



CITY OF OSHKOSH

Menominee Park Zoo Master Plan

Oshkosh, Wisconsin



December, 2014

FEH Associates, Inc. + WDM Architects



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SECTION 1

PROJECT OVERVIEW, ANALYSIS, & DESIGN

1.1 Executive Summary

Introduction

When the City of Oshkosh updated their Comprehensive Outdoor Recreation Plan in 2011, the Menominee Park was identified as the city's most visible and popular park. That resulted in the development of a comprehensive long range master plan (2012) focused on playgrounds, boat launches, sports fields and other outdoor facilities found in Menominee Park. The Menominee Park Zoo, located within the park, was not included and this comprehensive master plan report will define the next 20 years of the zoo's development.

The multi-disciplinary design team worked intensively with the Oshkosh Parks Department, Advisory Park Board, Zoo Society, and the community to develop a new master plan concurrent with innovative and visionary designs for the zoo that fit within the overall mission of the zoo. The mission statement is "to service the community through the acquisition and maintenance of a collection of living animals for the enrichment of the zoo visitor, with continual advancement of knowledge and appreciation of animals, both wild and domestic and their environments."

The planning process included a review of the existing zoo and surrounding park through an onsite inspection and meetings with the city's parks department. Physical attributes of the zoo grounds and operations were analyzed and evaluated to identify all impacts on future planning and development efforts. Needs were identified through a series of meetings with the Zoological Society, Advisory Parks Board, Zoo staff, Parks Department, Advisory Task Force, and the community. A comprehensive list of ideas and concerns was developed and documented as 14 project Goals for Success. These project Goals for Success guided the project team when developing a list of space and facility needs. A two day public design workshop or "charrette" occurred in October 2014 and resulted in twelve potential master plan concepts. Through an analytical process of elimination and selection three concepts rose to the top and responded positively to the project Goals for Success. The three top concepts were merged into one to create a concept with a consensus of support from all participants. The preferred concept was developed and presented at an Advisory Park Board meeting in October 2014 and an updated version was presented in December 2014.

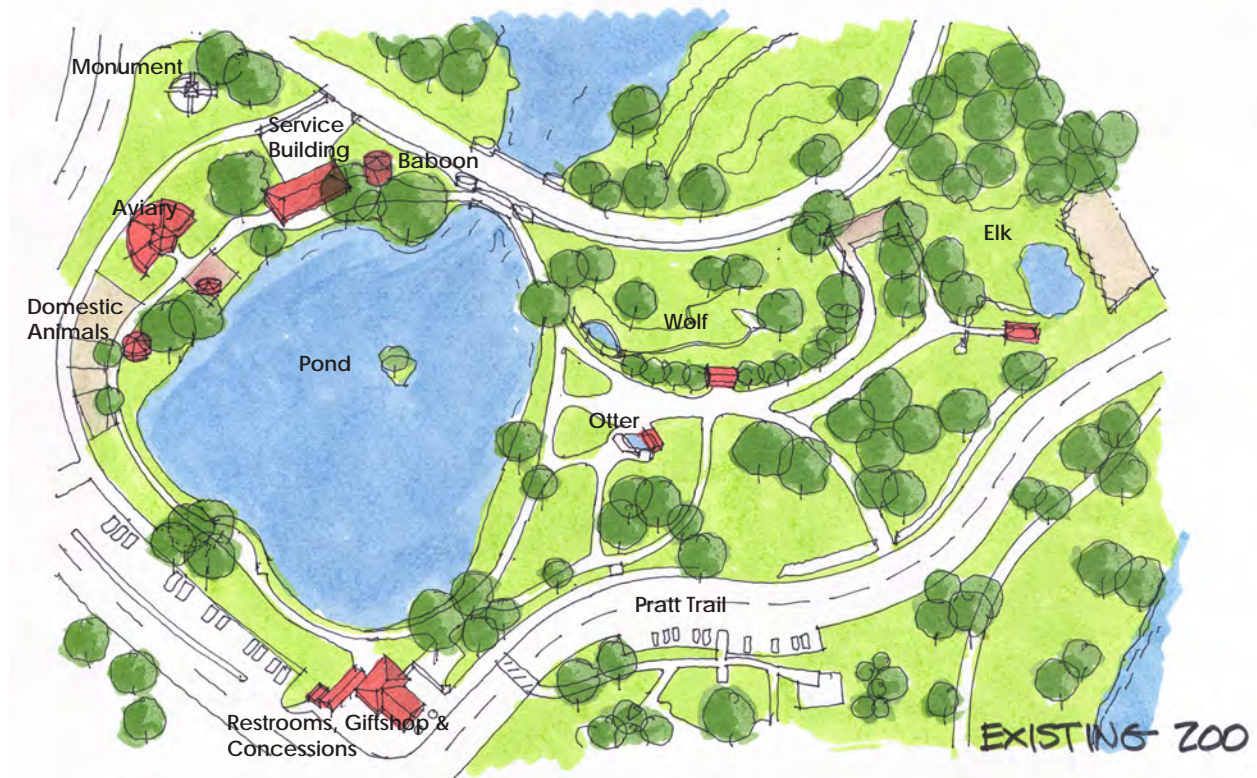
A final master plan, phasing plan, and associated construction cost is the framework upon which circulation, structures, and exhibit placement is made. It will guide future development and management efforts for the zoo. Future development will be driven by need and funding and reviewed by city and applicable boards prior to implementation.

Background

The Menominee Park Zoo, one of the best free zoo's in Wisconsin, resides on 3.8 acres of land within the Menominee Park in 1945. The Zoo entertains and educates over 100,000 visitors annually and operates on a seasonal basis. The zoo is land-locked within the current park due to heavy usage of Menominee Park for; hiking, children's playground, boating, beach, and sports facilities. The animal exhibit area is further defined by a 2.4 acre pond in the center of the property. Game birds, river otters and wolves belong to the zoo and other domestic animals and exotic animals are leased during the summer months (May through September). Because of the location and great habitat many native animals just show up and visit from time to time including: muskrats, squirrels, chipmunks, birds, water fowl and turkeys.

The City of Oshkosh is located in a unique geographical and ecological area which was impacted by glaciers. The receding glaciers left rock hills, broad sandy valleys and numerous lakes and streams and the terrain supported hardwood forests, prairies and an abundance of wetlands. These ecological factors provided an optimal habitat for a wide variety of animal species including; bear, elk, bison, red fox, mink, otter, big cats, river otters, coyote, wolves, skunk, raccoon, badger, prairie dogs and numerous game birds. The abundance of birds and animals made the region a hotspot for hunting, trapping, and trading during the mid-seventeenth century.

The story of this rich heritage will be incorporated in the new master plan for the Menominee Park Zoo.



1.2 Acknowledgments

The following persons provided critical input, support, and critical thinking in the development of this master plan document. The City of Oshkosh and FEH/WDM Architects wish to thank the following people for their time and participation in developing this plan.

City of Oshkosh

Ray Maurer, Parks Director

Chad Dallman, Parks Operations Manager

City of Oshkosh Advisory Park Board

- Sean Fitzgerald
- Victor Girens
- William Gogolewski
- James Michelson
- Bill Miller
- Carrie Rule
- Megan Scheussler
- Jonathan Wilson
- Terry Wohler

City of Oshkosh Staff

Menominee Park Zoological Society

- Memuna Khan, President
- Joe Bongers, Treasurer
- Erin Gordon, Secretary
- Jason Trembly
- Steve Cummings
- Judi Payton
- David Gundlach
- Jerry Lang
- Teresa Enking Novals

Zoo Advisory Members

And the many residents throughout the city who shared their opinions at our design workshop!

- Anjelica Kikendall
- Kaylee Wright
- Ceci Gabavics
- Ciesa Crann
- Lisa Ruetten
- Scott Rammer
- Terry Steel
- Tom OfferWodstort
- Rachel Brookins
- Melissa Kohn
- Kim Biedermann
- Jullie Sonnenschein
- Ronda Velie
- Laura Dowdy
- chanda Henderson
- Jim McCullian

1.3 Needs Assessment

The primary objective of the 20 year comprehensive master plan is to create a plan for the future that allows for the implementation of; expanding the quantity and quality of animal exhibits, creating education space and programs, promoting conservation, and making the zoo a destination for the City of Oshkosh within the existing zoo footprint within Menominee Park. Careful and thoughtful long-range planning within the master plan framework will lessen the impact on the zoo's small site, and prevent costly exhibit or amenity alterations that would prevent future improvements.

Animal Welfare

Every animal at the zoo should be able to go outdoors, breathe fresh air and experience wind, rain, and sunshine. Every animal should be able to make choices about how to spend the day and they should be able to live alone or in family or social groups appropriate to its species and sex, by choice, as it would in the wild habitat.

Education

The zoo shares animal knowledge and conservation ethics with more than 100,000 visitors each year, many of whom are children. Managing so many programs-and the equipment, animals, and vehicles that support them- is challenging. There is a strong need for space that will outfit students for their zoo adventures, serve as a clearinghouse for conservation education programs around the region and provide the curious zoo visitors with a deeper understanding of the animals entrusted to its care. The education space will function as a base camp where students and adults alike can focus and begin their zoo learning experience.

Education space will be integrated into the zoo experience in many different ways. In some cases, the space may be a discrete area adjoining an animal habitat, while in others it may be a graphic panel tucked away along a visitor path. These varied space and locations will provide ultimate flexibility for sharing the excitement and knowledge that will inspire people to make a better future for wildlife.

Innovative exhibits and interpretation around the zoo will enhance the visitor's experience of the wonder of nature and engagement with the zoo's remarkable animals. These opportunities will take various forms and be delivered in different media, from tactile and physical participation to tantalizing visuals and compelling text. A good example would be bears fishing and eating in a real stream. These dynamic combinations enrich visitor's experiences and offer an effective complement to live animal and habitat exhibits.

Conservation

The zoo is committed to conserving the regions wildlife and environments. The zoo will be directly involved in conservation efforts through breeding and educating the public about the need for preserving habitat for such animals.

Sustainability

The zoo's primary mission is inspiring the community to create a better future for wildlife. What better way to do so than be located within a natural park setting on Lake Winnebago in downtown Oshkosh and modeling sustainable ways of reusing water, managing waste and conserving energy. Using resources wisely will reduce impacts on wildlife and habitat around the world. Improving the quality of water in the pond is a good example of how the zoo can employ sustainable principals on the zoo grounds.

Destination

The zoo is part of the city's long range plan to make the City of Oshkosh a destination and event city. The zoo will incorporate numerous opportunities for interaction with the animals and interpretive and hands-on opportunities for visitors. The bear exhibit could feature a pond where the animals will catch and feed on fish much like they do in the wild and the aviary exhibit and the eagle exhibit could provide visitors an opportunity to get up close to the animals with a climbing tower. The prairie dog exhibit could incorporate underground tunnels that people can crawl through and see these unique animals in their environment. These unique experiences would help make the zoo a must see when visiting the City of Oshkosh.

Assessment of Existing Exhibits

The design team also conducted an assessment of existing exhibits for safety and USDA compliance. Overall, the zoo has an adequate perimeter fence and most of the exhibits comply with guidelines or industry standards for animal welfare.

Standards

The primary facility requirements are the USDA guidelines. These guidelines establish minimum standards that need to be achieved for both animal welfare and the safety of guests and keepers. The regular inspections by their inspectors provide ongoing guidance relating to issues under the USDA prevue. These guidelines however are not the end goal. In most cases there are other recommendations and ideals that should be sought out. The USDA requirements are important and are not to be overlooked, but in most cases they can and should be surpassed. Other resources that can be consulted in every phase of development could include: AZA publications (Association of Zoos and Aquariums) and peer institutions. It is important to realize there is no single comprehensive source and that recommendations are continuing to evolve.

Animal Welfare

The goal of animal welfare in a zoological setting should be to create environments for animal residents to thrive. All spaces are important elements of the habitat and deserve design attention to create an atmosphere that not only accommodates, but encourages and provides opportunities and reasons for every variety of natural behavior.

Following is a broad brush overview of possibilities to be considered.

Choices for comfort:

- Variety of substrates: turf, sand, mulch, rocks, nesting material
- Appropriate types of habitats: arboreal, terrestrial, aquatic
- Adequate size for: exploration and variety
- Climate gradients: sun/shade, breeze/calm, warm/cool
- Refuges: places to withdraw and feel safe

Foods challenges:

- Food presentation: search/work to find, puzzle feeders, scatter feeders, places to hide/bury
- Novel food items

Sensory stimulation:

- Scent: rotatable habitats to leave scents of other animals
- Sight: position habitats with views of other animals, consider predator/prey relationships
- Sound: position habitats within range of the sounds of other animals
- Tactile: objects and materials for: scratching, grooming, playing

Social interactions:

- Size habitats for species appropriate social groups
- Create opportunities to share space with other animals or to be alone
- Places to be close to guests and to retreat
- Consider mixed species groups
- Keeper interactions

As part of its mission the zoo desires to instill respect for animals and inspire guests to take action to conserve animals and the environments they inhabit. To this end the perception of the guest is extremely vital. Creating habitats and viewing experiences that produce the very real impression of interesting and complex habitats as part of the highest quality animal in care is of the utmost importance.

Containment

Appropriate barriers need to be maintained for the safety of guests, animals, and keepers. All animal yards must have containment that prevents the escape of the animals. There must also be barriers that prevent guests from coming too close to any animals such that either guest or animal are in danger. All caging, shifts, yard access, etc. must be very carefully considered to assure safety behind the scenes. Keepers must work in very close proximity to animals and every precaution possible should be built in to facilitate all appropriate keeper – animal interaction in the safest way possible.

1.4 Process and Design Workshop

Process

The design team developed a thorough understanding of community wants and wishes for the zoo through a series of public meetings and meetings with city representatives and zoo staff. In addition, an Advisory Task Force made up of interested citizens and partner organizations was created to share ideas, analyze solutions, and make a master plan recommendation to the Advisory Park Board. These public discussions led to the creation of the following list of project Goals for Success and space needs. The goals were used to evaluate ideas and concepts developed at the design workshop.

Goals for Success Menominee Park Zoo

1. Be a resource for community programs
2. Promote education and conservation programming
3. Accessible for all
4. Low maintenance facility
5. Animal habitats that promote health and wellbeing
6. Support the Oshkosh Event City Initiative
7. Educate attendees on principles of environmental stewardship
8. Educate attendees on native and agrarian species of Wisconsin
9. Improve the existing infrastructure
10. Expand partnerships with like-minded institutions
11. Enhance quality of life
12. Promote economic development in the City
13. Create an experience that visitors will want to return for
14. Sustainable for at least another 50 years

Zoo space needs are grouped into three categories; public space, staff space, and animal space. Each item listed in the space needs chart are based on creating opportunities that best accomplish the project Goals for Success and utilize best practices for public zoos.

Space Description	Square Feet
1. Education Building	
a. Environmental classrooms (30 persons) 2@1200	2,400
b. Classroom storage	500
c. Welcome space/multifunction space (300 persons)	2,100
d. Prep kitchen and storage	500
e. Staff workroom	500
f. Keepers lab	300
g. Public restrooms, family restroom	500

Space Description	Square Feet
h. Mechanical space	500
Subtotal	9,700
Unassigned space (20%)	1,940
Total space	11,640
2. Retail and Guest amenities	
a. information kiosk	50
b. gift shop	900
c. product storage and staff office	250
d. first-aid station/sanitation station (2 required)	200
e. stroller and wheelchair storage	300
subtotal	1,700
3. Outdoor event space	
a. outdoor gathering space (300 persons)	3,000
b. storage for tables, chairs, umbrellas, equipment	500
c. tornado shelter	700
4. Food service	
a. serving window-exterior	120
b. interior dining (20 persons)	250
c. vending machines	120
d. vestibule/air locks	200
e. kitchen	300
f. kitchen cooler/freezer	300
g. serving counter	150
h. janitorial	100
i. chair, table, equipment storage	200
subtotal	1,740
unassigned space (20%)	348
total	2,088
5. Animal Exhibits (proposed)	
a. Black bear exhibit with off-exhibit space	6,000
b. Aviary for eagle, raptors, turkeys with off-exhibit space	3,000
c. Red fox exhibit	400
d. Raccoon exhibit	400
e. Badger exhibit	400
f. Mink exhibit	400
g. Farm animal building and exhibit (year round use)	3,500

Space Description	Square Feet
h. Jack rabbits exhibit	300
i. groundhog exhibit	300
j. prairie hens and quail exhibit	300
k. Fish species tank	200
6. Operation and staff space	
a. Off exhibit space	200
b. Security office	150
c. Quarantine/vet room	250
d. Food prep area	150
e. Food storage with cooler	200
f. Walk-in freezer and walk-in cooler	200
g. Office for staff	150
h. Staff toilet	75
i. Outside storage yard	2,500
j. Heated garage for (1) truck and (2) carts	600
k. Fueling room	450
subtotal	4,925
Unassigned space (20%)	985
Total	5,910

The intensive two-day design workshop or “charrette” explored twelve big picture thematic ideas that could organize the entire zoo grounds. They ranged from; Option A, all native species, Option B big agriculture, Option C big bear, Option D big aquarium, Option E main street, Option F big wetlands, Option G big cat/big bear, Option H big prairie. These broad-brush brainstorming ideas were critiqued several times and pros and cons were recorded for each option. At the end of the first day, the best ideas were harvested.

Day two of the design workshop started by narrowing the number of concepts down to the best three concepts. Based on the project Goals for Success they were; Option D1 big aquarium, Option F1 big wetlands, and Option G1 big cat/big bear. These three concepts were critiqued at mid-day and two strong concepts were carried forward. Option D2. Big aquarium, and Option F/G2 wetland big cat big bear. Both options were scrutinized against a list of criteria that were formulated from the project goals for success and phasing diagrams and cost estimates were developed. The evening presentation of the two concepts to the Advisory Committee and interested public resulted in the recommendation of concept F/G2 wetland big cat big bear along with a medium sized aquarium.

1.5 Master Plan Concept

A Journey of Discovery

At Menominee Park Zoo, guests will step away from their day-to-day environment and into the surrounding natural world to discover and explore Wisconsin's diverse fauna and ecosystems.

Your journey to Menominee Park Zoo begins as soon as you approach the new Welcome Center, which is both a gateway and basecamp for exploration. Upon entering the building, one is immediately struck by the activity of the space, setting the stage to explore, discover and learn.

Guest services, which include concessions, gifts, restrooms and other necessities, are easily identifiable and conveniently just feet away.

The sound of children's voices carry excitement down the hall as the program "Bats, Birds & Butterflies" is about to begin. The children are learning about the different types of flying animals and their importance to the native ecosystems. They will be doing hands-on activities such as building a birdfeeder and planting bushes to attract and provide habitats for endangered butterflies, such as the Swamp Metalmark or the Karner Blue.

A large aquarium draws guests through the entry hall. The freshwater habitat is a swirling kaleidoscope of colors, revealing the rich diversity of underwater life found in regional lakes. Guests are captivated by the contrasting beauty of the fish species and find themselves spending more than a few moments here.

The Welcome Center Calendar is chock full of events. The Fishing Club will meet Monday evening, the Retirees breakfast on Tuesday morning, a special Cub Scout event on Thursday evening, and a New Volunteer Orientation session Saturday morning.

The bold colors of a poster catch your eye. "Centipedes, Millipedes, and the Need for Speed!", an upcoming temporary exhibit in the gallery space. "Oh, cool!"

You exit the Welcome Center and stand on a wood deck jutting out over the pond. You stand for a moment and gaze at the views to various habitats and activities on the surrounding shores. A small plaza to the right is being set up for the summer "Zoo-Tunes" concert series. Tonight, a folk band that features the national blue grass picking champion from 2012 will perform.

The new Welcome Center truly defines the Menominee Park Zoo as an activity hub that has something for everyone in the community. You are excited to see where this journey of discovery takes you as you proceed further into the park.

The Horicon Marsh

From the edge of the Plaza, you move towards re-created wetlands that flow out into the pond and stretches up into the woods. This area of the zoo represents the Horicon Marsh and animals that live there. Interpretive signage explains the vital function of wetlands and the role they play in the cycle of water and the ecosystem. A small series of islands in the pond seem to have flowed from the mouth of the waterway and are now inhabited by ornate box turtles and visiting ducks. From a small bridge that goes over the marsh guests receive a wonderful view of the pond edge where sand hill cranes have found the perfect bog site for nesting. Proceeding upstream, a series of habitats are home to river otters, beavers and mink. These residents are found in different habitats on different days; it keeps them curious and active, which in turn, keeps guests curious too!

The North Highlands Forest

As the stream leads you along, the flora changes. You are now in the wooded North Highlands Forest, thick with brush and tall trees. Settled in for a nap, a Bobcat lies dangling his limbs over a low-hanging branch. He yawns. He could not be cozier in his habitat. His mate is a few feet higher in the tree and appears to be focused on the mink in the habitat across the path.

A chance to sit down and relax is found at a small lean-to building once built by trappers in area, and the view from here could not be better. Floor-to-roof glass opens views over a small pond in the woods where two young sibling black bears, which were recently rescued, are splashing about as they frantically search for fish the keeper just released. It's enrichment for the bears and entertainment for the guest. Everybody is happy! The path continues along the lush bear habitat with tall fallen trees, boulders and foraging areas under a shady canopy. Across from the bear yard a treehouse reaches up and leans over the path. From the top level of this eclectically stylized backwoods fort, young adventurers find themselves eye-level with the majesty of an eagle perched in an adjacent tree. Looking out the window on the other side, a flurry of activity stirs in the aviary, alive with countless robins, warblers and woodpeckers among others, in what appears to be a contest of sorts combining the unique unmatched talents of singing and air show stunts. Looking out to the south is the biggest surprise of all when one of the black bears charges up a tree to an apex just a little higher than the fort and only about 30 feet away. You find it hard not to feel kinship with all the creatures of the forest as you share in their space, their play, and the wonder of the natural world.

At the far end of the bear yard a quaint cabin welcomes you. You read that in the winter bears can be seen hibernating through a small window into their den. On the other side of the cabin you once again feel a special connection as you witness a family of elk, the mother gently taking care of her young, and the stateliness of the father as he watches with a protective glare, all against the backdrop of a spacious and shaded habitat. Looking back as you move on, you are pleasantly surprised to find two more eagles on this side of the yard that you could not originally see. As you take a moment to read the sign, you realize that these eagles were injured, rescued and rehabilitated; they cannot be re-released.

Across the high overlook that connects the elk habitat to the wolf habitat you approach with anticipation. You first spot a pair of wolves moving along the perimeter through the brush patrolling their territory as they look for food and watch for predators. Continuing on, you have another opportunity to enter the treehouse from the other side. You soon stumble upon a family of raccoons making the most of this beautiful Wisconsin morning foraging for food that was hidden in bush and buried in a sandpit by their caring keepers earlier today. A skunk in the adjacent habit has found a pleasant resting space burrowed half under a log. You are almost sure that last time you visited the skunk and raccoons were in opposite yards.

Continuing around the wolf yard these legendary canines are found not only patrolling the perimeter, but stopping to quench the thirst they have built up at the water's edge; then finding a shady den for a mid-morning nap. You think there must be four or five wolves in all, but you are not really sure. You cannot see all of them at once.

As the view out of the forest opens back up, you are once again greeted by the beautiful Sandhill Cranes. You stop to read a little about conservation efforts that are helping to increase the population of these endangered birds and how the zoo is helping. You think, "I should get involved."

Continuing around the pond is a refreshing walk in the warm sun. You soon recognize another zoo guest, a Blue Heron, has just swooped down and is wading in the shallow along the edge. It is a satisfying combination to see invited wildlife living in concert with the residents of Menominee Park Zoo.

Glacial Plains

A little further down the path is the entry to the "Glacial Plains Conservation Center." Inside guests find conditioned comfort where several small habitats showcase the wide range of animal life found in Wisconsin. Fishing spiders with their 3-inch leg spans explore their habitat, which built as the underside of a boat dock. The Northern Cricket Frog and the Slender Glass Lizard serve as ambassadors for the many animals that have declining populations in Wisconsin. Two endangered species; the Giant Carrion Beetle and the Northern Long Eared Bat have a prominent place where graphics explain how the zoo is helping to support breeding and conservation programs for these animals. A window into the keeper service area gives guests a peek into diet preparation for all of the zoos resident population. A large viewing window now ahead looks onto a rocky outcropping where coming over the ridge you see the deliberate, confident saunter of a cougar, his eyes peering through you as he is heading your way. Around the other side of the ridge you find his sister who is basking in the sun from her position of prominence where she can view her surroundings while expending energy with only the elegant sway of her over-sized soft-brown tail.

About that time you hear a curious high pitched bark coming from behind you, spinning around you see a large mound inhabited by a colony of prairie dogs. Tunnels allow explorers of all ages to imagine themselves inside the prairie dog's complex underground burrow system, occasionally popping up through the surface of the grasslands to find themselves surrounded by these highly social rodents.

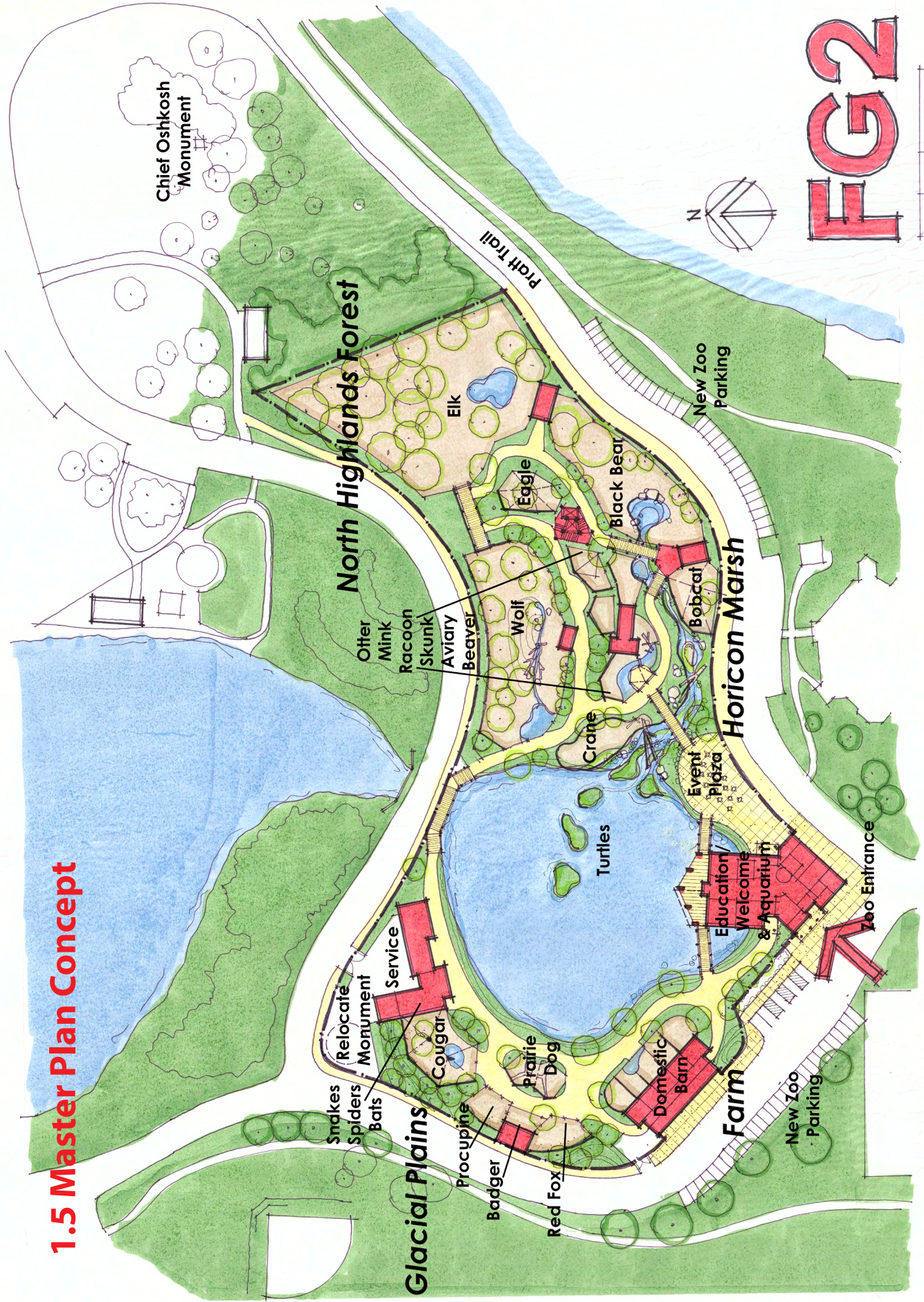
Just across the way you discover three more species native to the grassy plains. Badger, red fox and porcupine all seem to be enjoying the beautiful weather as much as you are. Like many animals at the zoo, these three species share rotating habitats with each other. This keeps them more active and interested in their surroundings as they are not in the same environment every day, investigating the scents left by their neighbors the day before and the mischief they may have caused.

The Glacial Plains are Wisconsin's most fertile farming area. Just ahead is a barn housing a variety of animals found on many farms in the state. Guests are enjoying feeding and petting goats as well as some of the other small animals. Kids are working off some energy by filling the water trough for the ponies with an 'old-fashioned' water pump. At the far end of the barn you are introduced to some of the "farmer's friends;" a Barn Owl as well as well as two snakes, a Blue-Racer and Eastern Milk snake. All of these help out farmers by hunting disease carrying rodents.

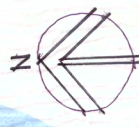
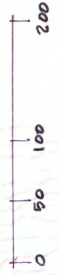
A final walk back through the Welcome Center and everyone takes one more look at the aquarium. The family stops at the restroom and the gift shop. As you sit and relax you make a few mental notes:

- 1) Talk to your business partners about having the company picnic at the zoo this summer
- 2) Sign the kids up for the upcoming class on reptiles
- 3) Don't miss the centipede exhibit starting next month
- 4) Come back in mid-winter to see the black bears hibernating
- 5) Look into a family day-trip to a park in the Highlands Forest or the Horicon Marsh

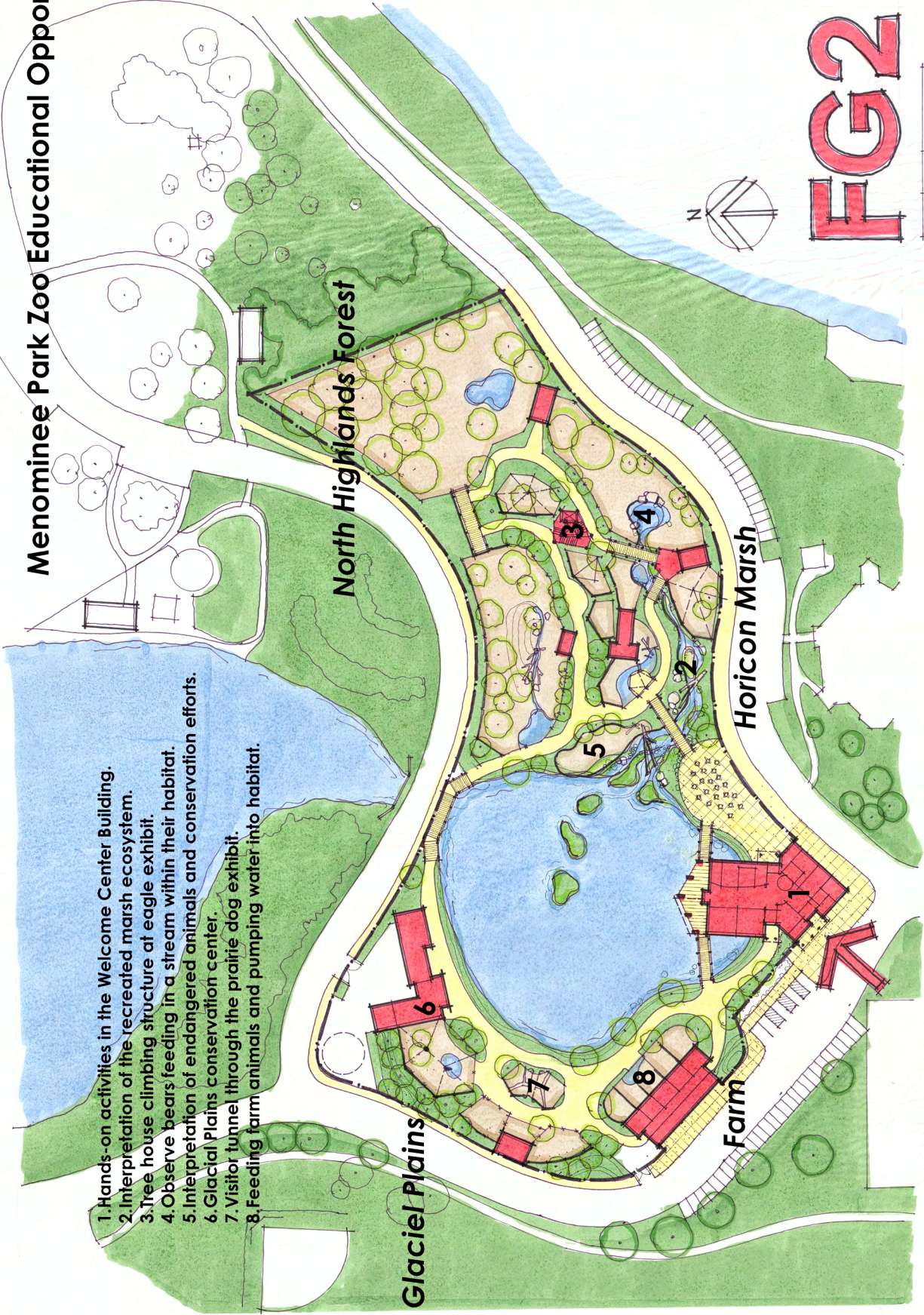
1.5 Master Plan Concept



FG2



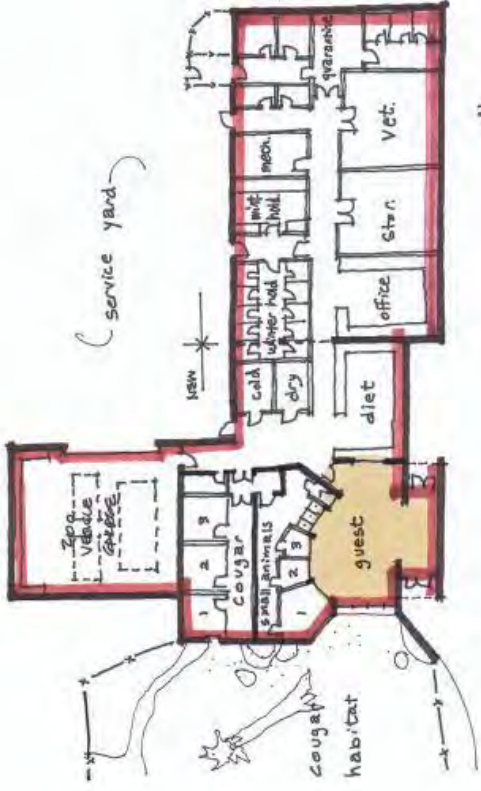
Menominee Park Zoo Educational Opportunities



1. Hands-on activities in the Welcome Center Building.
2. Interpretation of the recreated marsh ecosystem.
3. Tree house climbing structure at eagle exhibit.
4. Observe bears feeding in a stream within their habitat.
5. Interpretation of endangered animals and conservation efforts.
6. Glacial Plains conservation center.
7. Visitor tunnel through the prairie dog exhibit.
8. Feeding farm animals and pumping water into habitat.

FG2

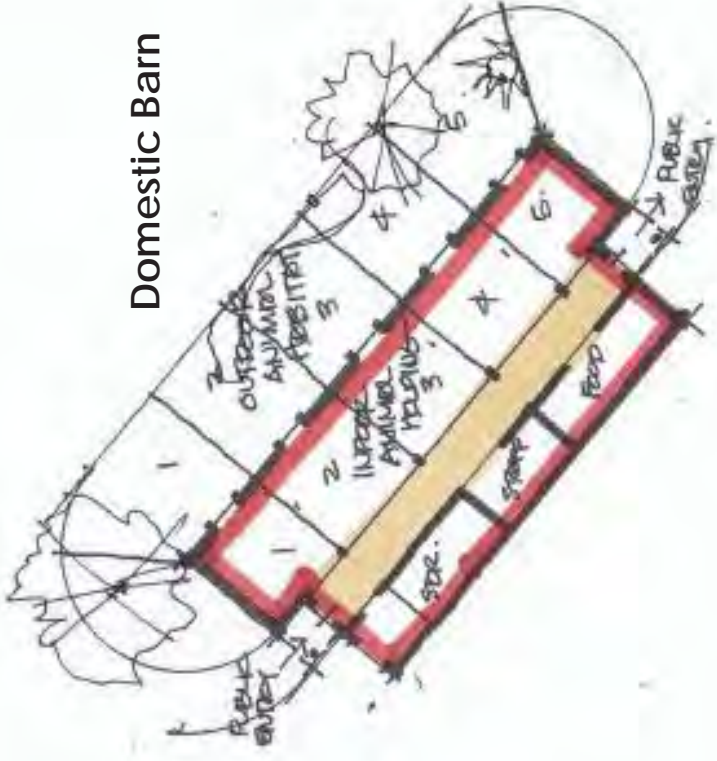
Service Building



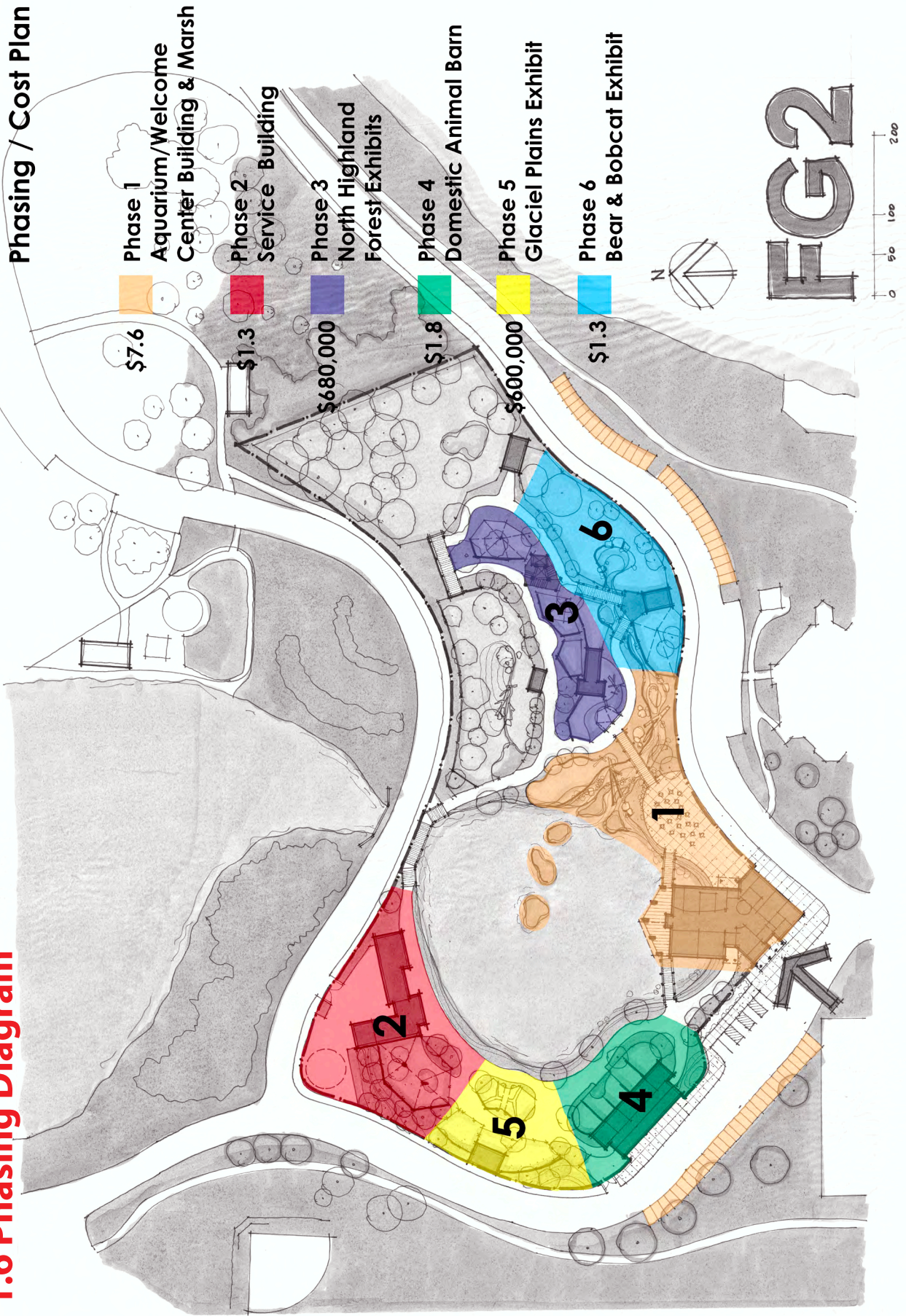
Education/Welcome & Aquarium



Domestic Barn



1.6 Phasing Diagram



I.7 Cost Estimates

See the following pages for cost estimates by phase.

OPINION OF PROBABLE COST



Owner: City of Oshkosh
 Project : **Menominee Park Zoo Long Range Plan**

Project No.: 2014319
 Phase: Master Planning

Date : 12.2.2014
 Estimator : KE

Phase 1

DESCRIPTION	QTY	UNIT	COST/SF	TOTALS
Building and Exhibit Construction Costs:				
New construction				
1 Education and Aquarium Center	16,000	SF	200.00	3,200,000
Deconstruction				
2 Entry building, rest rooms, concessions	3,000	SF	8.00	24,000
Storm Shelter				
3 Enhancement	900	SF	100.00	90,000
Exhibits & Enclosure				
4 Water Bird Exhibit	1,800	SF	85.00	153,000
5 Interpretive elements	2	EA	9,000.00	18,000
6 Lake Aquarium & Life support - 20,000 Gallons	1	LS	650,000.00	650,000
7 Marsh Aquarium & Life support - 4,000 Gallons	1	LS	350,000.00	350,000
	21,704			
SubTotal				4,485,000
Design / Bid Contingency 15%				672,750
Building Construction Costs SubTotal				5,157,750
Construction Contingency 5%				257,888
BUILDING CONSTRUCTION COST TOTAL				\$5,415,638
Site Work Construction Costs				
20 Parking removal and fencing relocation	1	LS	40000	40,000
21 New Parking Spaces	72	EA	3,000.00	216,000
22 New Entrance Plaza and gateway	4,000	SF	25.00	100,000
23 Storm Sewer modifications	300	LF	100	30,000
24 Domestic Water & Sanitary Sewer	1	LS	60,000	60,000
25 Electrical	1	LS	60,000	60,000
26 fill material for wetlands - dredging	4,000	CY	30	120,000
27 Earthwork	1,800	CY	30	54,000
28 Retaining Walls	600	LF	40	24,000
29 Pedestrian Paving	2,500	SF	7.00	17,500
30 Lawns & Landscaping	1	LS	20,000	20,000
31 Directional & Informational Signage	1	LS	10,000	10,000
32 Educational and Interpretive Signage	1	LS	6,000	6,000
33 Wetlands path & bridge	1,920	SF	40.00	76,800
34 Dock walks	2,000	SF	40.00	80,000
35 Turtle Islands	3	SF	21,000	63,000
SubTotal				977,300
Design / Bid Contingency 15%				146,595
Site Work Construction Costs SubTotal				1,123,895
Construction Contingency 5%				56,195
SITE WORK CONSTRUCTION COST TOTAL				\$1,180,090
Soft Costs				
40 Geotechnical Subsurface investigation	1	LS		8,000
41 Legal Fees	1	LS		4,000
42 Architectural & Engineering Design Fees	1	LS		659,573
43 Environmental Designer	1	LS		40,000
44 Life Support Design	1	LS		50,000
45 Furnishing Design Fees	1	LS		30,000
46 Geo Thermal Horizontal Test Well	1	LS		9,000
47 Site Survey (utilize existing facility documents)	1	LS		7,500
48 Printing Costs for Construction Documents	1	LS		7,500
49 Construction Permits & Fees	1	LS		3,500
50 Builders Risk Insurance	1	LS		2,000
51 Quality Control Material Testing & Inspections	1	LS		20,000
52 Hazardous Material sampling	1	LS		5,000
53 Fixtures, Furnishings & Equipment Allowance	1	LS		100,000
54 Technology & Computer Equipment Allowance	1	LS		50,000
55 State reviews	1	LS		2,000
56 Fundraising Consulting	1	LS		70,000
Soft Cost SubTotal				1,068,073
Site Work Construction Cost Total				1,180,090
Building Construction Cost Total				5,415,638
PROJECT TOTAL COST				\$7,663,800

OPINION OF PROBABLE COST



Owner: City of Oshkosh
 Project : **Menominee Park Zoo Long Range Plan**

Project No.: 2014319
 Phase: Master Planning

Date : 12.2.2014
 Estimator : KE

Phase 2

DESCRIPTION		QTY	UNIT	COST/SF	TOTALS
Building and Exhibit Construction Costs:					
New construction					
1	Staff Service Building Expansion	2,250	SF	125.00	281,250
2	Small Animal support structure	250	SF	125.00	31,250
Remodeling					
3	Staff Service Building remodel for exhibit	700	SF	65.00	45,500
Exhibits & Enclosure					
4	Big Cat Exhibit	5,000	SF	85.00	425,000
5	Interpretive elements	1	EA	9,000.00	9,000
6	Small and Nocturnal exhibits/big cat holding	1,800	SF	200.00	360,000
		10,001			
	SubTotal				1,152,000
	Design / Bid Contingency 15%				172,800
	Building Construction Costs SubTotal				1,324,800
	Construction Contingency 5%				66,240
	BUILDING CONSTRUCTION COST TOTAL				\$1,391,040
Site Work Construction Costs					
20	Parking removal and fencing relocation	1	LS	12000	12,000
23	Extended service yard	8,000	SF	5.00	40,000
24	Storm Sewer modifications	60	LF	100	6,000
25	Domestic Water & Sanitary Sewer	1	LS	6,900	6,900
26	Electrical	1	LS	5,000	5,000
29	Earthwork	200	CY	30	6,000
30	Retaining Walls	100	LF	40	4,000
31	Pedestrian Paving	2,000	SF	7.00	14,000
32	Lawns & Landscaping	1	LS	14,000	14,000
34	Directional & Informational Signage	1	LS	5,000	5,000
35	Educational and Interpretive Signage	1	LS	3,500	3,500
36	Monument Relocation	1	LS	6500.00	6,500
	SubTotal				122,900
	Design / Bid Contingency 15%				18,435
	Site Work Construction Costs SubTotal				141,335
	Construction Contingency 5%				7,067
	SITE WORK CONSTRUCTION COST TOTAL				\$148,402
Soft Costs					
40	Geotechnical Subsurface Investigation	1	LS		5,000
41	Legal Fees	1	LS		2,000
42	Architectural & Engineering Design Fees	1	LS		153,944
43	Environmental Designer	1	LS		3,500
44	Life Support Design	1	LS		3,500
47	Site Survey (utilize existing facility documents)	1	LS		2,500
48	Printing Costs for Construction Documents	1	LS		2,500
49	Construction Permits & Fees	1	LS		1,000
50	Builders Risk Insurance	1	LS		1,000
51	Quality Control Material Testing & Inspections	1	LS		6,500
52	Hazardous Material sampling	1	LS		2,500
53	Fixtures, Furnishings & Equipment Allowance	1	LS		40,000
54	Technology & Computer Equipment Allowance	1	LS		10,000
55	State reviews	1	LS		1,000
56	Fundraising Consulting	1	LS		20,000
	Soft Cost SubTotal				254,944
	Site Work Construction Cost Total				148,402
	Building Construction Cost Total				1,391,040
	PROJECT TOTAL COST				\$1,794,386

OPINION OF PROBABLE COST



Owner: City of Oshkosh
 Project : **Menominee Park Zoo Long Range Plan**

Project No.: 2014319
 Phase: Master Planning

Date : 12.2.2014
 Estimator : KE

Phase 3

DESCRIPTION	QTY	UNIT	COST/SF	TOTALS
Building and Exhibit Construction Costs:				
New construction				
1 Small Animal support structure - indoor holding for animals	600	SF	125.00	75,000
Remodeling				
2 Otter Support Structure	250	LS	65.00	16,250
Exhibits & Enclosure				
3 Raptor Exhibit	2,100	SF	85.00	178,500
4 Interpretive elements	7	EA	9,000.00	63,000
5 Forest Animal enclosure	2,400	SF	80.00	192,000
pool and filtration system	1	LS	80,000.00	80,000
6 Treehouse viewing structure	1	LS	15,000.00	15,000
	5,359			
SubTotal				619,750
Design / Bid Contingency 15%				92,963
Building Construction Costs SubTotal				712,713
Construction Contingency 5%				35,636
BUILDING CONSTRUCTION COST TOTAL				\$748,348
Site Work Construction Costs				
20 Domestic Water & Sanitary Sewer	1	LS	5,000	5,000
21 Electrical	1	LS	2,000	2,000
22 Earthwork	200	CY	30	6,000
23 Retaining Walls	100	LF	40	4,000
24 Pedestrian Paving	2,000	SF	7.00	14,000
25 Lawns & Landscaping	1	LS	6,500	6,500
26 Shade structure	3	LS	6,000	18,000
27 Directional & Informational Signage	1	LS	5,000	5,000
28 Educational and Interpretive Signage	1	LS	5,000	5,000
SubTotal				65,500
Design / Bid Contingency 15%				9,825
Site Work Construction Costs SubTotal				75,325
Construction Contingency 5%				3,766
SITE WORK CONSTRUCTION COST TOTAL				\$79,091
Soft Costs				
40 Land Acquisition	1	LS		0
41 Legal Fees	1	LS		10,000
42 Architectural & Engineering Design Fees	1	LS		82,744
43 Environmental Designer	1	LS		3,500
44 Life Support Design	1	LS		0
45 Site Survey (utilize existing facility documents)	1	LS		1,200
46 Printing Costs for Construction Documents	1	LS		1,000
47 Construction Permits & Fees	1	LS		500
48 Builders Risk Insurance	1	LS		750
49 Quality Control Material Testing & Inspections	1	LS		3,000
50 Hazardous Material sampling	1	LS		0
51 Fixtures, Furnishings & Equipment Allowance	1	LS		5,000
52 Technology & Computer Equipment Allowance	1	LS		4,000
53 State reviews	1	LS		750
54 Fundraising Consulting	1	LS		10,000
Soft Cost SubTotal				122,444
Site Work Construction Cost Total				79,091
Building Construction Cost Total				748,348
PROJECT TOTAL COST				\$949,883

OPINION OF PROBABLE COST



Owner: City of Oshkosh
 Project : **Menominee Park Zoo Long Range Plan**

Project No.: 2014319
 Phase: Master Planning

Date : 11.11.2014
 Estimator : KE

Phase 4

DESCRIPTION	QTY	UNIT	COST/SF	TOTALS
Building and Exhibit Construction Costs:				
New construction				
1 Agricultural Animal Exhibition hall	8,500	SF	125.00	1,062,500
Deconstruction				
2 Remove existing agricultural structures	1	LS	4,000.00	4,000
Exhibits & Enclosure				
3 Farm Animal Exhibit Yards	4,000	SF	40.00	160,000
4 Interpretive elements	1	EA	9,000.00	9,000
	12,502			
SubTotal				1,235,500
Design / Bid Contingency 15%				185,325
Building Construction Costs SubTotal				1,420,825
Construction Contingency 5%				71,041
BUILDING CONSTRUCTION COST TOTAL				\$1,491,866
Site Work Construction Costs				
20 Parking removal and fencing relocation	1	LS	5000	5,000
24 Storm Sewer modifications	40	LF	100	4,000
25 Domestic Water & Sanitary Sewer	1	LS	4,000	4,000
26 Electrical	1	LS	5,000	5,000
29 Earthwork	200	CY	30	6,000
30 Retaining Walls	80	LF	40	3,200
32 Lawns & Landscaping	1	LS	6,000	6,000
34 Directional & Informational Signage	1	LS	5,000	5,000
35 Educational and Interpretive Signage	1	LS	5,000	5,000
SubTotal				43,200
Design / Bid Contingency 15%				6,480
Site Work Construction Costs SubTotal				49,680
Construction Contingency 5%				2,484
SITE WORK CONSTRUCTION COST TOTAL				\$52,164
Soft Costs				
40 Geotechnical Subsurface Investigation	1	LS		5,000
41 Legal Fees	1	LS		2,000
42 Architectural & Engineering Design Fees	1	LS		154,403
43 Environmental Designer	1	LS		0
44 Life Support Design	1	LS		0
45 Furnishing Design Fees	1	LS		0
46 Geo Thermal Horizontal Test Well	1	LS		0
47 Site Survey (utilize existing facility documents)	1	LS		1,500
48 Printing Costs for Construction Documents	1	LS		1,000
49 Construction Permits & Fees	1	LS		750
50 Builders Risk Insurance	1	LS		750
51 Quality Control Material Testing & Inspections	1	LS		3,000
52 Hazardous Material sampling	1	LS		0
53 Fixtures, Furnishings & Equipment Allowance	1	LS		15,000
54 Technology & Computer Equipment Allowance	1	LS		85,000
55 State reviews	1	LS		500
56 Fundraising Consulting	1	LS		15,000
Soft Cost SubTotal				283,903
Site Work Construction Cost Total				52,164
Building Construction Cost Total				1,491,866
PROJECT TOTAL COST				\$1,827,933

OPINION OF PROBABLE COST



Owner: City of Oshkosh
 Project : **Menominee Park Zoo Long Range Plan**

Project No.: 2014319
 Phase: Master Planning

Date : 12.2.2014
 Estimator : KE

Phase 5

DESCRIPTION	QTY	UNIT	COST/SF	TOTALS
Building and Exhibit Construction Costs:				
New construction				
1 Small Animal support structure	250	SF	125.00	31,250
Exhibits & Enclosure				
2 Small Animal Complex: fox, porcupine, Badger, Raccoon, skunks	3,600	SF	50.00	180,000
3 Elk transfer and Support structure	400	SF	75.00	30,000
4 Prairie Dog Exhibit	1,800	SF	75.00	135,000
5 Interpretive elements	1	EA	9,000.00	9,000
	6,051			
SubTotal				385,250
Design / Bid Contingency 15%				57,788
Building Construction Costs SubTotal				443,038
Construction Contingency 5%				22,152
BUILDING CONSTRUCTION COST TOTAL				\$465,189
Site Work Construction Costs				
24 Storm Sewer modifications	30	LF	100	3,000
25 Domestic Water & Sanitary Sewer	1	LS	4,000	4,000
26 Electrical	1	LS	2,000	2,000
29 Earthwork	200	CY	30	6,000
31 Pedestrian Paving	2,000	SF	7.00	14,000
32 Lawns & Landscaping	1	LS	10,000	10,000
34 Directional & Informational Signage	1	LS	5,000	5,000
35 Educational and Interpretive Signage	1	LS	5,000	5,000
SubTotal				49,000
Design / Bid Contingency 15%				7,350
Site Work Construction Costs SubTotal				56,350
Construction Contingency 5%				2,818
SITE WORK CONSTRUCTION COST TOTAL				\$59,168
Soft Costs				
40 Land Acquisition	1	LS		0
41 Legal Fees	1	LS		1,500
42 Architectural & Engineering Design Fees	1	LS		52,436
43 Environmental Designer	1	LS		0
44 Life Support Design	1	LS		0
45 Furnishing Design Fees	1	LS		0
46 Geo Thermal Horizontal Test Well	1	LS		0
47 Site Survey (utilize existing facility documents)	1	LS		1,500
48 Printing Costs for Construction Documents	1	LS		1,000
49 Construction Permits & Fees	1	LS		500
50 Builders Risk Insurance	1	LS		500
51 Quality Control Material Testing & Inspections	1	LS		3,000
52 Hazardous Material sampling	1	LS		0
53 Fixtures, Furnishings & Equipment Allowance	1	LS		10,000
54 Technology & Computer Equipment Allowance	1	LS		2,500
55 State reviews	1	LS		500
56 Fundraising Consultanting	1	LS		15,000
Soft Cost SubTotal				88,436
Site Work Construction Cost Total				59,168
Building Construction Cost Total				465,189
PROJECT TOTAL COST				\$612,793

OPINION OF PROBABLE COST



Owner: City of Oshkosh
 Project : **Menominee Park Zoo Long Range Plan**

Project No.: 2014319
 Phase: Master Planning

Date : 12.2.2014
 Estimator : KE

Phase 6

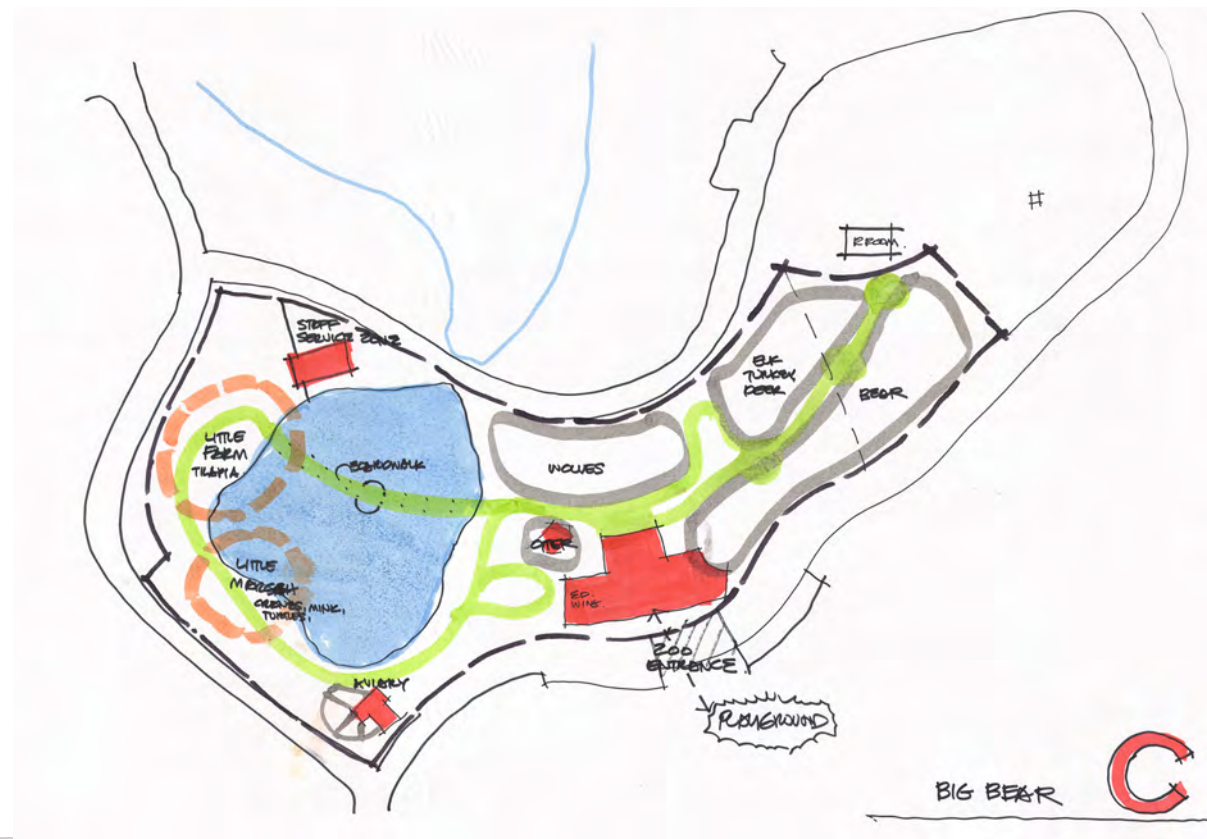
DESCRIPTION	QTY	UNIT	COST/SF	TOTALS
Building and Exhibit Construction Costs:				
New construction				
1 Bobcat Structure	450	SF	125.00	56,250
Exhibits & Enclosure				
2 Interpretive elements	2	EA	9,000.00	18,000
3 Black Bear Exhibit Yard	8,000	SF	75.00	600,000
4 Bobcat exhibit yard	3,500	SF	75.00	262,500
	11,952			
SubTotal				936,750
Design / Bid Contingency 15%				140,513
Building Construction Costs SubTotal				1,077,263
Construction Contingency 5%				53,863
BUILDING CONSTRUCTION COST TOTAL				\$1,131,126
Site Work Construction Costs				
20 Storm Sewer modifications	40	LF	100	4,000
21 Domestic Water & Sanitary Sewer	1	LS	4,000	4,000
22 Electrical	1	LS	3,000	3,000
23 Earthwork	400	CY	30	12,000
24 Retaining Walls	200	LF	40	8,000
25 Pedestrian Paving	300	SF	7.00	2,100
26 Lawns & Landscaping	1	LS	15,000	15,000
27 Shade structure	1	LS	6,000	6,000
28 Directional & Informational Signage	1	LS	5,000	5,000
29 Educational and Interpretive Signage	1	LS	5,000	5,000
SubTotal				64,100
Design / Bid Contingency 15%				9,615
Site Work Construction Costs SubTotal				73,715
Construction Contingency 5%				3,686
SITE WORK CONSTRUCTION COST TOTAL				\$77,401
Soft Costs				
40 Land Acquisition	1	LS		0
41 Legal Fees	1	LS		2,500
42 Architectural & Engineering Design Fees	1	LS		120,853
43 Environmental Designer	1	LS		4,000
44 Life Support Design	1	LS		0
45 Furnishing Design Fees	1	LS		0
46 Site Survey (utilize existing facility documents)	1	LS		1,500
47 Printing Costs for Construction Documents	1	LS		1,000
48 Construction Permits & Fees	1	LS		500
49 Builders Risk Insurance	1	LS		500
50 Quality Control Material Testing & Inspections	1	LS		3,000
51 Hazardous Material sampling	1	LS		0
52 Fixtures, Furnishings & Equipment Allowance	1	LS		10,000
53 Technology & Computer Equipment Allowance	1	LS		5,000
54 State reviews	1	LS		500
55 Fundraising Consultanting	1	LS		20,000
Soft Cost SubTotal				169,353
Site Work Construction Cost Total				77,401
Building Construction Cost Total				1,131,126
PROJECT TOTAL COST				\$1,377,879

SECTION 2

APPENDICES

2.1 Design Workshop Images

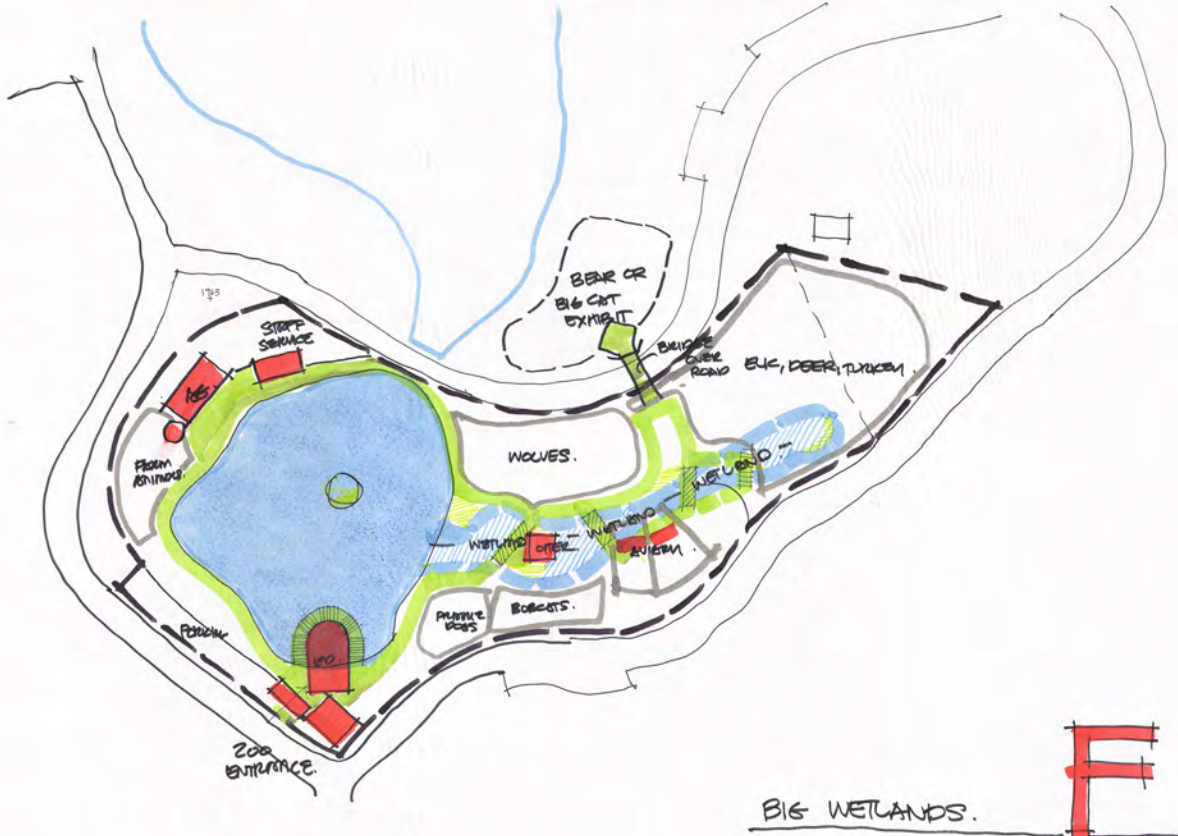


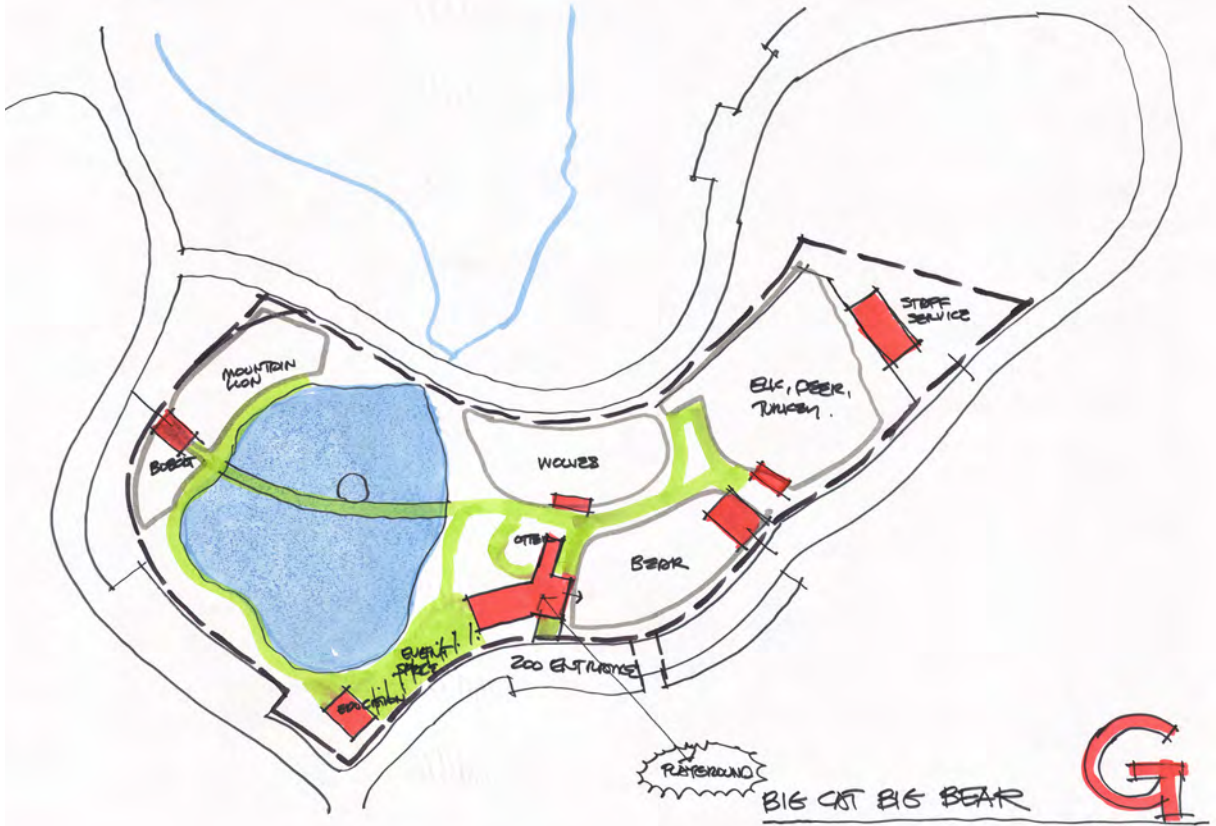


BIG BEAR **C**



BIG AQUARIUM **D**











- P.1**
- A. HOUS. MONUMENT
UTILITIES
BARRING
- B. FOREST ANIMALS
WETLANDS
SERVICE BUILDING
- C. BIG CAT
WATER BIRDS
- P.2**
- A. AQUARIUM/WELCOME CTR.
- B. BARN ANIMALS
- C. OUTDOOR EVENT SPACE

D2

PHASING



