



Sharing the Forest

Asian Tigers & Bears Exhibit

Design Briefing

Seattle Design Commission

16 June 2011

Monica Lake
Project Manager,
Woodland Park Zoo

Becca Hanson
Partner-in-Charge,
Studio Hanson/Roberts



Woodland Park Zoo

Sharing the Forest | Asian Tigers & Bears

The Consulting Team

Studio Hanson/Roberts

Prime Consultant & Design Lead

Prime Responsibility: Visitor Experience | Interpretation | Animal Habitat & Behavioral Enrichment | Animal Holding & Transfer

Becca Hanson • FASLA, RLA

David Roberts • ASLA, RLA

David Matthews • AIA

Jim McDonough

Susan Murray

Design Lead, Design Facilitation & Interpretive Coordination

Technical Lead: Visitor Experience, Animal Habitats & Holding

Project Manager, Design Coordination

Sr. Exhibit Designer

Exhibit Designer

Core Subconsultant Team:

ORB Architects

Prime Responsibility: Architectural Renovation/Design

Life & Fire Safety | Code Compliance

Geoff Anderson • AIA, LEED®AP

Rick Charbonneau

SvR Design Company

Prime Responsibility: Civil Engineering |

Stormwater Management | Water Use & Irrigation Design

Tom von Schrader • PE, LEED®AP

Greg Giraldo • PE, LEED®AP

Oppenheim Lewis, Inc.

Prime Responsibility: Strategic Cost Control Consulting

Scott Lewis, Principal

Paladino

Prime Responsibility: Eco-Design Workshop &

Green Building Review

Tom Paladino • AIA

CDI Engineers

Prime Responsibility: Mechanical Engineering

Richard Gerber • PE, LEED®AP

Rick Grove • PE, LEED®AP

Leslie Jonsson • PE, CSBA, LEED®AP

MLA Engineering, pllc

Prime Responsibility: Structural Analysis & Engineering

Michael Leonard • PE, SE

Dennis Pradere • PE, SE

Sparling

Prime Responsibility: Electrical Engineering

Joseph Virnig • PE

Specialty Subconsultants:

(As Needed)

T. A. Maranda Consultants

Prime Responsibility: Water Filtration System Design

Ted Maranda • PE

Natural Systems International

Prime Responsibility: Bio-filtration

Erin English • PE

Natural Encounters, Inc.

Prime Responsibility: Behavioral Enrichment Support &

Animal Training

Steve Martin

Scott Taylor

Prime Responsibility: Illustration & Visualization

Hope Engineering

Prime Responsibility: Mesh Structures

Mike West • SE

SSA Acoustics

Prime Responsibility: Environmental Acoustics

Erik Miller-Klein

James Karl Fisher

Prime Responsibility: Architectural & Environmental Lighting

James Fisher • AIA, RIBA

Project Requirements

SCOPE:

- Underscore the Zoo's mission to *save animals & their habitats ... by inspiring people to learn, care & act.*
- Maintain the Zoo's high standards of "immersion" exhibitry.
- Improve animal welfare with >50% increase in current space & improved micro-climate.
- Improve occupational safety & welfare for Staff.
- Increase efficiency & effectiveness of servicing & maintenance.
- Minimize energy & water use.

BUDGET:

- \$11.1 million construction budget

Project Desirables

DESIGN GOALS:

- Incorporate innovative elements that expand on the concept of “immersion”. Possibilities include:
 - *Create a rich acoustic & olfactory environment that pulls visitors out of “the everyday”.*
 - *Develop a barrier system that contributes to a “sense of place”.*
- Define an architectural style that weaves a story of the region without defining a particular place.
 - *Reflect the scale & texture of tropical materials & ways of building to create a unique & timeless “sense of place”.*
- Define a horticultural palette that differentiates this experience from the Zoo’s other existing Asian Tropical Forest experiences.
 - *Focus on the use or representation of iconic species that clearly reflect a “different place”. (eg. timber bamboo & banyan fig)*

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Content: The Animals



Indian Hornbill



Sloth Bear



Asian Small-Clawed Otter



Indian Giant Squirrel



Malayan Tiger



Asian Turtles



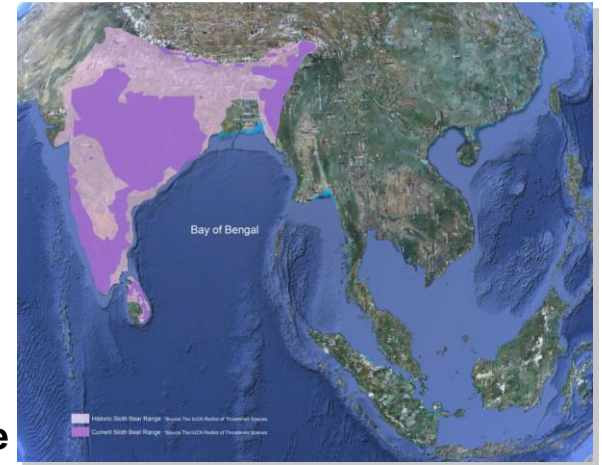
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Woodland Park Zoo

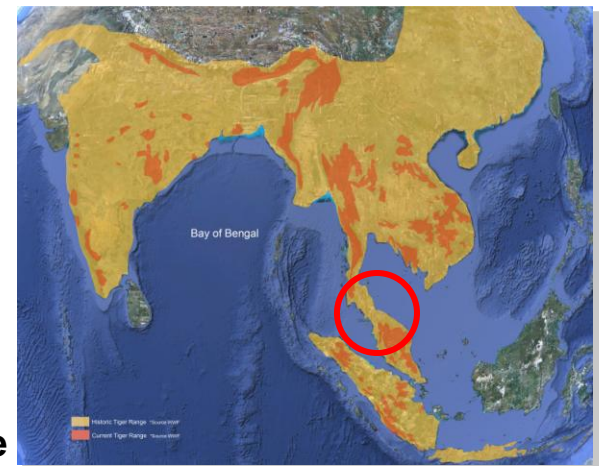
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Content: The Place

Sloth Bear Range



Malayan Tiger Range



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Content: The Habitat



Tropical Forests

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Content: The Habitat



Timber Bamboo



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Content: The Habitat



Banyan Trees



Banyan — Tree, Kingston Park

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Content: The Culture



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Content: The Structures



Malay Village Houses



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Content: The Structures



Indian Village & Tree Houses



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Content: The Structures



Modern Interpretation ...

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Content: The Threats



**Eucalyptus Plantations
for Pulp**



**Palm Oil Plantations
for Bio-fuel & Food**



Tea Plantations

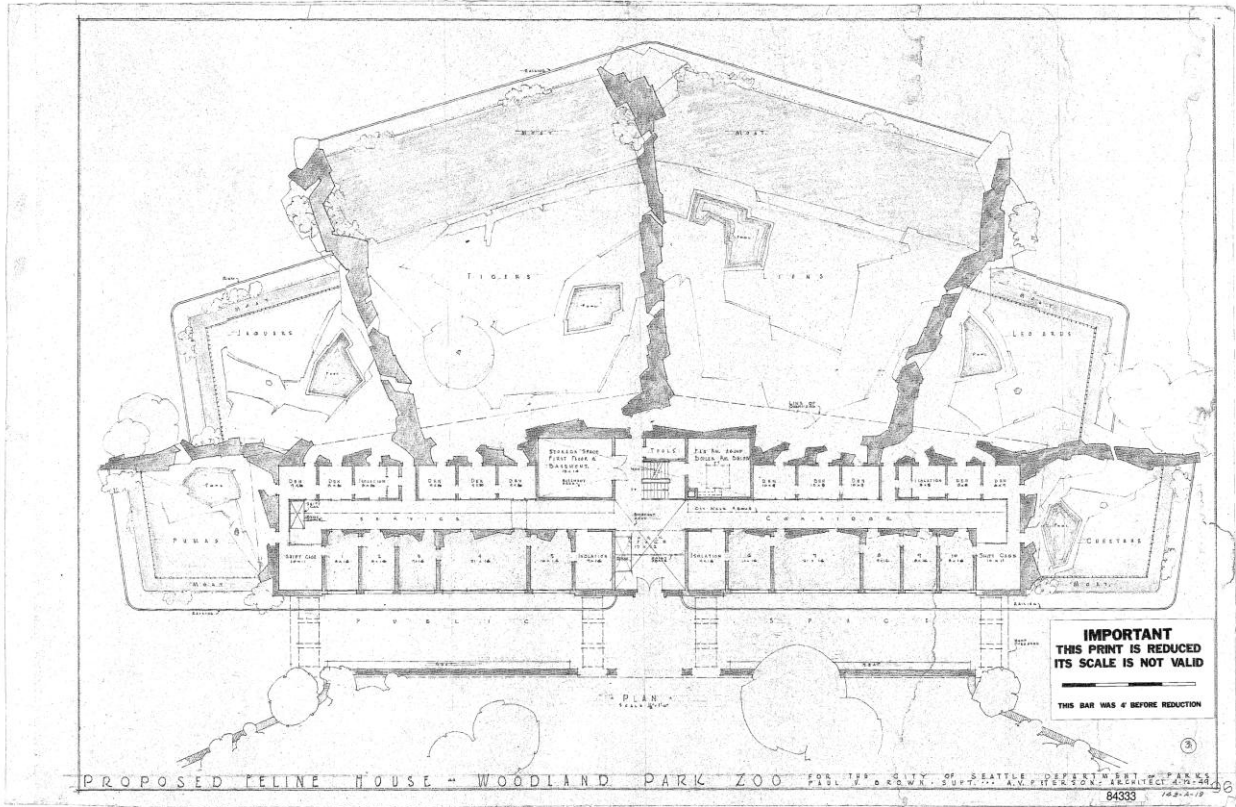
The Master Plan



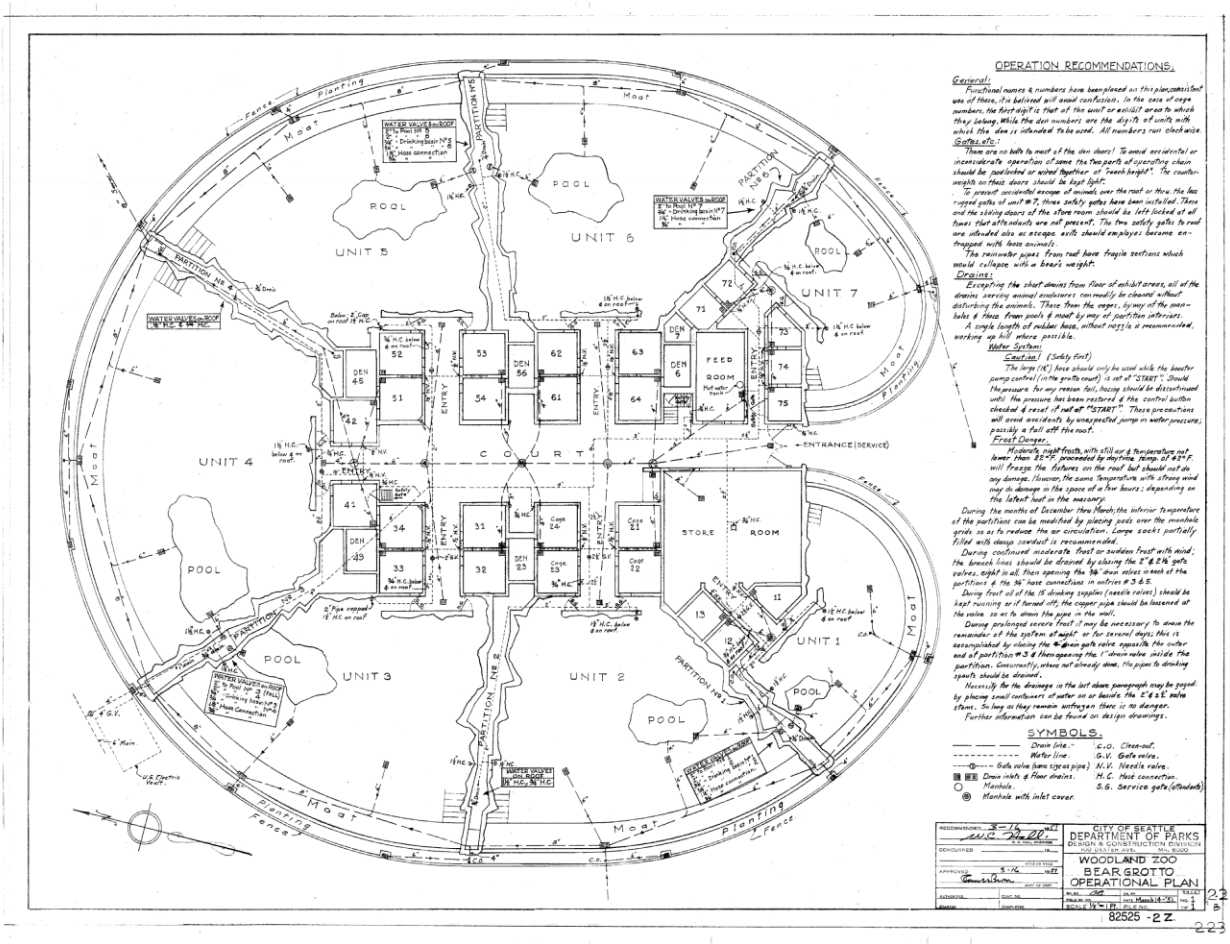
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Feline House 1949



Bear Grotto 1951



OPERATION RECOMMENDATIONS.

General:
 Functional names & numbers have been placed on this plan to assist you of them. It is believed that careful attention, in the case of large numbers, the first digit is that of the unit or units to which they belong. While the last number is the digit of units with which the line is intended to work. All numbers not otherwise specified.

There are no built-in seats in the den doors. To avoid accidents or unnecessary operations of some the two parts of operating chain should be fastened or held together at "reach height". The counter-weight on these doors should be kept light.

To prevent accidental escape of animal, over the roof or thru the two rigged gates of unit #7, three safety gates have been installed. These and the sliding doors of the show room should be kept locked at all times that attendants are not present. The two safety gates to roof are intended also as escape exits should employees become entangled with bear animals.

The rainwater pipes from roof have flexible sections which would collapse with a bear's weight.

Drainage:
 Excepting the sheet drains from floor of exhibit areas, all of the drains serving animal quarters normally be cleaned without disturbing the animals. These from the cages, by way of the pass-holes & flues from each & read by way of partition interiors. A simple length of rubber hose, without nozzle is recommended, working up 45° where possible.

Water System:
Control (Safety first)
 The large (K) hose should only be used with the booster pump control (in the grotto area) is set at "START". Should this pressure for any reason fail, hose should be disconnected until the pressure has been restored if the control button checked & reset if not at "START". These precautions will avoid accidents by unexpected pump in water pressure, possibly a fall off the roof.

First Aid:
 Heavy, night frosts, with still air & temperature not lower than 22°F. preceded by daytime temp. of 45°F. will freeze the floors on the roof but should not do any damage. However, the same temperature with strong wind may do damage in the space of a few hours; depending on the latest heat in the necessary.

During the months of December thru March, the interior temperature of the partition can be maintained by placing pans over the rimble grids so as to reduce the air circulation. Large pans partially filled with cheap sawdust is recommended.

During continued moderate frost or sudden frost with mild, the drainage lines should be cleared by taking the 2" & 1 1/2" gate valves, right in all lines opening the 3/8" iron valves in each of the partitions & the 1/2" hose connection in interior 3" & 2" S.E. Daily frost all of the 15 drinking supplies (reservoir valves) should be kept running or if turned off, the copper pipe should be banded at the main line or to main the pipe in the wall.

During prolonged severe frost, if it may be necessary to drain the remainder of the system at night or for several days, this is accomplished by raising the 1/2" iron gate valve opposite the entrance of partition #3 & then opening the 1" drain valve inside the partition. Conversely, when not already done, the pipe to drinking spouts should be drained.

Notice: As the drawings in the last show paragraph may be used by placing roof outdoors of water or air inside the 2" & 1 1/2" valve there, to say in they remain water there is no danger.

Further information can be found on design drawings.

SYMBOLS:

- Drain line
- - - - - Water line
- - - - - Gas valve line (green pipe)
- ⊠ 1/2" Drain inlet & floor drains
- ⊙ Manhole with inlet cover
- C.O. Clean-out
- G.V. Gate valve
- N.V. Needle valve
- H.C. Hose connection
- S.S. Service gate (standard)

RECOMMENDATION: 2-16, 2-17, 2-18, 2-19, 2-20, 2-21, 2-22, 2-23, 2-24, 2-25, 2-26, 2-27, 2-28, 2-29, 2-30, 2-31, 2-32, 2-33, 2-34, 2-35, 2-36, 2-37, 2-38, 2-39, 2-40, 2-41, 2-42, 2-43, 2-44, 2-45, 2-46, 2-47, 2-48, 2-49, 2-50, 2-51, 2-52, 2-53, 2-54, 2-55, 2-56, 2-57, 2-58, 2-59, 2-60, 2-61, 2-62, 2-63, 2-64, 2-65, 2-66, 2-67, 2-68, 2-69, 2-70, 2-71, 2-72, 2-73, 2-74, 2-75, 2-76, 2-77, 2-78, 2-79, 2-80, 2-81, 2-82, 2-83, 2-84, 2-85, 2-86, 2-87, 2-88, 2-89, 2-90, 2-91, 2-92, 2-93, 2-94, 2-95, 2-96, 2-97, 2-98, 2-99, 2-100

CITY OF BEAVER
 DEPARTMENT OF PARKS
 DESIGN & CONSTRUCTION DIVISION
 WOODLAND ZOO
 BEAR GROTTTO
 OPERATIONAL PLAN

DATE: 12/15/51
 SCALE: 1/8" = 1'-0"

82520 - 22

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Existing Site



Process to Date

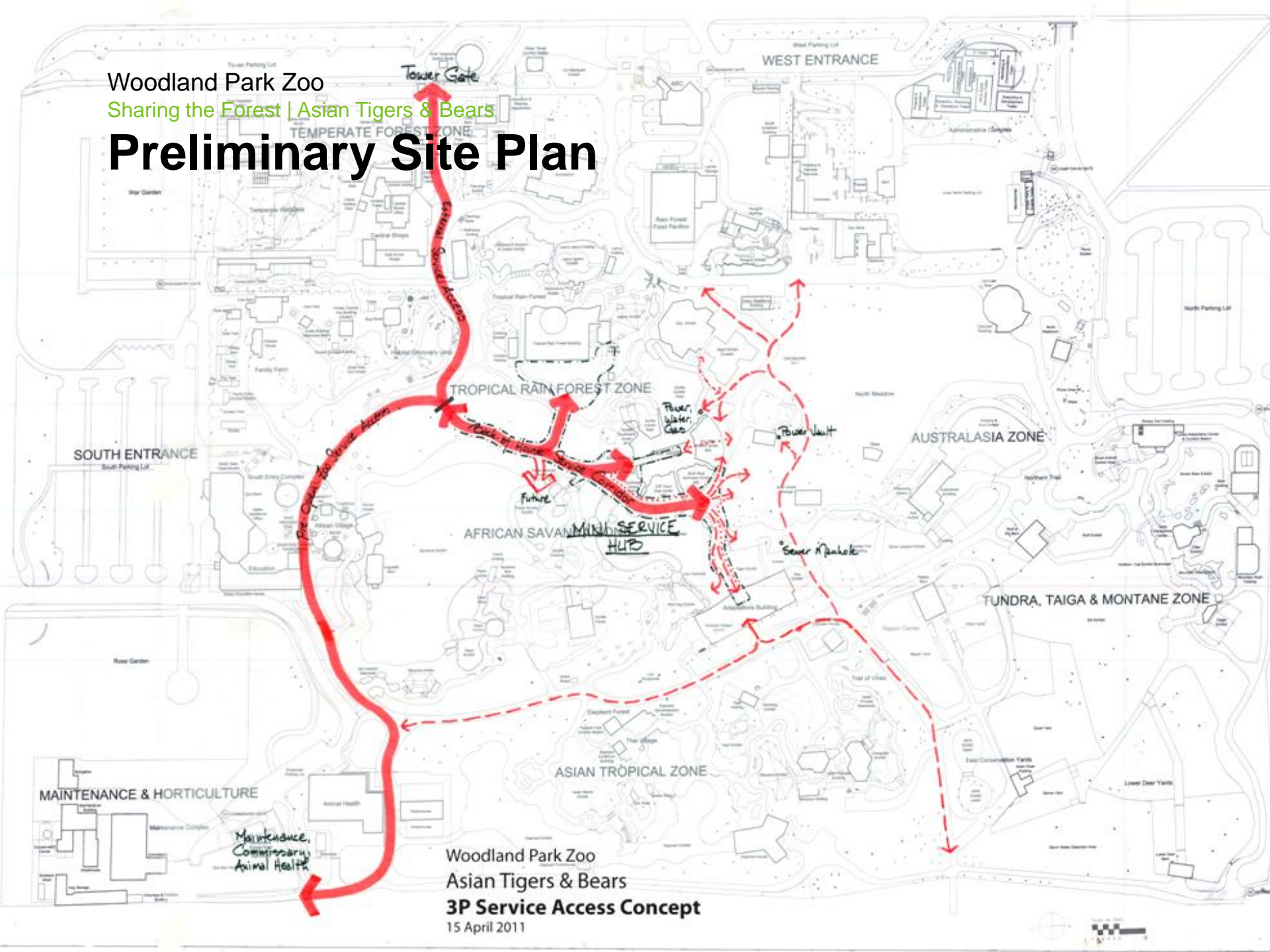
- 4 week long 3P Workshops:
 - Animals
 - Visitors
 - Interpretation
 - Services
- Schematic Design Workshop #1 with Staff & Consultant Team.
- Final Schematic Design Workshop: 16 July 2011.



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Preliminary Site Plan

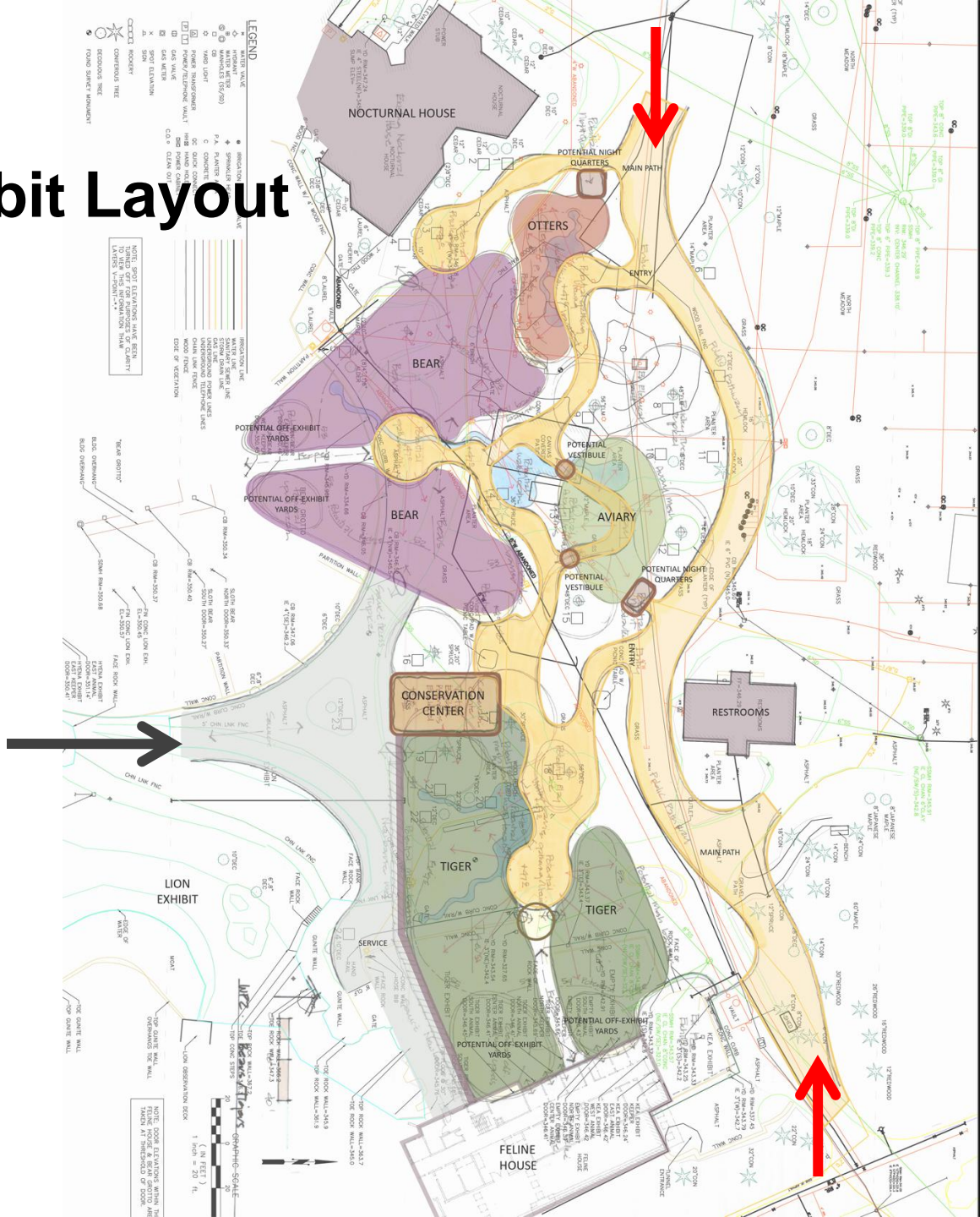


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Asian Tigers & Bears
3P Service Access Concept
15 April 2011



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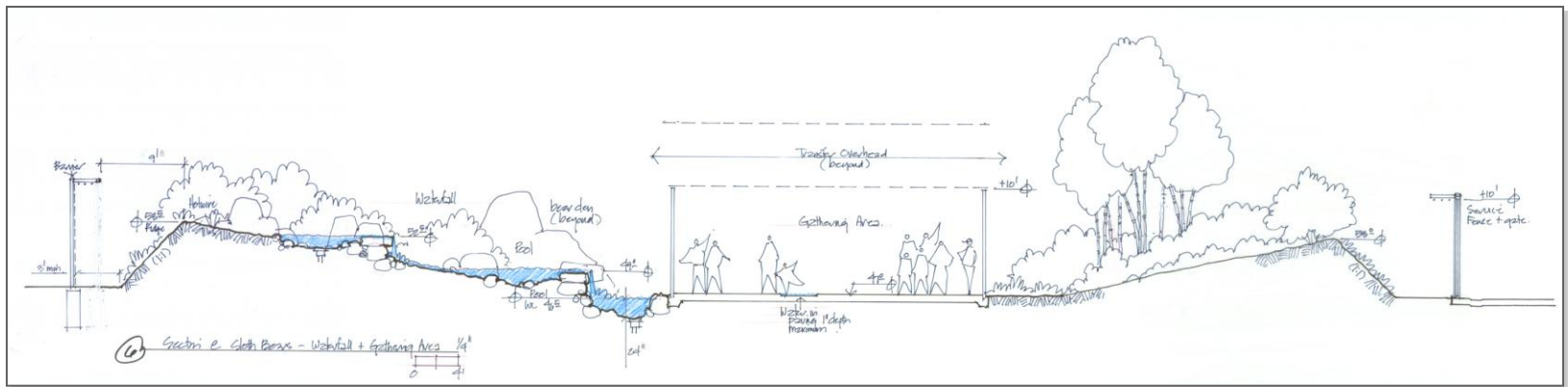
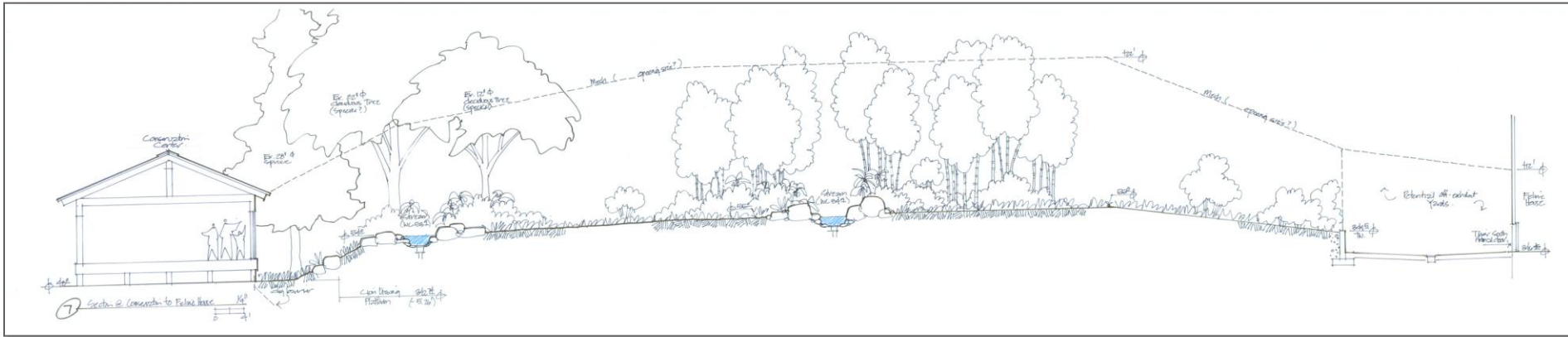
Preliminary Exhibit Layout



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Representative Sections



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Next Steps ...

