Winner Creek Trails
Feasibility Study

February 2007

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FEASIBILITY STUDY

Nordic Ski Trails
Glacier-Winner Creek Valley
Girdwood, Alaska

February 2007

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FEASIBILITY STUDY –NORDIC SKI TRAILS

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Introduction
The Municipality of Anchorage Heritage Land Bank (HLB) commissioned this study to determine the feasibility of constructing nordic ski trails in Girdwood, Alaska.

HLB proposes to develop approximately 17 kilometers of Nordic ski trails within the Glacier Creek/Winner Creek valleys. The trail will be part of a phased development, and be coordinated with other development initiatives in the area, including the Winner Creek Ski and Golf Resort, the Arlberg Road Extension and the Crow Creek Neighborhood. This study evaluates the conceptual alignment that had been developed in conjunction with the concept plan for a golf and alpine ski resort in the study area (The SE Group Concept Plan).

This study assesses the trail project’s feasibility with respect to design standards, constructability and sustainable maintenance. Alternative alignments, design standards, construction techniques and maintenance strategies were also evaluated. The preferred alternative will optimize development of the trail within the project’s financial, technical, political and environmental constraints.

Project Goals and Objectives
The goal of this study is to identify appropriate Nordic ski corridor(s) in the study area that balance community sensitivities to increased public use with the needs, environmental consequences and proposed development in the area. To achieve this goal, the following objectives were pursued:

Objective 1: Assemble concepts and proposals by agencies and private developers addressing land use and trail development in the project area.

Objective 2: Work closely with the affected community, listen to and record concerns and perspectives on environmental, political, technical and financial issues.

Objective 3: Characterize opportunities for near-term and future phases of development and coordination with development in the project area.

Objective 4: Evaluate technical, environmental, financial, and political requirements for alternative access routes. Key elements of this evaluation will include alignment and cross-section, life-cycle costs, right-of-way requirements, utility conflicts and permitting requirements.

Objective 5: Document these analyses, conclusions, and recommendations in a series of plainly written, well-illustrated documents. Identify a recommended alternative and present an implementation plan to consider phasing of the trail development, costs and funding sources, operation and maintenance responsibilities. Consider opportunities for partnerships in the construction, operation and maintenance of the facilities with HLB, the Girdwood Board of Supervisors, the Anchorage Parks and Recreation Foundation, user groups and Girdwood businesses.
Study Methodology
Preparation of the feasibility study was divided into six tasks, followed by a project closeout phase. Specifics of each task are discussed below.

Task 1: Project Scoping
During the scoping phase, information was gathered from a number of different sources through meetings, field reconnaissance, and document review.

September 5, 2006 Presentation to Girdwood Trails Committee
September 12, 2006 On Site workshop with the Girdwood Trails Committee

Information was gathered from interested groups, individuals, and through on-site visits, including:

- Presentation to the Girdwood Trails Committee – September 5, 2006. presentation
- Winner Creek Trails Workshop with Girdwood Trails Committee – September 12, 2006.
- Questionnaires developed, circulated and data collected.
- Field Reconnaissance utilizing Global Positioning System (GPS).
- Meeting with Alyeska Resort, Chugach Powder Guides.
- Discussion with U.S. Forest Service Trail ROW and Buffers.
- Discussion with Girdwood Residents

Existing documents and information was assembled, including:

- SE Group Concept Plan
- Crow Creek Neighborhood Land Use Plan
- Anchorage Area Wide Trails Plan
- Girdwood Trails Map
- Snow Avalanche & Mass-Wasting Hazard Analysis of Glacier/Winner Creek
- Trail Design and Construction Standards
- United States Ski Association 1991
- International Ski Federation Homologation Manual 2003
- Trail Design and Management Handbook
- Canadian Ski Trail Standards 2005
- U.S. Forest Service Design Standards
- U.S. Forest Service Wetland Trail Design and Construction
- International Mountain Bike Association, Trail Guide
- Nordic Ski Association of Anchorage 10-Year Plan for Soft Surface Trails
- Colorado Outdoor Training Initiative, Trail Instructors Guide
- Natural Surface Trails by Designer Troy Scott Parker
- Tread Lightly on the Land, Student Conservation Association
Management and Economic Examples

- Methow Valley Trail Association, Washington
- West Yellowstone Ski Education Foundation, Montana
- Nordic Ski Association of Anchorage
- Jackson Ski Touring Foundation, New Hampshire
- Bohart Ranch, Bozeman Montana

Studies Reviewed  (The following studies, or links to these studies, can be found at americantrails.org.)

- Trail expenditures have been shown to reduce health care cost.
- The economic and social benefits of trails, Parks and Trails Council of Minnesota
- Economic Impacts of Trails, RTCA-National Park Service
- Trails in new developments a case study
- How cities use parks and trails for economic and community development
- How the Methow Grew and Economy-American Trails
- Nordic Trail Easements and Property Values in Crested Butte Colorado-American Trails
- Trails-A Scientifically Proven Asset
- Trail Based Economic Development
- Cost-Benefit Analysis of Physical Activity Using Trails

During Task 1, we entered all available trail data into the GIS system. Components included existing Girdwood trails, trail corridors as proposed by the SE Group Concept Plan, and trails proposed in earlier plans.

Task 2: Conduct a Screening Analysis of Proposed Route and Alternatives

The data collected in Task 1 was reviewed and assembled into a project database. The database employs a GIS system to memorialize project data in an open-source, three-dimensional format. This data was then used to identify alternative routes; these alternatives were presented in the draft report, and are included in this Final Report under the ALTERNATIVES CONSIDERED section.

Task 3: Detailed Analysis and Evaluation of Design Standards

During Task 3, attention was focused on the “short list” of access alternatives identified under Task 2. Additional research and field investigations were performed to fill in” data gaps” and fully understand key planning and engineering parameters, including topography, drainage, wetlands, right-of-way requirements, life-cycle costs, and coordination with other area development initiatives for each alternative. Task 3 was divided into two sub-tasks; develop screening methodology and analysis of alternatives.

Screening Methodology

Our evaluation of alternative access routes will use quantitative and qualitative criteria. We have proposed a weighted scoring matrix for these criteria that yields a numerical score and allows direct comparison. We will study alternative routes in sufficient detail to permit scoring against all the criteria. The total scores will then be tallied and the alternative route with the highest score will be the preferred alternative. The screening process is discussed more fully under the Screening Process section.
Alternatives Analysis
The evaluation methodology will be applied to a “short list” of alternatives. Evaluation criteria will include the following engineering, environmental, and planning factors:

- Conformance with recommended trail design standards
- Consistency with existing and proposed development
- Environmental consequences, primarily wetlands impacts
- Life-cycle costs (construction, operation, and maintenance)
- Impacts to drainage patterns and utilities
- Neighborhood concerns

Task 4: Public Involvement
Two series of public meetings were held for this project: one at the completion of Task 1, and the second after submittal of the draft study report (middle of Task 5.) Extensive public coordination after Task 1 allowed us to present our “list of alternatives” and explain why some of them were removed from further consideration. It also gave the public an opportunity to bring additional alternatives forward that may not have been identified in Task 1.

Our second series of public meetings included presentations to the Girdwood Trails Committee, the Mayor’s Open House, and a community open house that focused exclusively on the trail proposal. We scheduled the second open house for the convenience of area residents, to focus exclusively on this study without a time limit. This second open house helped Girdwood residents understand and accept our recommendations.

The second series of public meetings were:

- Mayors Open House-Alyeska Day Lodge, October 30th, 2006, and
- Nordic Ski Trail Open House-Town Hall, December 7th, 2006

The agenda for these meetings was:

- Briefly review the results of the first series of meetings
- Present the short list of alternative access routes
- Present our evaluation methodology and demonstrate its application
- Discuss our recommended alternative(s) and how the Municipality would proceed
- Listen to audience reactions to the conclusions and recommendations

Task 5: Draft Report
The activities accomplished in Tasks 1-4 above were documented in a draft report submitted November 6, 2006 that integrated the project database, Technical Memorandum 1, a summary of the alternatives analysis, and records of public involvement.

The report provided conceptual plan, profile and cross-sectional details of alternatives, graphically depicting the range of alternatives under consideration. Other elements incorporated into the report graphics included existing infrastructure, topography and land status, other proposed development projects (i.e., Crow Creek Neighborhood, water and sewer improvements, the Arlberg Extension), environmental constraints (i.e., identified wetlands, habitat areas, avalanche zones, etc) and other relevant features.
The Draft Report was circulated among agencies, the community, user groups and project stakeholders for review and comment. In addition to providing published “hard copies”, a digital version was provided for HLB’s web page and posted on TBC’s web site.

The draft report did not identify a “preferred” alternative. Rather the report presented the results of our alternative analysis and highlights the advantages and disadvantages of the alternatives considered in the context of our screening analyses. We believe an important element of alternative analysis and selection is the integration of public and agency comments into the final analysis.

We used the draft report comment period, November 8, 2006 through January 7, 2007, to implement our second series of public meetings (see Task 4 above).

**Task 6: Final Report**

Following the second comment period, we prepared this final report that incorporates public comments and presents final conclusions and recommendations for action. The Final Report will be circulated among agencies, the community, user groups and project stakeholders. In addition to providing published “hard copies”, a digital version will be provided for HLB’s web page and posted on TBC’s web site.

This report does present a “preferred” alternative; our recommendation is presented and fully discussed in the “Preferred Alternatives” and “Analysis” sections of this feasibility report.

**Project Close-out**

The ultimate goal of this study is to identify a preferred trail network alignment that optimizes the technical, financial, political and environmental factors that will influence its development. Our implementation plan will also recommend a near-term development option that best uses the available funding, leverages other development activities that may contribute to the trail’s development, and “sets the stage” for further trail development in the study area.
Figure 1
Vicinity Map

Winner Creek Trails