Executive Summary

Introduction
The Arts & Industries Building (AIB) is located on the National Mall, between Jefferson Drive and Independence Avenue, east of the Smithsonian Institution Building (the Castle) and west of the Hirshhorn Museum and Sculpture Garden. The AIB possesses integrity of location, design, setting, materials, workmanship, feeling, and association. The building was listed in the District of Columbia Inventory of Historic Sites in 1964 and in 1971 it was listed on the National Register of Historic Places and designated a National Historic Landmark. The AIB is of national significance as defined by National Historic Landmark (NHL) Criteria 1 and 4. The property falls under NHL Theme III (Expressing Cultural Values), Subtheme 5 (Architecture, Landscape Architecture, and Urban Design).

Constructed between 1879 and 1881 and originally known as the National Museum Building, the Arts & Industries Building was built not only to house the vast foreign and domestic exhibits donated to the United States government following the 1876 Centennial Exposition in Philadelphia but also to accommodate the rapidly growing collections of the Smithsonian Institution (SI) which had exceeded the capacity of the Smithsonian Institution Building.

The AIB was the first of a group of purpose-built museums built by the SI with a combination of federal and private funding. Globally, the Smithsonian Institution was at the forefront of institutions developing public museums.

The Smithsonian Institution commissioned this Historic Structure Report (HSR) for the Arts & Industries Building to identify, compile, organize, and interpret previously produced research, and to develop new research and prepare a current conditions assessment. The document includes an evaluation and statement of significance to assist the Smithsonian in identifying preservation objectives and guidelines for future building preservation, maintenance, and revitalization.

Significance and Period of Significance Summary

Historical and Institutional Significance
The AIB was the beginning of what is now one of the greatest museum complexes in the world. Within the building, the Smithsonian Institution developed methods of museum administration, specimen preparation and preservation, classification and labeling, exhibition, and education outreach that became standard practice in museums worldwide.

Architectural Significance
The AIB is a unique example of early, innovative museum design inspired by the design of international exposition buildings following the 1851 success of the Crystal Palace in London. It is an early example of a building in which integrity of form and function is achieved by a clear expression of structure. It exemplifies the use of new building technologies and design attitudes to quickly, inexpensively, and ingeniously construct a new building type. It is an exceptional example of brick masonry architecture, in both design and craftsmanship, used in a major government building in a city where monumental stone architectural design now prevails for such buildings.
Its modern Romanesque style purposefully complements the historical Norman Romanesque style and scale of the Smithsonian Institution Building. The AIB is a major work of the notable Washington architectural firm of Cluss & Schulze with Adolf Cluss, FAIA, as principal architect. The AIB is the last surviving red brick building on the National Mall where once the red brick designs of Adolf Cluss and his partners dominated.

Primary Period of Significance
“Period of Significance” is defined as an extent of time that is important to defining the building. Because the significance of this building includes both institutional and architectural significance, the primary period of significance for the building must not only encompass the character defining features of its design and construction but also reflect important institutional changes. The primary period of significance, then, is between 1881 and 1902 as it defines both the architectural and institutional significance of the AIB. This period contains two significant eras: 1881 to 1896 A Museum for the Public and 1896 to 1902 Growth of Collections and Hornblower and Marshall.

1881 to 1896 A Museum for the Public
Architectural influences on Cluss and his design intent are examined in the Section 1.0 on the history of the building and its context. The critical roles of the building commission and the Secretaries of the Smithsonian Institution are also detailed in that section, which includes the detail of their missions, contributions and goals for the collections. The shift in 1896 was driven by an evolution in the ideas about museology of George Brown Goode, assistant director of the National Museum during that period.

Ongoing functional changes led to modifications to Cluss’s fundamentally democratic, open, accessible spatial design. The open physical and visual connections between the interior spaces derived from the exposition building model and reinterpreted by Cluss were blocked by the infill of many of the arched openings, signaling the evolution of an exhibition model reflected in the design of most major museums of the late 19th and early 20th centuries.

Cluss stated that the style of the building was:

A modernized Romanesque style of architecture adopted for the new building in order to keep up a relationship with the Smithsonian building, which is designed in Norman, a variety of this style. To modernize this style was found necessary on account of the different building material, and to do justice to the purposes of the building with its modern demands of perfect safety and elegance of construction, of greatest possible available floor space, of easy communications, efficient drainage, a well calculated and pleasing admission of light, free circulation of air, and all other hygienic dicta. The external architecture is based upon the general arrangement of the interior, and shows plainly the prominence of the four naves and the careful management of the light for the central portion of the building.¹

The effect of the “admission of light” and “free air circulation” created voluminous spaces culminating most impressively with the Rotunda.

The 1884 Visitor’s Guide to the Smithsonian Institution and the United States National Museum concisely...

identifies the primary purposes of the building as:

It is a Museum of Record, in which are preserved the material foundations of an enormous amount of scientific knowledge...

It is a Museum of Research, by the policy which aims to make its contents serve as fully as possible as a stimulus to and foundation for the studies of scientific investigators...

It is an Educational Museum of the broadest type, by reason of its policy of illustrating by specimens every kind of natural object and every manifestation of human thought and activity...

1896 to 1902 Growth of Collections and Hornblower and Marshall
This period represents the rapid growth of the Smithsonian Institution’s mission under the direction of Secretary Samuel Pierpont Langley. At this time, the most significant changes to the architecture of the building were the interior additions made by architects Hornblower and Marshall including galleries, skylights, building systems improvements and modifications to the interior finishes within the spaces of primary public significance.

Existing Conditions Assessment
This documentation of the current condition of the building fabric, structure, and systems incorporates institutional records and facility assessments in order to develop recommendations for treatment that are both feasible and compatible with the building’s historic integrity and significance of the AIB. Section 2.1 outlines the methodology and scope of the survey and assessment.

Recommendations for Treatment Summary
This section identifies and describes the recommended treatment of the building and states the rationale for that determination. Treatment of the building is to be guided by the Smithsonian Directive 418 including Appendices A, B and C; The Secretary of Interior’s Standards for Historic Properties; the Americans with Disability Act; and the International Building Code. Non-compliance with current codes should be addressed; but because this is an historic building, alternatives to full code compliance are recommended where compliance would unnecessarily compromise the integrity of the historic building.

Zones of intervention are identified in the report where preservation, rehabilitation, and restoration strategies are recommended. Preservation and rehabilitation projects needed to stabilize, preserve, and restore building elements are defined by priorities ranging from urgent, to high priority, and desirable. The guidelines and standards developed identify appropriate approaches to work in the AIB that will avoid damaging historic and character-defining materials.

The future use of the Arts & Industries Building should require minimal changes to the building’s historic character and the significant materials, and features discussed above and detailed in this report.

The recommended treatment for the AIB is a rehabilitation project. “Rehabilitation” is defined as “the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural
values.” ² Of the four treatments listed in the Secretary of the Interior’s Standards — Preservation, Rehabilitation, Restoration, and Reconstruction — rehabilitation provides an opportunity to introduce a contemporary use by means of alterations, upgrades and additions needed to comply with modern building, life safety, and accessibility codes and to meet programmatic needs.

Based on the significance of historic features and spaces, their condition and integrity, and the need to create a building that can accommodate a desired use, work should fall into the following particular categories:

1. Preservation and repair of the building’s existing architecturally significant features, fabric and finishes from the Period of Significance;

2. Replacement of the building’s mechanical and electrical systems and other alterations needed to comply with current building, life safety, and accessibility codes and meet programmatic needs;

3. Restoration of the building’s significant features that have lost their character or have been removed since the end of the Period of Significance.

All treatment priorities are outlined in Section 3.3. Urgent treatment priorities are listed below. Urgent measures are required to maintain a secure weather tight building envelope and address immediate life safety issues. As this HSR is being completed, some of this work is underway.

- Replace roofs and flashing at Rotunda, halls, courts, ranges, and all monitors
- Perform additional assessment of the roof structure and conduct material testing
- Reinforce roof trusses if determined necessary by additional analysis
- Repair and refinish roof trusses
- Replace gutters and leaders at Rotunda, halls, courts, and ranges
- Repair skylights at courts
- Repair monitors
- Replace all windows
- Repair metal ceiling panels at halls and courts
- Construct structural lateral support and seismic upgrades
- Construct perimeter and site drainage

Other treatment priorities are detailed in Section 3.3.

Summary of Opportunities and Limitations
Finally, this document explores some opportunities and limitations of the building and its possible use. The recommendations are based more on the characteristics inherent to the building materials and less on their condition and repair. This section presents several sustainable design approach options aligning with LEED principles. The design of the AIB was strongly influenced by the intent to use natural light and ventilation and to create an economical, “sustainable” building using traditional as well as innovative building technologies.

These founding goals provide the foundation for a rehabilitation of the Arts & Industries Building that is shaped by current sustainable design strategies.

**Documentation Summary**
As this report is the result of both past and new research it includes copies of the original source material and an annotated bibliography to facilitate access and use of this report for future projects.