SI South Mall Campus Master Plan

**Scope:** Study area is bounded by Independence Avenue, 7th and 12 Streets, SW, and the National Mall. South Mall Campus is home to the Castle, Arts & Industries Building, Freer-Sackler Galleries, National Museum of African Art, Ripley Center, Hirshhorn Museum & Sculpture Garden, and the Haupt and Ripley Gardens.

*Total Bldg Area = 71,500 M² or 770,000 SQ FT*
*Total Site Area = 7.19 hectares or 17.77 acres*

Buildings in the South Mall require both short and long-term strategies to restore and replace critical envelope (façade/roof) and building systems; the Castle’s needs are most urgent. The purpose of the Master Plan is to develop a comprehensive approach to the revitalization and enhancement of the oldest and most continuous area of our National Mall “campus,” seeking to better align facilities with our Strategic Plan, increase public access, and benefit from the programmatic and operational efficiencies of an integrated plan.

**Budget** – master planning services: $5.9M

$3.9M Federal (FY11-18) + $2.0M Trust

**Master Plan Schedule**
- Project start: April 2013
- Forecast completion: June 2018
- Implementation: 2017 – 2040

**Status:**
- Public process for NEPA/Section 106 compliance and agency review underway since December 2014.
- Issues: gardens, Quad significance, excavation below Castle
- Smithsonian and A/E have developed alternative F that addresses comments, incorporates research and further technical studies, and was favorably reviewed by agency staff.

**Upcoming Milestones:**
- Draft Programmatic Agreement Review Nov 2017
- Alternative F Presentations to SI Leadership Nov/Dec 2017
- Submit Concept Master Plan to NCPC Nov 2017
- Public hearing on EIS Dec 11 and 18, 2017
- Public Comments due Jan 2018
Smithsonian Institution Building
Revitalization Planning and Interim Repairs

Scope: Revitalization construction of the Smithsonian Institution Building is planned to begin in approximately five years and will be the first element of the South Mall Campus Master Plan to be realized.

The Smithsonian Institution Building, the “Castle,” is the Institution’s first home and its symbolic heart. It is and always has been the location of the Regents’ meeting room and the Secretary’s offices. It houses the Smithsonian visitors’ center and exhibits that introduce the public to the Institution’s museums and programs and illustrate its history.

The Smithsonian Institution Building is urgently in need of repair and an effort is now underway to address the most urgent envelope and systems repairs. An analysis of structural options to meet seismic and blast requirements will be the first phase of a comprehensive revitalization design to be completed by 2021 and leading to construction.

Office of Planning, Design and Construction
November 2017

Budget
Revitalization Design Funding (FY17-21): $36.75M
$26.75M Federal (FY17-21) + $10M Trust (TBD)
Future Comprehensive Revitalization TBD

Planned Interim Repairs (revitalization funding)
Façade Stabilization (FY16-20): $7.0M
MEP Systems Repair to Mitigate Risk (FY18-19): $1.1M
Windows Replacement (FY19-21): $14.0M

Schedule
Project start: January 2017
Interim work forecast completion: 2021

Status:
• First phase of exterior repairs nearing completion (approx. $2M)
• Full façade assessment contract awarded - field work continuing
• MEP assessment to mitigate risk of catastrophic failure complete and interim repairs and equipment replacement underway
• Contract for structural concepts, seismic resistance design options, and BIM development awarded
• Contract for windows and masonry blast mitigation study awarded
National Air and Space Museum (NASM) – Udvar Hazy Center (UHC)
Dulles Collections Storage Module 1

Mission/Scope:
The recently completed NASM Master Plan (2013) and Smithsonian Collections Framework Plan (2014), validated the need additional collections storage at the NASM-UHC in Chantilly, Virginia. In June 2015, the Regents approved pursuit of congressional authorization for Dulles Collections Storage Module 1 (and MSC Pod 6); the request is currently before Congress.

In the near-term Storage Module 1 will provide artifact swing space during the upcoming NASM Mall Building’s Envelope and Building Systems Revitalization project (FY2018-23). Ultimately, it becomes the permanent home for artifacts moving out of deficient collections space at the Garber Facility in Suitland. Storage Module 1 (11,562 gsm or 124,452 gsf) will be tied into the UHC loading dock and the existing Haul Road. This 3-story structural steel frame structure with composite structural floor slabs and pre-cast concrete exterior wall panels is targeted for LEED certification.

Budget
Federal Capital design and new construction $58.4M

Funding
FY16 and prior (planning/design/engineering) $8.4M
FY17 funding (construction) $40.0M
FY18 funding (construction) $10.0M

Schedule
Construction: 7% 2017 – 2019

Upcoming Milestones
Building Dry-in October 2018
Construction Completion January 2019
**Mission/Scope:**
NASM on the National Mall in Washington DC opened in 1976. This 69,480 gsm (747,877 gsf) facility includes approximately 14,971 sm (161,145 sf) of exhibit galleries and holds the world’s largest collection of historic air and spacecraft.

The mechanical and plumbing systems, original to the 1976 building, have exceeded their useful life spans and are unable to maintain desired environmental conditions. Extensive analysis of the cupping/cracking of portions of the existing “Tennessee Pink marble” exterior has concluded that the entire façade (13,000 stone panels) must be replaced. This LEED-Gold candidate project will revitalize the building envelope and terraces, improve energy efficiency, upgrade the structure’s blast and seismic resistance, modernize the building MEP systems, and improve functionality of spaces affected by the systems renewal.

The museum plans to renew the exhibitions with privately raised funds.

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**Budget (current working estimate)**
- Federal Capital: $650M
- Trust Funding (exhibits): $250M

**Funding (federal capital)**
- FY16 and prior funding (planning/design/pre-construc.): $43.0M
- FY17 funding (design/pre-construction/design-assist): $9.0M
- FY18 funding (major revitalization): $90.0M
- FY19-FY22 (major revitalization): $508.0M

**Schedule**
- Planning/Design: 100% complete, 2013 – 2017
- Construction: design assist underway, 2018 – 2024

**Upcoming Milestones**
- Final Design submission: Jan 2018
- Interior rendering: 3D Night Rendering - North Entrance Vestibule off Jefferson Drive
- Interior rendering: Interior rendering
Scope
This project includes various repairs and improvements for all levels of the NMAH building roofs and terraces, including work at the First floor roof/Second floor terrace and Fourth floor roof/Fifth floor terrace to address leaks, improve drainage, and eliminate tripping hazards from broken terrace pavers, as well as incidental repairs of the electrical service and lighting infrastructure and additional security cameras on the upper levels. Due to favorable bids, additional options were awarded, including fall protection at the upper roof levels and fire suppression systems at the mechanical penthouses.
Scope
This new chilled water system replaces an unserviceable cooling plant which is more than 20 years old and utilizes R22 refrigerant. Six new modular chillers, including N+1 redundancy, will deliver 400 tons of cooling. A new two-cell rooftop cooling tower will provide condenser water, and a variable volume condenser water distribution system will maximize pumping efficiency while maintaining constant flow through active chiller modules. This project is a predecessor for the upgrade of the building air handling units and after all upgrades are complete a significantly improved energy use profile is expected.

Budget
Federal Capital (FY12-16) $8.52M

Schedule
Survey: 2012 - 2013
Design: 2015 - 2016

Upcoming Milestones:
Substantial Completion 11/30/2017
Testing & Commissioning 01/31/2018
National Museum of Natural History
Halls 2-6 Renovation and Fossil Hall Exhibit

Scope

Last renewed in the 1960’s, the Fossil Hall is the final of the three great halls in the museum to have major utilities renovated. This project includes restoration of historic Halls 2-6 which will house the Fossil Hall exhibit. The project which renovates approximately 55,900 square feet (5193 SM) of space continues progress on the NMNH Comprehensive Facilities Development Plan under which all mechanical systems are being replaced due to risk of imminent failure. LEED-Silver for interiors is expected.
MISSION / SCOPE:

The National Museum of Natural History is one of the most visited museums in the world and is now over a century old. The long term detrimental effects of limited resources for maintenance, repair and upgrades are highly visible, particularly at the South Entrance. This main entrance from the National Mall has never been accessible so a renovation in this area requires making the entrance ADA compliant. There have been no large scale repairs to the steps since they were built – the waterproofing has failed and now mold, mildew, and tree roots are visible in the Vault below. This project will upgrade the Vault and address the refurbishment of all stone at the steps, plaza and portico and will provide long-overdue replacement of portico doors and windows, and a new Air Handling Unit for Baird Auditorium. The goal is to be complete for reopening of the Fossil Halls in June 2019.
MISSION / SCOPE:

The West Court of the National Museum of Natural History was built in the 1990s and contains the IMAX Theater, Atrium Café and basement kitchen. Currently, demand for food service in the museum is greater than supply. To remedy this situation and take advantage of large crowds expected with the reopening of the Hall of Fossils in 2019, the museum and Smithsonian Enterprises intend to revitalize the West Court. The IMAX Theater will be replaced with a new 302-seat restaurant on the 1st floor. Additionally, a shell space will be constructed on the 2nd floor for later development by the museum. The ground floor Atrium Café will be renovated and will increase public seating to 500. The basement kitchen will be upgraded as part of this project and new dishwashing rooms will be installed in the dining areas of both the café and restaurant to reflect enhanced sustainability efforts at the Smithsonian.

## Budget and Funding

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<tr>
<td>Federal - $1.08M FPD + $.73M MR</td>
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## Schedule

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## Upcoming Milestones:

Construction bids evaluated  Nov 2017
**Mission / Scope**

The 847 sq meter (9,120 sf) Police Station opened in 1956 to house police, public restrooms and storage. This project will replace failed/failing building infrastructure components and systems and provide egress and accessibility upgrades. In Phase 1, the public restrooms will be permanently relocated to the picnic pavilion site next to the adjacent Mane Café into a new two-level building housing the restrooms and event space. Phase 2 is the renovation of the Police Station building, including reinstalling the Zoo’s security control room and providing direct public and staff access to the First Aid Station from Olmsted Walk. The project is pursuing LEED-Gold certification.
MISSION / SCOPE:
The Bird House (BH), designed by Architect Albert Harris, opened in 1928 and remains a historically significant example of the zoo’s early architecture. An addition was completed in 1938; significant interior and exterior modifications occurred in 1965 as well as the addition of the Great Flight Cage and bridge.

This LEED-Gold candidate project renews the 4,282 sq meter (46,090 sf) Bird House/Great Flight Cage and approximately .4 hectares (1 acre) of the Bird House Plateau to house the “Experience Migration” exhibit, emphasizing the global importance of migration to species survival through innovative conservation-based education. Facility improvements include new site utilities and replacement of HVAC equipment, storm and waste water management systems, animal/human life safety, electrical, plumbing, security and data systems. The undersized entrance area will be expanded for improved accessibility, public restrooms and programmatic space for the Congressionally established Smithsonian Migratory Bird Center.

Budget
Federal Funding (major revitalization) $50.75M
Trust Funding (capital and non-cap) $10.25M

Funding
FY15 and prior funding $5.57M
FY16 funding $2.78M
FY17-20 funding $52.65M

Schedule
Design % Complete 100%
Timeframe 2013 – 2017
Construction:
Timeframe 2017 – 2021

Milestones
Complete Flamingo Swing Space Fall 2017
Advertise Bird House “Experience Migration” Jan 2018

Progress photos of Propagation Swing Space
NZP-DC: Central Parking Facility

Scope
The purpose and need for centralized parking at the National Zoo has been recognized for more than 4 decades, since the 1973 Master Plan first proposed a multi-level structure on top of the General Services Building. This location for parking facility was affirmed in the 1986 Master Plan and again in the 2008 NZP Facilities Master Plan.

Currently, due diligence is proceeding on alternative financing and delivery methods for constructing a ~1285 space garage in order to: facilitate visitation with a centralized, accessible, and modern point of arrival; expand on-site parking; improve pedestrian safety; repurpose existing surface lots to expand animal habitat and exhibit space; consolidate access points for increased security.

Budget
~$75M

Schedule
% Complete
Feasibility/Due Diligence: 100%
Design/Construction: 100%

Timeframe
2016
FY2017-TBD

Recent & Upcoming Milestones
RFQ
Winter/Spring 2016/17
RFP Released (4 teams shortlisted)
11/08/2017
Procurement
Spring/Summer 2018
Design-Build – Approx. 2-1/2 years
Following Procurement
Smithsonian Astrophysical Observatory (SAO)  
Chandra Operations Control Center (OCC) Relocation

**Scope**  
NASA's Chandra X-ray Observatory telescope, orbiting at 139,000 km (86,500 mi) in space, detects X-ray emission from exploded stars, clusters of galaxies, and matter around black holes. SAO hosts the Chandra Operations Control Center (OCC) which operates the satellite, processes the data, and distributes it to scientists around the world for analysis. The lease for the OCC, located at 1 Hampshire Street, Cambridge, is set to expire 9/30/19. A new OCC must be fully operational by 3/30/19, requiring selection and lease negotiation of a new facility, design and build-out.

**Budget**  
- Trust Funding $TBD
- Grant Funding (NASA) $TBD

**Schedule**

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**Upcoming Milestones:**
- Receipt of RE Proposals 10/18/17
- Non-binding Letter of Intent to Selected Offeror 11/09/17
- Expected Regents Review/Approval Nov 2017

**NGC 604 – largest star formation in Galaxy M33 – photo by Chandra**

**Cassiopeia Supernova – photo by Chandra**
BCI NEW GATUN LAKE ELEVATION
Smithsonian Tropical Research Institute, Panama

Scope
This project was originated due to the Panama Canal expansion, which will cause the water level of Lake Gatun to rise. The grade along the BCI shoreline must be raised by .80 meters (based on .45 meters expected water level increase plus factors for safety and dynamic waves), and structures close to the shoreline must be demolished and re-built at higher elevations. New construction includes sheet piles to hold the raised grade and site work in place, as well as replacement structures, including docks facilities, a Game Warden Building, and two buildings, “A” and “B”, to consolidate shops, maintenance, electrical service, and the generator.

Budget
- Federal Funding (FY11-15) $5.88M
- Trust Funding $0.75M
- Total $6.63M

Schedule
- Design: 100% complete 2011 - 2015
- Construction: 88% complete 2015 - 2017

Upcoming Milestone:
- Construction Completion 12/30/2017

Building A construction ongoing. Exterior Walls have been painted with prime and roof works are being completed. Finishes works are ongoing with windows frames and lighting fixtures installation.

Building B under construction with main structure completed and roof installed. Masonry and walls plaster works are ongoing. Progress as of November, 2017.