Master Site Plan

After Site B was chosen as the preferred location for new development, the Division of Parks and Outdoor Recreation presented three different alterative site development plans to the public. Based on the ideas and comments presented during workshops and public meetings, the preferred site plan chosen was **Alternative "C"** and has since been revised based on feedback from the public, division, and Friends of Eagle River Nature Center. (The Alaska Department of Fish and Game also concluded that Alternative "C" was the "best option for providing educational and recreational activities in Chugach State Park while also protecting the wildlife, fisheries, and habitat that visitors come to see." For a more detailed summary, see Appendix E.)

Figures 4 and 5 show the detailed site plan drawings for the final development plan and for Phase I.

The division and the Friends of Eagle River Nature Center prefer a facility that requires minimal staff to operate while satisfying the needs and desires of the community. The footprint shown in Alternative C is an optimal one; while an engineer's estimate is included in Appendix F, the actual construction costs, operational costs, and other issues will be evaluated during the next phase of development (architectural, environmental, engineering). Funding for the next phase has not been secured and will be dependent on the mutual consensus of the community, the division, and the Friends of Eagle River Nature Center.

Appendix G, "Eagle River Nature Center Interpretive Prospectus," provides a detailed assessment of current and recommended interpretive sites and services.

The following paragraphs discuss the design criteria and considerations for the final Master Development Plan.

Eagle River Road Intersection with Park Access Drive

The Alaska Department of Transportation and Public Facilities (ADOT&PF) is currently upgrading Eagle River Road from Mile 5.3 to the end at Mile 12.6. The upgrade will terminate at a new turnaround near the existing center. The existing nature center parking lot will be blocked off by a vegetated landscape earth berm, screening the proposed development from the neighbors. The Division of Parks and Outdoor Recreation has been working closely with ADOT&PF to determine the best location for the new access road. The design criteria is a 90-degree driveway with the first 30' being a maximum two percent running and cross slope, matching the final elevation of Eagle River Road. The proper site distance to the east and west must be present. The design vehicle is a school bus and a recreational vehicle towing a passenger car. No obstructions should be present within a 45' x 45' triangle on both sides of the intersection. The maximum height of any vegetation within this triangle should be a maximum of 24" high. No rocks or signs should be placed within the ADOT&PF right-of-way. Permits for the driveway and any highway directional signs will be required from ADOP&PF.

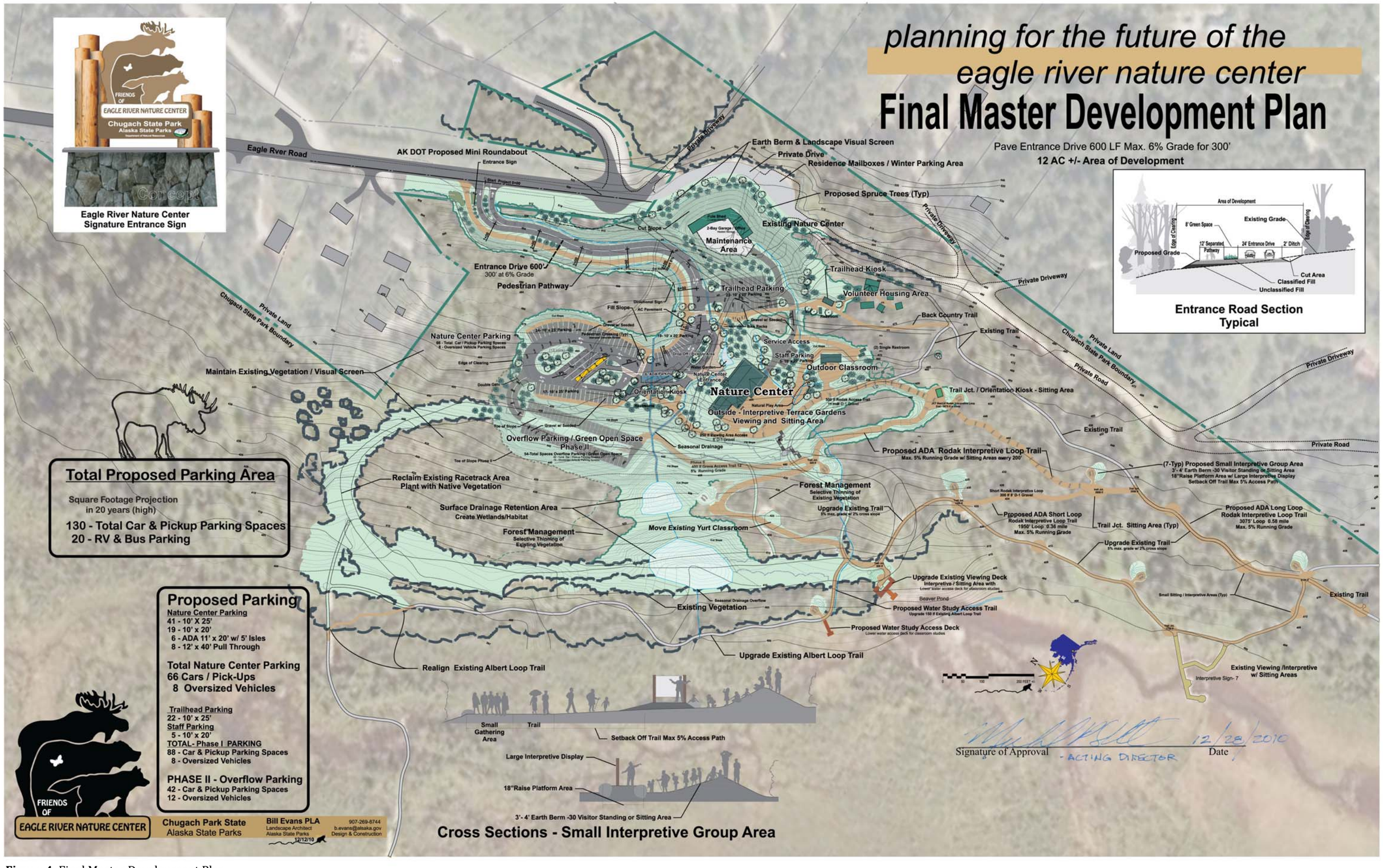

Figure 4. Final Master Development Plan

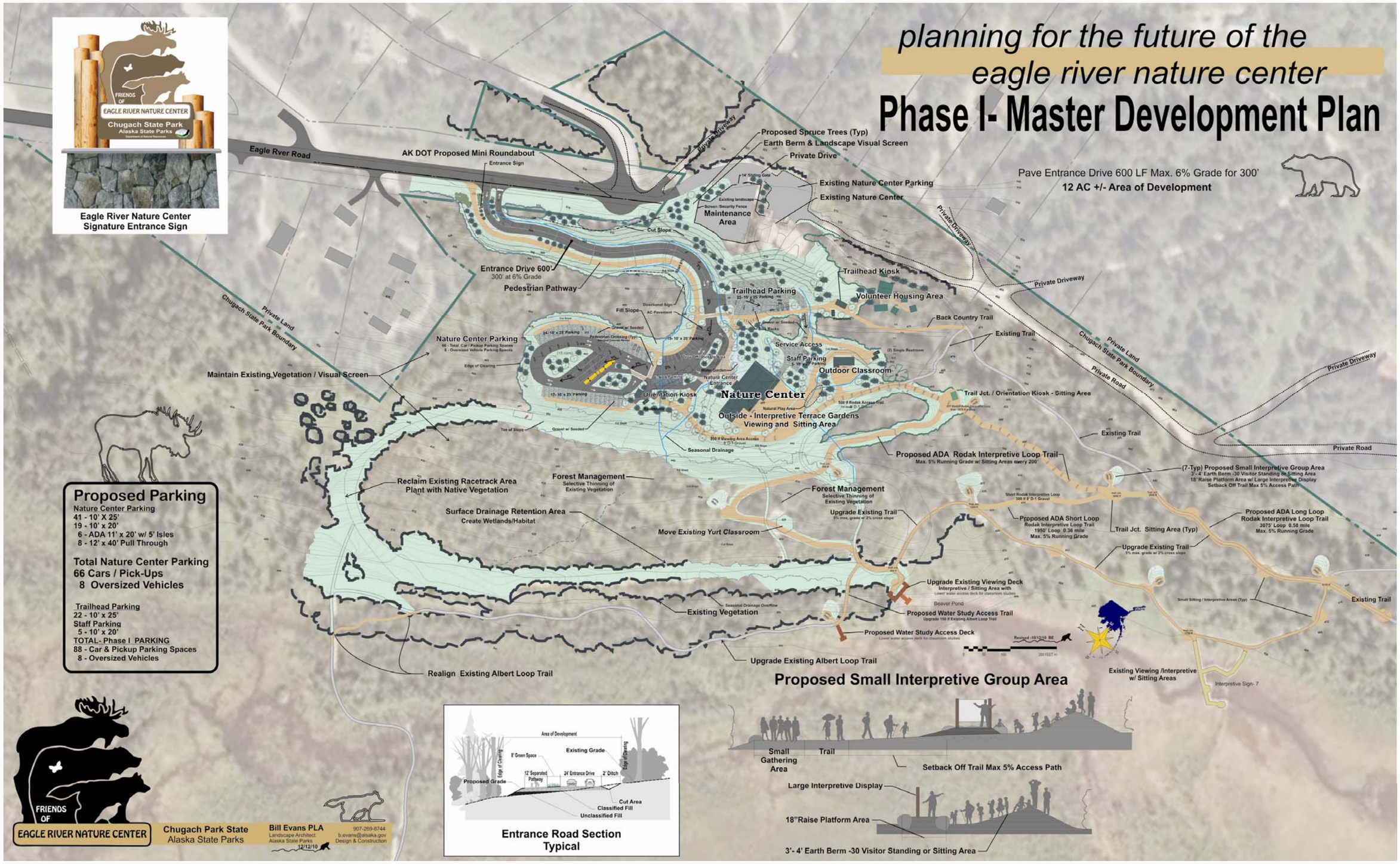

Figure 5. Phase I Master Development Plan

Existing Nature Center Building

The existing building, parking lot, and trailhead would remain in operation during construction of the new nature center, Crow Pass trailhead, and parking areas.

Private Access for Cumulus Road Residents

Cumulus Road is a private road that provides access for the residents who live east of the nature center. The road would remain in the same location. A pull-off at the beginning of the road would be developed on the south side for mail and newspaper boxes. A staging area for residents to chain up or temporarily park would be provided at the existing staff parking area once the new center is open. Residents would need to coordinate with the nature center for temporary parking within this area. No long term parking will be permitted.

Entrance Sign

A signature sign would be designed for the entrance of the facility. It would reflect the character and themes developed for the nature center and incorporate native stone and or heavy timbers. The sign would be placed outside the ADOT&PF right-of-way at a slight angle to the west.

A pre-warning sign one mile in advance of a highway directional sign would be installed to provide adequate stopping distance along the east-bound side of Eagle River Road.

Proposed Nature Center Entrance Access Drive

The proposed entrance drive into the new Eagle River Nature Center is 625’ long and 24’ wide, with two-foot, D-1 gravel shoulders and a two-foot ditch on the uphill side. A separated pedestrian path would be offset to the downhill side of the road by a 10’-long landscape island made of a two-foot-high maximum non-contiguous earth berm; the berm would be planted with native shrubs and perennials. The D-1 gravel surface pedestrian pathway would be 12’ wide and constructed parallel to the entrance road. The first 100’ of the entrance drive would be divided with a center landscape island. The first 200’, starting from the connecting edge of Eagle River Road, would include a transitioning vertical curve starting with the first 50’ at a two percent running grade then transitioning into a five-to-six percent grade at station 200+00. At station 600+00, the six-percent grade ends and transitions into a five-percent grade for 100’ then into a two-percent grade at the intersection of the Crow Pass/Iditarod Historic Trail trailhead parking area. Long term, this access drive would be paved, with a 24’-driving surface and a painted center line. No shoulder lines are required.

The design speed of the entrance road should be no greater than 20 mph and the design vehicle is a recreational vehicle towing a passenger car. This will also allow for a school bus, small panel delivery trucks, pick-up trucks, vans, and passenger cars.

On the downhill/south side of the entrance drive, between station 0+50 and 1+00, three-to-eight-foot native white spruce trees would be planted to screen the entrance drive from the closest

neighbor to the southwest. An open view of the nature center and mountain peaks across the valley should be maintained.

Crow Pass/Iditarod Historic Trail Trailhead Parking Area

A small, 22 space D-1 gravel parking lot (10' x 25' parking spaces) to the left side of the access drive would be developed for access to the Crow Pass/Iditarod Historic Trail. A trailhead orientation kiosk would be installed with a fee station, bulletin board, message board, and interpretive panel. A single vaulted toilet would also be located within this area.

Nature Center Drop-Off/Pick-Up Area

The drop-off and pick-up area would be a 24' wide, paved, single loop located between stations 6+75 and 7+75 on left side (eastside) of the entrance drive. A 20'-landscape/earth berm (maximum two-feet high) island would be built between the entrance drive and drop-off/pick-up area. The purpose of the drop-off/pick-up area is to provide an easy access for visitors. Parking would not be provided in this area. The design vehicle is a large passenger van, passenger car, or pickup truck. School buses and recreational vehicles must park in the oversized-car parking area. The design decision to limit the size of the vehicle to access the drop-off/pick-up area was made to minimize the overall amount of land disturbance.

Two bicycle parking areas would be located between the trailhead parking lot and the drop-off/pick-up area. The bike racks would be constructed of custom metal tubing and resemble the animal outline shapes in the Eagle River Nature Center logo (moose, bear, and wolf).

Three raised and stamped color concrete pedestrian cross walks would be constructed along the entrance drive; one would be located at station 6+50 and the other two would be located at the intersection (station 8+50) at the entrance of the large parking area and exit lane.

Nature Center Parking Area

The primary parking area for the new building would be located across from the drop-off/pick-up area. This area would accommodate 19 paved, 90-degree pull-in parking spaces (10' x 20'). Six ADA parking spaces would be located adjacent to the nature center building entrance on the left side of the entrance road between stations 7+80 and 8+50. Once past the intersection of the entrance drive and the parking area exit lane, the cross grade of the parking lot increases to five percent to reduce the amount of fill. Between station 6+00 and 8+75 the running grade is a maximum two-percent slope.

In the large parking area there are a total of 41 (10' x 25') gravel/green parking spaces with wheel stops and eight oversized, (12' x 40') pull-through paved parking spaces to accommodate buses, RVs, and trucks pulling trailers.

The total number of parking spaces in Phase I is 66 for passenger cars and eight for oversized vehicles.

Overflow Parking Area/Green Open Space – Phase II

An access drive would be constructed from the main parking area to the overflow parking area. The drive would be 100' long and 24' wide, with a maximum grade of five percent. The driving surface would be D-1 gravel. A double gate will be installed for controlled access. The overflow parking area would be a 75' wide by 255' long, D-1 gravel pad with a maximum five-percent cross slope.

The total number of parking spaces in the Phase II overflow parking area is 54.

Nature Center Main Building – Conceptual Design

The new center will have a covered outdoor entrance area that includes seating and possibly informational boards. The surface would be paved. The entrance façade should be similar to that of the existing building to invoke a sense of nostalgia for the original log building.

The center would appear to be a single-story, cozy log cabin from the front and visitors would enter the building on the perceived ground level. However, the proposed building would be two levels, with the bottom floor designed as a daylight basement that opens onto an outdoor viewing and sitting area. When viewed from the back, visitors would see the building's two stories and rustic design.

The building design should incorporate the Leadership in Energy Efficient Design (LEED) standards and be an example of fine architecture that complements the surrounding environment. The building and adjacent facilities and trails will also comply with the ADA standards and guidelines.

The main floor would be designed for visitor information and interpretation. A welcoming arctic entrance, information center, interpretive display area, child-centered play/learning area, lounge area, retail area, and restrooms should be on the main floor (see Appendix G for detailed interpretive recommendations). The main floor would also provide access to an upper viewing deck that connects to the lower viewing area and trail systems. A series of terraces would interact with the surrounding grades of the landscape. The main floor should be oriented to the southeast and provide views of the Eagle River Valley and Chugach Mountains.

The lower level would consist of a large multi-purpose area and food service/kitchen area. Additional small classrooms, storage areas, restrooms, and other related rooms should be located on this floor.

Table 1, "Space Requirements," identifies estimated capacity numbers for the center and its outbuildings as identified in October of 2010.

Main Building		
Item	***Qty***	***Square Footage***
Arctic entryway	1	100
Janitorial supply & equipment storage	1	25
Janitorial sink/wet area	1	25
Restrooms/water fountain/restroom supplies/coat storage	1	500
Interpretive display area	1	400
Interpretive display storage	1	120
Child-centered play/learning area	1	80
Lounge area/woodstove	1	400
Information center	1	200
Information center storage	1	25
Volunteer work area/locker space	1	75
Copy/general work area	1	50
Retail display	1	300
Retail storage	1	120
Rental storage	1	40
Multi-purpose auditorium (large)	1	2400
A/V room/storage	1	30
Table & chair storage	1	120
Classroom (small)	1	400
Classroom materials & equipment storage	1	150
Telescope area(s)- wildlife; astronomy	1	150
Director's office/staff conf room	1	150
Manager's office	1	120
Chief Naturalist's office	1	120
Asst. Naturalist work space	1	50
Other administrative work space	1	50
Staff/volunteer bathroom	1	35
Office equipment storage	1	50
Safe & secure storage room	1	25
SUB-TOTAL MAIN		**6310**
Food Service		
Food service area (to serve snacks, eat on deck)	1	120
Food service kitchen for snacks/commercial kitchen for auditorium (to serve both areas)	1	150
Recycling and trash area	1	100
Food service storage	1	50
SUB-TOTAL FOOD SERVICE		**420**

Housing		
Winter caretaker/visiting lecturer apartment	1	350
Resident volunteer housing- move and keep old housing (2 @ 120sf)	1	240
Resident volunteer kitchen/dining	1	100
Resident volunteer bathroom w shower & storage	1	75
Resident volunteer lounge area	1	200
SUB-TOTAL HOUSING		**965**
Maintenance		
Trails & grounds workshop (heated)	1	200
Equip repair shop/garage (heated)	1	225
Equipment/machinery storage (unheated)	1	1750
Tool storage (unheated)	1	100
Fuel storage (unheated)	1	25
SUB-TOTAL MAINTENANCE		**2300**
TOTAL NATURE CENTER BUILDING AREA		**7695**

Table 1. Space Requirements

Outside Interpretive Terrace Gardens Viewing & Sitting Area

The building's interior spaces should tie into the useable outside upper and lower interpretive gardens viewing and sitting areas. These areas will be designed in conjunction with the nature center building. The large multi-purpose area and the classrooms should have an outdoor space that will not interrupt the general visitor's activities. The upper viewing area terraces should interact with the surrounding grades of the landscape to the lower viewing area. Small sitting areas and interpretive displays and spotting scopes should be available.

A natural play area between the indoor classrooms and the outdoor classroom should be developed. Large rocks, gravel, sand, logs, and stepping stones over a seasonal rain/melt water system should allow opportunities for creative natural play.

Outdoor Classroom

The outdoor classroom would be a covered amphitheater terraced into the slope. A small storage area would be built for interpretive display items and staff materials. A presentation area with a large fire pit should be on the lower level with ADA access to both the upper and lower levels. The sitting area would be orientated to allow views of the Eagle River Valley and Chugach Mountains.

The architecture of the covered structure should take the character of the main building. Logs from the existing nature center could be reused if the timing for construction of the structure coincided with the demolition of the existing building.

Two single vaulted toilets would be installed on the top level of the classroom area, with service access to each. Single toilets were chosen because of their small footprint.

Service Access and Staff Parking Area

A small staff parking area to accommodate five to ten vehicles would be located in the service access next to the lower level of the building. A vegetated earth berm would screen the service area from main entrance and the outside viewing and sitting areas. The service access road would be 14' wide and have a compacted, D-1 gravel surface with a maximum five-percent grade. A vehicle turnaround would allow a delivery van turn around and back in.

Volunteer Housing Area

The two existing volunteer cabins would be moved into this area. The yurt could be used as a volunteer lounge area and/or storage. In the long-term plan a common kitchen, dining, lounge, restrooms, showers, and laundry area should be located within the volunteer housing area.

Entrance Trails and Connecting Pathways within Parking Areas

The main parking area would have an orientation kiosk and a single vaulted toilet. The orientation kiosk would have the same architectural character as the nature center. A pedestrian walkway

would lead visitors from all the parking areas to the orientation kiosk and to the front entrance of the nature center.

The main trail leading from the orientation kiosk in the main parking area to the outside viewing and sitting areas would be 250' long and 8' wide, and have a compacted D-1 gravel surface with a maximum five-percent grade. A staircase would connect each area to the Rodak Nature Trail.

A 400' long, 12' wide service access trail would be constructed of compacted D-1 gravel with a maximum five-percent grade. The trail would connect the overflow parking area to the Rodak Nature Trail. A 600' long, 8' wide service access trail would also be constructed to connect the lower viewing area to the Rodak Nature Trail Trailhead Orientation Kiosk. The trail would be compacted D-1 gravel with a maximum five-percent grade.

Rodak Memorial Interpretive Loop Trail

Slight modifications to the existing Rodak Nature Trail are included in the master development plan to accommodate different user groups and establish trail connections. The trail incorporates two loops and is designed to coincide with interpretive programming. At the first trail intersection there would be an orientation kiosk with a sitting area and a small group gathering/program area. The first loop is approximately 1/3 of a mile long, with a maximum five-percent running grade and maximum two-percent cross slope. The trail would be eight-feet wide with a compacted D-1 gravel surface to provide full accessibility to the primary interpretive program. Six small group gathering/program areas would be located along this first loop. About halfway through the first loop there is easy access to a small viewing deck overlooking a clear water stream. The existing deck would be upgraded to provide full accessibility.

The second, larger loop builds off the first loop and follows the existing trail alignment. New construction would include upgrading 1,200 feet of trail to meet the ADA Recreational Trail Guidelines and creating an eight-foot-wide surface of compacted hard D-1 gravel. The maximum running grade of the second loop would be eight percent with a two-percent cross slope. The second loop would tie into the existing Crow Pass/Iditarod Historic Trail. Four hundred and twenty-five feet of the existing trail would need to be upgraded to meet the ADA Recreational Trail Guidelines. Two small group areas would be located along this section of trail and five individual sitting and interpretive areas would be spaced 200' apart. The total length of the two loop trails is just over one-half mile.

The existing salmon viewing deck should be upgraded to follow the direction of the Interpretive Prospectus (see Appendix G).

Small Group Areas

The small group areas would be set off the trail to provide sufficient space for a small classroom group of 25-30 visitors to gather for lessons and instruction. The areas would be a minimum of 10' long by 6' wide. The base would be compacted D-1 gravel, with a maximum running grade of five percent and a two percent cross slope. The area would open to a similarly-sized space where an interpretive panel would be displayed on a 19" high pedestal. The instructor could stand on the

pedestal if desired and the outer edge could be used as a bench. A small grassy earth berm graded into the surrounding landscape would create a small amphitheater for sitting or standing. A passive vegetated buffer between the trail and the small group area should be maintained.

Sitting and Interpretive Areas

Individual sitting and interpretive areas could be spaced 200' apart along the Crow Pass/Iditarod Historic Trail. These areas should have a maximum two-percent cross slope. Trail intersections will have a three-post trail sign with the name of the trail, its length, grade, and an overview map. Trail conditions and points of interest could also be included. An area could be provided for temporary signs such as bear sightings or trail closures.

Albert Loop Trail

The Albert Loop Trail will need to be upgraded, including select vegetation management to reveal scenic views. To ensure the safety of visitors, two hundred feet of the trail would need to be rerouted to direct hikers back to the nature center. The reroute would provide access to an elevated light-penetrating deck that could be used as a small outdoor classroom space to bring students safely to the stream edge. A small group area would also be located nearby.

Maintenance Compound

During construction, the maintenance area would need to be temporarily relocated to the existing septic field area. When the nature center moves into the new building, the maintenance compound could be developed at the existing nature center site. The maintenance compound would be built into the slope to muffle noise and screen the facility from the neighbors. The heated maintenance building and covered outdoor storage areas would be tucked into the slope, with retaining walls as their back walls. A security fence would be built around the maintenance compound with a sliding double entrance gate and a four-foot service entrance gate.

If funding is not available or if the material under the existing nature center is not useable for fill, the maintenance compound could be located on the existing nature center parking area and the existing nature center building could be retained for this purpose. This item will require further evaluation and discussion.

Surface Runoff, Water Garden, and Surface Retention Ponds

The proposed Phase I development area is about 10 acres. The additional overflow parking area and storm water retention ponds would increase the development area to 12 acres. The design plan is to channel all the storm water from the entrance road and parking areas to two retention ponds. A water garden near the nature center entrance would also be developed. All rain water from the roof of the center would be directed to the water garden and natural play area. The retention ponds could be used for winter activities and would provide wildlife viewing opportunities from the outdoor viewing and sitting areas. The lower retention pond would tie into the subsurface water system and create wetland habitat.

Landscape Plan & Reclamation of Disturbed Areas

The old race track would be designated for overburden material and for stock piling useable materials for reclamation during construction. The final grading of this area should fit into the natural grade and provide adjacent property owners privacy. The grading should also attempt to discourage visitors from trespassing on private property. In an attempt to use all materials excavated during construction, all clearing and grubbing material must remain on site; stumps and brush would be required to be turned into mulch for slopes and landscaping material.

Area Lighting

Street or parking lot lighting is not necessary unless needed for safety or security. All necessary lighting would be directed down to the required area to prevent light pollution.

Forest Management

The area outside the development footprint should be evaluated to determine if a forest management plan would be beneficial. Forest management would be an ongoing task and include items such as clearing trees and brush for views and safety concerns. Management of invasive species could also be included.