

# STAFF RECOMMENDATION

E. Keller

NCPC File No. 6413



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**NATIONAL ZOOLOGICAL PARK -ASIA TRAIL PROJECT**  
DESIGN CONCEPT DEVELOPMENT  
3001 Connecticut Avenue, NW, Washington, D.C.

Submission by the Smithsonian Institution

December 30, 2003

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***Abstract***

The Smithsonian Institution (SI) has submitted a design concept for a project called the Asia Trail. The proposed Asia Trail project is consistent with the Master Plan for the National Zoological Park (National Zoo) which was approved by the Commission in 1988. The SI advises that it is in the process of further refinement of wildlife and zoo exhibition management and has determined the need to upgrade the park. Part of this effort will adhere to the American with Disabilities Act requirements for zoo accessibility improvements. The facility upgrades also provide improved animal husbandry and exhibit capabilities. In furthering the National Zoological Park Master Plan, the Asia Trail project will group animals by their natural geographic locations into themed exhibits, but will maintain the same overall land use areas of the approved Master Plan.

***Commission Action Requested by Applicant***

Approval of design concept pursuant to 40 U.S.C. § 8722(d) and Section 5 of the National Capital Planning Act (40 U.S.C. § 8722(b)(1)).

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***Executive Director's Recommendation***

The Commission:

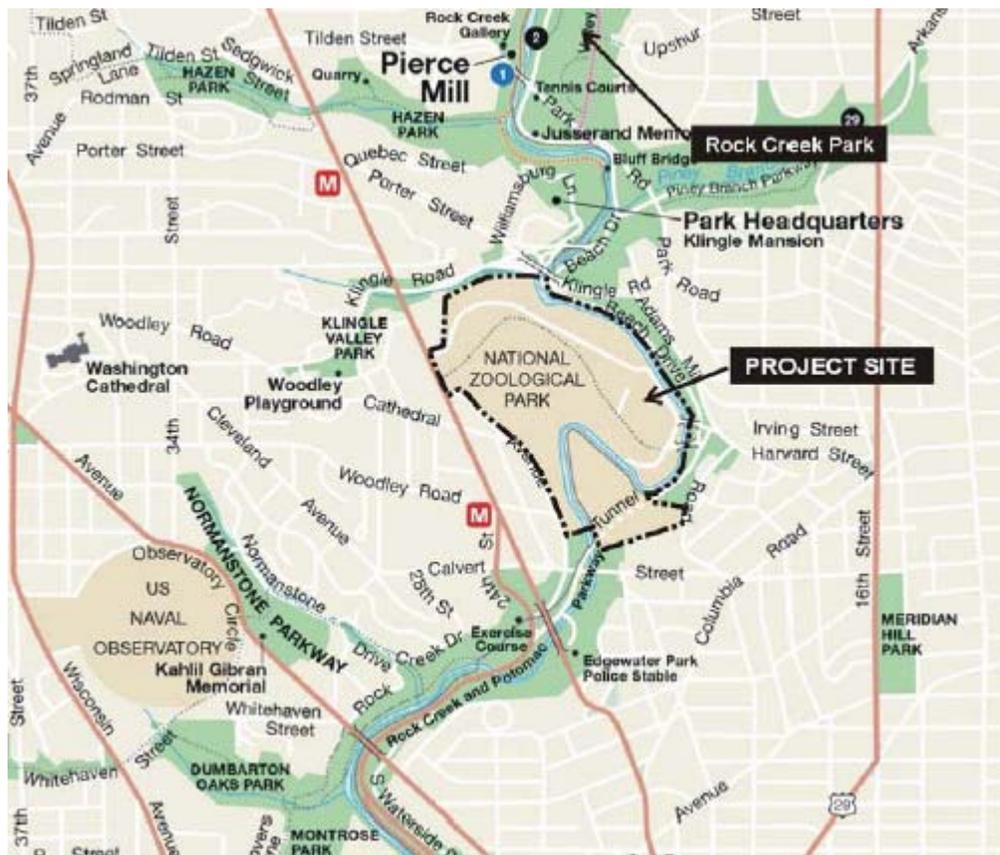
**Approve** the design concept for the Asia Trail Project at the National Zoological Park, Washington, D.C., as shown on NCPC Map File No. 2.00(08.21)-41282.

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## BACKGROUND AND STAFF EVALUATION

### *DESCRIPTION OF PROPOSAL*

The SI has submitted a design concept for further development of a construction proposal in accordance with the NCPC project review process. The Asia Trail Project is an inaugural development of features that would be established at the National Zoo that comprises 17.1 acres and is located east of Connecticut Avenue and south of Rock Creek Park in northwest Washington adjacent to the Olmsted Walk and portions of the landscape areas that comprise the



### PROJECT LOCATION PLAN

design of the original Fredrick Law Olmsted zoo plan.

The Asia Trail Project is situated in the northwest corner of the zoo near the park's main entrance at 3001 Connecticut Avenue, NW. The Asia Trail will be the first component of the National Zoo's upgrading of existing facilities, which reorganizes and rebuilds the zoo by grouping animals by their natural geographic locations into themed exhibits. The Trail project is intended to create a display sequence that shows a series of Asian animals, provides compliance

with Americans with Disabilities Act (ADA) for access, upgrades infrastructure and utility systems, improves visitor's interpretive experience, increases visitation, improves integration of zoo science into exhibits; and provides for more natural animal behaviors. This project also further implements objectives of the Commission approved Master Plan and the Smithsonian Institution's 2001 Utility Improvement Plan.



*PHOTO COURTESY OF THE SMITHSONIAN INSTITUTION AND EDRAW, INC.*

### **ASIA TRAIL PROJECT CONCEPT DESIGN BOUNDARY**

Major exhibit components of the Asia Trail Concept Design include:

- Sloth Bear exhibit

- Fishing Cat exhibit
- Giant salamander exhibit and waterfalls
- Clouded leopard exhibit
- Refurbished and re-designed Red Panda and Giant Panda exhibit
- A Panda Café food service structure
- Central Conservation Plaza which serves as an all-weather observation and connecting feature of the exhibit area.
- Refurbished Bird flight cage with water fowl area
- Redesigned Elephant House and exhibit area
- New one-horned rhinoceros exhibit
- Asian small-clawed otter exhibit

The Asia Trail project will also include several new structures to replace the current or newly required denning of animals and allow appropriate exhibiting of the animals during open public hours. These structures include:

- A refurbished Panda House
- Redesigned and renovated Elephant House
- New Rhino compound

The Asia Trail conceptual design currently is anticipated to be constructed in two phases as follows:

#### Area of Site

Asia Trail, Phase I - 5.66 acres  
 Asia Trail, Phase II - 11.44 acres

#### Area of Buildings & Site Coverage

Asia Trail, Phase I --- 16,600 square feet overall  
 Asia Trail, Phase II --- 52,700 square feet overall

#### Employment (existing/projected)

Asia Trail, Phase I --- 12/13  
 Asia Trail, Phase II --- 8/15

### *DEVELOPMENT PROGRAM*

Applicant: Smithsonian Institution  
 Architect: Chatelain Architects, P.C. Washington, DC  
 Landscape Architects: Nelson-Byrd Landscape Architects, Charlottesville, VA  
 Structural Engineers: McMullan & Associates, Vienna, VA  
 Civil Engineers: WH Gordon & Associates, Chantilly, VA

Cost: Asia Trail, Phase I -- \$38.9 million, FY2001-2005  
 Asia Trail, Phase II --\$69.5 million, FY2003-2007

Schedule: Asia Trail, Phase I - Design Completion Date December 2003  
Construction Start Date June 2004  
Occupancy Date May 2006  
Public Opening Date June 2006

Asia Trail, Phase II - Design Completion Date January 2005  
Construction Start Date November 2005  
Occupancy Date August 2007  
Public Opening Date September 2007

### Asia Trail Project – Phase I



Source: Smithsonian National Zoological Park 2003

#### Legend:

- (1) The Asia Trail Pathway Entry (2) Sloth Bear Holding Building (3) Fishing Cats Exhibit (4) Clouded Leopards  
(5) Red Pandas (6) Giant Salamander Exhibit (7) Conservation Plaza (8) Giant Panda House and Panda Café

## Asia Trail Project - Phase II



Source: Smithsonian National Zoological Park 2003

### Legend:

(1) Asia Elephant Exhibit and Amphitheater (2) Greater One Horned Rhinoceros Exhibit (3) Asian Small Clawed Otter (4) Renovated Avian and Water Fowl Exhibit and future exhibit space.

### MASTER PLAN COMPLIANCE

Staff finds there are no changes in land use related to the general idea of thematic animal exhibits as depicted in the approved Master Plan reviewed by the Commission in 1988. There are minor revisions to circulation pathways in order to accommodate accessibility requirements for limiting the slope of walkway pavements to five percent in many of the Asia Trail project areas. Final locations of animal holding facilities and the bridge to the Bird House area are in close proximity to the Master Plan specifications. The Elephant House has been located at its present site since

1935 and is depicted as a renovated building in the Master Plan. The intention in the Trail concept is to maintain elephants in the same location with improved husbandry and exhibit capabilities.

The Asia Trail project reinforces concepts of the Master Plan that include:

- A pedestrian loop trail that would be tied to the Olmsted Walk which remains unchanged
- Introduction of many water features presented in a context with the created animal habitats
- A cross-valley pedestrian bridge
- Integration of the animal and vegetation displays through manipulation of terrain and the replacement of existing landscaping.

No additional staff or visitor parking is provided in the development plans for the Asia Trail Project. All of the existing Olmsted Walk and its visitor connections to the main zoo parking areas are maintained. The current Master Plan provides for approximately 1690 parking spaces and remains unchanged. Metrorail provides two stations that serve the zoo and would continue to operate without a project-related increase in ridership, as zoo visitation is not anticipated to increase annually due to the implementation of this project. The pedestrian pathways in the Asia Trail project area would become ADA-compliant, and connect Asian-themed animal exhibits. Bicycle circulation would not change with the proposed alteration, thus the zoo's existing transit systems and pedestrian/bicycle circulation remain unaffected.

The Asia Trail Project employee level adds minimal staff as indicated above, with a total of eight additional personnel.



**SLOTH BEAR HOLDING BUILDING CONCEPT**



**RED PANDA AND GIANT PANDA EXPANSION AREA, WITH CONSERVATION PLAZA AT BOTTON OF VIEW**

*COORDINATION*

Coordinating Committee

The Coordinating Committee reviewed this item at its meeting on December 10, 2003, and forwarded the proposal to the Commission with the statement that the project has been coordinated with all agencies participating. The participating agencies were NCPC; the District of Columbia Office of Planning; the District Department of Transportation; The National Park Service and the Washington Metropolitan Area Transit Authority. Although not in attendance the representative for the General Services Administration concurred in the coordination of this project.

## *EVALUATION*

Staff **recommends approval** of the design concept for the Asia Trail project. The Asia Trail features several improvements to the existing zoo physical development which include:

- The identification of several detailed and comprehensive landscape revisions to the northwest area of the zoo with specific recommendations for new exhibits, their structures, and the public activity areas associated with them.
- New drainage infrastructure to update site surface drainage as well as wastewater discharges from the proposed new or refurbished animal exhibit structures meeting best management practices for water treatment.
- New accessible routes to all animal exhibits that conform to the Americans with Disabilities Act (ADA) requirements for access.
- Establishment of a replacement food service concession at the Giant Panda exhibit.
- Provision for establishment of a new security perimeter at the zoo, which adheres to the latest animal husbandry protection requirements for exhibits and which meets security protection criteria of the Smithsonian Institution.

Staff finds the submitted concept plans maintain much of the general intent of the master plan and provide a much improved and expanded animal and flora experience for the potential zoo visitor in the context of the new exhibits. The proposed landscape and terrain modifications are intended to improve and bring closer the varied view opportunities for zoo patrons and to experience the Asia-themed animal displays through the use of such devices as slotted wooden viewing blinds or hidden viewing areas. Moreover, the improved animal environment amenities such as trees, rocks, snags, waterfalls, and pools would be integrated into the design of the exhibit yards creating a varied environment to stimulate the animals.

The proposed concept design would be consistent with the original Olmsted zoo plan since the proposed trail and exhibits would strengthen the park-like setting envisioned in the original facility design. Similar to the original intent, the Asia Trail pathway in the proposed project would be established in a curvilinear manner respectful of the steep topography of the National Zoo and would connect, but remain separate, from the historic lineal feature of the Olmsted Walk.

Large areas of dense vegetation would shelter and screen animals for reclusive rest as required. Additional features such as bio-retention areas of shrubs, trees, and grasses would be constructed to buffer the exhibit from the noise and activity on the Trail. Moreover, these areas would also serve the dual function of filtering stormwater runoff and creating lush, shaded environments that would screen utilitarian structures and urban intrusions. Newly proposed structures are limited in number but are well integrated into the layout and topography of the zoo environs.

Staff finds overall that the project would reorganize and revitalize an area of the zoo that would be focused on building world-class facilities fostering healthy and active animals and strongly supports the objectives and features of the concept design. The Asia Trail project will deliver varied viewing opportunities and close-up encounters with many of the zoo's most charismatic

creatures housed in new habitats designed to encourage natural behaviors, and which also serve to provide interpretive exhibit elements that will create a compelling visitor experience.

## *CONFORMANCE*

### Comprehensive Plan

The proposal is consistent with the Comprehensive Plan for the National Capital. The Parks, Open Space and Natural Features Element of the Plan designates the installation as a distinct feature to the Capital's environs and states:

The National Zoological Park should continue to be maintained and developed as an integral part of the Rock Creek stream valley, emphasizing natural conditions and retaining existing topography and indigenous plant materials to the extent practicable.

Additionally, within the context of cultural activities, the Comprehensive Plan notes:

The importance of Washington as a national tourist attraction allows for the presentation of unique facilities such as the National Arboretum, the Kenilworth Aquatic Gardens, and the National Zoo. These open air displays are important, both visually and educationally, and should be continued and carefully maintained as part of the National Capital Open Space system.

### National Environmental Policy Act

The SI is in the process of preparing an Environmental Assessment (EA) consistent with the National Environmental Policy Act (NEPA) of 1969, as amended, and the Council of Environmental Quality's (CEQ) regulations implementing NEPA. The Smithsonian Institution is not a "federal agency" within the meaning of NEPA and CEQ. However, it is SI policy and intent to inform and involve the public and other stakeholders in the planning of the Asia Trail Project and to adhere to Commission project submission requirements. Additionally, recognizing its stewardship responsibilities as an independent trust instrumentally created by Congress, the Smithsonian is committed to integrating environmental considerations into its planning and decision-making activities consistent with the spirit of NEPA. The SI is the lead entity responsible for this EA preparation and the Commission is a cooperating agency. The Environmental Assessment (EA) will be available for public comment on or about December 16, 2003.

### National Historic Preservation Act

The National Zoological Park, with its variety of 19th and 20th century zoo-related structures, is listed on the National Register of Historic Places. The facility is also listed on the District of Columbia Inventory of Historic Sites. According to the National Register of Historic Places Nomination Form, the zoo contributes to the cultural heritage and visual beauty of the District of

Columbia. The National Zoo was planned by Fredrick Law Olmsted and its location, in the spacious and picturesque Rock Creek Valley, marked an important departure from the 19th century practice of confining zoological collections to limited areas.

SI has begun Section 106 consultation on the proposed design concept for alterations to the landscape and buildings at the National Zoological Park, which is listed in the National Register of Historic Places. The alterations would occur in the northwest portion of the zoo, near the Connecticut Avenue entrance. The Olmsted Walk would be affected in two ways—the physical connection of the new Asia Trail to the Olmsted Walk at two points, and visual effects that might result in the alteration of views from the Walk toward the Asia Trail, especially since the new trail would be higher in elevation. SI has not yet determined if these alterations would have an adverse effect.

The Elephant House, while not listed on the Historic Register, is eligible for listing due to its age. As a result, potential changes to the building are subject to historic preservation review. The Elephant House might be affected, depending on still-incomplete architectural and engineering studies. SI states that potential alterations to the building could include: structural reinforcement, modernization of the building systems, renovation and expansion, and possible relocation and reconstruction. SI states that the Elephant House will be treated according to the Secretary's Standards.

Due to the known presence of Native American settlements within the Washington, D.C. area, an archaeological study was conducted of the project area by SI and its contract design team. An initial reconnaissance to identify landforms resulted in identifying some warranted interest areas for shovel-testing. These included the crest of the steep knoll, a portion of the saddle that extends westward from the knoll, the southern edge of the ridge south of Olmsted Walk and west of the Panda House, an area east of the Elephant House yard, and at the oval avian cage south of the Elephant House. All other portions of the project area contain steep slopes or evidence modern disturbance and developed activity. Phase I archaeological investigation has indicated that none of the tested areas reveal any artifacts of concern. Therefore, SI has determined that the proposed improvements would not likely impact archaeological resources in the project area.

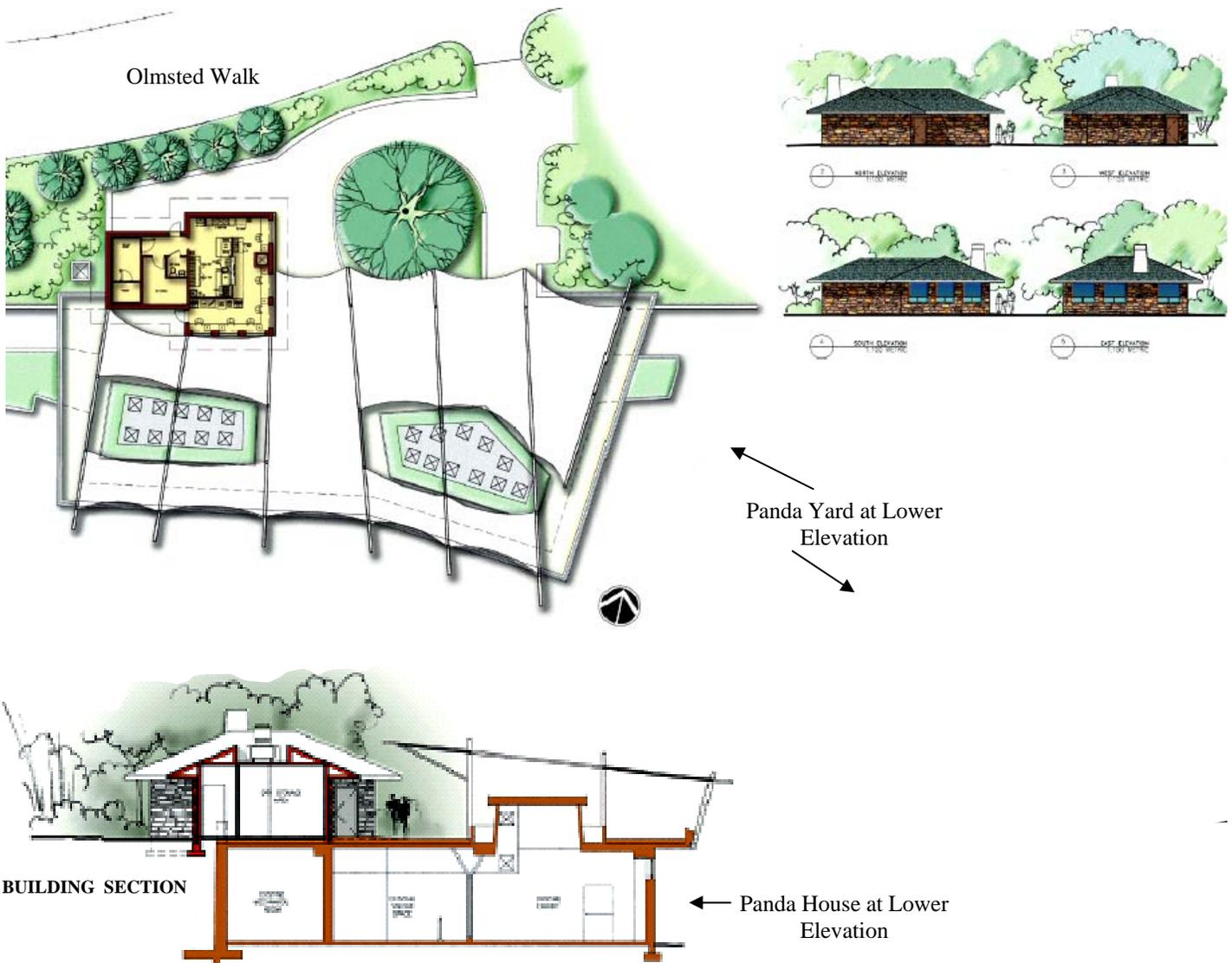
New and upgraded trails would be constructed at the site, along with new habitats, visitor viewing areas, and exhibit buildings. SI staff is also examining the potential for archaeological discovery in this portion of the zoo. Consultation with the D.C. State Historic Preservation Office (DC SHPO) and other parties including the Commission will continue through subsequent phases of design development.

All determined information relating to historic or archeological resources will be provided to the District of Columbia Historic Preservation Office for review and consultation pursuant to the National Historic Preservation Act, Section 106. SI anticipates completion of the Section 106 review process prior to the submission of preliminary plans to the Commission.

Federal Capital Improvements Program

The Asia Trail Project is included in the Federal Capital Improvements Program, Fiscal Years 2003-2008 adopted by the Commission on July 11, 2003. The listed projects include:

- ASIA I, RENOVATE DEER/TAPIR  
*Recommended*  
\$8,000,000 for planning, design, and construction to renovate or replace the existing bear habitat area. Three acres of the existing exhibit will be re-designated and renovated. Prior Funding: \$1,400,000.
- ASIA I & II, NEW ELEPHANT HOLDING AREA AND YARD RENOVATION  
*Recommended*  
\$51,500,000 Total Project Cost: \$52,000,000; Prior Funding: \$500,000.



**PANDA CAFÉ CONCEPT DESIGN**

