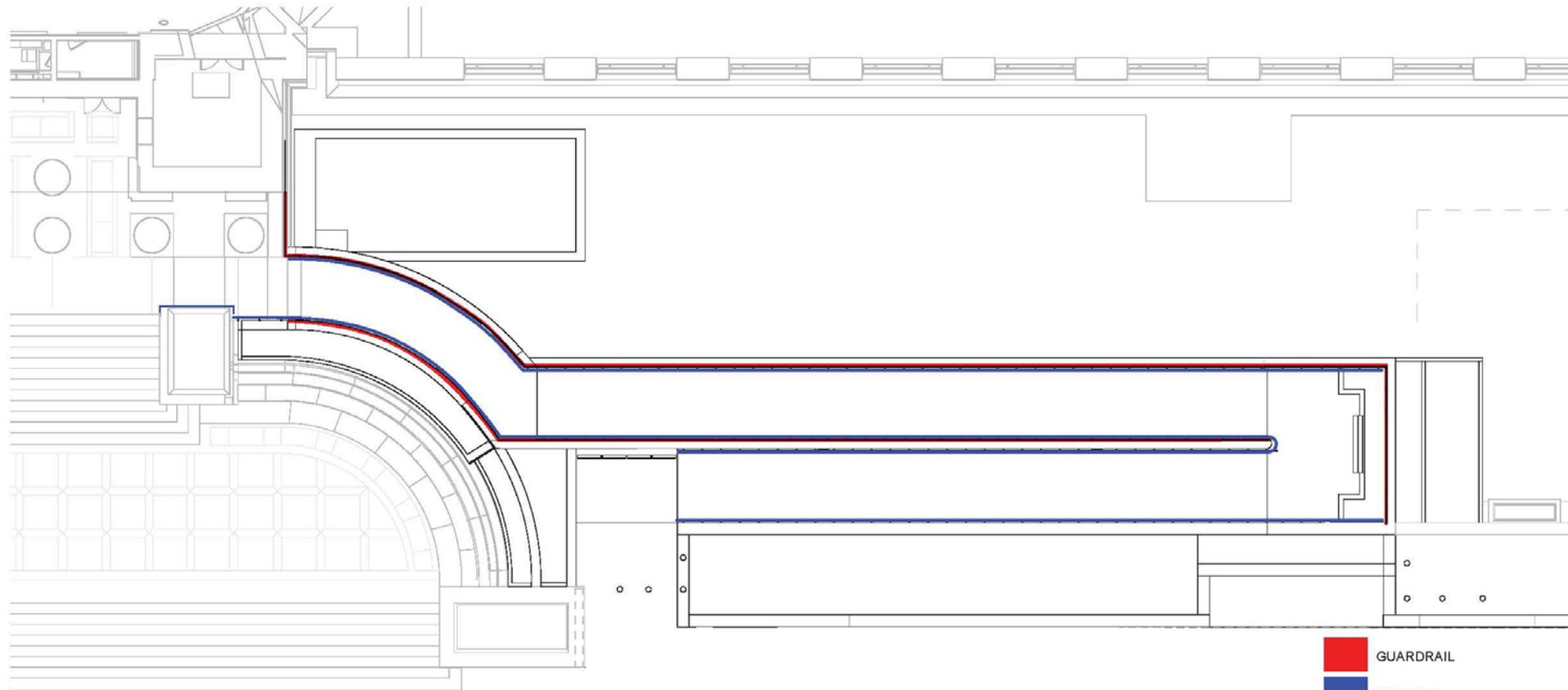


NORTH & EAST ELEVATION



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



GUARDRAIL/HANDRAIL DIAGRAM



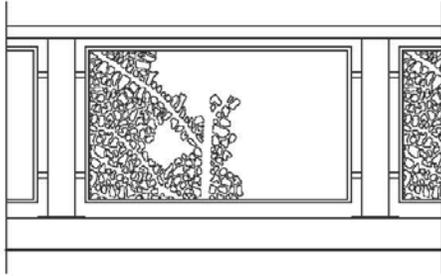
Smithsonian
National Museum of Natural History

QEA • AECOM

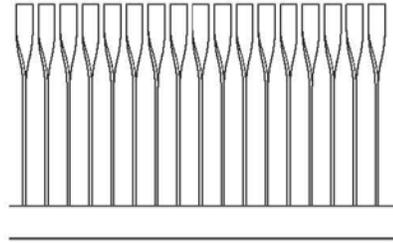
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Proposed Scheme

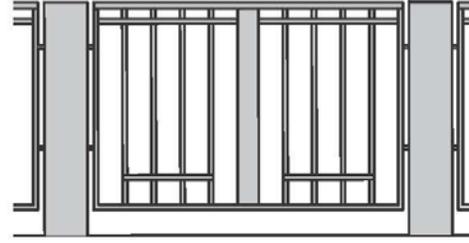
NMNH Renovate South Entrance - Accessible Approach



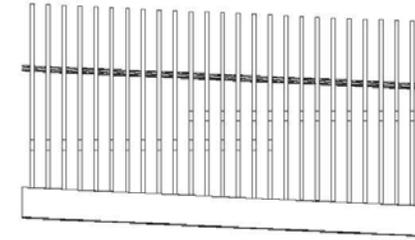
PERFORATED METAL PANEL ELEVATION



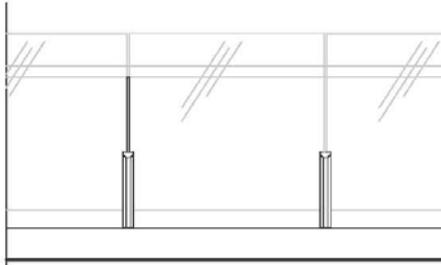
TWIST ELEVATION



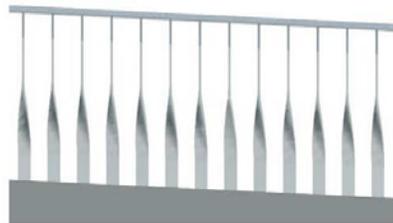
TRADITIONAL GUARDRAIL ELEVATION



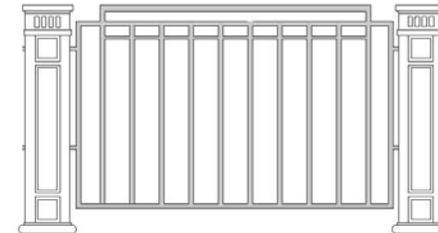
STRIATION ELEVATION



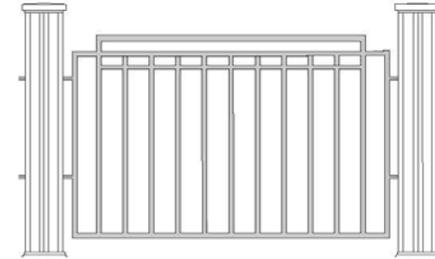
GLASS CLAMP ELEVATION



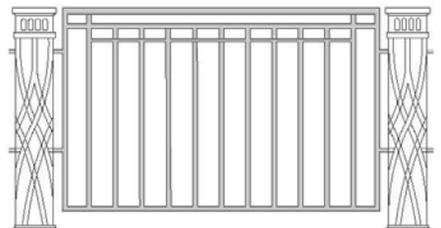
ASCENDING TWIST ELEVATION



BUILDING-INFLUENCED GUARDRAIL



DIAMOND CAGE ELEVATION



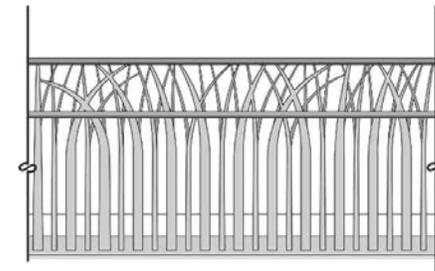
TWISTED CAGE ELEVATION



GRASS ELEVATION NO BEND OPTION



GRASS FLOATING BLADES OPTION



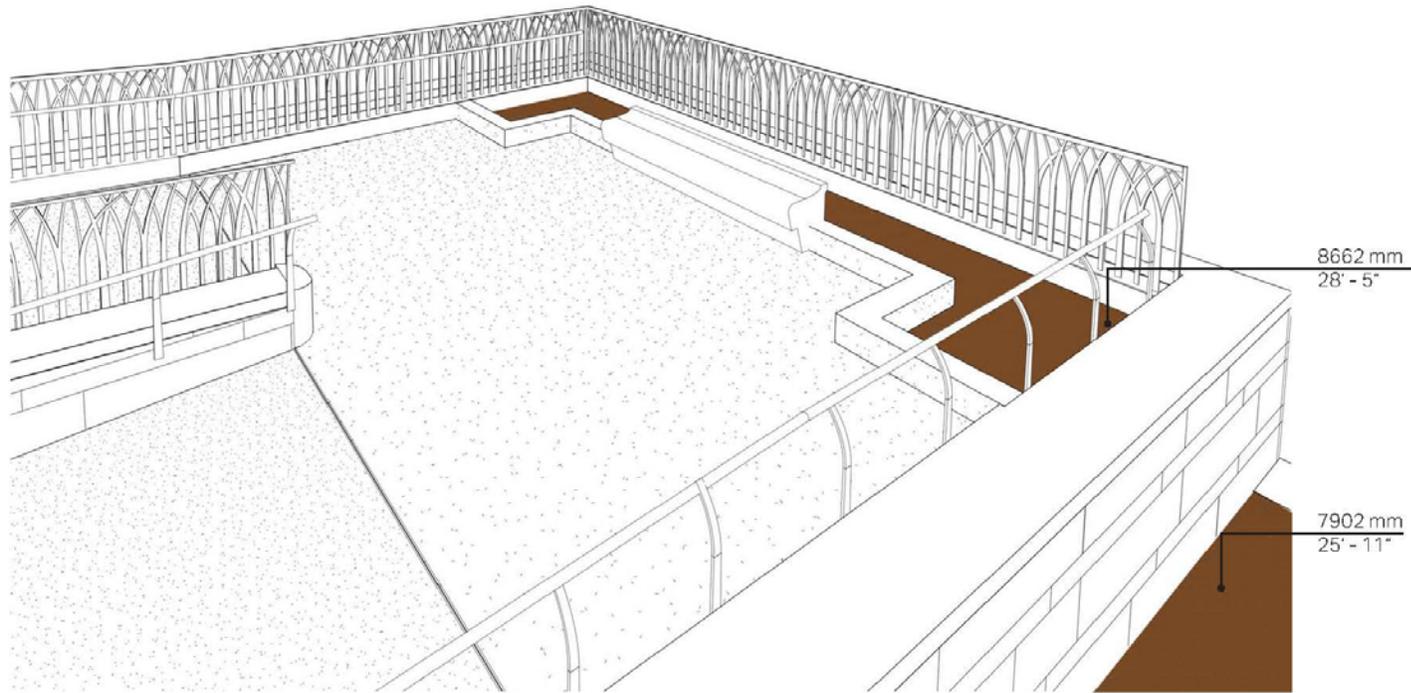
GRASS ELEVATION PREFERRED

RAILING STUDIES



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



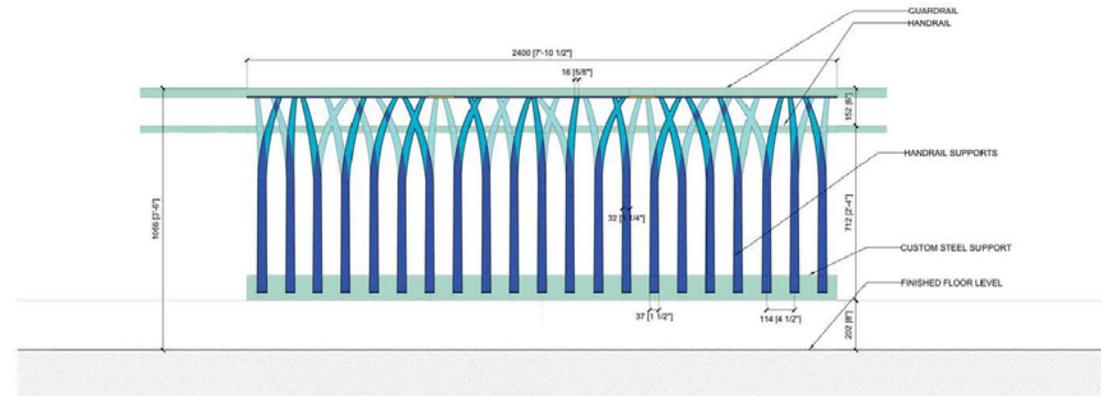
OPTION 1B: PERSPECTIVE VIEW

RAILING TERMINATION AT LANDING STUDY - PERSPECTIVE VIEW

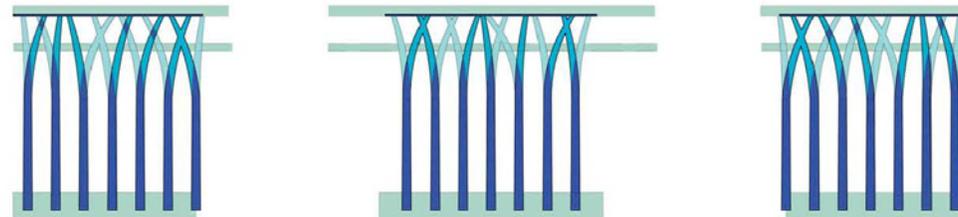


Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



GUARDRAIL ELEVATION 1:10



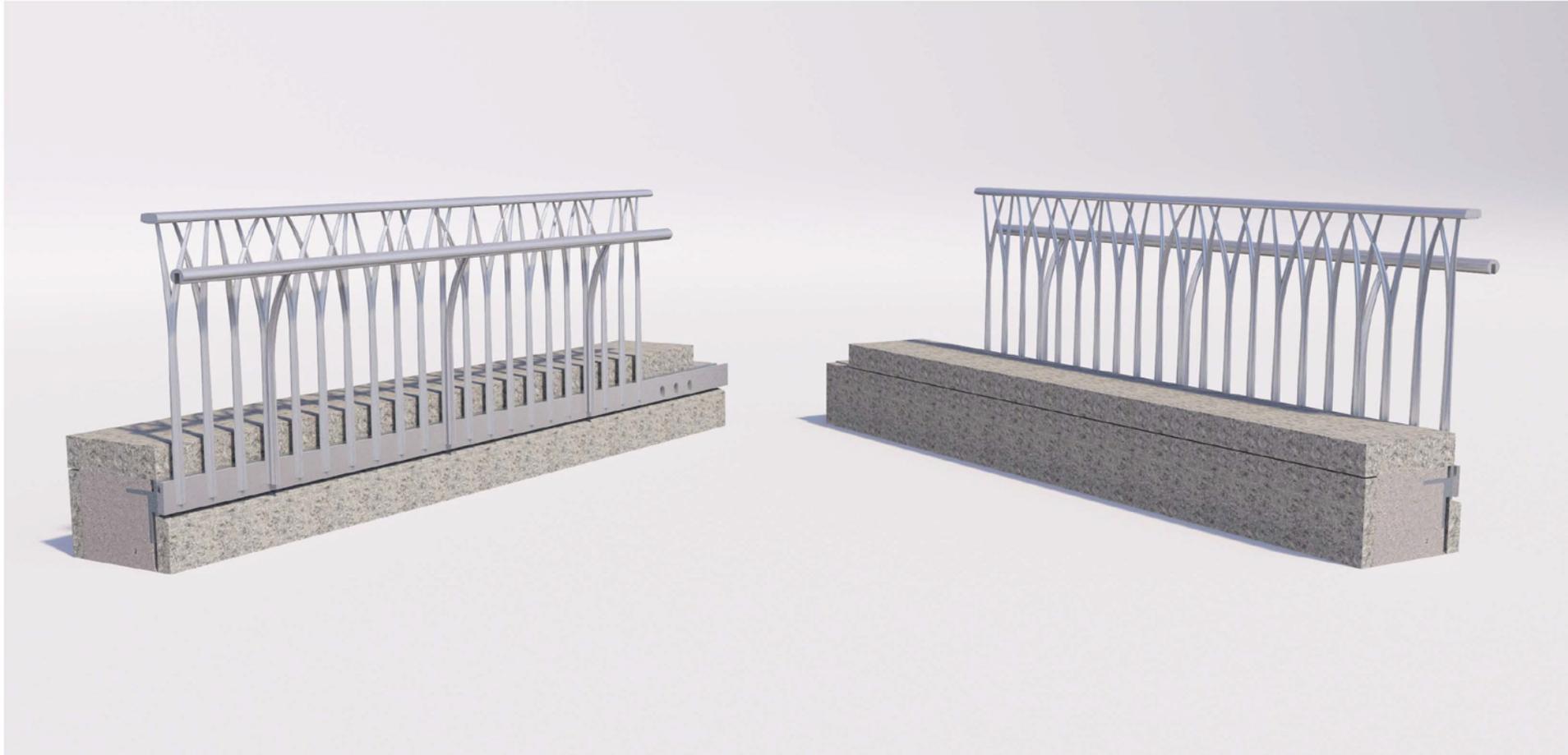
GUARDRAIL ELEVATION 1:10

GUARDRAIL PANELIZATION STUDY



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach

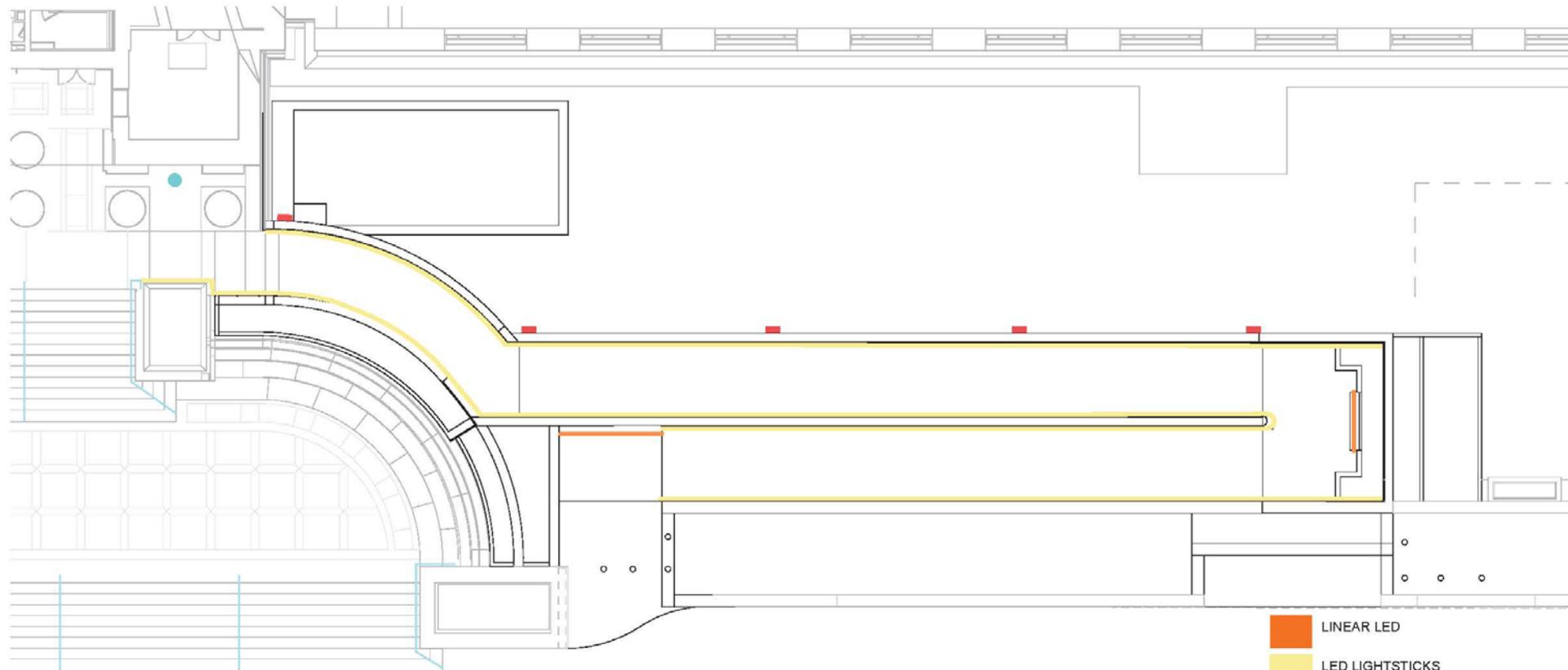


GRASS PANEL RAILING

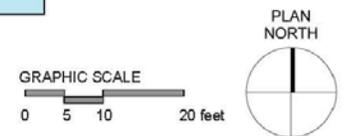


Smithsonian
National Museum of Natural History

Preferred Scheme
NMNH Renovate South Entrance - Accessible Approach



- LINEAR LED
- LED LIGHTSTICKS
- PORTICO AND STAIR LIGHTING

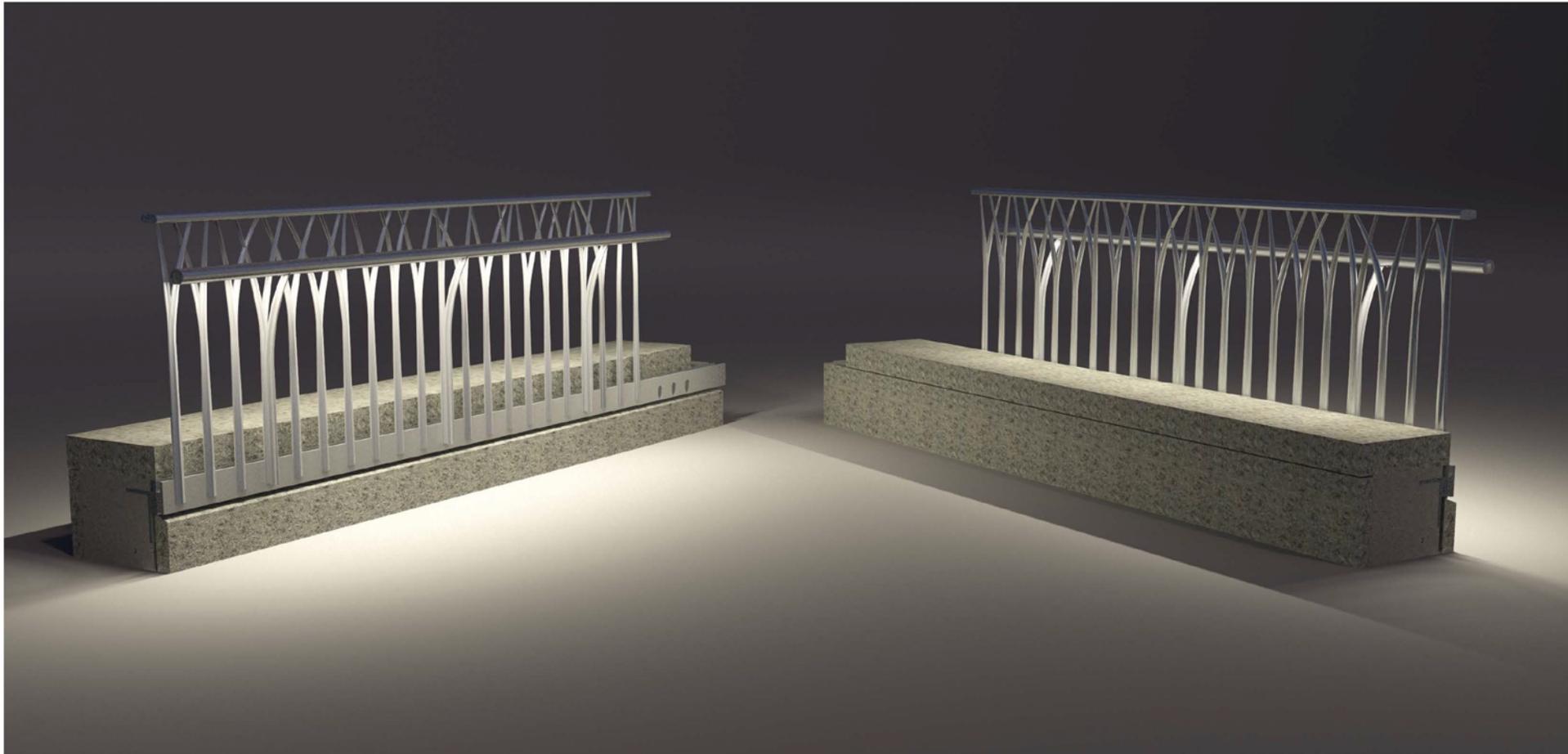


LIGHT DIAGRAM



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



LIGHT STUDY DETAIL



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



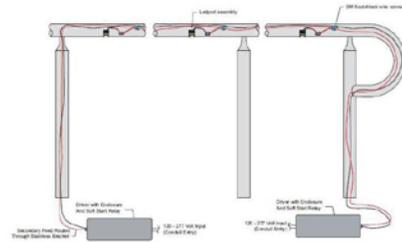
NIGHT STUDY PERSPECTIVE



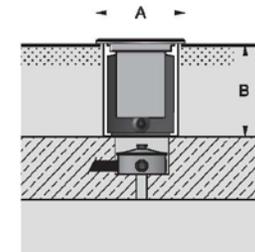
Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach

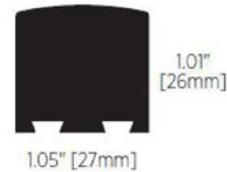
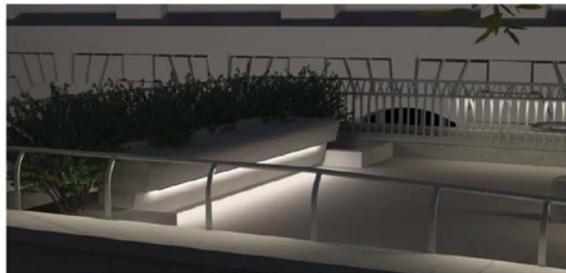
INTEGRAL HANDRAIL LIGHTING



LINEAR LED LIGHTING - SIGNAGE



LINEAR LED LIGHTING - BENCH



PROPOSED LIGHTING





Preferred Scheme

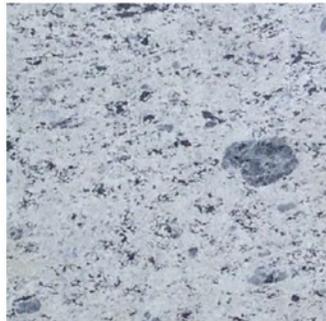
NMNH Renovate South Entrance - Accessible Approach



EXISTING MILFORD PINK GRANITE



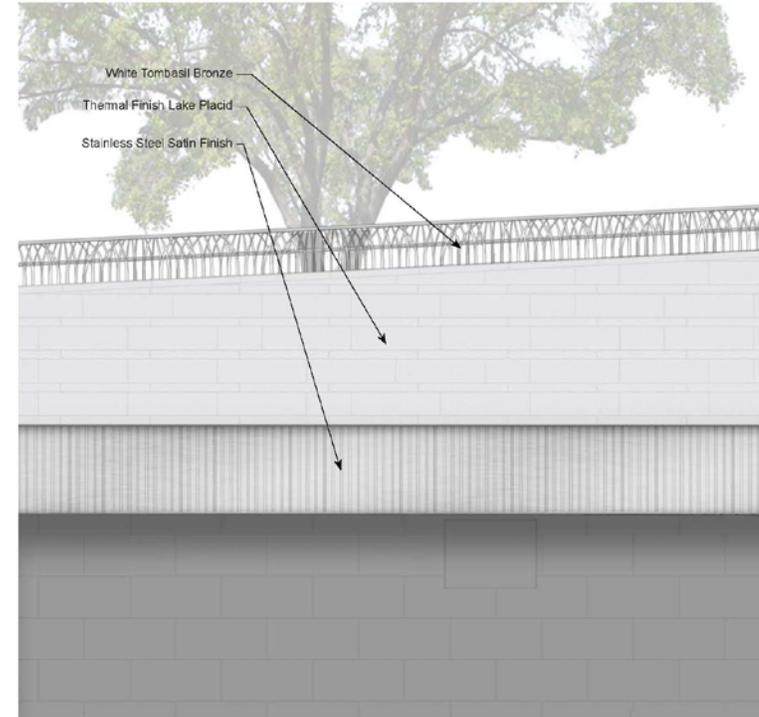
WHITE TOMBASIL BRONZE



PROPOSED LAKE PLACID



STAINLESS STEEL SATIN FINISH



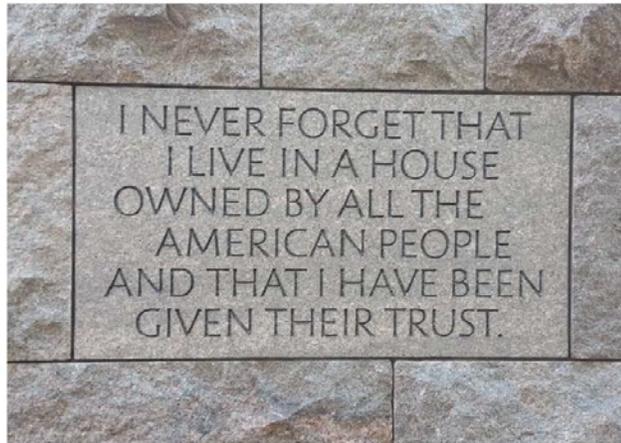
WALL MATERIAL KEY

WALL MATERIAL PALETTE



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



FDR MEMORIAL SIGNAGE PRECEDENT
(size and font to match SI standards)



SANDBLASTED SHADOW FINISH TREATMENT

SIGNAGE



Smithsonian
National Museum of Natural History

Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach

EXISTING MADISON AVENUE AGGREGATE:



SCHEME 1: NEUTRAL



ROSE PINK QUARTZ
AGGREGATE (ACCENT)

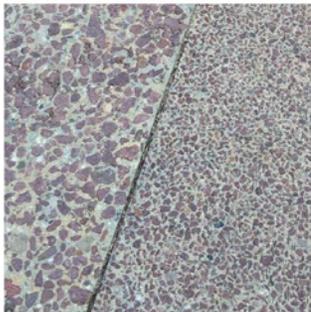


RIVER BIRCH PEBBLE (FIELD)



ROSE PINK QUARTZ ON EXISTING JERSEY PINK
ACCENT BANDS

GETTY MUSEUM AGGREGATE
WALKWAYS PRECEDENT



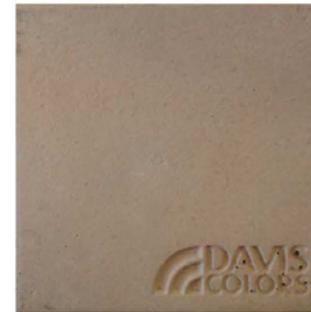
COLOR, VARYING SIZES,
ROUNDED



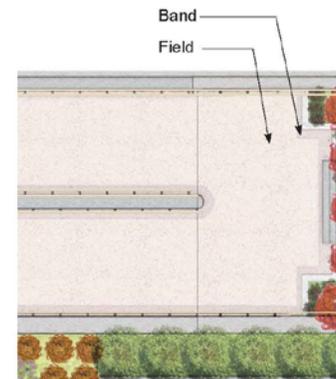
FIELD AGGREGATE MIX:
20% ACCENT 80% FIELD



BAND AGGREGATE MIX: 50 %
ACCENT 50% FIELD.



OUTBACK CONCRETE MIX



MATERIAL KEY: NEUTRAL SCHEME

MATERIAL PALETTE



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



PERSPECTIVE LOOKING EAST



Smithsonian
National Museum of Natural History

Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



MADISON AVENUE PERSPECTIVE LOOKING EAST



Smithsonian
National Museum of Natural History

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Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



PORTICO PERSPECTIVE LOOKING EAST



Preferred Scheme

NMNH Renovate South Entrance - Accessible Approach



PARKING PERSPECTIVE LOOKING WEST



Smithsonian
National Museum of Natural History

Appendix

NMNH Renovate South Entrance - Accessible Approach

PERENNIALS AND GRASSES



Carex pensylvanica
Sedge



Phlox subulata
Creeping phlox



Aster novae-angliae
New England Aster



Heuchera villosa "Autumn Bride"
Hairy alumroot

SHRUBS



Prunus laurocerasus "Otto Luyken"
Dwarf Cherry Laurel



Viburnum dentatum "Christom"
Blue Muffin



Itea virginica "Little Henry"
Sweetspire



Aronia melanocarpa
Autumn Magic



Myrica cerifera "Down's Dwarf"
Wax Myrtle

PLANT PALETTE



Smithsonian
National Museum of Natural History

Appendix

NMNH Renovate South Entrance - Accessible Approach

SHRUBS CONTINUED



Hydrangeas quercifolia
Oakleaf Hydrangea



Fothergilla gardenii
Fothergilla

BULBS & VINES



Narcissus & Hyacinth Mix
Daffodil & Hyacinth Mix



Parthenocissus quinquefolia
Virginia Creeper

TREES



Cornus kousa
Japanese Dogwood



Liquidambar styraciflua
American Sweetgum

PLANT PALETTE

