

April 9, 1998  
M97-640 Substitute/am

LARRY PHILLIPS  
LOUISE MILLER

Introduced By:

Proposed No.:

97-640

1  
2 MOTION NO. **10446**

3 A MOTION granting interim approval of the Executive  
4 Proposed Section 36 Regional Park Master Plan to allow the  
5 department of parks to proceed with and complete the SEPA  
6 review process.  
7

8 WHEREAS, the King County council has adopted Motion 9015 in May 1993  
9 authorizing the executive to enter into a purchase and sale agreement with the Washington  
10 State Department of Natural Resources for the acquisition of Section 36 on the  
11 Sammamish Plateau for park and open space purposes, and

12 WHEREAS, the King County council has adopted Motions 9713 and 9714  
13 regarding the Section 36 Citizen Advisory Committee's recommended uses for Section 36  
14 Regional Park and regarding the Project Program Plan for the park, and

15 WHEREAS, the King County council has appropriated funds to prepare a master  
16 plan for Section 36 Regional Park Master Plan, and

17 WHEREAS, the King County department of construction and facilities  
18 management in conjunction with the department of parks and recreation and a Citizens  
19 Advisory Committee (CAC), has completed the preparation of the master plan, and  
20 relevant environmental studies, and

1           WHEREAS, the master plan designates approximately 300 of the park's 628 acres  
2 of land as natural zones, devoting them to wildlife habitat and sensitive area protection,  
3 and

4           WHEREAS, the master plan designates approximately 80 of the park's 628 acres as  
5 active and passive recreation, and support services zones, and

6           WHEREAS, as extensions of the natural zone, the master plan designates the  
7 remaining approximately 248 acres as special management zones which serve as buffers  
8 between the natural zones and active portions of the park and in which are located different  
9 types of internal trails, and

10           WHEREAS, King County and the CAC held thirteen public meetings, solicited  
11 public comments and considered a range of future uses and design concepts for the park,  
12 and

13           WHEREAS, the master plan will be used as the basis for a State Environmental  
14 Policy Act (SEPA) determination;

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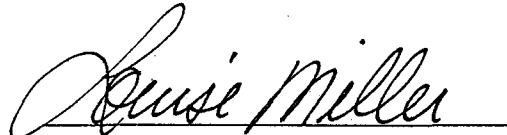
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NOW, THEREFORE BE IT MOVED by the Council of King County:

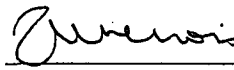
The April 1997 Executive Proposed Section 36 Regional Park Master Plan, as amended, is hereby approved for the purposes of permitting the department of parks to proceed with and complete the SEPA process. At the completion of the SEPA process, the department shall submit the master plan for final council adoption.

PASSED by a vote of 12 to 0 this 20<sup>th</sup> day of APRIL,  
1998.

KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

  
Chair

ATTEST:

  
Clerk of the Council

Attachments: Section 36 Regional Park Master Plan, dated April 1998.

10446

97-640

SECTION 36 REGIONAL PARK  
Master Plan

EXECUTIVE PROPOSED

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SECTION 36 REGIONAL PARK  
Master Plan

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**EXECUTIVE SUMMARY**

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## EXECUTIVE SUMMARY

### INTRODUCTION

Section 36 Regional Park promises to be a magnificent and much-needed addition to King County's parks and open space system. Located on the East Sammamish Plateau at the edge of the County's Urban Growth Boundary, the multi-use regional park will serve to separate the developing residential areas of the Plateau from the rural Snoqualmie Valley. A range of passive and active recreational opportunities will be created while respecting the 628-acre site's natural qualities.

Section 36 has challenged its planners to balance the physical aspects of the site with the expressed recreational needs and desires of the community. The site with its variety of natural features has attracted the interest of a large and diverse community of users. While some want to preserve the site's tranquillity and habitat values, others want it developed for active recreation facilities to serve the growing community. Determining an optimum balance between a natural and a "built" environment has been the goal of a citizens' group committed to creating a thoughtfully designed regional park and a landmark for King County. Through in-depth analysis and judicious planning, Section 36 Regional Park can provide places for solitude and communion with nature while including developed areas for organized sports and active recreation.

The first part of this report is devoted to summaries of the planning process: Inventory and Analysis, Site Alternative Concept, and Preliminary Master Plan. Part Two of the report presents the Executive Proposed Master Plan on colored paper, details of the Park Program, Design Guidelines and a Phasing Plan with associated costs.

## PLANNING PROCESS

In late 1993, the King County Council confirmed appointments to the Section 36 Citizens' Advisory Committee (CAC). This group was established to recommend uses for the future park to King County. During 1994 and 1995 the Parks Department worked with the CAC to create the Section 36 Program Plan of recommended uses, which was then adopted by Council in November, 1995. When the Department of Construction and Facilities Management began the master planning effort, a new CAC was established with former members and new participants. These citizens were chosen to represent different interest groups such as sports enthusiasts, conservationists, and neighbors, among others. In addition, special user groups were contacted to provide supplemental information and discuss their concerns with the CAC. As representatives of the larger community, CAC participants contributed their knowledge and visions as each phase evolved.

Section 36 Regional Park has been planned in four phases of development:

- Site Inventory and Analysis
- Site Alternative Concept
- Preliminary Master Plan
- Final Master Plan

All phases were shared with the public in a variety of forums, including open houses and presentations. Interested individuals within the community were encouraged to express their ideas and concerns through written comments and attendance at public meetings. They were kept informed of the project's development through a newsletter and as additional individuals expressed an interest in the project, they were added to the database of newsletter recipients. Public input from all of these forums was tallied and taken into consideration as the design process continued.

After the Preliminary Master Plan was refined to reflect public input as well as comments from King County staff and CAC members, this Executive Proposed Master Plan was developed. With King County Council approval, this Plan will become the Adopted Final Master Plan.



## SITE INVENTORY AND ANALYSIS SUMMARY

The Site Inventory and Analysis Phase studied the Park's larger setting, its relationship to adjacent land uses and infrastructure, as well as the natural and cultural features within the Park's property lines. The inventory of natural features included soils, slopes, hydrology, aspect, vegetation, habitat conditions, and visual resources. Cultural features included history, population growth and development, surrounding land uses, recreational and cultural needs, transportation, trails, and utilities. Visual resources were also considered. Detailed data were analyzed and significant aspects were highlighted. The resulting Inventory and Analysis Phase presents a framework for future planning, development, and management of the Park. The results are published in the *Section 36 Regional Park Master Plan III - Site Inventory and Analysis* (August 1995).

### CONTEXT

Located in the East Sammamish Planning Area in unincorporated King County, the Park's nearest urban neighbors, Issaquah, Fall City, and Carnation, are five miles from its borders. Regional users will travel 18 miles from Seattle and 10 miles from the cities Bellevue and Redmond. While there is no direct access to the site, the Park is roughly bounded by the Redmond-Fall City Road (SR 202) to the north and east, Duthie Hill Road and Beaver Lake Road to the south, and 228th Avenue SE to the west.

Beginning high on the East Sammamish Plateau and descending toward the Patterson Creek valley further east, Section 36 exhibits a range of features within its 628 acres. The park not only straddles the two geologic features, it also traverses two land uses, the rapidly urbanizing plateau and the rural valley below. Untouched except for logging earlier in this century, the site is covered in second-growth vegetation typical of the Northwest. A rich diversity of plants, land forms, and habitat types exists within the surveyed limits.

The CONTEXT MAP combines contextual information from the inventory and analysis of the regional cultural resources, history, and infrastructure.

#### Planning Parameters

- The Planning Area offers a diversity of recreational facilities at State and County parks as well as at local school sites.
- Public facilities, however, are limited within a two-mile radius of Section 36 Regional Park.
- The rest of the area is devoted to trails and 'passive recreation', a concept that includes informal family activities in the 'great outdoors', as well as kids 'mucking in the dirt' and 'discovering nature'.

- According to the proposed *King County Parks, Recreation and Open Space Plan*, recreational land for the area is adequate through the year 2003. Although traditional recreational facilities, such as ballfields, tennis courts, etc., are available throughout the area, many residents believe that the number of organized sport facilities are inadequate for the current population.

#### History

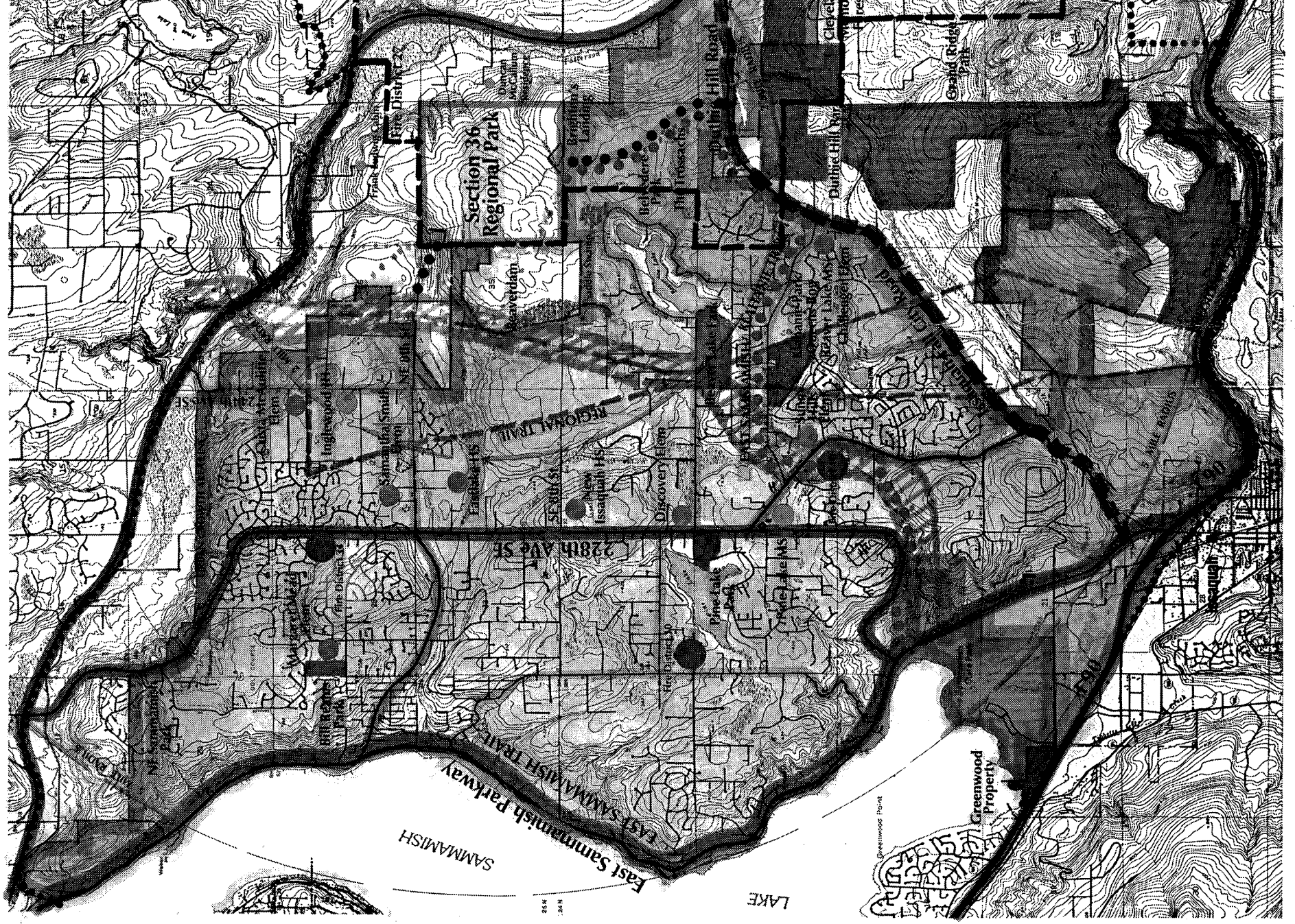
- While Section 36 has no outstanding historical sites, its use by Native Americans as well as its relative lack of use by later settlers, is representative of many large, heavily forested tracts within the region. Two historic sites lie beyond the Park: the Frank Ludwig Cabin (1885) is one-half mile north and the Duncan McCallum Residence (1893) is one-quarter mile east. Opportunities exist to interpret the multi-cultural use of the land.

#### Access

- Major access to the site is along State Highway 202 (Redmond-Fall City Road), Issaquah-Fall City Road, Issaquah-Pine Lake Road, Duthie Hill Road, 228th Avenue SE/SE43rd Way and Inglewood Hill/NE 8th. According to King County Department of Transportation, the developing area is currently underserved by arterials. Past discussions included a possible Beaver Lake Loop Road that would travel through Section 36 from the Brighton's Landing (part of the Trossachs) development on the south to connect with NE 8th Street at the NW edge of the property.

#### Trails

- Three non-vehicular, regional trail systems are planned for the area: the East Sammamish Trail along the Lake; a regional trail along I-90; and directly related to Section 36, the proposed Klahanie-East Sammamish Trail is planned to end within the Park. Combined, these trails will enable users to move throughout the planning area and connect to remote parts of the County.



## ADJACENT LAND USE AND INFRASTRUCTURE

The ADJACENT LAND USE AND INFRASTRUCTURE MAP summarizes existing zoning and proposed developments, as well as vehicular, non-vehicular, and utility access.

### Zoning and Planned Developments:

- At this time the land adjacent to the Park is relatively undeveloped. To the north and east of the Park, where the land is zoned agricultural, single-family residences on 5- and 10-acre lots are allowed. Two residential developments are proposed adjacent to the park on the other two sides. The Beaverdam development to the west has both residential development and a major permanent open space/golf course fronting the park. To the south, Brighton's Landing, one of three residential communities within the Trossachs development, proposes residential development fronting the Park.

### Access

- Section 36 has four potential vehicular access points.
- Two of the access points to the Park, which are provided in the Park's deed, present limitations either due to deed restrictions or natural constraints.
- The two remaining access points exist by virtue of the proposed roadways within the future residential developments of Beaverdam and Trossachs. Both offer the opportunity for a coordinated system of vehicular access, non-vehicular trails and utilities access.

### Trails

- Two separate trails exist within the Park.
- At the far northern edge, a remnant logging road is used by equestrians, hikers and mountain bikes. Access to the trail is from NE 8th Street, past the detention ponds for the Cross Creek development. Access to the trail through the easement at the north property line is restricted by a locked gate.
- The second trail, a small part of a winding trail called the 'Northwest Passage', crosses the southwest corner of the site. The trail is user-built, the creation of a combination of mountain bicyclists, motor bikers and hikers. Access to the trail is through private property from the Beaver Lake Road to the south, and from Brighton's Landing proposed open space to the west. A trail easement within the Sammamish Plateau Water and Sewer District (SPWSD) property on the west side of Section 36 offers the opportunity to continue this trail and provide a connection to the Beaverdam pedestrian/equestrian trail.
- There are potential connections, a variety of experiences, and sufficient area to support an interesting and easy-to-use trail system. The challenge will be to plan and implement memorable and safe recreational opportunities for different user groups.

SECTION 36 REGIONAL PARK  
Master Plan

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Cross Creek

NE 8th Street

Section 36 Access

60' Easement for  
Hauling Cement Products and  
Other Volatile Materials

AR-5

Section 36 Access

60' Easement For Road Purposes

Old Road Grade

AR-5

Future SE 1st/Main/NE 1st St

40' ROW

Beaverdam

Future Development

Pedestrian/Equestrian Trail

Beaverdam

Permanent Open Space

SPWSD Property

Northwest Pass

Growth Reserve

Brighton's Landing

Future  
Development

Open Space

Phase I

15' Open Space  
for Public

2676.75

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13

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## OPPORTUNITIES AND CONSTRAINTS

The OPPORTUNITIES AND CONSTRAINTS MAP summarizes the relationship of significant natural resources, land uses, elements of infrastructure and funding conditions of the Park.

### NATURAL RESOURCES

- The site is delineated into two planning zones: a Conservation Zone and a Development Zone. Based on information in the *King County Sensitive Areas Map Folio*, the *East Sammamish Community Plan* Wildlife Corridor, and ecological planning criteria from the Washington State Department of Fish and Wildlife (WSDFW), the Conservation Zone represents the landscape that is sensitive to alterations. The Development Zone includes land most suitable to alteration and change.

#### Conservation Zone

- Two areas define the Conservation Zone. Area "A" is land that is most sensitive to development and is protected by government agencies. Area "B" is land that is recognized as being sensitive to development, but not regulated.
- The Regulated Conservation Zone, Area "A", comprises 198.07 acres (32 percent) of the site. Proposed uses within this area must be approved prior to development.
- The Recommended Conservation Zone, Area "B", comprises a total of 191.93 acres (30 percent) of the site. Land within this zone extends protection of the sensitive areas zone and recognizes valuable site-specific attributes.
- Regulated and Recommended Conservation Zones total 390.0 acres, or 62 percent of the site.

#### Developable Zone

- Outside the Conservation Zones, the site offers two Developable Zones separated by a 600'-wide Wildlife Corridor. Combined, the two development zones total 238.00 acres, or 38 percent of the site, which is appropriate for the development of recreational facilities. While this area includes some of the most level portions of the site, considerable elevation changes between these flat areas will make the development of contiguous level areas difficult and costly.
- Slopes within these zones further delineate areas appropriate to development. Categories of 0-5 percent, 6-8 percent, and 9 percent or greater, are delineated to define relative ease of potential development. Of this total area, 49 acres fall within the slope range of 0-5 percent, the most suitable for the development of facilities requiring level land. The 120 acres that make up the "6-8 percent" category and the 69 acres that comprise the "9 percent or greater" are most appropriate for informal recreational activities. Both suggest higher costs for environmental impact mitigation and construction. Recreational facilities considered for these sloped areas should not require direct access facilities, such as parking.

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NE 8th Access

Beaverdam Access

Brighton's Landing Access  
Klahanie-East Sammamish Trail Access

## INFRASTRUCTURE

### Utilities

- Utilities currently do not serve the Park. Future developments of the SPWSD and adjacent residential developments of Beaverdam and Trossachs will best serve to provide connections for the Park's utility needs.
- SPWSD's proposed water tank would offer the opportunity for the Park to tap into a water source. The most cost-effective service pressure will be a gravity-fed system from the 550' elevation to the 450' elevation. Above or below these elevations, pressure will need to be controlled. Options to tap into the future adjacent developments' utility lines may be established if timely contacts to the developers are made.

## CONDITIONS OF DEVELOPMENT

### Funding

- Section 36 Regional Park has two sources of funding with stipulations for development.
- Originally, funding from the Interagency Committee on Outdoor Recreation (IAC) stipulated that only 100 acres, or 16 percent of the site, could be developed, with the remaining 528 acres designated as Urban Wildlife Habitat.
- Funding through Conservation Futures Tax (CFT) stipulates that 50 percent of the site, or 314 acres, may be developed for low-impact use and within this zone only 15 percent or 47 acres, may be constructed as impervious (i.e., non-draining) surface.

### Drainage Basins

- Conditions on development also exist for the two drainage basins in Section 36, Beaver Lake Drainage Basin and Patterson Creek Drainage Basin (King County Land and Water Resources). Both have different requirements affecting development for the Park. Based on the opportunities and constraints map, conserved land within the Beaver Lake Drainage Basin (52.9 acres) is 11 acres above Basin requirements. Land set aside for conservation within the Patterson Creek Drainage Basin is 338.40 acres, or 66.9 acres above the basin requirement.

SECTION 36 REGIONAL PARK  
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## SITE ALTERNATIVE CONCEPTS SUMMARY

Using the framework established in the Inventory and Analysis Phase, combined with a preliminary park program, three basic site alternative concepts with a broad range of options were developed and presented to the Parks Department, the CAC, and the public. The development of the Site Alternative Concepts prior to formal adoption of a Park Program tested the potential physical impact of the preliminary program on the site and considered the possibilities and impacts of expanding the program. The statistics and responses to the plans were shared with the Council prior to the adoption of Motions 9713 and 9714.

Overall, each of the concepts sought to preserve the sensitive and special character of the Park while maximizing use of developable areas. Two options were presented for each alternative, one with a lesser degree of construction (A schemes), and one with a greater degree of construction (B schemes). These six alternatives were presented to King County Council staff, the CAC, the community at a public open house, and special interest groups. The work of this phase is documented in the *Section 36 Regional Park Master Plan I - Site Alternatives Concepts Report* (October, 1995). Each alternative designed the Park with a focus on the broad issues of:

### Vehicular Systems

- Access

- Circulation

- Parking.

### Land Use Zones

- Active and Passive Recreation and Support Services Zone

- Special Management Zone/Internal Trail Network,

- Special Management Zone Habitat Corridor

- Natural Area Zone

### Trail Types

- Multi-use

- Mountain Biking

- Equestrian/Hiking

- Hiking/Interpretive

## VEHICULAR SYSTEMS

Options for vehicular access studied single access points, west and south, as well as dual access points. Circulation options varied from the traditional, direct, two-way road to an undulating parkway composed of two one-way systems with the flexibility to

accommodate the grade changes between different land uses. Parking in all concepts was designed to be shared by the different user groups.

### LAND USE ZONES

The areas for the Active and Passive Recreation and Support Services Zone, and the Special Management Zone/Internal Trail Network land use zone varied in each concept and each scheme. However, the Special Management Zone Habitat Corridor and Natural Area Zone remained constant due to established environmental sensitivity and the IAC requirement, during this phase, for a 300-acre urban wildlife habitat.

Within the developed zone and the Special Management Zone/Internal Trail Network, the spatial relationships between program elements varied within each concept. Approaches differed based on topographical constraints and based on those areas where concentrated development could make connections with the trail network zone while preserving unstructured open space. The concept of a 'Heart of the Park' was introduced to the program. Located within the Active and Passive Zone and Support Services Zone, its intent was to create a place that would be the central focus and gathering place representative of Section 36 Regional Park. The actual features were left for definition during the final phases of the Master Plan.

The A schemes demonstrated that the development of the preliminary park program was possible on acreage varying from 90.5 to 136 acres. Even when development was concentrated on the flatter portions of the site, a grade change of approximately 100 feet exists across the potentially developable footprint. All proposed improvements thus need to be constructed as a series of gently graded, interconnected terraces. The challenge is in creating smooth grade transitions, minimizing the amount of grading and tree removal, and integrating the overall development with the natural character of the surrounding forest.

The B schemes showed the possibility of expanding the park program by doubling the number of active-use fields to require between 104 and 141 acres. For current use or future expansion, the B schemes stretched the capacities of the circulation system, potentially requiring multiple access points and additional pavement widths. It also reduced the land available for passive recreation and trails, and impacted the environmental character of the site because of extensive grading.

### TRAIL TYPES

All alternatives provided a variety of soft-surfaced trails for hikers and equestrians, a regional trail linked to the Park's interior trails, and a separate mountain bicycle trail system linked to the interior trails.

All of the trail types in each of the three concepts were located both inside and outside of the Active and Passive Recreation and Support Services Zones, as well as within the Special

Management/Internal Trail Network Zones. The only exception to this approach was the Hiking/Interpretive Trail which occurs in the Special Management/Habitat Corridor Zones and Natural Area Zones where limited access is allowed.

The concepts presented different adjacencies and overlapping of the various trail types, as well as the idea of special-use trails as distinct from multi-use trails throughout the proposed Park. The overall length for all trails ranges from a minimum of 9.1 miles to a maximum of 11.5 miles.

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Master Plan

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## PRELIMINARY MASTER PLAN SUMMARY

During the Preliminary Master Plan Phase, the Park was designed based on the adopted Park Program as documented in King County Motion 9713 and Motion 9714 (November 27, 1995). The physical plan primarily follows Concept 2A, developed during the Site Alternative Concepts Phase, with preferred ideas pulled from the other concepts. Discussions with the IAC during the Concept Phase established the urban wildlife habitat area at 300 acres. Shared with King County Parks, the CAC, special interest groups, and the public, the following Executive Proposed Master Plan is the preliminary master plan that incorporates comments from the Parks Department.



SECTION 36 REGIONAL PARK  
Master Plan

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**EXECUTIVE PROPOSED MASTER PLAN**

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## EXECUTIVE PROPOSED MASTER PLAN

### INTRODUCTION

The Executive Proposed Master Plan brings to focus the definition of the Park, its program, design guidelines, and the phasing needed for implementation. Once adopted by the King County Parks and Recreation Department and the King County Council, the Master Plan will become the basis for all subsequent planning and design decisions in the development of the Section 36 Regional Park.

The following report discusses the Park Program and Recommended Uses adopted by the King County Council, the physical Executive Proposed Master Plan, a Detailed Park Program and Design Guidelines, and finally a Park Development Phasing Plan and Costs.

## PARK PROGRAM AND RECOMMENDED USES

The adoption of Motion 9713 and Motion 9714 by King County Council on November 27, 1995 defined the Park Program and Recommended Uses for Section 36 Regional Park. Within these documents the Council also identified goals and provided design direction. Copies of the original documents can be found in APPENDIX A.

### GOALS

Motions 9713 and 9714 establish the overall goal for the park to preserve and protect the natural environment while providing passive and active recreation fields for organized sports as well as trails for a variety of users. More specifically, Motion 9713 recommends that future uses of the site "preserve, and interpret open space, including wildlife habitat and sensitive areas; provide athletic fields for organized youth and adult sports; provide soft-surfaced trails for equestrians, mountain bikes, and pedestrians; provide a paved regional trail with parallel soft-surfaced equestrian trails".

### PARK PROGRAM

Two major directives establish the areas of development and conservation within which the Park's program can be established. Motion 9714 establishes the development of the Active and Passive Recreation and Support Services Zones on 80 acres. In addition, the IAC requires that 300 acres of the site be placed in conservation with the stipulation that this area be limited to low-impact uses for the benefit of wildlife. Pedestrian and equestrian trails are allowed in this zone.

Motion 9714 also establishes the specific Park Program. The summary that follows is taken from the original Motion found in Appendix A.

#### SITE ACCESS

No through road

Recommend West and South access

Prefer South Access

Road Pavement

- Narrow to minimize destruction of habitat
- Meander in alignment to minimize vehicular speeds
- Buffer from the Klahanie trail

#### ATHLETIC FIELD DEVELOPMENT

"... the following recommendation for athletic field development portrays a balance between preserving the site's natural beauty and resources and athletic field needs":

- 10 acres of multi-use turf for youth soccer and T-ball, pick up games, frisbee, large picnics, etc. Irrigated, underdrained, no lighting
- 1 Softball/Baseball Quad to include 3 Softball Fields/1 Baseball Field with all-weather surface, underdrained, lighted
- 4 Soccer Fields with all-weather surface, underdrains, lighting

#### Lighting Policies

- Lighting of sports fields only after all other alternatives are explored.
- Use of latest technology to minimize glare.

#### OTHER DEVELOPMENT

Locate “to serve the field users and provide access to the trail system”:

- Parking
- Restrooms
- One large centrally-located Play Area

Vegetation within the developed area to:

- Incorporate and extend the character of the site’s natural features
- Buffer adjacent property and enhance urban wildlife habitat

#### TRAILS

##### Klahanie Regional Trail

- Main trail for pedestrians, bicyclists, mountain bicyclists
- Separate equestrians
- Buffer between main trail and equestrian trail
- Entrance planned from the south paralleling the access road
- Terminus in the Heart of the Park

##### Northwest Passage Trail remains

- Alignment may be altered to meet wetland and wetland buffer requirements
- Make connections west and south

##### Mountain Bike Trails

- Separate from other park trails except on the Klahanie Regional Trail
- Provide a challenging experience that includes tight turns, undulating topography and trail features designed to minimize speed while enhancing enjoyment.

#### MAINTENANCE

##### On-Site Facility

- Approximate size of Beaver Lake or Hamlin Park without fueling facility
- Provide sufficient access from the facility to the intensely developed portions of the property without dominating the viewshed.

- Incorporate the estimated operating costs for the site at full build out.
- "... seek partnerships with interested volunteers and organizations to minimize park maintenance and maximize public use."

#### JOINT DEVELOPMENT

"Joint development opportunities between King County and the Issaquah and Lake Washington School Districts will provide a critical alternative to the demand for athletic fields on the Plateau."

#### SALE OF SECTION 36

"Because there is a large existing deficit of acreage in the Park System, ownership of all of Section 36 should be retained by King County."

SECTION 36 REGIONAL PARK  
Master Plan

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## EXECUTIVE PROPOSED MASTER PLAN

The EXECUTIVE PROPOSED MASTER PLAN organizes the program established by King County Council in Motion 9714, as well as expanded recreational uses identified by the consultants, into the land use classification system identified by King County Parks and Recreation (Parks) in the *Executive Proposed King County Park, Recreation and Open Space Plan* (May 1995). This classification system is part of the Parks Department's "framework for stewardship of park resources".

Discussion is presented in a summary format focusing on the key elements of the plan. The plan is described by Vehicular Systems, Recreational Land Uses, and Utilities. General descriptions of the plan, rationale and visions of the character are presented within each topic.

### VEHICULAR SYSTEMS

Elements of the vehicular systems are access, circulation, parking, physical characteristics, and landscape enhancement.

#### ACCESS

The Master Plan can accommodate access either from the south or the west. Because it appears that the construction of an access road from the south through the Trossachs development is more imminent than an access road from the west, the plan shows park access from the south.

To make access to the Park more convenient and to reduce congestion on community roads, it may also be necessary to provide a second access and parking area from the west. However, in accordance with King County Motion 9714 - Site Access, the park is not designed for, nor shall be planned or constructed to allow for, a road through the park.

Access to the Park from the south:

- Takes advantage of the direct route from Duthie Hill Road through the Trossachs development at Brighton's Landing along 269th Avenue SE.
- Trossachs has allocated right-of-way to the Park property line but has no obligation to construct the actual roadway from the development's road end to the Park's boundary, approximately 1250 feet. King County will need to design and construct the extension of 269th Avenue SE for access to the Park.



Potential alternative western access:

- Addresses those areas where users live and the uncertainty of the construction timing for the adjacent developments.
- Provides access through the Beaverdam development via NE 1st Street. Similar to the Trossachs conditions of development, Beaverdam has dedicated the right-of-way but limits road construction to some 1850 feet from the property line of the Park. Again, King County will need to design and build the road extension.
- Allows for construction of a parking lot (25 spaces) for trail users only, and emergency access for maintenance staff and emergency services.

CIRCULATION

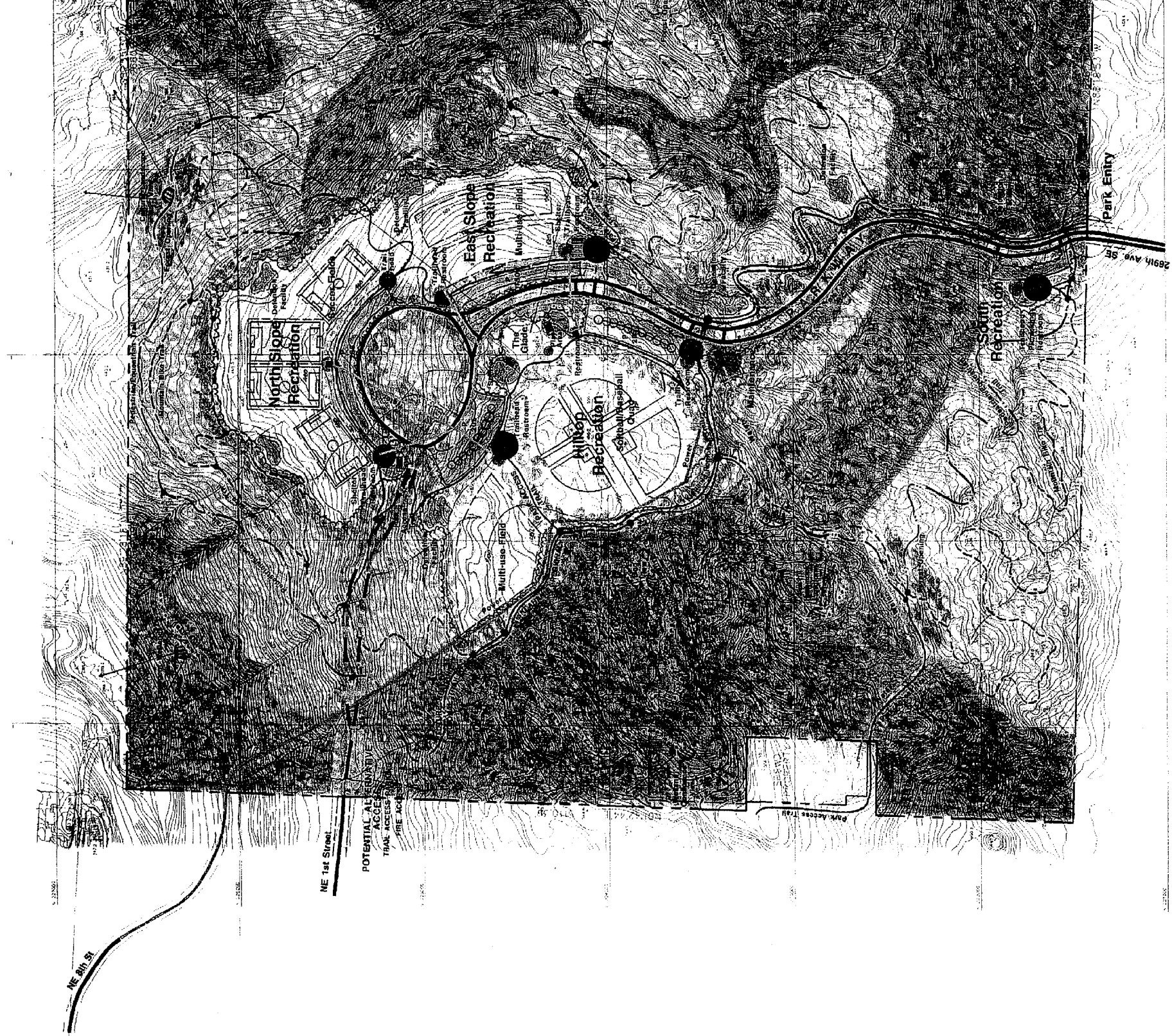
- Does not propose, nor is designed to accommodate, a continuous road through the park.
- Recognizes that the drive into and within the Park is part of the recreational experience.
- A one-way looped parkway circulation system is proposed.
- Circulation to the facilities is direct while providing an introduction to the intrinsic natural qualities of the Park's landscape and views, taking advantage of vistas while preserving special stands of vegetation.
- Crossovers are located to coordinate with parking lot entries.
- Potential for conflicts between vehicles and park users are minimized.

PHYSICAL CHARACTERISTICS

- Two 16-foot paved lanes, two-foot compacted shoulders with no parking.
- The narrow right-of-way of the one-way loop system, while more expensive to construct, allows for a more graceful meandering road alignment as well as access to recreational areas at different elevations. It limits habitat destruction and preserves of the natural feeling of the Park expressed by the topography and vegetation.
- A buffer separates the Parkway from the Klahanie Regional Trail.
- Signage along the road should be minimal and simple in expression.

PARKING

- Parking lots are located adjacent to the recreational area they serve and within close proximity to one another for shared access and for parking overflow, thus providing the most flexible accommodations for peak-use times.



- Within each recreational area, shared parking and the goal of providing parking within 300 feet of the activity, and topographical considerations, determined the lots' locations and sizes.
- The physical dimensions of the sports fields coupled with the hillside terrain prevent the consistent application of the 300-foot allowance from the parking lot to the furthest distance of the recreational field.
- A total of 840 parking spaces are distributed in five parking lots. Actual numbers vary within each parking lot based on the use within the recreational area. King County Parks' preferred standard of 50 spaces per sports field has been reduced to 40 spaces per sports field.
- All parking lots are terraced with respect to the terrain and access to the recreational areas.
- A minimum buffer of 30 feet between the road and parking lot provides a way to present the naturalness of the park through buffering the parking lots, a transition between the elevation of the road and the elevation of the parking lot, and the flexibility for preserving significant stands of vegetation.

#### LANDSCAPE ENHANCEMENT

- Preserve significant vegetation
- Reforest and enhance with indigenous native plant materials

#### RECREATIONAL LAND USE

Under the guidance of the *Executive Proposed King County Park, Recreation and Open Space Plan*, the Master Plan delineates the park into three general land use zones: an Active and Passive Recreation and Support Services Zone, a Special Management Zone/Trail Network, and a Natural Zone.

#### ACTIVE AND PASSIVE RECREATION AND SUPPORT SERVICES ZONE

(80 ACRES - 13 PERCENT OF PARK)

The Active and Passive Recreation and Support Services Zone encompasses the core area of the Park. Located in the central and north-central area of the Park, this zone has the greatest concentration of gentle slopes (0-5 percent) and least sensitive landscape. At 80 acres (13 percent of the Park), it is the smallest land use zone. In this acreage are not only the active, passive, and support services identified

by the council, but also the storm drainage facilities necessary for their development. This intensity of use within 80 acres is achieved by concentrating development, sharing facilities, and terracing steep grades.

Within this zone are four recreational areas, each providing a range of active and passive recreational opportunities as well as support services. These 'sub-parks' result from, topographical considerations, the dimensional requirements of the sports fields as well as from access needs. While geographically close to each other, each of the recreational areas is sited at a different elevation. Elevational differences between these areas range from 42 feet between the Hilltop Recreation and the East Slope Recreation Areas, to 67 feet between the Hilltop Recreation and the North Slope Recreation Areas. A summary of each of the recreational areas follows.

#### SOUTH RECREATION

Primary focus is access to the trail system.

Located at the Park's entry for ease of access to the trails.

Facilities:

- Primary Trailhead
- Shelter
- Restroom
- Northwest Passage trails
  - 1 - Pedestrian/Equestrian
  - 1 - Mountain Bike
- Stormwater detention facilities.
- Total parking spaces - 75
  - 15 to 25 for the picnic shelters.
  - 50 to 60 spaces for equestrian trailer parking.

#### EAST SLOPE RECREATION

Primary focus is active and passive recreation.

Facilities:

- Five acres of multi-use fields, terraced, with the lower field being ADA accessible via ramps.
- Primary trailhead offers central access to trail system.
- Tertiary trailhead
- Shelter

- Two restrooms - located within 300 feet, serving trailheads and the multi-use fields.
- Stormwater detention facilities.

Total parking spaces - 150

80 spaces for the sports fields.

15 to 25 spaces for the picnic shelters.

30 spaces are allocated for trail users (20 for primary trailhead, 10 for tertiary trailhead).

15 additional spaces to accommodate equestrian trailers.

#### NORTH SLOPE RECREATION

Primary focus is active and passive recreation.

Facilities:

- Four soccer fields, all ADA accessible, all at same elevation
- Secondary trailhead
- Tertiary trailhead
- Shelter
- Two restrooms
- Stormwater detention facilities
- Total parking spaces - 205

160 for the sports fields.

15 to 25 spaces for the picnic shelters.

20 spaces for the trailheads (10 for secondary trailhead, 10 for tertiary trailhead).

#### HILLTOP RECREATION

Primary focus is active and passive recreation.

All development is ADA accessible.

Facilities:

- Softball/baseball quad - 3 Softball/1 Baseball
- Five acres of multi-use fields, unterraced
- Play area - 3000 square feet
- Three restrooms
- Primary trailhead
- Secondary trailhead

- Stormwater detention facilities
- The Glade - 3 acres
  - Two shelters
  - Large open lawn for informal play
  - Potential opportunity for:
    - Small Festivals - Assuming use of all sports fields on the Hilltop at the same time, access to 175 parking spaces can accommodate 525 people.
    - Views of Mount Si, Rattlesnake Mountain, Tiger Mountain, and the Snoqualmie River Valley.
- Maintenance Building
  - Sited for visual presence (park safety) and against hillside to allow visual separation from the recreation areas. This location is near high use, high maintenance areas and trailhead. It serves as the central point for distributing park information as well as for providing telephone access.
- Total parking Spaces - 410
  - 240 spaces for sports fields.
  - 30-50 spaces for shelters.
  - 30 spaces for the trailheads (20 for primary trailhead, 10 for secondary trailhead).
  - 15 spaces for the play area.
  - 75 spaces for festival occasions and/or equestrian parking

#### LANDSCAPE ENHANCEMENT

- Overall character is primarily lawn for fields and picnicking.
- Create meadows on the edges of the lawn areas to introduce new wildlife habitat.
- Reforest between different land uses.
- The Glade plantings are a combination of natives and non-natives. Non-native plant material include specimen trees, shrubs and groundcover selected for their seasonal interest and non-invasive characteristics. Seasonal interest should be selected to correspond to seasonal events at the Park.

## SPECIAL MANAGEMENT ZONE - TRAIL NETWORK

(248 ACRES - 39 PERCENT OF THE PARK)

This zone includes the transition areas that lie outside the prime development area of the Active and Passive Recreation and Support Services Zones. The Special Management Zone, with its moderate slopes and lack of sensitive areas, could potentially support more development. However, the County's vision for the Park limits active development to no more than 80 acres (excluding roadways). This zone, at 248 acres (39 percent of the park), is the second largest land use zone. Management and use of this area will focus on corridors for the different types of trails recommended in the Park program.

Five trail types are presented in the Master Plan. In addition to the Program's trail user-type definitions, equal user group trail lengths were considered a planning objective. The equal-length objective was applied primarily between the Equestrian/Pedestrian and the Mountain Bike Trails, with consideration also given to the Hiking Trail. Together these three trail systems provide 12 miles of recreation opportunities.

A summary of the trail types follows.

## KLAHANIE REGIONAL TRAIL: (1 MILE)

- Extension of the Klahanie-East Sammamish Regional Trail into the Park parallels the Parkway and provides ADA accessibility. The trail also serves as an internal link to the different trail types and land uses within the park. The 12'-wide multi-use trail is paved with hard surfacing for pedestrian use and mountain bikes. An adjacent, parallel, soft-surfaced trail is provided for equestrian use.
- Buffers between the trails vary to allow flexibility in siting the trail alignment, to accommodate grading requirements, and to preserve significant vegetation.

## PARK ACCESS TRAILS:

- Primarily located within the Active and Passive Recreation and Support Services Zone, these trails link the 'sub-parks within the Park. The trails in this zone are hard surfaced while the trails within the Special Management - Trail Network Zone are soft surfaced.
- At certain points along the parkway crossings will occur. Three crossings trail users are integrated with vehicular access to the parking lots at points of good visibility and reduced speed. Signage for both vehicles and pedestrians will reduce the potential for conflict.



One crossing just inside the Park entry provides access from the Klahanie Regional Trail to the South Recreation Area, and access for the equestrian/pedestrian users from the South Recreation Area to the east side trail system.

Two crossings are anticipated between the Hilltop Recreation Area and the East Slope Recreation Area.

#### MOUNTAIN BIKING TRAIL: (4 MILES)

- This trail type takes advantage of the topographic variation on the site, and provides challenge and interest through a meandering, looped route.
- The Mountain Bike Trail system is separate from other trail systems but will intersect or merge with them (Klahanie/Park Access trails) at given points.
- Mountain Bikes will have designated areas of the park.

#### EQUESTRIAN/PEDESTRIAN TRAIL : (4 MILES)

- This trail seeks to accommodate horses and hikers on one fairly broad, soft-surfaced trail where the different user groups can easily see and move around one another. This trail takes advantage of the site's topography without over-exposing the trail to erosion problems.

#### HIKING TRAIL: (3.2 MILES)

- This trail is planned to carry only hikers into the more sensitive parts of the site where they can observe and learn from the Park's natural and cultural interpretive features. The trail is soft-surfaced for the most part, and will include boardwalks or bridges as necessary to protect the surrounding habitat.
- Occurs within the Natural Zone, accessed via other trails
- ADA-accessible trail, with maximum five percent slope on the hilltop area providing access to the multiple wetlands, the bog, and hummock landforms. Other hiking trails may be accessible to disabled individuals looking for a physical challenge.

#### NORTHWEST PASSAGE TRAIL

- This existing trail continues within the Park as two separate trail types: equestrian/pedestrian and mountain bike. Both trails merge into a soft-surfaced park access trail connecting to an easement on the western portion of the SPWSD's property, then to a trail along the Beaverdam road right-of-way along NE 1st Street.



### INTERPRETIVE OPPORTUNITIES

Interpretive observation points and signage will help to enhance the public's understanding and appreciation of the site's natural systems. Interpretive opportunities are made available to all users at points along the entire trail system. Interpretive features include:

- Emergent wetland in the far northwest corner of the Park.
- View of the rural landscape at the north edge of the Park.
- Stream restoration at the northeast corner of the park. The stream currently exhibits erosion similar to urban conditions.
- Cultural/geologic view - Views of Mount Si, Rattlesnake Mountain, and Tiger Mountain as well as the Snoqualmie River valley.
- Natural stream view - Class 2 stream with salmonids in natural state.

### LANDSCAPE ENHANCEMENT

- Preserve of existing forest (the limited number of conifers are preserved wherever possible).
- Clear areas at main trail intersections and at view points.
- Selectively prune and clear trees to create views and to increase the diversity of the understory.

### NATURAL ZONE

(300 ACRES - 48 PERCENT OF PARK)

The Natural Zone focuses on wildlife habitat conservation consistent with conditions of funding from the IAC. During the course of the Concept Phase of the master planning process, approximately 300 acres (48 percent of the site) were identified as required for meeting grant conditions. Proposed activities focus on:

- Observation and research.
- Protection, preservation and wildlife habitat enhancement.
- Minimal site disturbance and maintenance in areas where visitor safety is at risk (e.g., downed trees, unstable slopes, subsidence, etc.)
- Phased elimination of selected existing trails and revegetation.
- A number of minimal breaks within the Natural Zone are required in order to provide access to the other regions of the park, such as along the

Parkway and Klahanie Regional Trail, the Equestrian/Pedestrian and Mountain Bike Trail, and along the Northwest Passage Trail.

The width of the crossings should be kept to a minimum for access but should allow for the area needed to align the elements both functionally (grading) and aesthetically (avoiding trees, providing views, etc.).

#### LANDSCAPE ENHANCEMENT

Wildlife habitat enhancement is aimed at restoring and protecting existing conditions and protecting against future degradation of the park's natural resources.

#### UTILITIES

As with road access to the Park, utility access is currently non-existent. In addition, opportunities to connect to utilities such as water and sewer are limited because the Park site lies outside the Growth Management Act (GMA) urban boundary. The following recommendations are based on the current understanding of utility access, availability, and site conditions.

#### WATER

- Water is planned to come from the SPWSD's proposed holding tank.
- The water line will need to extend through the natural area within the Equestrian/Pedestrian and Mountain Bike Trail easement. In lieu of the SPSWD line, a well would need to be dug. Because most development is located above the 550-foot elevation, the Park would likely need a pump house with pump and a utility extension.
- Unless and until such a utility extension is constructed by SPWSD, water will need to come from wells or through a cooperative agreement with nearby developments.

#### SANITARY

- Due to the GMA's restrictions, septic systems are the only possibility for the Park.
- Alternative methods, such as biological contactors or mound systems, may be necessary due to the shallow nature of the soils.

#### POWER AND TELEPHONE/CABLE

- NE 8th Street has the only currently available three-phase power needed to supply the Park. Three-phase power is necessary for lighting any ballfields.
- Viacom cable lines run along the Redmond-Fall City Road, 224th Avenue NE, and along NE 8th Street ending at 258th Avenue NE. Cable lines have also been extended to the Trossachs and Beaverdam developments.
- Telephone service is provided by US West with lines located along the Redmond-Fall City Road, along 224th Avenue NE, and at the Trossachs and Beaverdam developments.

#### GAS

- Propane is proposed for use on the site.

#### STORM/WATER QUALITY DETENTION FACILITIES

- Based upon current King County regulations for water quality as well as for retention/detention facilities, it is estimated that about five acres of land are given to this purpose.
- The Master Plan proposes that the detention basins be dispersed throughout the developed portion of the Park rather than concentrated in one area in order to fit the geography of the site. Infiltration systems at the edge of the sports fields are recommended.

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**DETAILED PARK PROGRAM & DESIGN GUIDELINES**

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## DETAILED PARK PROGRAM AND DESIGN GUIDELINES

### INTRODUCTION

The Detailed Park Program and Design Guidelines present the program elements established by King County Council Motion 9714 as well as additional program elements that are needed to support park development. Design Guidelines are intended to establish a unified environment for the Park landscape within the contextual setting as the park develops over time.

The Detailed Park Program and Design Guidelines section is organized by systems of related elements:

- Vehicular systems
- Trail Systems
- Sports Fields & Play Area
- Architecture
- Lighting, Signage & Site Furnishings
- Utilities

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## VEHICULAR SYSTEMS

### PARKWAY

The Parkway is the primary roadway access to parking areas for motorized vehicles and secondary service access for park maintenance vehicles and emergency vehicles.

Design Treatment: Two-way parkway system with separated one-way lanes

Size: 20' cross section, each direction

(16'-wide pavement, 2' paved shoulder each side, additional 4' shoulder along median edge)

Design Speed: 25 miles per hour

Posted Speed: 15 miles per hour

Relationships: Coordinate the location of crossovers for access to parking lots and for ease of changing directions on one-way road.

Design Guidelines Align and grade road to respond to the existing landscape and to avoid removal of stands of large trees. Shoulders should be structurally reinforced to support weight of emergency vehicles and should be landscaped with low growing, non-woody vegetation.

The following design guidelines are taken from *King County Road Standards* (1993) which are currently in effect. Relevant sections of the standards are cited in parenthesis at the end of each paragraph.

Parkway Classification: Classified as a Minor Commercial Access Street (2.04), but the speed and character is closer to a residential street. Maximum grade is 12 percent. Design for low speed and low speed curves. Intersection angles should range from between 85 and 95 degrees (2.10). Spacing between intersections shall be 100 feet or more. Horizontal curvature (2.05) shall meet the following standards:



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	Residential Street	Minor Commercial Access Street
Design speed	25	30
Horizontal curvature for 6% superelevation, radius (ft.)	135	273
Horizontal curvature for 4% superelevation, radius (ft.)	145	
Horizontal curvature for 2% superelevation, radius (ft.)	155	
Horizontal curvature, normal crown section, radius (ft.)	180	
Stopping sight distance	150	200
Entering sight distance	365	430
Minimum run-off length	80	

**Median:** Design median so as not to limit turning radii or sight distance at intersections. Any structures within the median will be yielding or breakaway.

**Pavement:** Design using currently accepted methodology that considers the load-bearing capacity of the soils and the traffic-carrying capacity requirements of the road. Pavement thickness shall be based on soil strength parameters reflecting actual field tests and traffic-loading analysis. The analysis shall include the traffic volume and axle loading, type and thickness of roadway materials, and the recommended method of placement. Pavement sections shall not be less than those required for neighborhood collectors (4.03). Investigate use of alternative materials for paving, e.g., porous paving materials that meet the design requirements for the road and are acceptable to the County.

**Denied Access Points:** Closed line of bollards that deny motor vehicle access to an easement, tract, or trail, except

for maintenance or emergency vehicles. These shall include one or more fixed bollards on each side of the travel lane and removable, locking bollards across the travel lane. Spacing shall provide one bollard on centerline of trail and other bollards spaced a minimum 50 inches on center on trails 10 feet-wide or less. Spacing shall be 60 inches on center on trails wider than 10 feet. Bollard design shall be in accordance with Drawing No. 5-013 or other design acceptable to the Engineer or Reviewing Agency. No Fire Apparatus Access roads shall be blocked in this manner without the concurrence of the Fire Marshall. Additional bollards shall be located at least 10 feet from the paved edge of roadway (5.08)

Parking lot access should be clearly visible. Design turning radii to allow for bus and horse trailer access.

Furnishings: Design entry sign to identify and define the Park experience and suggest the nature of the Park. Other signage may be needed to direct visitors, regulate traffic and identify park regulations.

Lockable perimeter fence/gate at park entry. Minimal signage along the road. Directional signs should be easy to read, highly visible, and designed for the speed limit.

Trail crossing signs located where appropriate. Trail crossing signs and pavement markings where appropriate (refer to Manual on Uniform Traffic Control Devices [MUTCD] standards).

Landscape: 30-foot minimum buffer between parking lot and road. Use native plant materials in a plan that reflects the forested landscape yet provides for visual surveillance and safety.

## PARKING

### Parking Criteria:

Sports fields - 40 spaces per field

Multi-use field - 80 spaces per 5-acre site

Shelter/Picnic:

Parking - 1.5 spaces/table

Trailhead Parking:

10 spaces per secondary/tertiary trailhead

20 spaces per primary trailhead

Provide equestrian trailer and bus parking

- Posted Speed: 10 miles per hour for all parking lots
- Relationship: Within 300-400 feet of recreational activities
- Design Guidelines
- Provide pedestrian circulation along perimeter of parking lot.
  - Grading: Entry to parking lot, five percent maximum. Minimum cross slope for parking bays per American Disability Act (ADA). Barrier-free parking per ADA requirements.
  - Pavement: Same principle as Parkway. Design for no curbs. Where curbs are desired or necessary, use extruded asphalt curbs. Use curb stops to control vehicles. Bollards may be used where appropriate.
  - Landscape: 30-foot minimum buffer between parking lot and road. Use native plant materials in a plan that reflects the forested landscape yet provides for visual surveillance and safety. Apply the same landscape principles to terraced parking lots.

## TRAIL SYSTEMS

Recommendations for trail guidelines address planning and construction standards that respond to the ecological and social needs of the Park and its users. The ecological objective for the trail system is to minimize direct and indirect impacts to the Park's vegetation, wildlife, water and soil resources. The social objective is to provide degrees of accessibility relative to the recreational experience.

The guidelines presented here recommend the final trail design and follow the latest criteria for outdoor recreational accessibility. Guidelines for Park Access Trails, Equestrian/Pedestrian, and Hiking Trails summarize information from the publication: *Recommendations for Accessibility Guidelines: Recreational Facilities and Outdoor Developed Areas*, prepared for the U.S. Architectural and Transportation Barriers Compliance Board, July 1994.

### DESIGN GUIDELINES FOR MINIMUM IMPACT

Minimum impact means developing a trail system that is aligned to avoid removal of large trees, is well-drained, requires low maintenance, is not prone to erosion, minimizes disturbance to flora and fauna, and deters off-trail exploration.

- Trails located on steep sideslopes will make use of switchbacks and climbing turns.
- Sidehill slopes in excess of 40 to 50 percent may require additional structural support, such as cribbing or tie-back walls.
- Upon the recommendation of biological and engineering specialists, hiking, equestrian and bicycle trails may contain structural water crossings or culverts.
- Trails constructed on steep sideslopes will have erosion-control devices such as water bars, culverts, parallel ditches and/or drainage dips. Construction of such drainage devices will help to remove water from trails before it pools or gathers enough force to cause significant erosion.
- Trail tread on steep sideslopes will be built with a two to three percent outslope. This will ensure that surface water runoff will simulate natural drainage conditions, rather than pool on the trail.
- The drainage objective for trail planning is to align a trail to maximize sheet flow in harmony with the site's hydrologic patterns to avoid pooling and puddling. Trail tread on relatively flat terrain may be crowned to achieve a two to three percent slope from the centerline of the trail tread.
- Within a trail corridor, all healthy trees greater than six inches in diameter may not be removed.
- Trees greater than six inches in diameter may be limbed within a trail corridor to achieve height and width clearing limits.

- If trails are permitted within wetland environments they will be elevated.
- Trails should be located to avoid areas with poorly drained soils, such as Seattle Muck or Shalcar Muck. For very short trail segments, trail placement on such poorly drained soils may be appropriate as long as structures such as turnpikes are incorporated into the trail design. (A turnpike is an elevated trail structure that facilitates proper drainage. It consists of two parallel logs or timbers, between which is placed clean [free of organic duff] fill which is crowned to form the trail tread. If soils or drainage conditions are poor, the turnpike is capped and crowned with compacted gravel.)
- New trails will be located to minimize impacts to plants and wildlife.
- Off-trail use will be discouraged through the development of appealing and intuitive trail alignments and appropriate surfacing. Strategically placed vegetation, boulders, and logs are preferred methods of encouraging recreational users to stay within the trail corridors.

#### TRAIL CONSTRUCTION METHODS

Construction methods should implement techniques and technology to minimize disturbance to vegetation and wildlife. Construction methods include new construction and obliteration techniques. Trail construction methods will differ depending on Parks' decision to use professional construction methods (i.e., private contractors and/or King County trail crews) or volunteer/community site-steward construction methods. Professional trail construction may make use of machinery (such as trail excavator machines), while volunteer construction methods will rely on hand labor. To ensure a minimum of environmental impact, it is imperative that construction documents contain very detailed information pertaining to allowable equipment and preferred construction methods. In general:

- Whenever possible, borrow pits will be located within the trail corridor, to ensure that the mineral soil used for trail construction and reconstruction does not introduce organic material or seeds not common to the site.
- When designing and constructing the trails, all attempts should be made to work with the existing topography to minimize cuts and fills and to avoid excessive storm drainage requirements and structures.
- Trails will be aligned, constructed, and maintained over time to limit erosion and minimize impact to riparian zones and aquatic resources.
- The use of large machinery and trucks to transport construction materials will be limited to roads and parking areas during construction. Machinery limitations will be identified in the construction documents

#### OBLITERATION TECHNIQUES

Certain portions of the pre-existing Section 36 recreational trail system are either ecologically unsustainable or are not scheduled to be part of the site's new trail system.

Such trails must be professionally “erased” from the landscape using special obliteration/restoration methods. Typically, trail obliteration and restoration consists of the following:

- Trail tread soil is decompacted.
- Pre-existing sideslope is recontoured to simulate topographic conditions prior to the establishment of the trail.
- Woody debris, organic material, small nurse logs, etc., are scattered to simulate groundcover conditions adjacent to the trail corridor.
- Native plants and/or seeding are added as appropriate.

### KLAHANIE REGIONAL TRAIL

The following guidelines are taken from the *King County Regional Trails Plan*, October 1992. The main trail is for non-motorized wheeled users and pedestrians. The equestrian trail is separate from the main trail.

#### Main Trail

Grade:	Preferred grade of two percent to three percent not to exceed five percent.
Width:	12' preferred paved surface 2' soft shoulders
Clearing:	Horizontal - 11' from trail centerline Vertical - 8'
Trail Surface:	Asphalt paving
Trail Edges	Plant buffer with native plant materials to allow surveillance and safety.
Trailhead:	Trailheads should provide signage with the Universal Design Symbols and provide adequate information on trail features for all users.

#### Equestrian Trail

Grade:	18 percent maximum (12 percent preferred)
Width:	8' width
Clearing:	Horizontal - 7' from trail centerline Vertical - 10'
Trail Surface:	Soft surface
Trail Edges:	Plant buffer with native plant materials to allow surveillance and safety.
Trailhead:	Trailheads should provide signage with the Universal Design Symbols and provide adequate information on trail features. Include a hitching post.
Design Guidelines:	Minimum sight distance of 50'. Buffer between the main trail and the equestrian trail varies. Rest areas where appropriate with hitching posts for equestrian users.

**PARK ACCESS TRAIL**

Access trails are connectors between trail systems and to existing facilities in the Park. These trails will vary depending on use and terrain, and they should maintain the criteria of the trails they are accessing or connecting. Connectors are useful in creating multi-loop systems by integrating shorter routes into a larger loop trail.

Path Type: Outdoor Recreation Access Route

Level of Development: High to Moderate

Degree of Access: Easy to Moderate

Width: Preferred width is 5' (minimum) with 8' maximum

**Outdoor Recreation Access Route Standards:**

	<b>Easier Access</b>	<b>Moderate Access</b>
<b>Trail width (min.)</b>	48"	36"
<b>Sustained running grade (max.)*</b>	5%	5%
<b>Maximum grade allowed: **</b>	8%	10%
<b>For a maximum distance of:</b>	30'	50'
<b>Cross slope (max.)</b>	3%	3%
<b>Passing space interval (max.):</b>	200'	300'
<b>Rest area interval (max.):</b>	400'	900'
<b>Small level of changes (max.)</b>	1/2"	1/2"

\* No more than 20% of the total length of the outdoor recreation access route shall exceed the maximum sustained grade.

\*\* The measurement of a maximum grade and cross slope should be made over a 24" measurement interval to correspond to the footprint of a wheelchair operating in that environment.



- Clearing: Horizontal - 5' from trail centerline  
Vertical - 10'
- Trail Surface: Trail surface should be constructed of a smooth, slip-resistant material, (i.e., concrete, asphalt or compacted soils with soil cement); type will depend on appropriate recreation use and site conditions. Alternatives to wood for elevated trails are recommended and should be explored based on the availability of the resource, the impact on the environment, and maintenance.
- Trailhead: Trailheads should provide signage with the Universal Design Symbols and adequate information on trail features in order for individuals to make a decision. Signage should include maps that orient the user and locate emergency services.
- Design Guidelines: Align and grade trails for minimal use of handrails. Provide edge protection for all maximum-grade path segments and landings. All raised boardwalks should be constructed of a skid-resistant material with curbs or kickrails. Guardrails, fences and other safety barriers should be determined by function. Signage should use the Universal Design Symbols and provide adequate information on trail features in order for individuals to make decisions.

## PEDESTRIAN AND EQUESTRIAN TRAIL

Combined use by horseback riders and hikers

Path Type: Recreational Trail

Level of Development: Moderate to Minimal

Degree of Access: Easy to difficult

Trail Width: 5'

Outdoor Recreation Trail Design Standards:

	Easy Access	Moderate Access	Difficult Access
Sustained running grade* (max.)	5%	8%	12%
Maximum grade allowed: ***	10%	14%	20%
For a maximum distance of:	30'	50'	50'
Cross slope** (max.)***	3%	5%	8%
Passing space interval (max.):	200'	300'	400'
Rest area interval (max.):	400'	900'	1200'
Level of Change	1"	2"	3"

\* No more than 20% of the total trail length shall exceed the maximum sustained grade.

\*\* Cross slope may not exceed 3% in maximum grade segments, or 5% in maximum grade segments on difficult access trails.

\*\*\* The measurement of a maximum grade and cross slope should be made over a 24" measurement interval to correspond to the footprint of a wheelchair operating in that environment.

Clearing: Horizontal - 5 1/2' from the trail centerline

Vertical 10' minimum.

Trail Surface: Hardened earth with a compacted mineral soil. Outslope of 2 percent to 3 percent. Log turnpikes or gravel may be used for

raised trails and boardwalks or culverts for stream crossings. Culverts should be reinforced and secured with rocks on gradients exceeding 10 percent. All equestrian trails will have structural crossings across significant surface water features. The goal is to minimize contact between horses and fragile riparian systems.

**Trailhead:** Trailheads should provide signage with the Universal Design Symbols and adequate information on trail features in order for individuals to make a decision. Include a hitching post for equestrian users. Signage should include maps that orient the user and locate emergency services.

**Design Guidelines:** Provide small rest areas that blend with the landscape. Interpretive areas may be larger in size but should maintain the natural character of the small rest areas. Control sight lines to site features and viewpoints. Align and grade trails for minimal use of handrails. Provide edge protection and safety rails commensurate with safety requirements and site conditions. Signage should use the Universal Design Symbols and provide adequate information on trail features in order for individuals to determine if the trail is appropriate for their abilities and their interest.

**HIKING TRAIL**

Hiking trails provide access for park users to the sensitive and remote areas of the park. This trail provides a range of difficulty determined by slope, distance, and trail surface conditions. These trails are the most primitive in the system and should be the least intrusive to the environment.

Path Type: Recreational Trail

Level of Development: Minimal

Degree of Access: Easy to difficult

Outdoor Recreation Trail Design Standards:

	Easy Access	Moderate Access	Difficult Access
Trail width (min.)	48"	36"	28"
Sustained running grade* (max.)	5%	8%	12%
Maximum grade allowed: ***	10%	14%	20%
For a maximum distance of:	30'	50'	50'
Cross slope** (max.)***	3%	5%	8%
Passing Space Interval (max.):	200'	300'	400'
Rest Area Interval (max.):	400'	900'	1200'
Level of Change	1"	2"	3"

\* No more than 20% of the total trail length shall exceed the maximum sustained grade.

\*\* Cross slope may not exceed 3% in maximum grade segments, or 5% in maximum grade segments on difficult access trails.

\*\*\* The measurement of a maximum grade and cross slope should be made over a 24" measurement interval to correspond to the footprint of a wheelchair operating in that environment.

- Clearing:** Horizontal clearing should be limited to 3' from the centerline of the trail and within this area only vegetation with branches over 1/2" diameter and 12" tall should be removed for visibility and safety.
- Vertical clearing minimum is 80" (6'8").
- Trail Surface:** Natural earth with hardening as needed is the preferred trail surface. Where raised trails are necessary, an elevated system or turnpike may be used. In order to ensure the most accessible trails, stairs should only be constructed where necessary. When stairs are needed, a variety of natural materials including stone and logs may be used. If windfall can be crossed without difficulty, it can be left in place.
- Trailhead:** Trailheads should provide signage with the Universal Design Symbols and adequate information on trail features in order for individuals to make a decision. Signage should include maps that orient the user and locate emergency services.
- Design Guidelines:** Provide small rest areas that blend with the landscape. Interpretive areas may be larger in size but should maintain the natural character of the small rest areas. Control sight lines to site features and viewpoints. Align and grade trails for minimal use of handrails. Provide edge protection and safety rails commensurate with safety requirements and site conditions. Signage should use the Universal Design Symbols and provide adequate information on trail features in order for individuals to determine if the trail is appropriate for their experience and interest.

## MOUNTAIN BIKING TRAIL

Mountain Biking Trails should be designed for a diversity of challenges. The following planning and design guidelines are taken from *Mountain Bikes on Public Lands: A Manager's Guide to the State of the Practice* (September 1990).

Grade	Easiest	More Difficult	Most Difficult
Tread Width	24"	12-24"	12"
Max. Sustained Pitch	5%	10%	15%
Max. Pitch	10%	30%	+30%
Length	100'	300'	500'
Turning Radius	6'	3'	2'
Clearing Width	48"+	36-48"	36"
Height	8'	8'	8' max.
Trail Surface	Relatively smooth	Sections of relatively smooth	Varied-some portage required

## Trail Edge:

The vegetation should be maintained at a 8' maximum level for head clearance. Align trails to avoid removal of large trees. In steep or hazardous areas the trail width should extend 6". Windfall trees may be left in place.

## Trail Surface:

Constructed of hardened earth with a crowned profile and a cross slope for positive drainage. Water bars and ditches will be installed as needed. In areas inclined to be wet or mucky, a boardwalk or turnpike will be designed.

**Trailhead:**

Trailheads should provide signage with the Universal Design Symbols and adequate information on trail features in order for individuals to make a decision. Signage should include maps that orient the user and locate emergency services.

## SPORTS FIELDS AND PLAY AREA

### 1 - SOFTBALL/BASEBALL QUAD

3 Softball fields and 1 Baseball field.

**Dimensions:** Softball - King County standard, 75' baseline with moveable base pegs, 285' outfield fence line, 65' mound.

Baseball - King County standard, 90' baseline, 60.5' mound, 330' fence line.

Distances between field fence lines in quad 50' allow for dugout and bleachers.

**Field Surfacing:** Per King County standard.

**Design Guidelines:** ADA Accessible. Reference *Recommendations for Accessibility Guidelines: Recreational Facilities and Outdoor Developed Areas* (July 1994). Provide 50' buffer between uses and from edge of steep slopes. No outfield fencing. Two sets of metal bleachers per field on concrete pads. Concrete dugouts. Concrete mowing strip under fencing. Signage for field identification. Select lights with the latest technology to minimize glare and spill light. Irrigate and underdrain fields.

### 4 - SOCCER FIELDS

**Dimensions:** King County standard - 210' x 360' each, joint fields with 15' spectator areas on the sidelines and 30' behind each goal.

**Field Surfacing:** Per King County standard.

**Design Guidelines:** ADA Accessible. Reference *Recommendations for Accessibility Guidelines: Recreational Facilities and Outdoor Developed Areas* (July 1994). Provide 50' buffer between uses and from edge of steep slopes. No outfield fencing. Two sets of metal bleachers per field. Signage for field identification. Select lights with the latest technology to minimize glare and spill light. Irrigate and underdrain fields.



#### 10 ACRES OF MULTI-USE FIELDS

- Dimensions:** Fields for mini-mod soccer, T-ball, practice sessions, pick-up games; frisbee, etc. Dimensions of multi-use fields vary by user group. Minimum width dimension of 180'. Field surfacing per King County standard.
- Field Surfacing:** Turf per King County standard.
- Design Guidelines:** Irrigate and underdrain fields.

#### LARGE PLAY AREA

- Capacity:** Design for two developmental age groups:  
Pre-school ages of 2-5 years and elementary/middle school ages 5-10 years
- Size:** Large play structure - +/- 3000 square feet.
- Design Guidelines:** ADA accessible for children and adults. Final program and design should reference *Recommendations for Accessibility Guidelines: Recreational Facilities and Outdoor Developed Areas* (July 1994). Design the play area so structures are integrated into a landscape of play. Incorporate pathways as part of the play experience, such as riding tricycles. Incorporate landforms for informal play activities.
- Locate away from vehicular traffic. Orient for sun and shade opportunities. Plan seating for parents. Provide visual connections for surveillance of activities. Locate in close proximity to restroom and drinking fountain.
- Integrated Play Structures - *ASTM Play Area Handbook*.

## ARCHITECTURE

Unlike other County Parks, such as Beaver Lake, Section 36 has no strong presence of historical structures or reminders of the past that suggest an architectural framework for future construction. Current and future development surrounding the Park offers a variety of building forms, styles and materials that may not be appropriate for the site. This lack of a clear architectural direction creates an opportunity to define a new style specific to the Park that responds to the essence of the place, taking into consideration at the same time the strong, memorable character of the park at Beaver Lake. With advanced planning, an architectural style can be developed for all elements - shelters to signage - to tie them together through common shapes, finishes and materials.

Structures and site furnishings should express the goals presented in the Master Plan through a combination of contemporary and historic materials and styles. For example, preserving the existing landscape and its ecology may be reflected in the use of skylights or translucent roofs. Materials used in construction should be of local origin, tying the structures to their larger setting, and should be environmentally-friendly. Colors used on the buildings should work with the natural materials to create a sense of pride and of place.

Currently, a split-face concrete block restroom is the only architectural standard of King County Parks. Variations within the standard materials should be explored. Design of the structures need not be identical, but the materials should apply consistent materials. The uniqueness of each structure could represent the development of the Park over time, making the structures identifiable, timeless, and creating memorable spaces.

### COVERED PICNICKING FACILITIES

#### Medium Group Rental facilities (Covered Shelter)

- Capacity:** Group and individual users. Small covered picnic shelter for 60 to 100 persons maximum.  
10 to 12 individual picnic tables for groups of six persons.
- Size:** 1500 square feet
- Relationships** Distance to parking - 150' to 200' preferred, 300' maximum  
Restroom - preferred service radius 300' to 400' maximum from restroom
- Utility Requirements:** Water, light, duplex receptacles in covered shelters.
- Design Guidelines:** All structures should display similar architectural character. Site structures should have minimal impact on environment. All facilities and access will be ADA accessible.  
Furnishings: Grills, prep table, water, light, electrical outlets  
Tables and grill should be ADA accessible.  
Trash receptacles - 1 per 4 tables

### FESTIVAL EVENTS

Located at the Glade on the Hilltop Recreation Area, shelters and open lawn will provide a space for festival events, such as gatherings of people, displays of information, food concessions (pre-prepared food), entertainment (music, songs, dance, story telling), as well as providing a gathering place for guided interpretive walks and tours.

Capacity: 525 people

Use of shelters - 120-200 persons

Other potential facilities: (not provided by Parks)

Large tent structure - portable or rented

Information/display tent - portable or rented

Concession area(s) with portable booths

System Requirements: Permanent electric, water, and telephone service

Relationships: Locate within 300' of parking lot and adjacent to restrooms

Design Guidelines: Provide service and emergency vehicle access. Minimum furnishings will be provided by Parks Department, i.e., waste receptacles. Additional furnishings provided by organizer such as; portable benches, temporary stage and equipment, seating for large tent structure.

### PARK MAINTENANCE FACILITY

The park maintenance facility will serve Section 36 and will act as a visible presence indicating that the park is staffed. However, it is not envisioned as a park information staff office. The size is to match that of the Beaver Lake facility without the fuel tank.

Main Facility Size: Total size - 1484 square feet

(2) storage bays 12' x 27' = 324 square feet

(1) exterior bay 12' x 27' = 324 square feet

Workshop area 16' x 16' = 256 square feet

Storage space 5' x 10' = 50 square feet

Staff lunch room 10' x 15' = 150 square feet

District office 10' x 10' = 100 square feet

#### Restrooms:

Men's with shower 8' x 10' = 80 square feet

Women's with shower 8' x 10' = 80 square feet

Lockers and changing areas 10' x 12' = 120 square feet

#### Service Yard and Parkin:

Minimum 6,500 square feet, fenced and lighted

8 parking spaces

Utilities:

- 1 handicap space
- Power and telephone
- Septic system
- Storm drain with oil separators
- Fire protection - sprinklers
- Security- fire and burglar alarm system

#### RESTROOMS

King County Parks and Recreation Standard Restroom Facility

Capacity: Women's - 2 water closets  
Men's - 1 urinal and 1 water closet  
Janitorial room in center

Size: 20.5' x 27' = 575 square feet  
10' ceilings  
4' walks adjacent to the building  
4' roof overhang over walks

Materials: Concrete block walls with metal roof

Equipment and System Requirements:

Ventilation, interior and exterior lighting, plumbing, heating. Heavy duty fixtures, metal mirrors, changing tables, waste receptacles, handrails, maintainable finishes and surfaces. Drinking fountain. Outdoor lighting at the entry as well as motion detecting security lighting at the rear of the building is part of the standard restroom design.

Design Guidelines: Locate restroom no closer than 75' to picnic sites and play areas. Coordinate architectural character and colors with other structures on site. Provide bike racks.

SECTION 36 REGIONAL PARK  
Master Plan

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## LIGHTING, SIGNAGE AND SITE FURNISHINGS

A unified system for the different types of lighting and signs used throughout the Park will add greatly to the sense of a coherent environment. Simple yet sophisticated designs used consistently will reduce the amount of visual clutter and will present an image of quality.

### LIGHTING

#### SPORTS FIELDS

Where sports fields lighting is determined to be necessary, lighting will be installed that uses the latest technology to minimize glare and reduce spill light.

#### PARKWAY AND PARKING

Illumination will be installed at road intersections, pick-up/drop-off locations, and areas where key signage is located. Illumination intensity and uniformity shall conform with current King County design practices. Luminaire fixtures shall be consistent with fixtures maintained by the local electrical utility. Both Parkway and parking lot lighting will be of one type.

### SIGNAGE

#### ENTRY

The entry sign will be designed to define the Park experience and to suggest the nature of its character. Main information on the sign shall identify the Park, have the King County logo, and identify the King County Parks and Recreation Department. Other signage may be needed to direct visitors, regulate traffic, and identify park regulations.

#### PARK REGULATORY AND DIRECTIONAL SIGNS

Minimal signage will be installed along the Parkway. Directional signs should be easily seen, easily read, and designed for the speed limit. Trail crossing signs and pavement markings (refer to Manual on Uniform Traffic Control Devices [MUTCD] standards) where appropriate. Park regulation signage will convey King County Parks' standards, such as park regulations, parking restrictions, etc.

Trailhead signage will have information to indicate that all trails are accessible to varying degrees in order to allow people to make informed choices. Information on the sign will include trail grades, surfacing, challenges, and hazards.

#### INTERPRETIVE

At numerous points along the trail system there will be wayside exhibits with self-guiding interpretive signs that inform park users about natural or cultural features. Interpretive information should be presented in a manner that complements the feature of interpretation. Provide seating where appropriate.

Panel dimensions will vary with the amount of information and location of the sign. Panels with similar information should be consistent in dimensions and in graphic presentation. Panel materials should be of one type.

Heights of signs should be universally accessible, with step-ups at panels to assist children. Panel mounting heights will vary with details of location and relation to walks and paths.

## SITE FURNISHINGS

### BIKE RACKS

Metal structures on a concrete pads will be installed, and will be of a simple design that provides security for the bike and prevents vandalism.

### BENCHES

Benches will be of simple design, with materials appropriate to the recreational zone in which they are located. These should match the picnic tables and should require low maintenance. One bench type per recreational zone.

### PICNIC TABLES

King County Standard on concrete pads.

### DRINKING FOUNTAINS

Drinking fountains will be located at the restrooms.

### TRASH RECEPTACLES

Trash receptacles will be of simple design, be standard throughout the park, and require low maintenance.

### GATES AND FENCING

Entry fencing and gate materials should be designed in character with the entry signage and as an extension of it. Other fencing and gate materials within the Park and at needed locations along the property lines should be limited in extent and in character with Park architecture.

## UTILITIES

### WATER

- Requirements:** Well system with tank(s), chlorination and pump(s).  
(Public water supply may be available in a few years from SPWSD's proposed reservoir. Pumping will be required.)
- Design Guidelines:** Size system to provide required fire flows and on-site needs.  
Distribution pipe shall be 8-inch ductile iron for fire lines.  
Pipe from wells shall be sized to provide supply to tanks.  
Tank sizing shall be according to State Department of Health requirements.  
Domestic pipe shall be copper tubing type K and shall be sized for demand.  
Design shall meet Department of Health requirements and shall be submitted for approval.

### POWER

- Requirements:** Three-phase supply for current and projected park needs.
- Design Guidelines:** Underground power feed to originate from either southern or western park boundary.  
Coordinate design with current and future development surrounding park.

### TELEPHONE/CABLE

- Design Guidelines:** Underground feed to originate from either southern park boundary or western park boundary.  
Coordinate design with current and future development surrounding park.

### SANITARY SEWER

- Requirements:** On-site treatment per best management strategies at the time of construction.
- Design Guidelines:** Individual facilities for each restroom. Locate facilities in areas of well-suited native soils. If desired locations are underlain by unsuitable soils, investigate alternative treatment systems, such as biological contactors or mound systems.



Adhere to King County Department of Health design criteria for systems with flows less than 3500 gallons per day (GPD).

Adhere to Washington State Department of Health design criteria for systems with flows greater than or equal to 3500 GPD.

#### DETENTION/WATER QUALITY FACILITIES

**Requirements:** On-site collection and conveyance system with detention and water quality facilities as required, such as infiltration systems at the edge of ballfields.

King County Surface Water Design Manual (KCSWDM), edition in force at time of permit application.

**Design Guidelines:** Ponds and swales shall be graded and sized so that fencing is not required.

Per Draft February 1996 KCSWDM, provide Level 2 Flow Control (Detention):

Match developed discharge durations to predeveloped discharge durations for 50 percent of the two-year flow up to the fifty-year flow.

Per Draft February 1996 KCSWDM, provide basic water quality treatment for runoff from pollution-generating impervious areas.

#### NATURAL GAS (OPTIONAL)

**Requirements:** On-site exterior propane storage tanks.

**Design Guidelines:** Design tanks in accordance with all applicable local, state, and federal codes.

Size tanks for current park needs and 10-year expansion needs.

Locate and paint or plant screen for aesthetics.

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**PARK DEVELOPMENT PHASING & COSTS**

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## PARK DEVELOPMENT PHASING PLAN AND COSTS

The PHASING PLAN establishes priorities for development of the Park Master Plan. The phased project's budget is based on an overall guideline of providing for multiple uses during each phase of development combined with the potential availability of annual King County Parks Capital Improvements Funds of approximately \$1,500,000 to \$2,500,000 maximum allowable construction costs (MACC).

Implementation for Section 36 Regional Park Master Plan is proposed in three phases: Phase 1 Park Access, Phase 2 Park Development, and Phase 3 Park Completion. The Phasing Plan graphically presents these phases. Within each phase, tiers of development are proposed to create small-sized MACC units. Total costs for each phase and tier include costs for contractor's markup, contingency, sales tax, administrative, and design costs. These costs are 1996 costs and do not provide for inflation.

### PHASE 1 - PARK ACCESS AND BALLFIELDS

Three tiers comprise the development of Phase 1 - Park Access and Ballfields. Tier 1 consists of extending the road from within the Trossachs development to the Park Boundary, extending the road into the Park, and developing the Parking Lot just inside the entry. Tier 2 includes further access into the Park by extending the road from the parking lot to the softball/baseball quad, and develops one softball field and the baseball fields. Trail development and site furnishings (signs, gates, lighting, etc.) are included in each tier of development.

Tier 1 - Entry Road.....	\$1,522,829
Tier 2 - Softball/Baseball Access Road & Ballfields.....	\$3,226,461
Tier 3 - Beaverdam Access.....	\$878,686
<b>Phase 1 - Park Access and Ballfields Grand Total.....</b>	<b>\$5,602,976</b>

### PHASE 2 - PARK DEVELOPMENT

Four tiers of development comprise Phase 2 - Park Development. The goal of Phase 2 is to provide access to the Park for multiple users. Tier 1 extends access to the East Slope recreation area and develops half of the multi-use fields. Tier 2 extends and completes the parkway loop and constructs two of the soccer fields. Tier 3 develops the major passive recreation and festival space at The Glade. Tier 4 constructs the Maintenance Facility. Trail development, utilities, and site furnishings (signs, gates, lighting, etc.) are included in each tier of development.

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Tier 1 - Half East Slope Recreation.....	\$2,183,281
Tier 2 - Half North Slope Recreation Development & Loop Parkway.....	\$2,428,721
Tier 3 - Hilltop Recreation - The Glade.....	\$2,415,525
Tier 4 - Maintenance Facility .....	\$857,925
<b>Phase 2 - Park Development Grand Total.....</b>	<b>\$7,885,451</b>

**PHASE 3 - PARK COMPLETION**

Seven tiers complete the development of the Park in Phase 3 - Park Completion. Phase 3 completes the Master Plan, providing access to all facilities. All tiers essentially develop the remaining planned uses proposed in Phase 1 and Phase 2. Trail development, utilities, and site furnishings (signs, gates, lighting, etc.) are included in each tier of development.

Tier 1 - Entry Trailhead Facilities .....	\$816,235
Tier 2 - Half of the East Slope Recreation.....	\$1,945,211
Tier 3 - Half of the North Slope Recreation .....	\$1,977,846
Tier 4 - Hilltop Multi-use Field .....	\$2,881,982
Tier 5 - Hilltop Two Softball Fields.....	\$2,008,848
Tier 6 - Restroom and Trailhead Facilities.....	\$672,072
Tier 7 - Parkway Loop Road Completion.....	\$748,195
<b>Phase 3 - Park Completion Grand Total .....</b>	<b>\$11,050,389</b>

**TOTAL PARK DEVELOPMENT COST**

<b>1996 costs for Total Park Development (Phase 1, 2, 3).....</b>	<b>\$24,563,816</b>
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**Section 36 Regional Park**  
*Master Plan Development Costs*

Item Description	Unit	Quantity	Unit Price	Amount
<b>Phase 3 - Park Development</b>				
<b>Tier 1 - Entry Trailhead Facilities</b>				
Site Development				
				<b>Phase 3 - Tier 1 Grand Total</b>
				<b>\$816,235</b>
<b>Tier 2 - Half of the East Slope Recreation</b>				
Site Development				
				<b>Phase 3 - Tier 2 Grand Total</b>
				<b>\$1,945,211</b>
<b>Tier 3 - Half of the North Slope Recreation Development</b>				
Site Development				
				<b>Phase 3 - Tier 3 Grand Total</b>
				<b>\$1,977,846</b>
<b>Tier 4 - Hilltop Multi-use Field</b>				
Site Development				
				<b>Phase 3 - Tier 4 Grand Total</b>
				<b>\$2,881,982</b>
<b>Tier 5 - Hilltop Two Softball Fields</b>				
Site Development				
				<b>Phase 3 - Tier 5 Grand Total</b>
				<b>\$2,008,848</b>
<b>Tier 6 - Restroom &amp; Trailhead Facilities (near Ballfield/Maintenance Facilities)</b>				
Development				
				<b>Phase 3 - Tier 6 Grand Total</b>
				<b>\$672,072</b>
<b>Tier 7 - Parkway Loop Road Completion</b>				
Loop Addition				
Development				
Phase 1 Road Demolition				
				<b>Phase 3 - Tier 7 Grand Total</b>
				<b>\$748,195</b>
<b>Phase 3 - Park Development Grand Total</b>				<b>\$11,050,389</b>
				<b>(Tiers 1-7)</b>
<b>Total Park Development - Phase 1,2,3</b>				<b>\$24,563,816</b>



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**MAINTENANCE PLAN**

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**King County**  
Parks and Cultural Resources  
Program Development & Land Management  
506 Second Avenue Suite 1621  
Seattle, Washington 98104-2311  
(206) 296-4252  
Fax(206)205-5385

December 3, 1996

TO: Connie Zimmerman, Project Manager, Capital Planning and Development Division

FM: Mark Sollitto, CIP Program Coordinator

RE: Estimated Operating Costs Section 36

Pursuant to the adopted Program Plan for Section 36 an estimated cost model for future development has been prepared. It is based on the passive and active program elements included in the draft master plan for Section 36 that total \$24 million.

The accuracy of projecting future operating costs is uncertain due to several independent variables. First, adoption of a 10 Year Park CIP will occur in conjunction with consideration of the Operational Financial Plan in mid-1997. Second, construction of the preferred southern access road to Section 36 is contingent on approval of the final phase of the Trossachs development. Third, King County will continue to pursue partnerships for local active recreation opportunities which serve the growing population of this area. Because of limited capital funding, joint development at local schools could also impact the schedule for future development at Section 36. Therefore it is very difficult at this time to accurately predict when future capital improvements and subsequent operating costs will come on line.

Development at Section 36 will be similar to the range of activities currently ongoing at Marymoor Park. If Section 36 was built out and operating in 1997, estimated costs for full time and seasonal labor, supplies, materials, tools, equipment, vehicles etc. would total approximately \$1.4 million and about \$1 million annually thereafter.

I hope this is helpful, please contact me at 296-4252 if you have any questions on this matter.

MS:ms

SECTION 36 REGIONAL PARK  
Master Plan

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**APPENDIX A**  
**KING COUNTY COUNCIL MOTIONS**

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1 August 2, 1995  
2 S36 appreciation  
3 MS:elm

BRIAN DERDOWSKI  
Introduced by: LARRY PHILLIPS  
Proposed No.: 95-541

MOTION NO. **9713**

A MOTION acknowledging the dedication of the Section 36 Citizens Advisory Committee (CAC) in developing Phase I recommendations for use in developing a Section 36 Master Plan.

11 WHEREAS, King County acquired the 633-acre Section 36 for \$8 million in 1993 to  
12 preserve and protect the natural environment and provide passive and active recreation  
13 opportunities in the King County Park System, and

14 WHEREAS, Motion 9015 established a Section 36 Citizens Advisory Committee (CAC)  
15 to advise King County on future uses of Section 36, and

16 WHEREAS, the CAC held eight public meetings, solicited public comment and  
17 considered a range of future uses, and

18 WHEREAS, the CAC has identified future uses of Section 36 as identified on  
19 Attachment A;

20 NOW THEREFORE, BE IT MOVED by the Council of King County:  
21 King County acknowledges the dedication of the Section 36 Citizens Advisory  
22 Committee in developing a long-range vision for future public uses at Section 36. The  
23 attached summary of future uses (Attachment A) is accepted for consideration in the  
24 development of the Section 36 Master Plan.

25 PASSED by a vote of 11 to 1 this 27<sup>th</sup> day of November 19 95.

26 KING COUNTY COUNCIL  
27 KING COUNTY, WASHINGTON

28 Kent Pullen  
29 Chair

30 ATTEST:

31 Donald A. Peterson  
32 Clerk of the Council

33 Attachments: Section 36 Citizens Advisory Committee Summary of Future Uses  
34 Recommendations

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October 6, 1995

*Section 36 Citizens Advisory Committee Recommended Revised 95-541  
Attachment A*

**SUMMARY OF FUTURE USES  
RECOMMENDATIONS**

1. Preserve, and interpret open space, including wildlife habitat and sensitive areas;
2. Provide athletic fields for organized youth and adult sports;
3. Provide soft surfaced trails for equestrian, mountain bikes, and pedestrians, ~~which may be shared where appropriate;~~
4. Provide a paved regional trail with parallel soft surfaced equestrian trail.

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August 2, 1995  
S36Plan  
MS:elm

BRIAN DERDOWSKI  
Introduced by: LARRY PHILLIPS

Proposed No.: 95-542

MOTION NO. 9714

A MOTION related to the King County Park System adopting the Section 36 program plan.

WHEREAS, King County acquired the 633-acre Section 36 for \$8 million in 1993 to preserve and protect the natural environment and provide passive and active recreation opportunities in the King County Park System, and

WHEREAS, Motion 9015 established a Section 36 Citizens Advisory Committee (CAC) to advise King County on future uses of Section 36, and

WHEREAS, the CAC held ten public meetings, solicited public comment and considered a range of future uses, and

WHEREAS, Section 36 is a regional, multi-use property that provides a range of benefits for all the residents of King County;

NOW THEREFORE, BE IT MOVED by the Council of King County:

King County adopts the attached program plan for future uses of Section 36 to guide the development of the proposed Section 36 Master Plan which will be subject to Council review and approval.

PASSED by a vote of 11 to 1 this 27<sup>th</sup> day of November 19 95

KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

*Kent Pullen*  
Chair

ATTEST:

*Donald A. Peterson*  
Clerk of the Council

Attachments: Section 36 Program Plan

Revised November 16, 1995  
Section 36 Citizens Advisory Committee Recommended Revised 95-542  
Attachment A  
SECTION 36 PROGRAM PLAN

### Introduction

1 The sheer size of Section 36 and the variety of its natural features are regional in  
2 character. Its location on the urban rural boundary provides a physical buffer that  
3 separates more intense urban development on the East Lake Sammamish Plateau  
4 from the rural Snoqualmie Valley. The overall program goals for this property are  
5 wildlife corridor and open space preservation, trails for equestrians, mountain  
6 bicycles and pedestrians, athletic field development, passive recreation and  
7 appropriate maintenance that supports these program elements.

8  
9 When the park land was purchased it was envisioned that active development  
10 footprint would be limited to 80 acres. ~~The program recommended below can be~~  
11 ~~accomplished within a footprint of between 100 and 120 acres, exclusive of the~~  
12 ~~entry road.~~ The collective development of the Active and Passive Recreation  
13 and Support Services Zones (hereinafter called the developed footprint) should  
14 be limited to 80 acres.

15  
16 The Parks Department recommendation is to pursue a limited development program  
17 that respects this site's natural systems and balances all elements of the program. In  
18 recognition of this balance, this site has been classified as a Regional, Multi-Use  
19 Site.

20  
21 In order to minimize the developed footprint of the park, the use of alternatives  
22 to existing codes, policies and design and development standards for parking  
23 and sports fields is strongly encouraged.

### Athletic Field Development

24  
25  
26 The public comments on future athletic field development supported maximizing  
27 athletic field development at Section 36. However, the following recommendation  
28 for athletic field development portrays a balance between preserving the site's  
29 natural beauty and resources and athletic field needs.

30  
31  
32 Ten acres of multi-purpose turf with irrigation and underdrainage should be  
33 included for activities like youth soccer and T-ball, pick up games, frisbee, large  
34 picnics, etc. This area should not be lighted. Provide one baseball and three softball  
35 fields in a quad layout to minimize the footprint of the fields. In addition, four  
36 soccer fields with all-weather surfaces, irrigation and underdrainage are  
37 recommended. The baseball/softball and soccer fields should be lighted to  
38 maximize play. Lighting should employ the latest technology to minimize glare.  
39 New lighting systems like the Bellevue ballfields at Marymoor and the Meadowdale  
40 Playfields may be effective in minimizing glare and light spill. Lighting of sports  
41 fields should be considered only after all other alternatives are eliminated.

### Other Development

42  
43  
44  
45 Parking, restrooms, and one large centrally-located play area, should be  
46 concentrated to serve the field users and provide access to the trail system.  
47 Vegetation inside the active zone should be included to incorporate and extend the  
48 character of the site's natural features and provide a buffer for adjacent property near  
49 the athletic fields and to increase the density of buffers between these areas and the  
50 urban wildlife habitat.

### Joint Development

51  
52  
53  
54 Joint development opportunities between King County and the Issaquah and Lake  
55 Washington School Districts will provide a critical alternative to the demand for  
56 athletic fields on the Plateau.

1  
2 Maintenance  
3

4 To support maintenance of the Park, a maintenance facility approximating the size  
5 of those constructed at Beaver Lake or Hamlin Parks is necessary. The location of  
6 this facility should provide efficient vehicle access to those more intensely-  
7 developed portions of the property without visually dominating the viewshed. No  
8 fueling for maintenance vehicle capability will be required. The final master plan  
9 should incorporate the estimated operating costs for the site at full build out. King  
10 County will seek partnerships with interested volunteer and other organizations to  
11 minimize public maintenance costs and maximize public use.  
12

13 Trails (Internal and Regional Connector)  
14

15 Loop soft surface trails for equestrians, mountain bicycles and pedestrians, should  
16 be provided. Provide within the park some exclusively pedestrian trails. Except  
17 with regards the Regional trail, mountain bicycle trails should be separate  
18 from other user trails. To minimize alteration of habitat, and allow for interaction  
19 of trail users, these trails should merge where appropriate. Only pedestrian and  
20 equestrian trails will be allowed in the designated urban wildlife habitat. The 12-  
21 foot wide paved Klahanie Trail and separated equestrian trail will enter from the  
22 south on a alignment paralleling the access road from Trossachs and terminate  
23 inside the heart of Section 36. Future plans for continuation north are subject to  
24 Council review and approval of the alignment.  
25

26 The existing Northwest Passage Trail should remain. However, future alignment  
27 could be subject to potential relocation based on further review of wetland and  
28 wetland buffer requirements. Under any circumstance, a new alignment must  
29 connect to the west and south.  
30

31 Mountain bicycle trails should provide a challenging experience that includes tight  
32 turns, undulating topography and ~~trail obstacles like wind thrown trees on a narrow~~  
33 tread trail features designed to minimize user speed while enhancing enjoyment.  
34 Additional A loop ~~trails~~ trail system should be provided within the ~~active-area~~  
35 Active and Passive Recreation and Support Services Zone of the park.  
36

37 Site Access  
38

39 The Parks Department recommends that no through road be constructed at Section  
40 36. In addition, based on the uncertain timing of adjacent private developments,  
41 access from the west and south are recommended. The preferred access is from the  
42 south based on population concentrations and a comparison of road development  
43 costs.  
44

45 Actual road pavement width should be as narrow as possible to minimize  
46 destruction of habitat and meander to minimize vehicle speeds. For the benefit of  
47 public safety and wildlife habitat preservation, buffers between the road, paved trail  
48 and the equestrian trail are critical.  
49

50 Sale of Section 36  
51

52 Because there is a large existing deficit of acreage in the Park System, ownership of  
53 all of Section 36 should be retained by King County.  
54



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**APPENDIX B**  
**CREDITS**

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## CREDITS

### CITIZENS ADVISORY COMMITTEE

GREG ALLEN  
SANDY FROM  
ANNE LINDSAY  
PHIL MC DONNELL  
SALLY REEVE  
WALTER SHOSTAK  
LEN STEINER  
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## CREDITS

### PROJECT LEAD

#### THE PORTICO GROUP

Architects, Landscape Architects, Exhibit Designers

Becca Hanson , Principal-in-Charge of Client & Community Liaison

Michael Hamm, Principal-in-Charge of Planning

Judith Ward, Project Landscape Architect

### PROJECT TEAM

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Environmental Services, General Contractor

Jennifer Knauer, Trail Planner

#### DIANE STEEN LANDSCAPE ARCHITECT/ENVIRONMENTAL PLANNER

Diane Steen, Landscape Architect

#### SvR INC.

Peg Staehli, Planner

Mark Errichetti, Physical Engineer

#### W&H PACIFIC

Laura Jackson, Transportation

Dennis Apland, Physical Engineer