



Highlands Ranch Community Association
Backcountry Wilderness Area Conceptual Plan
Report of Recommendations



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INTRODUCTION

Background

The Backcountry Wilderness Area (Backcountry) encompasses roughly 8,200 acres of conservation space within Highlands Ranch, Colorado. The mission of the Backcountry is to “provide visitors with unprecedented opportunities to enjoy nature near where they live, while protecting and conserving natural, cultural, archaeological, and historical resources for the enjoyment of future generations.” The goals of the Backcountry include protecting habitat, managing wildlife, and providing programs and activities to help achieve their mission.¹

Approximately 1200 acres of the Backcountry are within designated Planning Areas per the Open Space Conservation Area Plan developed in 1988 (original OSCA Plan), set aside for potential improvements for open space use. The Highlands Ranch Community Association (HRCA) owns 499 of the 1200 acres, and has undertaken several planning efforts to identify potential amenities that assist in meeting the Backcountry’s mission and goals. These studies, as noted below, include early planning to set aside the open space, and subsequent studies to plan for potential improvements for visitor use and access.

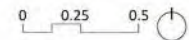
- Open Space Conservation Area Committee helped create the original OSCA Plan in 2000;
- OSCA Strategic Planning Committee developed a community survey in 2002;
- Backcountry Planning Areas Committee developed Community Involvement Process and completed professional, scientific survey in 2012;
- Backcountry Planning Advisory Committee completed Recommendation for Potential Uses in 2015, which identified the proposed amenity uses (pavilion, horse facility, ropes course, archery range, and trails);
- Delegate Backcountry Study Group provided additional recommendations and community involvement requirements resulting in the approval of a new Bylaw in 2016 requiring community approval for any additions in the Backcountry.

Funding to implement any potential improvements was made by possible by the 2001 sale of the Backcountry’s 457 acre parcel (Planning Area A) to Shea Homes. From this sale, the Backcountry acquired roughly \$4 million dollars designated for capital improvements to improve visitor experiences and increase visitation to the Backcountry, and assist in generating revenue necessary for continued management.

1 Backcountry Wilderness Area Management Implementation Plan via hrcaonline.org



Figure 1. Regional Context Map with Potential and Existing Sites



Project Purpose and Need

This planning effort was undertaken to evaluate the potential for proposed improvements to address the needs and desires of the HRCA community as identified by previous planning studies and community surveys. The earlier efforts gathered community input, evaluated the Backcountry landscape, defined potential areas for amenities, and made recommendations on potential uses.

The previous studies identified a need for future improvements to allow current programs to expand to meet community use, to encourage continued and increased experience of the Backcountry by HRCA residents, and to increase the number and variety of experiences the Backcountry can offer to all visitors. Any future improvements, if implemented, will produce revenue to allow the Backcountry to fund itself, lowering dues and increasing property values for residents.

Specific issues to be addressed by this study's potential future improvements include shelter for the Base Camp during inclement weather; potential expansion of programs to include new members or activities; potential opportunities to venture into the Backcountry trails; and potential to expand revenue generation with existing and future Backcountry facilities.

This planning effort analyzes and plans for the potential addition of specific amenities for community use, recreation, programming, events, and open space utilization and conservation within the Planning Areas of the Backcountry Wilderness Area of Highlands Ranch. This planning effort identifies areas for proposed amenities and provides a plan for future implementation. The purpose of the proposed amenities is to:

- **Get people into the Backcountry** by providing specific visitor opportunities to meet the Backcountry's mission and goals.
- **Address specific issues** including shelter for the Base Camp in times of inclement weather; potential expansion of programs to include new members / activities; potential opportunities to venture into the Backcountry trails; and potential to expand revenue generation with existing and future Backcountry facilities.
- **Increase revenue to better manage the Backcountry**
 - "Utilize the revenue to HRCA from the use of 1200 acres to financially support the management of OSCA .. ." - OSCA Plan.
 - Increase revenues without increasing financial burden of homeowners. Use funds to increase habitat conservation, conservation awareness, conservation education, and manage natural resources and excessive wildfire fuel loads.
- **Increase community value and individual home value** by providing amenities that will make Highlands Ranch a better place to live.
- **Ensuring long-term conservation of the Backcountry** by connecting the community to it through programs and education.

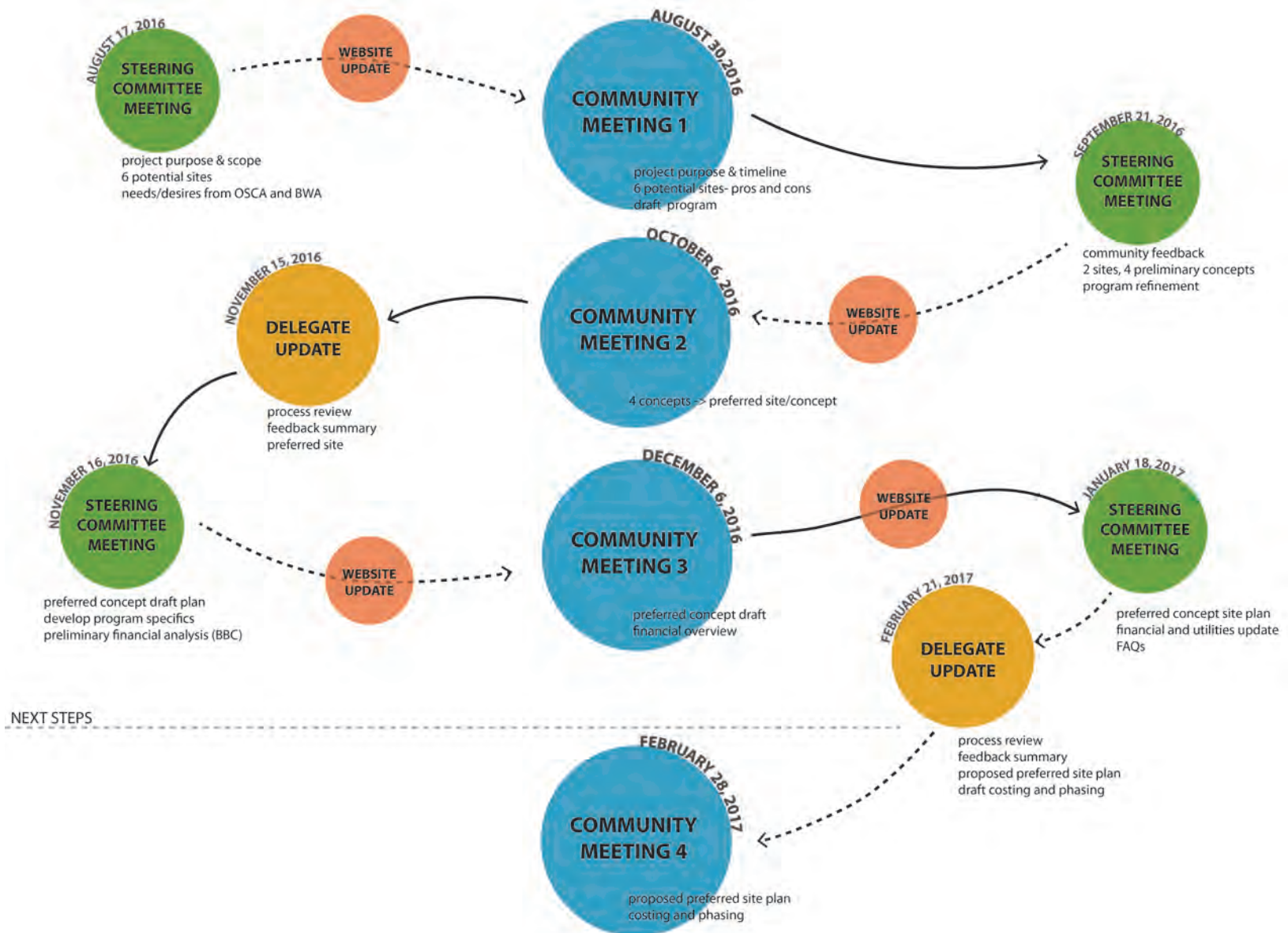


Figure 2. Community Involvement Process Diagram and Meeting Summary

Planning Process

This planning effort was a collaborative process that began in August 2016 and was completed in May 2017. In accordance with the Backcountry's guiding documents, the planning process involved a Steering Committee, Delegate representation, and community involvement through a series of meetings, open houses, and online forums.

In total, four community meetings, two delegate meetings, and four steering committee meetings informed the planning process.

The steering committee represented a broad range of interests with representatives from the HRCA Board of Directors, HRCA District Delegates, Backcountry Planning Area Advisory Committee, and Backcountry staff. Through four interactive meetings and involvement in each of the community open houses, the steering committee assisted with site evaluation and selection, concept development, and determination of the preferred approach and plan.

Community outreach offered several methods for engagement including four community open houses and meetings, two HRCA Delegate presentations, and regular website and newsletter updates. Community meetings were held at each HRCA recreation center to garner the broadest audience, and were organized as interactive open house forums. Community input and feedback was solicited in all phases of the planning process: site selection, program for potential development, concepts, and preferences for the preferred approach and plan.



Figure 3. Potential Sites along Grigs Road

SITE SELECTION SUMMARY

This planning process evaluated select locations in the Backcountry for suitability to accommodate the potential visitor amenities—covered pavilion, equestrian facility, ropes / adventure course, archery along with associated amenities including trails. An area of generally <20 acres is expected to be needed for the potential amenities. In general, it will be located within or near the 499 acres owned by HRCA associated with the 1200 acres that are within already determined planning areas, a fraction of the entire 8200 acres of the Backcountry.

Locations evaluated for the potential amenities were generally in places in the Backcountry where activities currently occur or have occurred in the recent past, i.e., Base Camp and the equestrian center, and or were locations east of Grigs Road near or within already designated planning areas. Site selection included a series of site visits, and an assessment of each site related to wildlife activity, ecosystem dynamics, and proposed program uses and needs. Six potential sites near Grigs Road and two existing sites on the west side of the Backcountry were identified for further evaluation for their potential to accommodate the potential visitor amenities. An initial review ensured that all potential sites shared these key qualities: all were out of viewsheds from HRCA residences, with relatively easy vehicular and utility access, and in locations compatible with habitat and wildlife. All potential locations were assessed by Backcountry staff, who determined some development could occur without overly disrupting wildlife or harming ecosystems.

The following summarizes the existing condition, estimated access to utilities, and the potential of each site to accommodate the identified visitor amenities. Each site is described by its individual characteristics and opportunities and challenges. Six sites, Sites 1, 1(a), 2, 3, 4 and 5 near Grigs Road were considered for potential amenity development in addition to the existing Base Camp and Equestrian Facility Sites.

- **Site 1** is located within the Griggs Homestead, south of the corral with views of Wildcat Mountain and is embedded within the Backcountry's cultural history and rolling topography.
- **Site 1a** is located on a hilltop above the Griggs Homestead with excellent and expansive views of Wildcat Mountain and Highlands Ranch, and in close proximity to the Griggs Homestead and Grigs Road.
- **Site 2** is located on a hilltop east of the Griggs Homestead with panoramic views and a with more mature vegetation.
- **Site 3** offers a balance of excellent, panoramic views and sheltering topography with good access to the Griggs Homestead and is near existing equestrian trails in Planning Area E.
- **Site 4** is located close to Grigs Road in a small valley with sloping topography and sheltering vegetation, and very good access to existing electric lines.
- **Site 5** is located along an existing service road near Planning Area E with good views of Wildcat Mountain and access to utilities along Grigs Road.
- **Existing Base Camp** is located along Ron King Road, sheltered by topography and vegetation with access from Santa Fe Drive (Route 85). Noise from the Highlands Ranch Law Enforcement Training Foundation and lack of permanent structures offering adequate shelter from weather impact the site's usability.
- **Existing Equestrian Facility** is a relatively level site with temporary shelter for horse boarding, with access from Ron King Road, and connections to a few Backcountry trails. Noise impacts this site as well.

	OPPORTUNITIES	CHALLENGES
Site 1	<ul style="list-style-type: none"> • Topography creates a bowl that naturally encloses the site • Gentle slopes are relatively flat • Griggs homestead offers historical interest • An existing dirt road provides access from Grigs Road • Potential to couple with Site 1a 	<ul style="list-style-type: none"> • Long distance from utilities • Requires long access road • Portions of the site are highly visible from Highlands Ranch residences • Limited views
Site 1a	<ul style="list-style-type: none"> • Site is on a ridgetop • Gentle slopes • Good views of mountains, downtown, and bluff to the east • Close to Grigs Road, good potential for site access and utilities • Potential to couple with Site 	<ul style="list-style-type: none"> • Exposed ridgetop may be windy at times • Portions of the site are highly visible from Grigs Road and some residences • Close to powerlines • Grigs Road traffic noise is audible • Outside of current Planning Area
Site 2	<ul style="list-style-type: none"> • Site is on a broad ridgetop • Gentle flat slopes (2%) • Excellent views of mountains, downtown, and bluff to the east 	<ul style="list-style-type: none"> • Exposed ridgetop may be windy at times • Portions of the site are highly visible from Highlands Ranch residences • Challenging access and utilities
Site 3	<ul style="list-style-type: none"> • Site is on a ridgetop • Topography and vegetation block views of Highlands Ranch • Excellent views of mountains and bluff to the east • Good access from Grigs Road 	<ul style="list-style-type: none"> • Exposed ridgetop may be windy at times • Portions of the site are visible from Castle Pines North residences • Relatively moderate distance from utilities • Outside of current Planning Area
Site 4	<ul style="list-style-type: none"> • Site is on a wide ridge • Large flat area with gentle slopes • Excellent views of mountains and bluff to the east • Good access from Grigs Road • Close to utilities 	<ul style="list-style-type: none"> • Exposed ridgetop may be windy at times • Close to powerlines • Grigs Road traffic noise is audible • Outside of current Planning Area
Site 5	<ul style="list-style-type: none"> • Site is on a wide ridge • Excellent views of mountains • Castle Pines North not visible due to sloping topography • Good access from Grigs Road • Close to utilities 	<ul style="list-style-type: none"> • Exposed ridgetop may be windy at times • Slightly steeper than Site 4 • Between powerlines/utility corridors • Grigs Road traffic noise is audible • Outside of current Planning Area

Figure 4. Potential Sites Opportunities and Challenges

Site selection was further evaluated by testing the program for potential visitor amenities through a series of four conceptual site plans on the six Grigs Road sites. After consideration by the Steering Committee and the community outreach process, further study of Sites 1 and 3 were evaluated in a second series of draft concept plans (see graphic plans in Appendix A, Alternatives Summary). These were evaluated and assessed by the steering committee and the community with a preferred site location and conceptual plan selected near Site 3.

The preferred site and approach offers the following:

- Development in this location would offer excellent views of Wildcat Mountain, Highlands Ranch, and Denver in the distance.
- The site is sheltered in a grove of native oaks which would screen any development from the Highlands Ranch community. The combination of prospect and shelter/screening makes this location ideal for proposed improvements.
- Access from Grigs Road was determined to be the least invasive to the land and most economically feasible.
- This site is advantageous for the Horse Facility relocation because of its access to existing equestrian trails.
- Expansion of the existing pedestrian and bicycle trail network would incorporate views of the Griggs Homestead and Corral, improving connections to local cultural history.

SITE:	1	1a	2	3	4	5
access road length (LF)	4,500	1,000	5,300 (from northwest)	2,500	700	550
proximity to electric service (LF)	1,750	550	1,650	450	700	700
proximity to water service (LF)	2,800	1,100	3,400	2,500	3,000	4,100
feasibility of septic system	Good	Fair	Good	Fair	Very Good	Very Good

Notes:

1. Electric line distances are distances from the sites perpendicular to the local overhead line that runs from southeast to northwest, located south of Sites 1A and 3, and north of Sites 4 and 5 as seen on google earth aerial imagery.
2. The Water line distances are from known well site location along the north side of Grigs Road , east of the Parking lot along the east-west trail. Actual availability of potable water needs to be verified with the Centennial Water District.

Septic Ratings	
Fair	Smaller bench area or slightly steeper grades
Good	Adequate Bench area with gentle grades
Very Good	Larger bench area with gentle grades

Figure 5. Site Selection Infrastructure Summary



View from Griggs Homestead



Topographic and vegetation character



View from Griggs Homestead



Corral remains from Griggs Homestead

Figure 6. Site 1 Existing Condition



Topography and vegetation character, existing powerlines



Topography and vegetation character



View to the east from hill above Griggs Homestead



View to northeast from hill above Griggs Homestead

Figure 7. Site 1a Existing Condition



View towards Wildcat Mountain



Service road and vegetation character



Vegetation and existing powerlines



Topography and vegetation character

Figure 8. Site 2 Existing Condition



Vegetation character



View of Wildcat Mountain



Existing service road and powerlines



Topographic character and existing powerlines

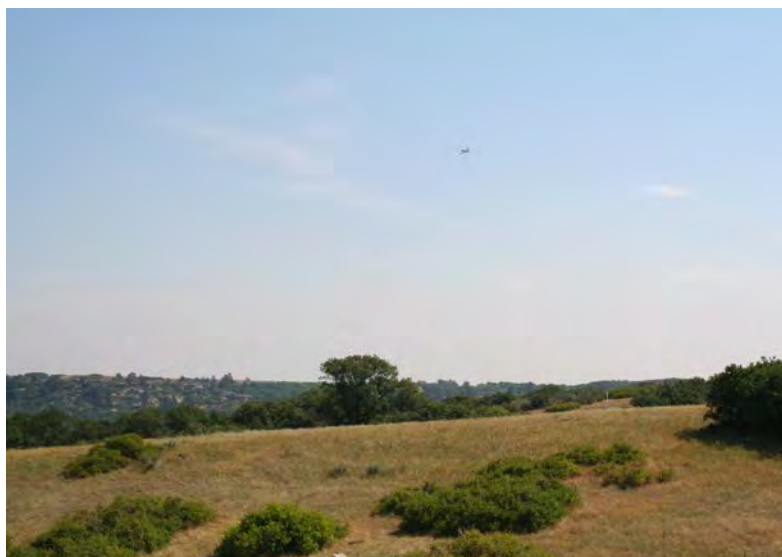
Figure 9. Site 3 Existing Condition



Vegetation character



Topographic character and existing powerlines



Topographic and vegetation character



Service road

Figure 10. Site 4 Existing Condition



Topographic and vegetation character



View of Wildcat Mountain



Service road and powerlines



Vegetation character

Figure 11. Site 5 Existing Condition

RECOMMENDATIONS

Recommendations were determined based on community responses in the 2012 Homeowner Survey, 2015 Backcountry Planning Advisory Committee Recommendations, community and Steering Committee feedback during this planning process, as well as information from the Financial Analysis of Proposed Improvements. The amenities would be designed and implemented to increase the accessibility and quality of visitor experiences in the Backcountry, increase revenue for the further management and protection of the Backcountry, increase HRCA home values, and improve connections of younger residents to the Backcountry to foster conservation and stewardship.

Several amenities were recommended for community use, recreation, programming, events, and open space utilization and conservation in the Planning Areas of the Backcountry Wilderness Area of Highlands Ranch. This section includes a description of the program for each of the proposed amenities, a summary and illustrative graphics of the proposed site plan, an implementation process and strategy, and potential costs and revenue opportunities.

Four of the proposed amenities were recommended to be located on the eastern section of the Backcountry Wilderness Area: the covered pavilion, equestrian facility, ropes/adventure course and trails. The archery range was recommended to remain on the west section in the location of the current horse facility.



Figure 12. Pavilion

Program

The programmatic elements for the Concept Plan include five amenities and associated infrastructure needs, such as parking, access and utilities.

- Covered Pavilion
- Equestrian Facility
- Ropes/Adventure Course
- Archery Range
- Trails

Four amenities originated through several previous planning efforts, and confirmed during this process. Trails for hiking and mountain biking were identified as a key community need during the community outreach process for this planning effort, and are now included in the amenities. The size, character, and uses associated with each amenity were further defined during this planning process through input and feedback from the steering committee, delegates, and the community.

Covered Pavilion

The addition of a covered pavilion addresses a serious need of the Base Camp youth program—a covered shelter for inclement weather and indoor space for programs. The current facility does not offer sufficient protection requiring the program to shut down when threat of inclement weather arises. The covered pavilion will primarily serve as the facility for the Base Camp and its programs. The facility will be available to rent for events and gatherings to benefit the community and community members. Rental of the space for events is expected to be a significant revenue generator for the Backcountry Wilderness Area.

Structure / Building

- 5,000 SF with capacity for 200 people
- 100 annual weekend events, 50 annual weekday events
- Base Camp – youth camps (6 per year with 50 each, 195 annual visitation)
- Inclusion of plumbed restrooms (based on occupancy requirements)
- Open room with partitions to divide into smaller spaces inclusive of small catering kitchen
- Rural, agricultural aesthetic

Pavilion Site (roughly one acre)

- Outdoor gathering area adjacent to structure / building
 - Capacity for up to 200 people
 - Multiple use as outdoor classroom, gathering space for events and pavilion uses

- Connections to other amenities
 - Visually (for example: horses may be visible from the pavilion)
 - Pedestrian access through trails and paths
 - Vehicular access for maintenance vehicles and ADA use

Parking and Vehicular Access

- Entry Drive (approx. 1800 LF) – gravel paved with shoulders
- 100 parking spaces (events with 200 people, assuming 2.5 per car with 3 to 4 hour turnover rate dictates 80 spaces, 20 additional spaces added for conservative estimate)
 - Gravel paved and dispersed into smaller areas along the entry drive
 - 5 Accessible spaces near pavilion, 2 Bus / RV spaces
 - Loop near pavilion to accommodate drop off area and fire access
- Space for overflow parking and portable toilets for larger community events along entry drive

Utilities

- Septic (fair, slightly steep grades)
- Water (distance to source = 2500 feet)
- Electrical (distance to source = 450 feet)

Setting / Location

- Located east of Grigs Road, set on a low bluff with an overlook offering 360 degree views, within a backdrop of trees on its western edge
- Not visible from residential areas; glimpses of pavilion occur along entry road
- Natural vegetation of trees, grasses, shrubs and forbs
- Restricted access

Connections

- To Pedestrian Hiking Trail(s)
- To Horse Facilities and Equestrian Trail(s)
- To Ropes/Adventure Course

Equestrian Facility

The proposed equestrian facility offers accommodation of the current program and room for expansion into a space connected to existing equestrian trails with proximity to shared parking, access and utilities. The location of the existing horse facility will be repurposed for use as the archery range. The equestrian facility provides boarding for horses utilized by community members and Backcountry programs. Locating the proposed facility near Grigs Road allows for expansion of the Archery program on a currently used, well-suited and previously disturbed site (existing site).

Core Area (one acre)

- Corrals, fenced riding arena, temporary shelters for horses, storage
- Shade shelter with 20 person capacity
- Restroom shared with covered pavilion

Parking and Vehicular Access

- Shared Parking with covered pavilion
 - Gravel paved parking
- Core Area Parking
 - 10 spaces for staff and accessible parking
- Service Drive and Operations
 - Existing service drive utilized
 - 2800 LF with new spur from main access drive
 - 2650 LF utilizing existing alternate entry drive to service drive
 - Gravel paved and gated for restricted access, (hay delivery, etc.)

Setting / Location

- Located east of Grigs Road on low bluff
- Natural grasses and vegetation
- Fenced pastures and grazing may be visible from Grigs Road
- Restricted access

Connections

- To Equestrian Trails
- To Pavilion
- To Ropes/Adventure course along extension of service drive

Archery

An expanded archery facility is needed to accommodate community uses, particularly the need for an Olympic-sized range for tournaments. The size and location of the current facility limits its role in meeting community needs for a challenging, diverse experience. The expanded archery facility will allow for needed expansion of archery-related programs, which will increase visitation and revenues.

Olympic Archery Range (two acres for Olympic Range, plus existing site at ½ acre for recreational range)

- 30-lane Olympic Course with Olympic distances and targets
- Potential to include 3-D Archery Range with life-size animals
- Membership and lessons – anticipated 1515 per year, youth camps (6 per year with 20 person capacity),
- Tournaments
- Shade Shelter(s):
 - Covered shade shelter(s) with 40 person capacity each at Olympic Range;
 - Covered shade shelter with 20 person capacity at recreational range
- Restroom:
 - Vault Toilets at site to accommodate daily use
 - Space for portable Toilets for tournaments and larger archery events

Recreational Archery Range

- Current Site with 10 yards to 60 yards range, approximately one-half acre.
- Base Camp facilities remain with restroom, chicken coop, outdoor classroom, informal trails

Parking and Vehicular Access

- Parking:
 - Spaces to be determined, assuming 2.5 per car with 3 to 4 hour turnover rate
 - Overflow parking on native grass areas (rotate use)

Setting / Location

- Accessed on existing road from Santa Fe, set in current horse facility location
- Visible from entry road

Connections

- To Existing Base Camp
- To Existing Archery

Ropes/Adventure Course

The ropes/adventure course would add a new type of recreation potential to the Backcountry. It would be designed to visually blend with the landscape and provide visitors with numerous climbing and exploring elements immersed in the Backcountry ecosystem. This element would serve the Highlands Ranch community and also provide additional revenue from non-resident user groups.

Structure – Climbing Activities

- 80 visitor capacity, 6,000 annual visitation, 60% adults / 40% children
- 50 climbing activities
- Restrooms at Pavilion

Parking and Vehicular Access

- 32 spaces for 80 people, assuming 2.5 per car with 3 to 4 hour turnover rate (as part of the site's 100 parking spaces)
- Located within gravel paved Pavilion parking
- Service Drive extends to Ropes Course for operations

Setting / Location

- Located east of Grigs Road tucked into a draw surrounded by trees
- Not visible from residential areas or from Grigs Road
- Natural grasses and vegetation

Connections

- To Pedestrian Hiking Trail(s)
- To Pavilion
- To Horse Facility via service road extension



Figure 13. Potential Ropes Course

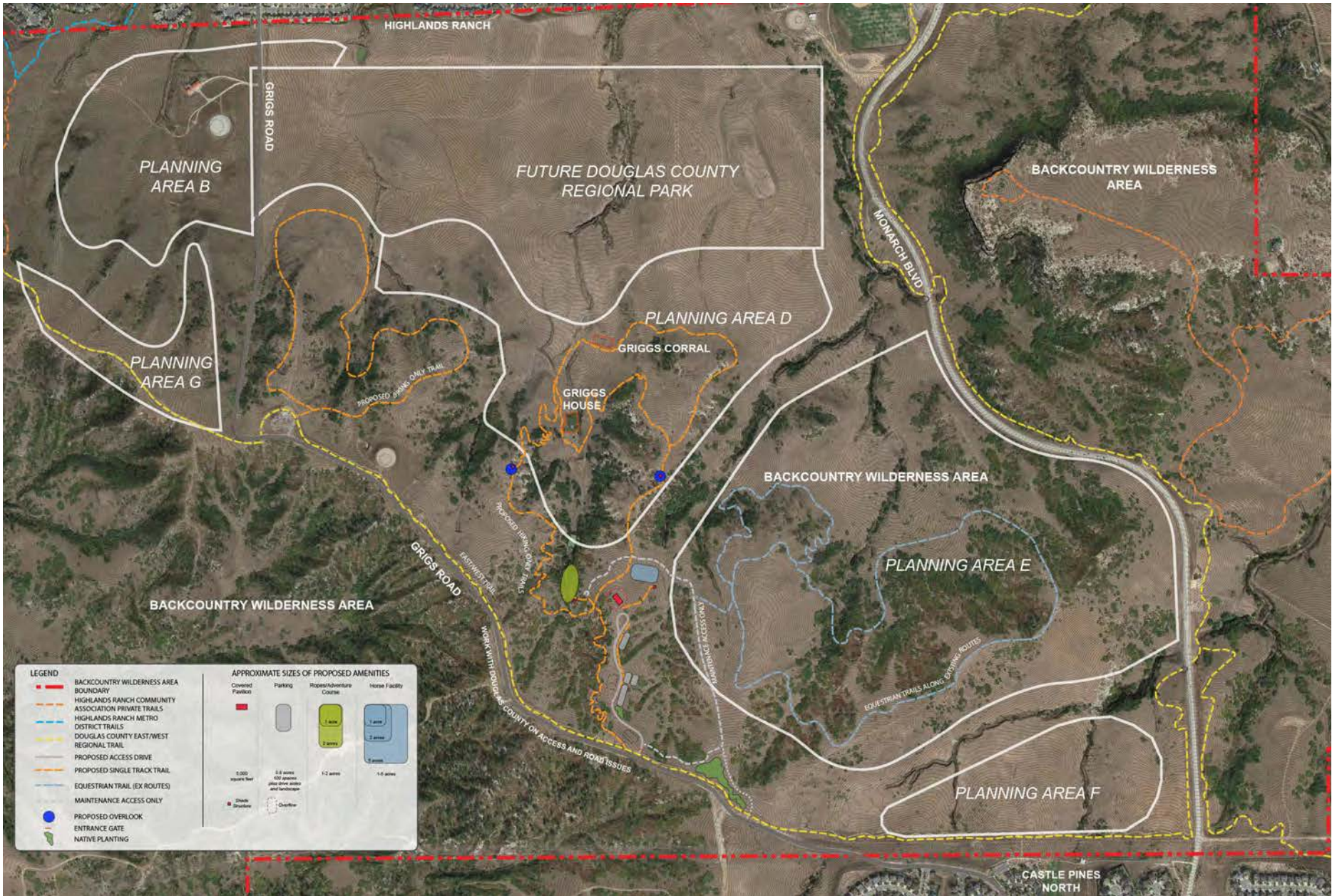
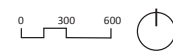


Figure 14. Preferred Concept Plan



Site Plan Summary

The preferred site offers excellent views for visitors while remaining sheltered by topography and vegetation. The experience would be one of immersion in the Backcountry but proximity to Grigs Road ensures ease of accessibility from Highlands Ranch. Existing utilities near this site allow for minimal development of additional infrastructure. Another important feature of the preferred site is its proximity to other regional and Backcountry trails and the potential to expand the Backcountry trail network to outlook points and around the Griggs Homestead and Corral site. Overall, the preferred site would expose visitors to the beauty and variety of wilderness and cultural history present in the Backcountry while increasing accessibility for residents and visitors.

The preferred site plan was developed through a comprehensive process that evaluated several sites for suitability to accommodate the program, potential for infrastructure development, natural character and site climatic conditions, potential for views, and visibility from HRCA residents and Grigs Road. Six sites in total were evaluated.

The preferred site plan offers locations and arrangements for the amenities that best meet the project criteria, and represent the preferences of the steering committee and community. Four amenities—covered pavilion, equestrian facility, ropes/adventure course and trails — are recommended for the primary site, easily accessed from Grigs Road and not visible from HRCA residences. Archery remains on the existing site on the west, easily accessed from Santa Fe Avenue.



Figure 15. Preferred Site and Concept



Primary Site

The recommended primary site consists of natural vegetation of trees, grasses, shrubs, and forbs. The site offers sloping topography from Grigs Road to the north, allowing for a covered pavilion located out of view of residences. The amenities are set on a low bluff with an overlook offering spectacular views, within a backdrop of native trees. Topography and vegetation block views from residences but offer opportunities for views toward the surrounding landscape, including the bluff to the east, the mountains, and Griggs Ranch. Vehicular access is from Grigs Road, with reasonable connections to existing infrastructure along Grigs Road for water and from nearby electrical. In addition to the primary entrance drive, a service drive provides access for staff, deliveries and equestrian use. The service drive follows an existing dirt road already used by staff.

The recommended site arrangement clusters amenities in one primary space in relative proximity to one another for shared parking, yet dispersed enough to allow multiple activities to occur simultaneously without disturbing one another or being visually disruptive. A trail network of hiking and mountain biking trails extends from the cluster of amenities and includes universally accessible routes and two overlooks. The ropes/adventure course is tucked into trees and set low on the hillside to offer the best course and to screen the course from surroundings. The equestrian facility includes a central corral area, grazing pastures and connections to existing equestrian trails. Wildlife impacts for the recommended site are minimal, as it is not within any of the ‘best’ wildlife areas and doesn’t interfere with wildlife corridors. Dark Sky compliance is a key element of future designs for these amenities.

The recommended site plan addresses goals expressed by the community including the following:

- Controlled access for safety
- Sensitivity to wildlife
- Expanded trail network
- Minimal visual impacts
- Shared parking for dispersed facilities
- Reasonable access to utilities & water
- Maximum benefit for Backcountry Wilderness Area programs and users

Archery Site

The recommended site for the archery expansion is on the current horse facility site on the west side of the Backcountry Wilderness Area. The site is relatively level, and already disturbed by current use. The level site will accommodate the full archery program including tournaments and day-to-day use. Vehicular access is from Santa Fe Drive, with reasonable connections to existing infrastructure within the existing facilities.



View of Wildcat Mountain from Preferred Site



Topography, vegetation, views of Highlands Ranch from Preferred Site



Topography and vegetation at Preferred Site



Vegetation character and views at Preferred Site

Figure 16. Preferred Site Existing Condition

Implementation

Introduction

Implementation recommendations for the preferred plan included: identifying potential costs for proposed improvements and infrastructure associated with the five amenities, analyzing potential revenue and operations costs, and providing a strategy for phasing improvements.

As outlined by the Backcountry Wilderness Area’s guiding documents, any potential future project will be more fully developed through plan development, HRCA’s accepted community involvement process (CIP), design and engineering and then construction.

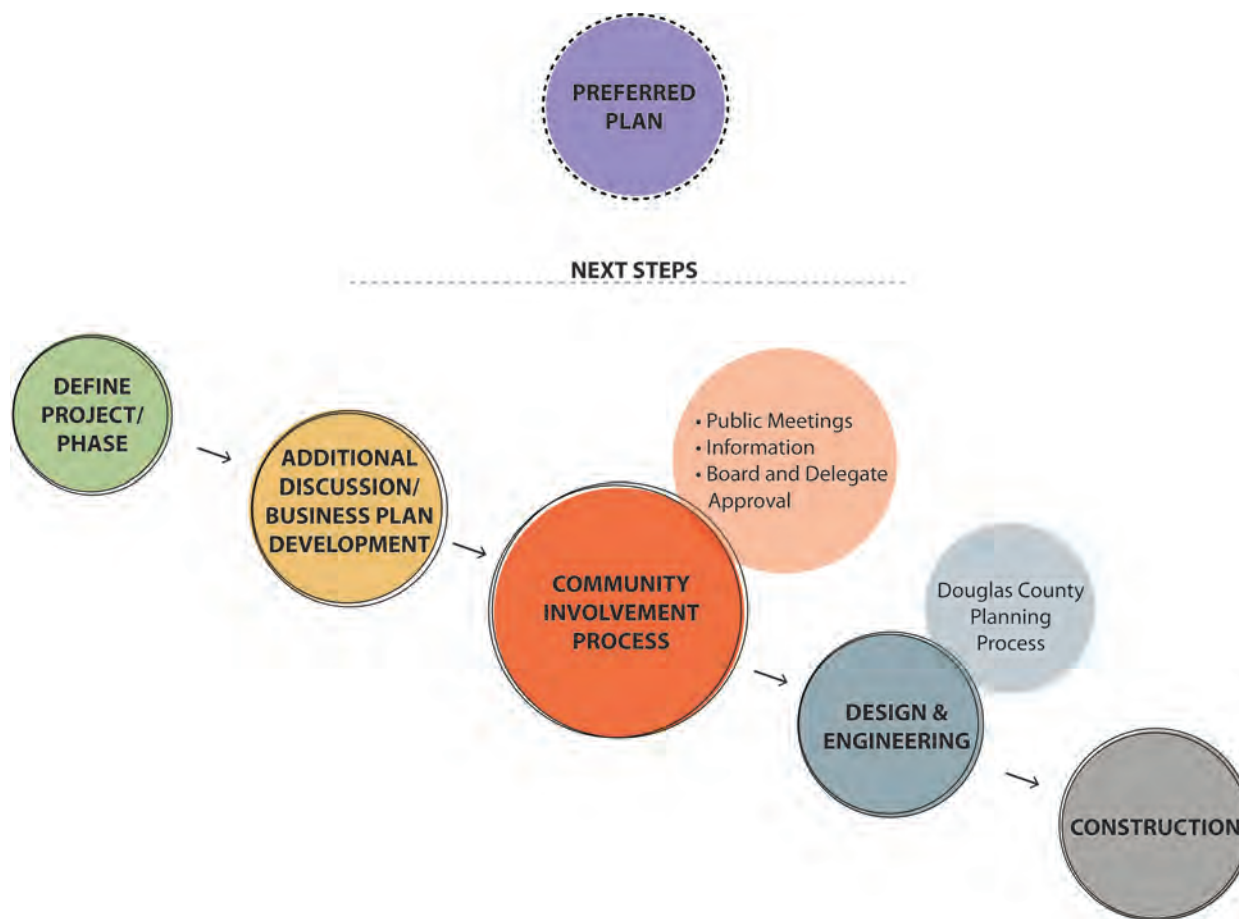


Figure 17. Next Steps to Implementation Diagram

Cost Summary

General costing for improvements identified by this plan, including associated infrastructure, is expected to fall within the available \$4 million to be completed over a several year period. Costing was completed according to 2017 unit pricing and augmented by contingencies for escalation, contractor costs, and design and engineering. A more detailed costing analysis is included in the appendix.

Covered Pavilion and Setting

5000 SF Building / Site	\$ 1M
Utilities (dependent on utility providers)	\$ 120K to \$ 220K
Potable water connection	\$ 500K
Entrance Drive and Parking	\$ 500K to \$ 700K

Equestrian Facility

Site, Fencing and Shade Structure, Access	\$ 125K
Utilities (dependent on utility providers)	\$ 10K to \$ 30K

Ropes / Adventure Course and Setting

50 Climbing Elements, Site, Access	\$ 350K to \$ 550K
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Archery

Olympic Course, Repurpose Existing Site	\$ 100K to \$ 150K
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Trails

Mountain Biking / Hiking / Overlook(s)	\$ 60K to \$ 110K
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Financial Analysis of Operations and Potential Revenue

BBC Research & Analysis conducted a financial analysis of operations for four proposed amenities for the Backcountry Wilderness Area. They modeled their analysis after similar operational facilities; examined financial data from HRCA and comparable sites; and estimated how expansion might affect visitation and how fees would increase revenues and expenditures compared to current operations. The more detailed analysis is presented in the appendix.

BBC's analysis included the following:

- Archery Range Expansion
 - Examined financial data from HRCA and other comparable archery sites to estimate how expansion might affect visitation and fees, and thus revenues and expenditures, compared to current operations
- Horse Facility Replacement
 - Examined how an increase in horse camp attendance would increase revenues and expenditures, compared to current operations, based on financial data from HRCA
- Addition of Rope Course
 - Modeled after rope courses at Epic Sky Trek Challenge at Phillip S. Miller Park, and the Genesee Rope Course at Genesee Mountain Park
- Addition of Covered Pavilion
 - Modeled after the Chief Hosa Lodge at Genesee Mountain Park

BBC's findings concluded that overall total revenues associated with the recommended amenities are expected to generate \$559,000 annual revenues and \$290,000 in annual expenditures.

- The archery and horse activities currently generate positive annual net operating cash flows. The proposed facility improvements are estimated to increase the combined operating net cash flows by about \$17,500 per year, with about \$137,000 in combined annual operating revenues and \$80,000 in annual operating expenditures.
- The proposed rope course is estimated to generate \$204,000 in revenues and \$121,000 in expenditures, for an annual net cash flow of \$83,000.
- The proposed pavilion facility will be used to host special event reservations such as weddings, birthdays, and family and corporate gatherings. It will also be able to host additional youth camps throughout the year. The estimated annual operating revenues are about \$218,000, with annual expenditures of \$89,000, for a net annual cash flow of \$129,500.
- Overall, the total annual revenues associated with archery, horse activities, the rope course and the pavilion are expected to generate \$559,000 in annual revenues and \$290,000 in annual expenditures.

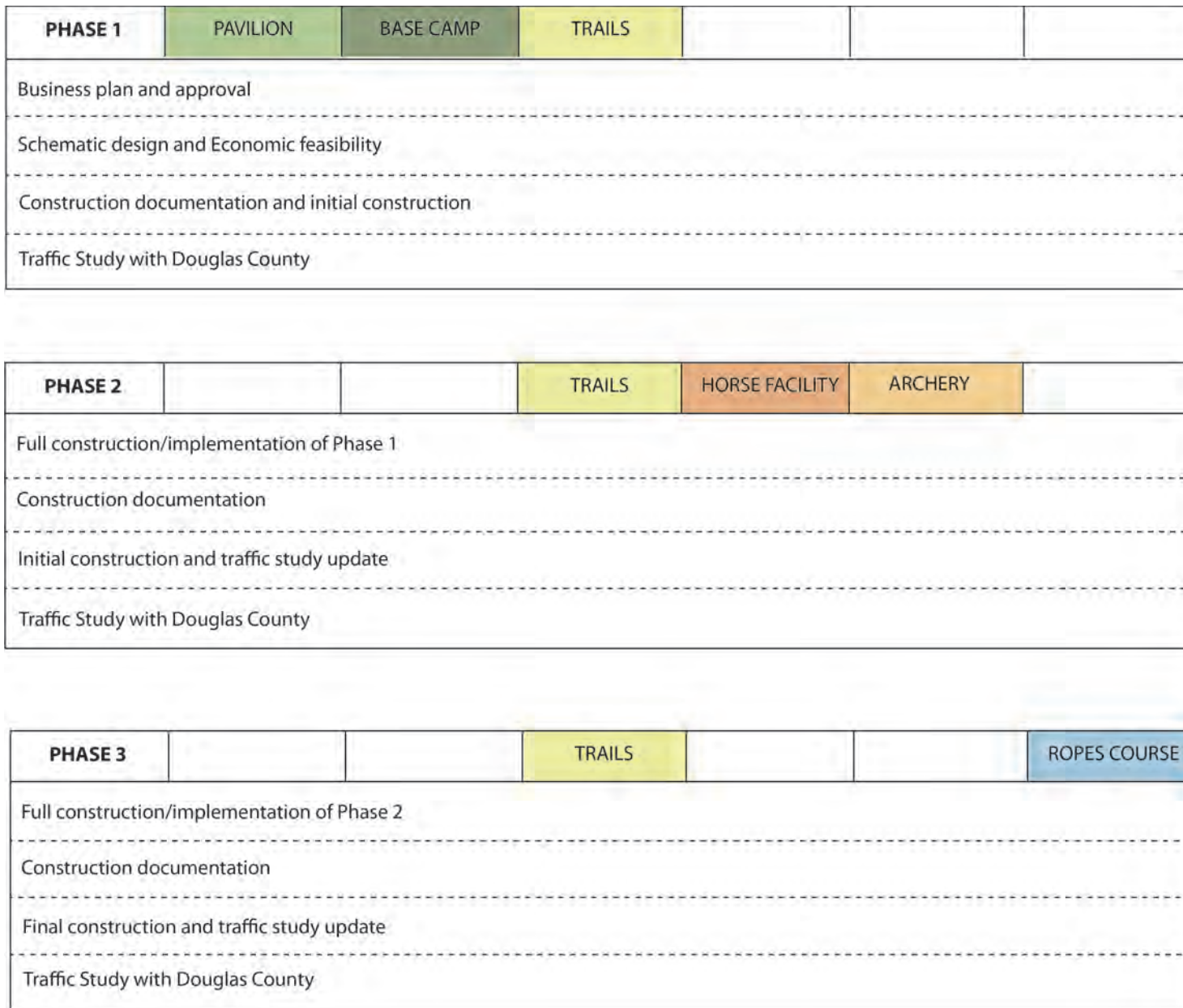


Figure 18. Phasing and Implementation Diagram

Implementation Strategy

The strategy for implementation of the amenities is based on the needs and desires expressed by the community and steering committee, and according to the expected revenue generation defined by the operations analysis. Implementation is expected to follow three general phases, whose timing is subject to change based on a variety of factors.

Phase One

The highest priority amenities for the community are the covered pavilion, expansion of the Base Camp program, hiking and mountain biking trails, and the associated infrastructure (roads, parking, and utilities).

- Creation of a detailed business and management plan is the initial action for Phase One. This is followed by design and engineering of proposed improvements, and then construction of Phase One amenities.
- Implementation of the covered pavilion and associated infrastructure and trails is expected to generate the most revenue.
- A traffic study, completed in conjunction with Douglas County, will be necessary to address issues or improvements associated with Grigs Road.

Phase Two:

Relocating the equestrian facility to the primary site with the covered pavilion and associated parking, and expanding the equestrian program is the second priority. Phase Two includes completing the trail system including the equestrian trails and infrastructure associated with the equestrian facility (service road, shelter, utility extensions), and relocating and expanding the archery facility.

- The initial improvements for Phase Two focus on design and engineering for the equestrian facility at the recommended primary site. The traffic study, in conjunction with Douglas County, will be updated or continued to assess any additional improvements needed.
- The equestrian facility must move from its current location prior to the expansion of the archery facility. Once this facility moves, the archery facility will be improved.
- Trail construction continues in Phase Two.

Phase Three:

The final phase includes construction of the equestrian and archery facilities, and completion of the trail system and the ropes/adventure course at the primary site.

- Construction of all Phase Two projects will commence in Phase Three. Trail construction will continue if the desired trail network has not yet been established.
- The final amenity to be implemented is the Ropes/Adventure Course, with design and engineering, and construction of this facility in Phase Three. Traffic and use studies will continue as needed.

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APPENDIX A - SITE SELECTION AND ALTERNATIVES SUMMARY

Existing Facilities

Evaluation

The Backcountry Wilderness Area staff and Highlands Ranch community have indicated that certain improvements to these facilities would greatly benefit both the Backcountry programs and the community. As visible in the following photographs, the temporary shelters utilized by the Base Camp program aren't sufficient to ensure safety in inclement weather, and options are limited for gathering areas that provide shade and/or protection from weather. The archery facility is adequate for most Base Camp needs but doesn't offer much challenge to more advanced archers. The horse facility is adequate but stands to gain access to many more trails if relocated to the proposed site. All existing facilities are impacted by their proximity to the Highlands Ranch Law Enforcement Training Foundation site, where gunshots are frequently fired at an audible range from BWA programs.



Existing Backcountry Base Camp, Chicken Coop



Existing Backcountry Horse Facility with Shed and Temporary Shelter



Existing Backcountry Base Camp Gathering Area



Existing Backcountry Archery Facility

Figure 19. Existing Facilities Photographs

Alternatives Summary

Concept Development

Each plan was subject to Steering Committee and Public comment via meetings and the HRCAs website. Feedback was taken into consideration and incorporated where possible. Plans from each phase of site design and planning are included in this appendix. The Draft Preferred Concept Plan integrated Sites 3 and 4 as well as the preferred elements and arrangements from the initial concepts.

Concepts

- Site 1 Concept
- Site 3 Concept A
- Site 3 Concept B
- Site 3 Concept C
- Draft Preferred Concept Plan

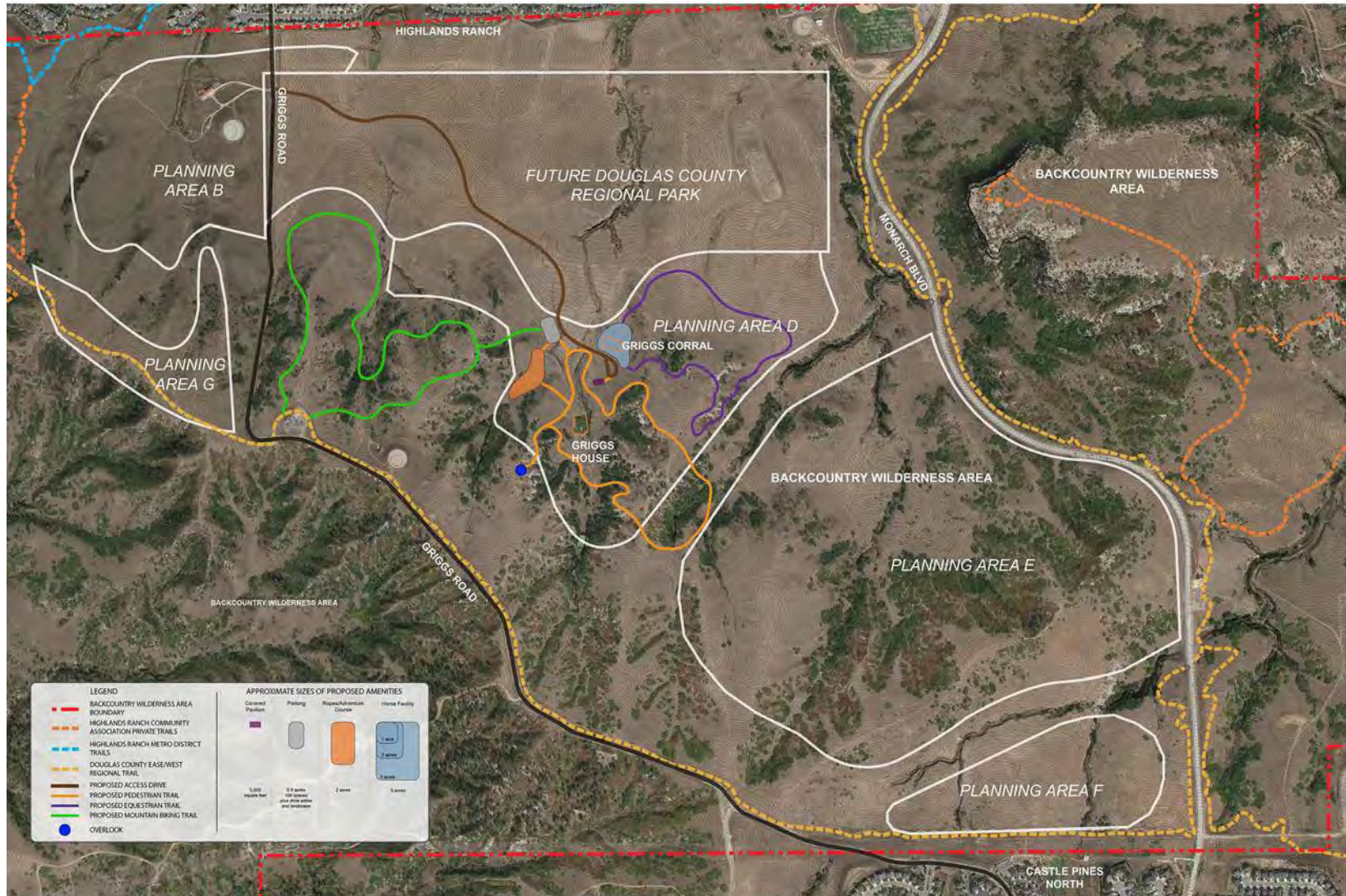


Figure 20. Site 1 Concept



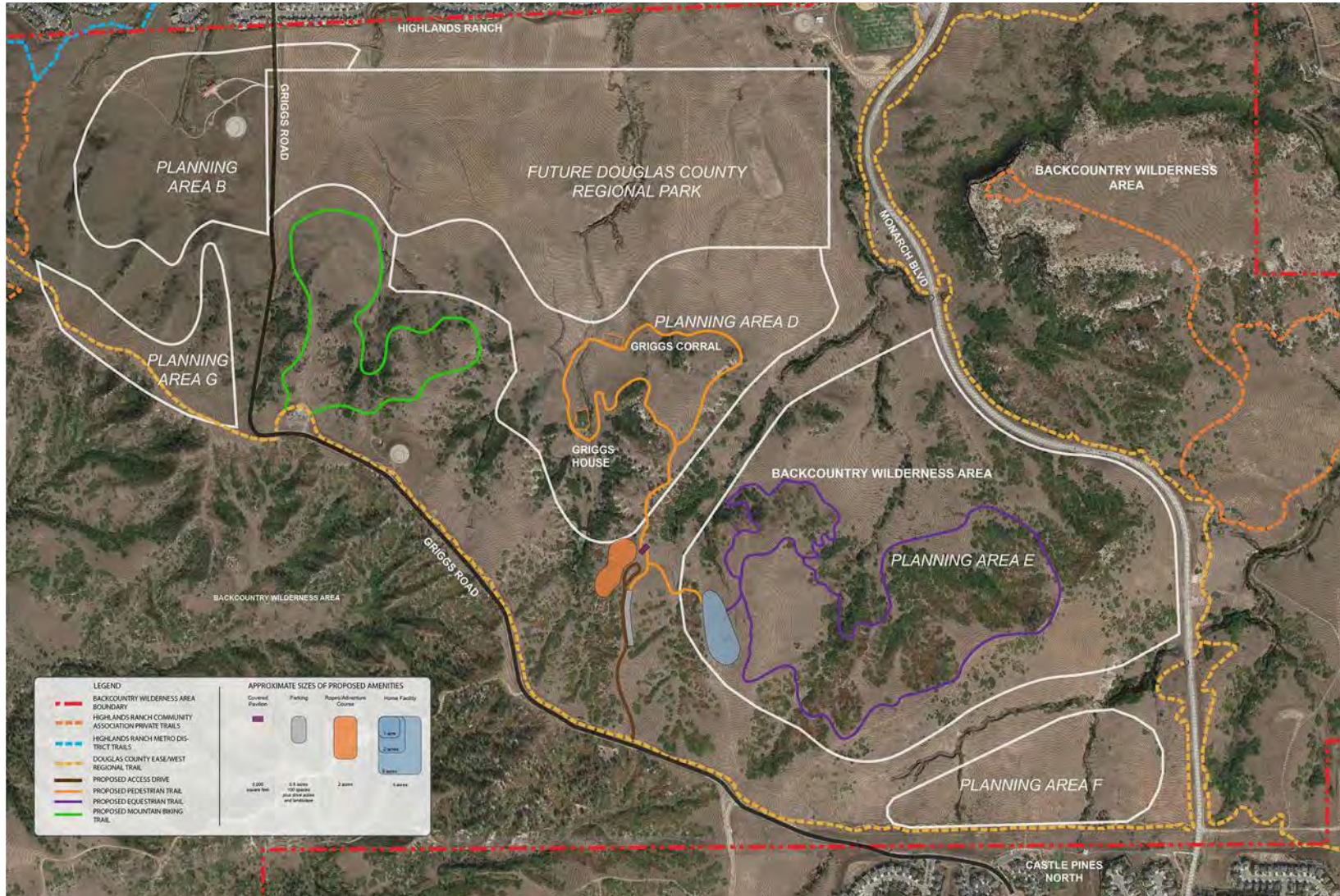


Figure 21. Site 3 Concept A



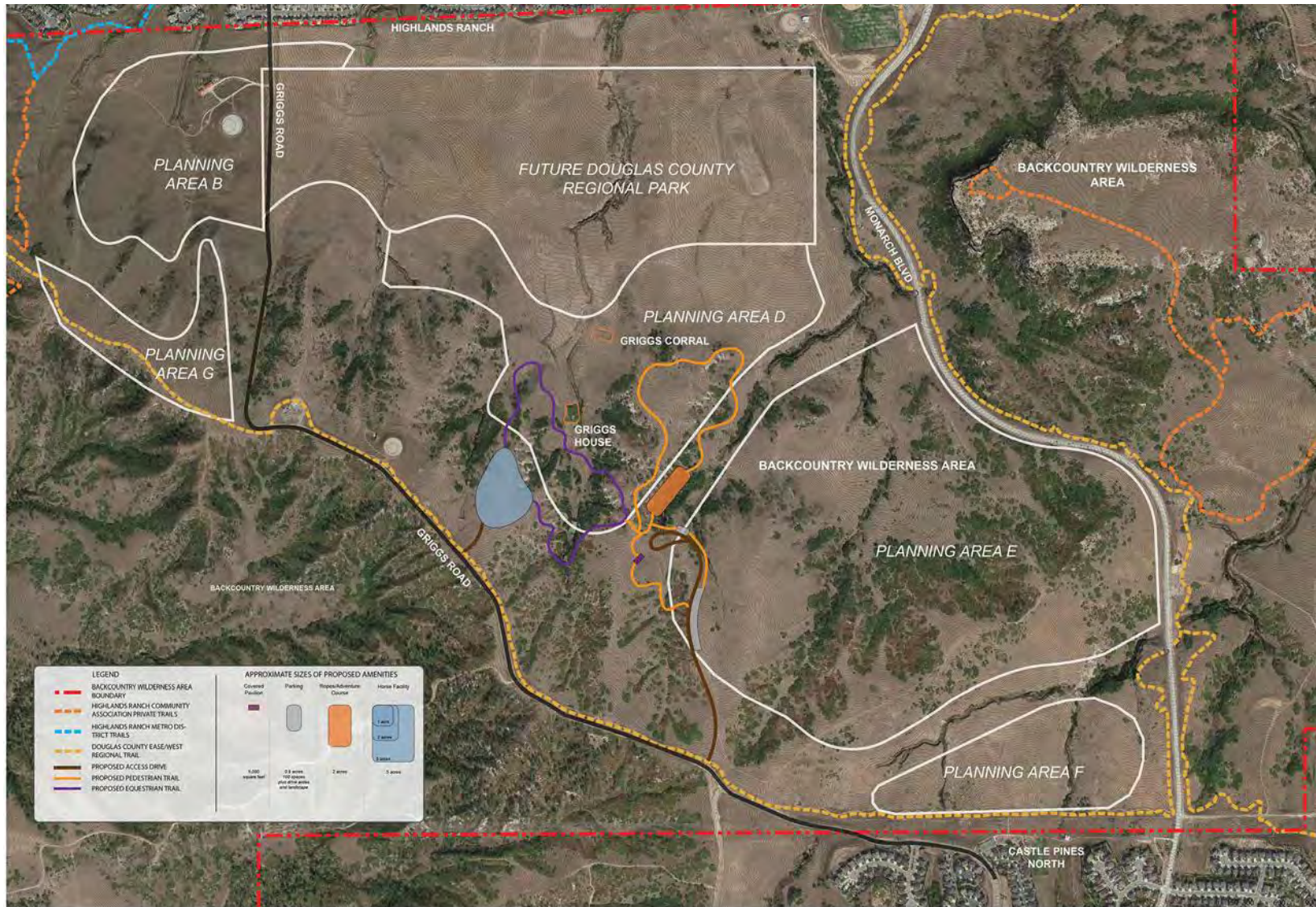


Figure 22. Site 3 Concept B





Figure 23. Site 3 Concept C

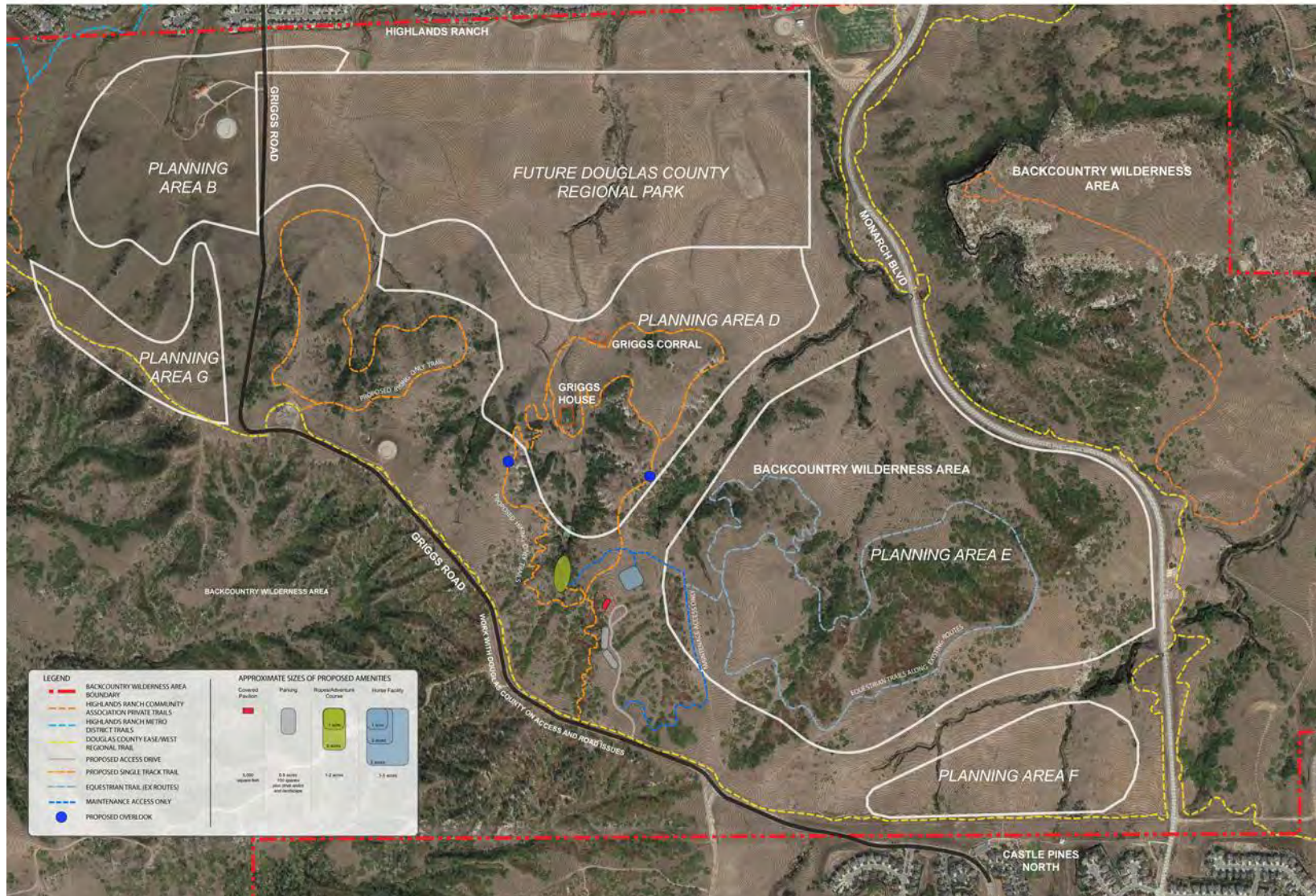


Figure 24. Draft Preferred Concept Plan



APPENDIX B - COMMUNITY OUTREACH SUMMARIES

Community Meeting 1 Summary

August 30, 2016

Community Meeting 1 was held at Eastridge Recreation Center at 6:00 pm. Over 100 people attended, 64 signed in.

Community Meeting 2 Summary

October 6, 2016

Community Meeting 2 was held at Westridge Recreation Center at 6:00 pm. 36 attendees signed in.

Community Meeting 3 Summary

December 6, 2016

Community Meeting 3 was held at Southridge Recreation Center at 6:00 pm. 19 attendees signed in.

Community Meeting 4 Summary

February 28, 2017

Community Meeting 4 was held at Eastridge Recreation Center at 6:00 pm. 13 attendees signed in.

**Backcountry Wilderness Area
Highlands Ranch Community Association
Community Open House Meeting 1**

Meeting Summary for August 30, 2016

At 6:00 pm on August 30, 2016, Highlands Ranch Community Association held an open house at Eastridge Recreation Center to present potential sites for proposed program elements and gather public input on the proposed program and locations. Approximately 64 attendees signed the sign-in sheets (attached). Mundus Bishop helped facilitate the event. The agenda included:

- A brief PowerPoint presentation explaining the project’s background and purpose, potential program elements, and potential sites for proposed improvements (See PDF of PowerPoint for presentation images and content.)
- An Open House segment to gather the community’s ideas, preferences, and comments on the presented options

During the Open House portion of the evening, attendees were invited to share their ideas and comments by reacting to images, words, and questions. Attendees wrote their responses on large sheets of paper and placed sticker “dots” near images to express support of a precedent. (See photographs below.)

The community expressed a diverse range of opinions regarding the proposed program and locations. Some attendees supported the proposed program, some expressed interest in elements not included in the current program, and others suggested that none of the proposed elements be implemented.

Below is a summary of the responses from the community. Following the summary are images that document the community’s input and the sign-in sheets.

Comment Summary

Do you prefer close proximity/access from Highlands Ranch or a longer distance between residences and improvements?

- Longer Distance: 12
- Closer proximity: 3
- Neutral: 2

Other Comments:

- Water Rights??
- Will this block elk migration? (No, these herds don’t migrate seasonally)
- Use base camp for ropes course, complimentary activities
- I like the mid-range 1/1a or 3

- Areas 1, 1a, & 2 seem to have good proximity, but are good distance away, too.
- Add Traffic Circle at Griggs & Craftsbury to slow traffic, maybe at Posten, too!
- Issues from the Sanctuary for sites 4 & 5?
- No additions- these are not “improving” the backcountry.

Do you like the idea of a barn or ranch house aesthetic for the covered pavilion?

- Barn: 14
- No/None: 2

Other Comments:

- Why can't HR Mansion be a “pavilion”? <Great use of existing resources, cost = FREE
- The existing pavilions are not fully utilized so why build more?
- Open air structure for gathering
- What about traffic on Griggs?
- What about the bison?
- TeePee
- Is the best use of HOA dues?
- How much will this cost us!??
- Who pays for this? (OSCA fund has \$ for these improvements)

Do you like the idea of a 3D archery in addition to a traditional archery range?

- Yes: 15

Reasons:

- Because I feel like it will be awhile for something like this to come out anywhere else. It will also give the ability for a real hunting experience and give people the ability on practicing on a real life target!
- 3D is vastly different than existing archery range. It will nurture skills that are useful in the wildlife management that HR must do. Strongly support a 3D range.
- Nothing like it in the area!
- Nothing close in the area that doesn't require a membership or a 2 year waitlist!
- Olympic distances!
- Less wind the better. Come out and watch these kids sometime. It's really cool.
- Low wind areas!
- Maybe/Need More Info: 3
- No: 9

Reasons:

- Does an archery range need to be located in a “wilderness area”? Are there other potential sites outside of the BCWA that should be analyzed?

- Amen! More Wilderness!
- Seems to cater to limited population/audience (Many amenities in HRCA are for limited interests. With 95K population, a small % is still a lot of people, eg: ballet, tennis, swimming)

Do you like the idea of locating improvements around a historic landscape feature such as a former homestead site?

- Yes: 12

Reasons:

- Being located on the historic site would be interesting for visitors.
- Homesteaders chose that site years ago to be sheltered from wind. Perfect for our use.
- But leave Griggs homestead structures and stone because I will love to see some history when I'm in Backcountry.
- It makes sense to make space that is already somewhat developed more useful.
- A "restoration" of home site building would keep the Highlands Ranch feel.
- Would give opportunity for another type of program type (ie: move chickens here)
- Keep any new developments located within existing developments, no need to "scatter" the impact to the wilderness.
- Wilderness is only "virgin" once, build on existing sites only!
- I didn't know a homestead site existed.
- No: Why are these considered "improvements." (2)

Should the proposed improvements be visible from Griggs Road? From Highlands Ranch residences?

- Visible from Griggs OK: 5

Reasons:

- There is an entire city visible from Griggs Rd (3)
- Visible from Griggs NOT OK: 3
- No/minimal visibility from residences: 9

Reasons:

- The distances are quite large, minimal visibility is ok.
- Most ideas have limited size structures.
- Minimal visibility from the road, signs are good for "advertising"
- Minimal visibility of pavilion would be acceptable, NO visibility of ropes course.

Other comments:

- No- they aren't "improvements." You are tearing up the backcountry and putting structures, roads, not improvements! (Ditto x2)
- Leave it alone!
- As long as it's well done it doesn't matter.

- Will this add more light pollution?
- Implement “traffic calming” on Griggs
- Day events only, no light at night.
- It doesn’t matter because any open space you will see a lot of human involvement.

Do you like a centralized cluster of improvements, or more dispersed?

- Cluster: 2

Reasons:

- To keep away from any animal activity
- Dispersed: 6

Reasons

- Maybe share parking (yes)
- Space them out over 2-3 sites
- To keep natural feel
- Would be possible in Areas 1, 1a, and/or 2
- The archery range and horses should be farther away from other structures for safety (yes, but horse away from shooting 1 area)
- You don’t want congestion or facilities to be on top of each other.

Other Comments:

- No- no cluster at all- leave it alone! (Ditto x 2)
- No- I don’t see a need or benefit to clustering.
- Central place to gather, then disperse from there
- How is this an “improvement”? (Ditto)
- Leave it alone! Elk and animals #1
- Like to see the development of existing locations farther west and leave the sites near Griggs in more natural state.

Other Ideas- What’s not on the list?

- Leave it alone! (2)
- Why is this being proposed? A cogent reason must be clearly stated.
- More running/hiking/bike trails
- If we build an equestrian facility, will this use the existing trails or will a new/separate network be built? How will the increased horse traffic affect other uses of the trail? (positive or negative) (yes??, please answer)
- 2+ acre dog park (off leash) (yes, no, no)
- Disc Golf Course (18 holes) (Mtn Vista has some)
- Respect Community Survey
- Bike Park like Ruby Hill or Valmont (Yes!, Right on!, These places are awesome!)

- A bike park that provides facilities to all riders: strider track, pump track, short track, jump park, skills course, cyclo x track (for the children)
 - (It would be close to home, wouldn't have to drive to Parker or Boulder or Winter Park- great for kids who can't drive)
 - (Great idea for all ages of the HR community. The cycling community is growing and a bike park are would be *well* used)
 - (Yes! Excellent Idea/Plan, No, Kids Mountain Bike Skills area)
 - (Yes!!! Jason Blackford, 303-704-3033 Fun for the whole family!)
 - (Revenue for HR like backcountry races)
 - (No!!! ☹)
- One way and single user (horse, hiker, bike only) trails. (yes, ditto)
- More hiking paths like backcountry west of Griggs Rd (yes, yes)
- Only if our kids get out to appreciate the outdoors, will they commit to preserve it.
- I'd like to make sure that any potential development of that portion of the backcountry involves an expansion of hiking/walking trails.(yes)
- Since HR is growing older- more older generation, I would like to see more amenities for them. Roping, horses, and archery really wouldn't be. The gazebo would, but there should be more that they can utilize. Along with their families, of course. (I agree, a central area for outdoor programs for all kids through seniors)
- Xeric landscape demo garden

Character

- Agricultural Structure
- Indoor/Outdoor
- Ames Family Ranch Style (yes)
- "off the grid" – solar (yes x3)
- Griggs Road dirt compared to asphalt (keep it dirt x2)
- No Thanks
- The minimalist approach in the bottom left could be an interim/test using temporary structures like tents/port-a-potties for events. If successful, more permanent structures.
- How are you going to pay for a permanent structure? There will be a lot of ongoing maintenance costs to this?
- No permanent structures!
- Don't pave Griggs! (yes x5) (Says the people who chose to live near Griggs. HR is 90K other people too!)
- Day activities only (yes x2)
- Protect the wildlife! (amen!)
- Build a structure at HR Mansion? (We already have the HR mansion, we do not need another wedding venue!!)

- Rustic
- We need natural-botanical area for viewing
- After these amenities are completed, will there be further development of the backcountry?

Word Map

- Adventure (5)
- Base Camp (1)
- Rustic (6)
- Close (1)
- Barn (3)
- Natural (6)
- Risk (1) (Averse)
- Nestled (1)
- (Mostly) Hidden (1)
- Accessible (1)
- Explore (2)
- Valmont/Ruby Hill Style Bike Park (6)
- Do Nothing (6)

Precedent Images

There was a strong adverse reaction to the Ropes/Adventure Course precedent imagery. A lot of support for Archery, and some support for an Equestrian Trail. There was support for all Covered Pavilion/Venue images, all represent some form of rustic, barn aesthetic participants liked.

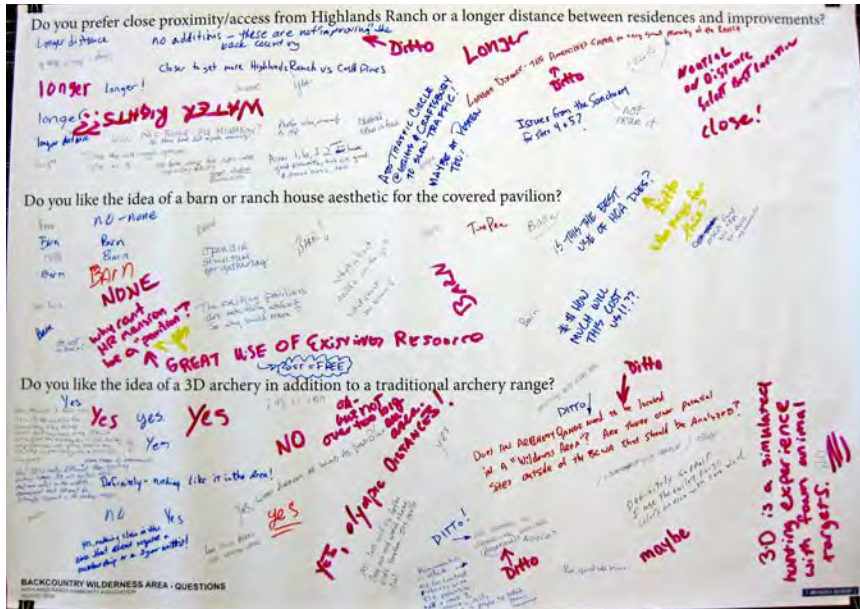


Figure 25. Community Input Question Board 1

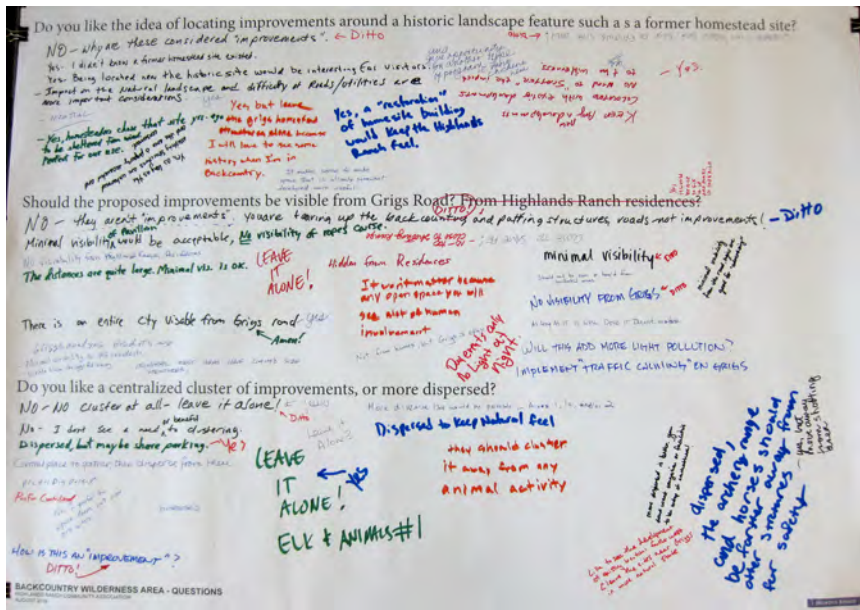


Figure 27. Community Input Question Board 2

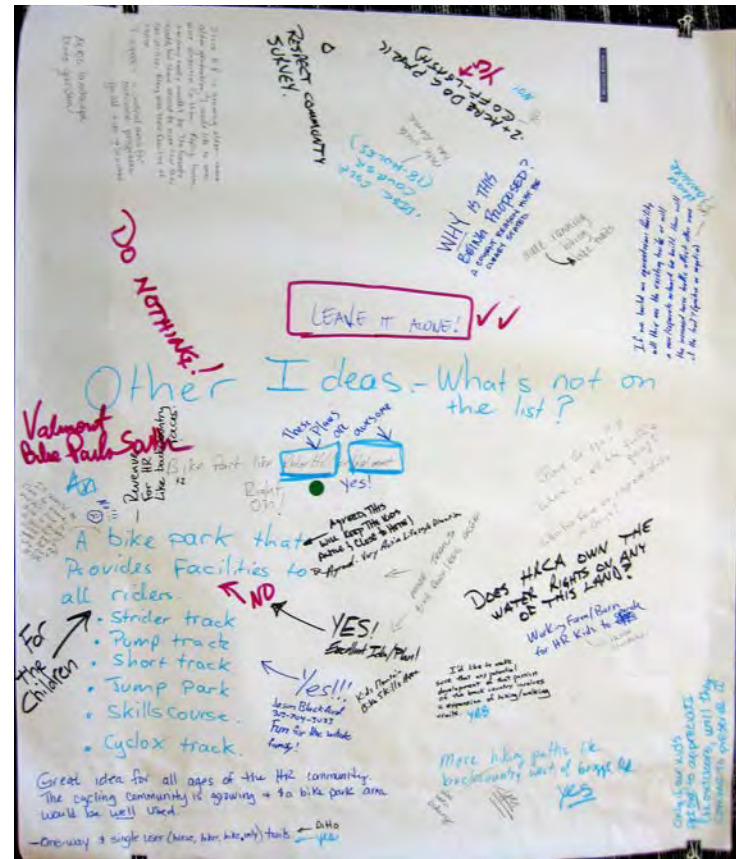


Figure 26. Community Input Question Board 3

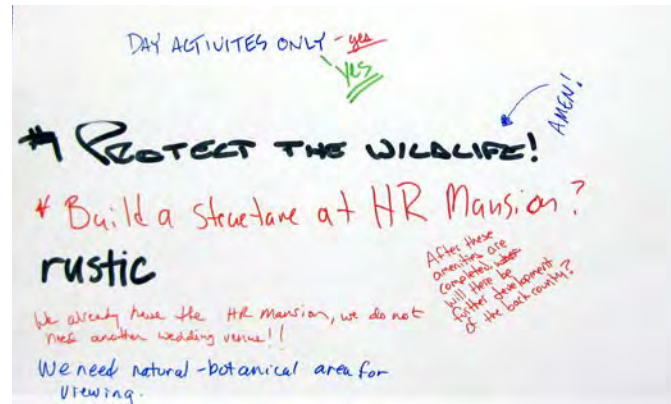


Figure 28. Community Input Question Board 4

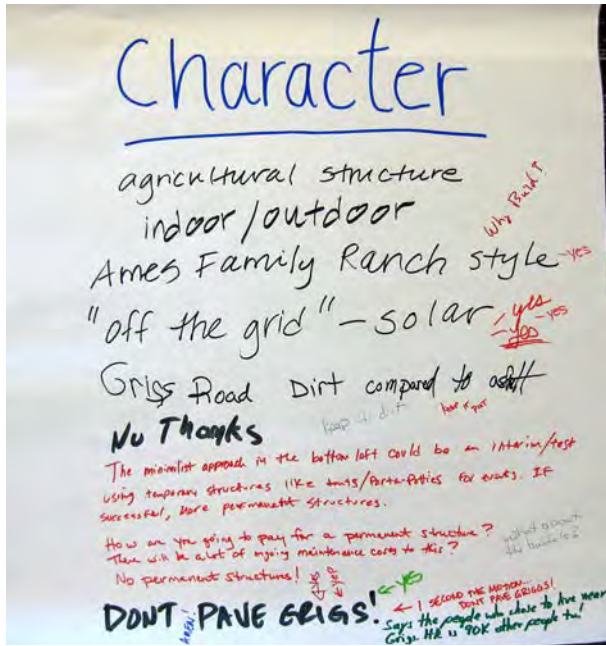


Figure 29. Community Input Character Board



Figure 30. Community Input Precedent Board: Covered Pavilion

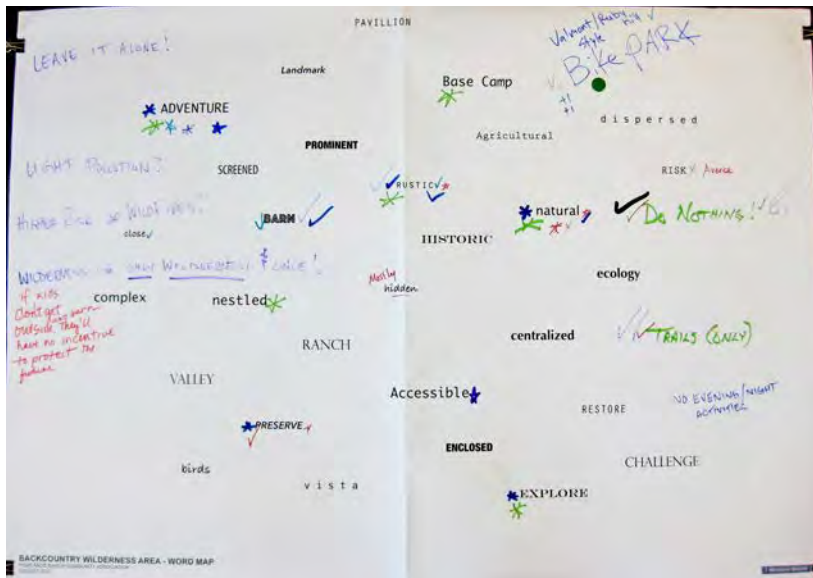


Figure 31. Community Input Word Board



Figure 32. Community Input Precedent Board: Equestrian/Ropes

**Backcountry Wilderness Area
Highlands Ranch Community Association
Community Open House Meeting 2**

Meeting Summary for October 6, 2016

At 6:00 pm on October 6, 2016, Highlands Ranch Community Association held an open house at Westridge Recreation Center to present conceptual alternatives and gather public input on the proposed concept plans. Approximately 36 attendees signed the sign-in sheets (attached). Mundus Bishop helped facilitate the event. The format included:

- Two separate rooms set up with boards on tables and easels. The boards were arranged to allow participants to learn about Backcountry history, how the proposed program was developed, the overall site context and scale of proposed amenities, and four concept plans.
- Mundus Bishop and BWA staff and steering committee members were present to guide participants through the series of boards, answer questions, and encourage them to record their comments on comment cards or large sheets of paper.
-

The community expressed a diverse range of opinions regarding the concept plans. Some attendees expressed support for the concept plans; some expressed interest in elements not included in the current program, and others suggested that none of the proposed plans be implemented.

Below is a summary of the responses from the community. Following the summary are comment cards, images that document the community's input and illustrate the variety of viewpoints represented at the meeting, and the sign-in sheets.

Comment Summary

Site 1:

- *Large Common Area* (no x 1)
- *Heavy Use- Impacts? Lighting Impacts?*
- *Mountain Bike Loop* (no x1)

Comments:

- Good- keep all out of Area E for Elk
- Bad- heavy congestion- scare away wildlife
- Night sky! No lights
- Heavy traffic on Griggs and Poston
- Additional access road behind Hearth? (bad x1)
- This plan and Future Douglas County Park may cut total land area in half! (bad x 2)

- Minimize extend of utilities
- Like Horse facility at old corral
- Please don't "pave our paradise"
- I will pay higher dues, quality of (wild)life is most important

Site 3/Option A

- Mountain Bike Area?
 - No bike park or races (x7)
 - Why not multi-use trail- ped and bikes
 - Like mountain bike loop; allows for future expansion and connection Eastward to Monarch without crossing roads
 - Consider bike park (like Valmont in Boulder) instead of ropes course. More revenue opportunities via host cyclocross races and offers more diversity than a ropes course - MAC in Castle Rock only 10 minutes away.
- Horse Trail in Area E?
 - No, keep for wildlife.
 - Like Conservation easement on E and east of Monarch

Additional Comments:

- Alt Option- Do not build anything! Open space will only be open space/wilderness once.
- Increased traffic on Poston from cut through traffic. Elementary school right on Poston. Increase traffic is a danger to those kids. (I agree!)
- Ropes courses not needed. Recreation needs to be wild, ie: no artificial structures
- We moved here for the wild spaces
- Please just raise our dues (worth every penny!)

Site 3/Option B

- No Horse Trails in Area E

Additional Comments:

- I like the ped trails here- connect to Monarch ped trail?
- Least impactful option
- Like this option, has safe access at intersection, less impact to overall area and can be expanded in the future. Could add mountain bike trail from option at with minimal cost.
- Option- do nothing! Do not build!
- Site 3 Option B Best- less effect on elk

- Keep most of the pace open as native land and do the least amount of development as possible- keep it the back “country” (yes!)
- Ped trails ONLY ok, but we really don’t need more. (we do need more)

Site 3/Option C

- Planning Area E – Horse trails in Elk Area
 - Keep E for wildlife, not horses
- Lighting Impacts for wildlife?

Comment Cards

- (11) comment cards were collected at the meeting. They are attached below.

Additional Comments (from Emails)

- Is it too late to put in my vote for a year-round Archery range? :)
- We are supportive of keeping all of the space as development-free as possible. The Elk need the space and use it all.
- Is there a sense of how these potential development options would influence the home values that border the open space in the Backcountry (like ours). Thanks!

- I just wanted to write a quick note to propose an idea at tonight’s HOA meeting. I am in scouting and there is no place within 40 miles where I can take the scouts target shooting with air rifles. To have a location close like the archery range would be a wonderful amenity to teach youth gun safety. Air rifles are fun to learn and shoot with youth. Air rifles are less dangerous than even a bow. Our scout troop would love to be part of a program such as this and could volunteer to build / clean / plan a target range such as this.

- Dear BoD: I attended the Open House on August 30, 2016. I was disappointed by the opening presentation as the speaker tried to tell us what the community “needs” are, and what “amenities” were being undertaken. I don’t agree that the “needs” she stated are supported by the community. I listened to the various development options, but didn’t hear anything about “no development”, or we already have “enough development”. I was also alarmed to learn this study cost over \$44,000. And is budgeted for \$100,000 in 2017. Are you listening, or is it a foregone conclusion this is going to proceed? I was asked to give you feedback. I strongly believe we should leave it as it is.

- I am a mountain biker who lives in Highland Ranch, and I ride the Backcountry area at least once a week. I love the HRCA trails in the Backcountry because they are relatively close and I can ride from my house. The thing that makes these trails fun is they are narrow single tracks creating a challenge as they wind through the beautiful country. HRCA truly did a great job in building those trails, I especially like the Bad Lands trails, and I am not alone in my opinions. Being out in the Backcountry frequently I can tell you mountain biking is probably the best fit for much of the area. It is a relatively inexpensive sport, all you need is a bike, so most people can afford to do it and it allows the rider to get miles and miles into the Backcountry. The only other users that can

get that far back into the Backcountry are a handful of people who own horses and some hard core trail runners. Currently the overwhelming majority of Backcountry users are mountain bikers, I estimate 90% to 95%. I know you are currently working on a plan for the Backcountry area, so I am writing as a mountain biking advocate. I think the best way to get more people into the Backcountry is to create more accessible mountain bike trails. There are lots of youth in the Highlands Ranch area that do not own a car, but if they could ride a mountain bike from their home to a fun trail, perhaps they would. A fun mountain biking trail is a narrow trail/single track not a dirt road. Sadly Douglas County recently widened and graded the EAST/WEST Trail into a wide trail/road which ruins it for mountain biking. I think most mountain bikers would prefer ride only on even or odd days or simply have a separate trails as apposed to flattening and widening all trails to the lowest common denominator of user. Thanks for listening, and I hope HRCA will continue to support its mountain biking community.

- Due to work travel, I was unable to attend your first open house on backcountry development and wanted to voice my concern that there is not a “status quo” option. The backcountry area is a rich resource for all of Highlands Ranch – if properly managed. I know that you have engaged outside resources to provide research on the various options available for recreation. As board members, you are entrusted with ensuring the best decision making for the entire community and I hope that you take into consideration the issues of traffic, existing homeowners and the ecosystem itself in your future planning.
- While the open house was informative, I was disappointed to see that the Conceptual Plan and presentation did not adequately address the option of doing nothing. It appears that it is a forgone conclusion that development will happen. However, after reviewing 2012 Community Survey, it appears that HRCA is going against the majority of respondents.
- I support the idea of creating an archery range. We have in HLR good facilities for sports; I love that. Most of the facilities are for sports where age, weight, high, gender segregates who you can play or compete with. Archery, at the way I see it, has less segregation by those factors. It makes easier for parents and their kids to practice a common sport and play/compete together: Gender, weight, high are not important factors to play/compete. Age does, but starting from mid teenager and older age, it does not give advantage... On last competition, I wish I was able to shoot like that 16 years old kid; he made better scores that the “senior archers” competing.
- As a resident of this community, an avid user of the Backcountry wilderness area, and the parent of an archer I want it to be known the importance of working to keep and improve Archery as a part of the Backcountry Wilderness area. I seems as soon as people mention ‘development’ and ‘backcountry’ in the same sentence most people have a visceral reaction and immediately want to shut it down. To be so small minded and disregard the population that finds great value in the backcountry is truly a shame. If the mission of the Backcountry is “Provide visitors with unprecedented opportunities to enjoy nature near where they live, while protecting and conserving natural, cultural, archaeological, and historical resources for the enjoyment of future generations.” How can the opportunity to increase the value, enjoyment and unique environment of the Backcountry be discussed without considering expansion of archery for our community. Highlands Ranch has always been unique, a gem of a community, offering opportunities and experiences not found in other planned neighborhoods, in other areas. Including the development of archery in Backcountry planning will continue the mission to allow residents to connect with and enjoy

nature. It does not have to mean mass destruction of any one area. Expansion of the Archery can be achieved on a scale which has a hugely positive impact to it's users, while not destroying the landscape. No one supporting the Archery program is asking for huge buildings or Costco sized paved lots. We want the opportunity to grow in the sport, to appeal to newcomers, to accommodate love of the sport. Expansion could allow for school teams and clubs to form and participate, where now this is little for them. If you are an Archer, or wish to be, you cannot do so with your school. Admittedly the logistics to making this possible at even some schools would be insurmountable. HRCA has a way to fill this gap, to show leadership and support of it's community. My son gets so much from participating with Coach Dorow's team, but everybody wants the chance to wear their school colors too. The community can make this happen. The July tournament offered a unique opportunity for our son to experience competition unlike any other. It was a brutally hot day, but he loved it. Another opportunity you just can't get anywhere else - and it could be even better with support of HRCA. And in case you don't already know, Coach Chris Dorow brings more to a lesson of Archery than just "Tips on Toes". He is committed to also supporting the growth of his young students into responsible, respectful, and confident young adults. He works to encourage their love of the sport and the growth of their confidence. His passion for sport and the positive impact it can have are evident in his work with his students. Students who wish to learn something outside of the 'norm' cannot grow and expand their experience without development of the Archery program. No program with such potential in HRCA should be limited in such a way. We have the best, we should make the most of it. I cannot be at the meeting tonight however I ask the voice in support of some Backcountry development not be drowned out, that our voice be represented and brought to light.

- Any improvements that could be done to the archery range (or a new range) would be great. While the range is open, I can normally be found there 3-4 times a week for an hour or so. I have been using the archery range since it opened 4-5 years ago. Over the years, its use and the diversity of users has grown tremendously. Especially with Chris' JOAD group. The addition of a 3D range and the ability to shoot at ranges beyond 60 yards would be great. From a cost perspective, I would be willing to pay an additional fee to utilize a 3D range. Another improvement that would be nice (although for a smaller group of people) would be a Sport dog training area. No this is not a dog off leash area, but a true sport dog training area where people who participate in Hunt/Field trials can train their dogs. This is not an area to let the dogs run free, but rather a place where dogs are ran through retrieves and handling drills under the direction of their handler/owner. All that is required is a parking area and access to a larger section of grassland. Environmental impact is almost non-existent compared to 'Dog parks', and these types of dogs are under hand and whistle control at ranges beyond 2-300 yards. Chatfield state park currently has an area similar to this, but having a facility closer to home and possibly less crowded would be a great asset. With the additional mountain bike trails the past few years, we have a world class trail system in our back yard. I do not think any more trails need to be added, and the backcountry can start focusing on other potential uses as mentioned above. As for a lot of the rest of the areas, I believe Mark and his crew have done a great job to balance the 'leave it alone' and 'how can I enjoy the area' views. My wife and I have participated in many of the backcountry activities: Art, Smores, and more, backcountry date night, Backcountry Fence Removal, Mountain Bike trails and the horseback riding. And maybe one day I will get drawn for a hunt in the backcountry! Our friends have younger kids who participate and love all the youth activities and camps that are provided - moving this to the Police

Training area was viewed as an awesome improvement! We would like to continue seeing the area used in this non-impact manner where the residents of highlands ranch and the wildlife can co-exist.

- I am opposed to any backcountry wilderness development. Please let the residents of Highlands Ranch enjoy the trails and beauty of an already overdeveloped community. I would love to see the open space preserved in its present state forever.

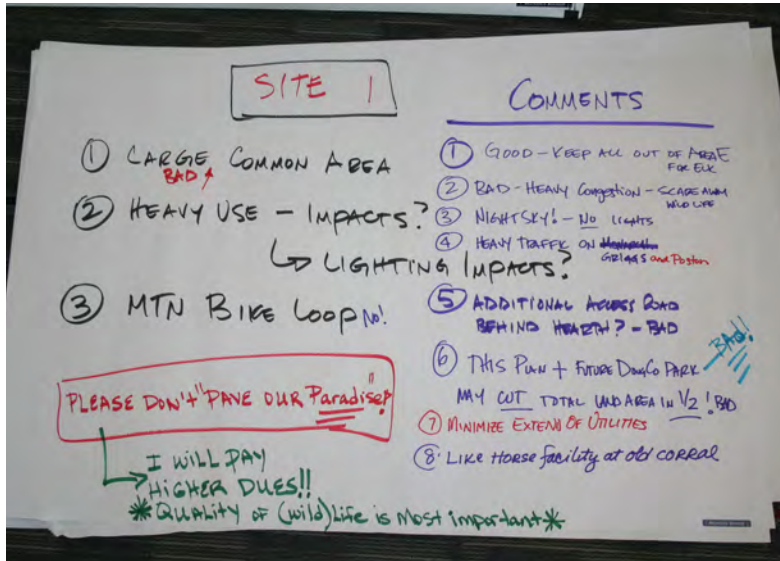


Figure 33. Community Input Board Site 1 Concept

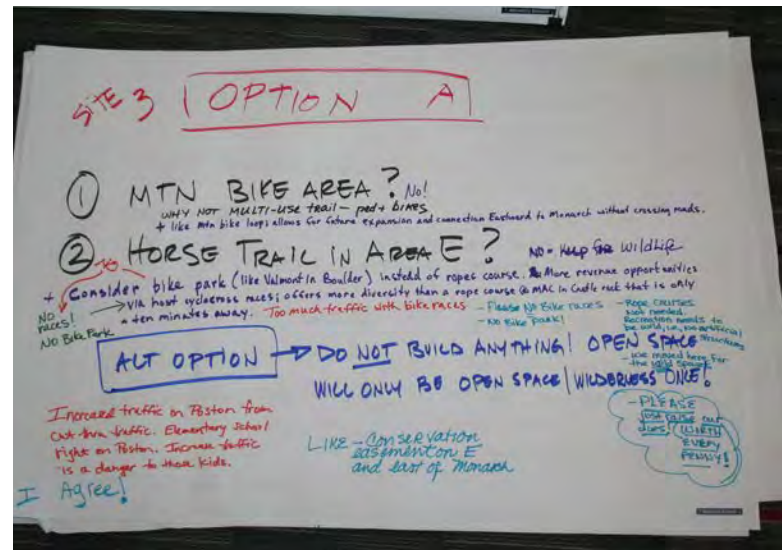


Figure 34. Community Input Board Site 3 Concept A

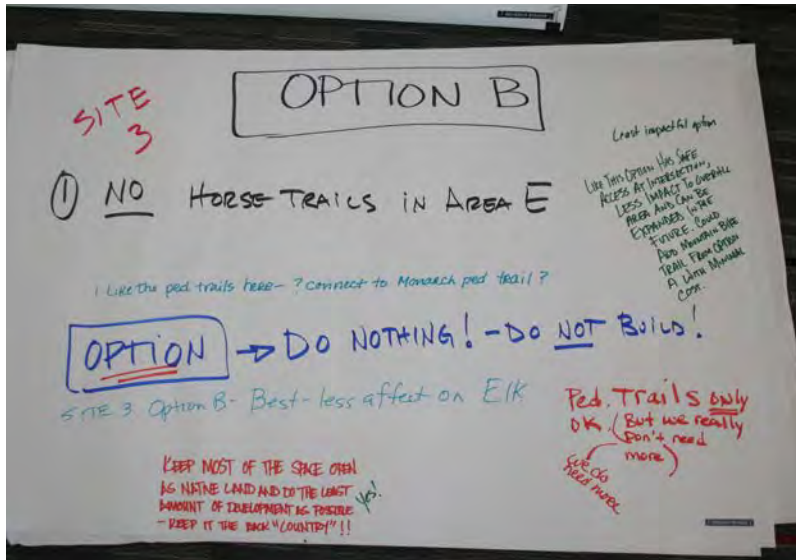


Figure 35. Community Input Board Site 3 Concept B

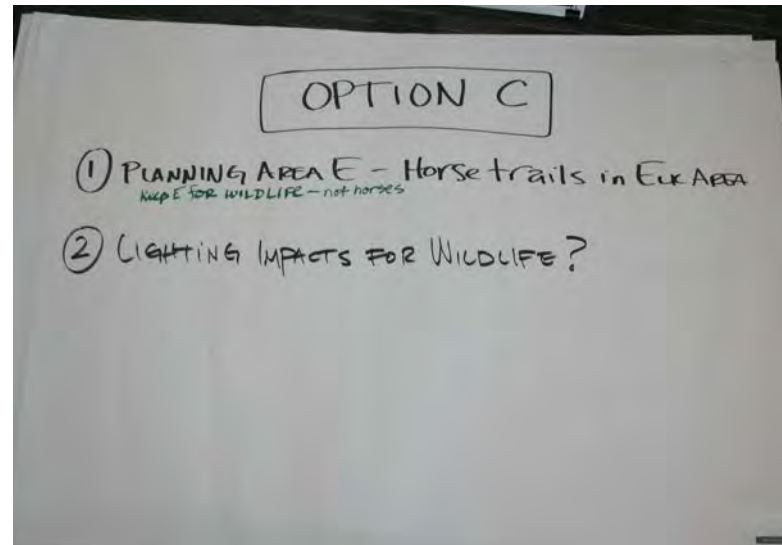


Figure 36. Community Input Board Site 3 Concept C

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

I would like to have a few jumps. I think some of the team doesn't want a loop. I really like the Frisco bike park and it is really fun, so if something like that could be done, that would be awesome. A really technical spot in the bike park would be great. Another ~~idea~~ idea is to have a trail around the bike park, but it doesn't connect

Name (optional): Drake Colburn

Also, a big steep hill would be nice for hill repeats

but goes ^{back} up to itself is already there.

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

Bikes! I would like to formally request for the implementation of a mountain bike park, and some one-way style downhill trails. Also, some large wooden features such as those presented at the Valmont bike park would also be very enjoyable. Also, for short-term results some technical one-way, downrated traffic trails. #HRComps #thebest #bikes

Name (optional): sincerely, and many thanks, Kendrick Barts (HRCA cycling team)

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

- a bike park like Frisco Adventure Parks one or Valmont
- new bike trails
- more technical bike trails
- large wood features in the new bike park

Name (optional): Ryan Hays, HRCA bike team

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

- Bike park and more trails
We would enjoy the new amenities installed in the backcountry wilderness area. The new trails and parks could include some more difficult terrain and features. We from the Highlands Ranch Cycling team would strongly use these amenities and very frequently. Thank you for what we do and we enjoy your continuous support.

Name (optional): Bob Ross

Figure 37. Comment Cards

Figure 38. Comment Cards

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

- Bike trails

- Bike parks

I believe that with the massive increase of bikers racing with the Highlands Ranch Complex from that an addition of innovative new trails would be a major asset to Highlands ranch. Some trails with slightly higher technical difficulty would prove very fun and a good training challenge.

Name (optional): Carson Archuleta

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

I am very concerned with the potential cut thru traffic on Poston. Copper mesa Elementary school is located right on Poston. We already have too much traffic speeding thru the neighborhood. In particular, a bike course and/or a ropes course would be the worst in creating traffic problems.

Name (optional): Jackie Nolan

* Please no bike course or bike races. *

Figure 39. Comment Cards

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

- Limit lightings on ^{mtb} courses (ie none)
- Access Road from Monarch not Griggs
- If Access Rd off Griggs use site 3 roads
- How will existing MTB Trails be regulated for non residents?
↳ will outsiders get any access?
- Limit hours at Pavillions-
- Give HR. Residents 1st choice for usage
- Zip lines or an Incline?
- Put facilities closest to Dory
- CO future site leverage their Infrastructure work
- Restrict development/trails from interfering with existing wildlife
- Keep structures out of line of site from Roads
- Nature Center?

Name (optional):

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

PLEASE KEEP THE BACK COUNTRY AS "COUNTRY"! DON'T PIP UP THE ECOSYSTEM AND DISRUPT THE ANIMAL HABITATS! IT'S PERFECT THE WAY IT IS! A SMALL PAVILLION IN THE LOWLAND AREA OFF MONARCH WOULD BE OK FOR CAMPS, BUT NOT ALL KINDS OF OTHER INVASIVE RECREATION. Thanks :)

Name (optional): ROBIN MENDELSON

Figure 40. Comment Cards

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

PRIMARY OBJECTION IS TO A PAVILION TYPE
STRUCTURE THAT COULD BE USED FOR EVENING/NIGHT
ACTIVITIES - WEDDINGS, CONCERTS, ETC. THIS WOULD
EXTEND THE HOURS OF PEAK TRAFFIC ON GREGS RD
AND LIKELY CAUSE COUNTY TO ADVANCE ANY PLANS TO
PAVE GREGS, WHICH WOULD INCREASE MORNING &
EVENING TRAFFIC. IT COULD ALSO SET A PRECEDENT
FOR THE DOUGCO PARK PROPERTY.

Name (optional): John Piche - FIRELIGHT

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

How to manage vandalism of
facilities? Daniel's park is
constantly vandalized.

Name (optional):

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #2 COMMENT SHEET

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

TRAFFIC STUDY FOR
POSTON PKWY
WILL BE NECESSARY

- CROSS WALK ON POSTON TO RED TAIL PARK IS DANGEROUS FOR CHILDREN NOW
- TRAFFIC COMING DOWN HILL IS ALWAYS ABOVE SPEED LIMIT

Name (optional):

Frank Wankar

Figure 41. Comment Cards

Figure 42. Comment Cards

**Backcountry Wilderness Area
Highlands Ranch Community Association
Community Open House Meeting 3**

Meeting Summary for December 6, 2016

At 6:00 pm on December 6, 2016, Highlands Ranch Community Association held an open house at Southridge Recreation Center to present the preferred conceptual plan and gather feedback from the community. Approximately 19 attendees signed the sign-in sheets (attached). Mundus Bishop helped facilitate the event. The agenda included:

- A PowerPoint presentation explaining the project's background and purpose, potential program elements, the preferred concept plan, and how the plan was developed per survey data and community feedback (See PDF of PowerPoint for presentation images and content.)
- An Open House segment to gather the community's ideas, preferences, and comments on the conceptual plan.

During the Open House portion of the evening, attendees were invited to share their ideas and comments by reacting to images and questions. Attendees wrote their responses on large sheets of paper and completed comment cards.

The community expressed a diverse range of opinions regarding the proposed program and location. Some attendees supported the proposed program, some expressed interest in elements not included in the current program, and others suggested that none of the proposed elements be implemented.

The following is a summary of the responses from the community.

Do you like the Base Camp/Pavilion in a screened location with views?

Other Comments:

- Shouldn't the real question be if we want a pavilion?
- Only day use-no nighttime events (no weddings)(Yes.)
- Not as a banquet facility (Yes.)

Do you like the idea of seeing horses from Grigs Road?

- Yes: 2

Other Comments:

- Fine, we see them now.
- If it would mean better security for them to not be visible, then no. Whatever is best for the horses.

Do you like that the new archery site (off Santa Fe) re-uses the existing Horse Facility?

- Yes: 4
- No: 1

Reasons:

- Not as convenient.

Other Comments:

- Do not mind the existing site off Monarch.

Do you like that the ropes course is in a screened location with trees?

- Yes: 1
- No: 1

Reasons:

- Screened locations are preferred by wildlife.

Other Comments:

- What about security and vandalism?
- Shouldn't the first question be if the community wants a ropes course? Don't lead people to the answer you want.
- Ask insurance company for free risk management assessment.

Do you like a short trail system with a few key overlooks?

- Yes: 3
- No: 2

Comments:

- Longer trails preferred

Are shade structures important at: archery, ropes course, horses?

- Yes: 4

Comments:

- But not if there are trees nearby.
- Good at overlooks- to rest and view!
- Protect ridgelines

Do you like shared parking for the Pavilion/Base Camp, Ropes Course, and Horse Facility?

- Yes: 2

Comments:

- Is Douglas Co. prepared for increase maintenance on Griggs/Daniels Park Roads?

Other Comments:

- Was the original question asked? If the community wants this?

- If pavilion is open to the public for events then most weekends will be crowded with weddings etc. Parking will be a problem, access to trails etc will be impacted due to the large group for an event.

Which facility/activity is most important to you?

- Trails only
- Trails
- I support a base camp facility with classrooms but not an event center
- If you build a pavilion make it big enough for events (No events) (No events, keep it small) (Agree, but need to minimize traffic and parking. Shuttle from remote/school parking?)
- Security v. Dark Sky? Dark Sky more important so limit what is there.

Do you like the idea of a flexible outdoor space around the Pavilion/Base Camp?

- Yes. Just minimize traffic.
- No pavilion, base camp, or flex space.

Anything Else?

- Detailed plan for wildlife protection prior to any development. (Yes/Agreed x4)
- Contract to ensure no further development after this area is developed (Yes x3)
- What is the night security plan to keep teens out of area/ropes? Risk? (Vandalism will be a problem) (<- Agree!)
- Please do NOT do this project! The effect on Nature wildlife is too severe/strong/detrimental. (Yes)
- How did the #s for the ropes course be determined? What were they based on? Has use/profit from Parker been looked at? (Cost in Castle Rock/Parker is same \$100)
- Integrate a disk golf course into the trails/amenities. Low Cost/Blend in/low traffic. (No)
- Protect night sky- day use only (Yes!) (No lights)
- If revenue is needed to fund the backcountry- why not use the \$4m to fund the backcountry. (Spin money from here for additional \$200K)(Invest the \$4m and use income to fund the \$200K)(Agree! Why are we doing this? \$\$)
- If NI on this project is only \$200k, why do this? (Exactly)
- If \$\$ is the purpose, raise HOA dues \$5.00
- What are current anticipated cost of pavilion use and rope course use?
- What about Traffic on Poston? Copper Mesa Elementary is on Poston and there will be lots of cut thru traffic! (Increased traffic on Poston is a concern)
- There is an existing elk herd off Grigs/Monarch. What happens to them? (Yes)
- How is the rope course going to be protected? If High, then visible. If Low, people will access/vandalize.
- There are several close by ropes course, by adding another one, revenues for all will decrease. Was this considered in our revenue projects. Market saturation

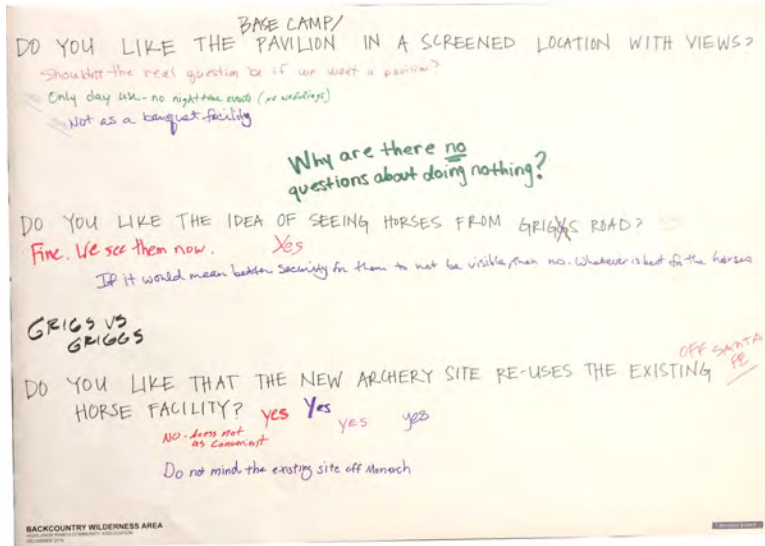


Figure 43. Community Input Board Site 1 Concept

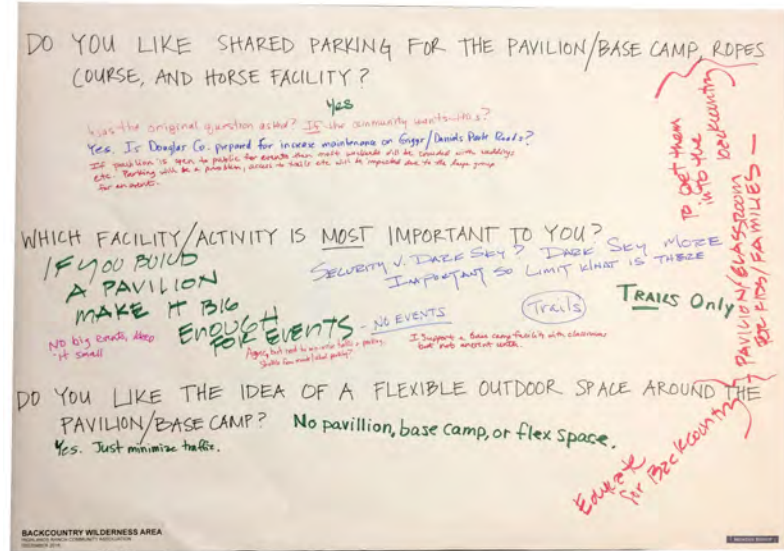


Figure 44. Community Input Board Site 3 Concept A

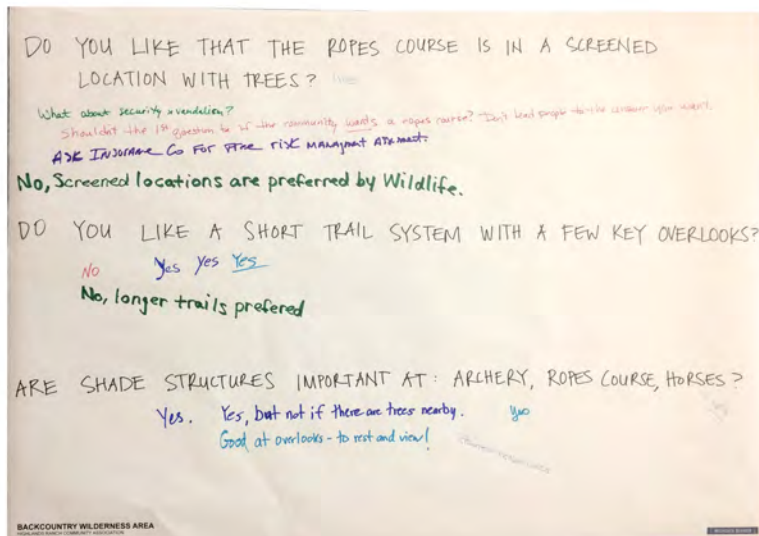


Figure 45. Community Input Board Site 3 Concept B

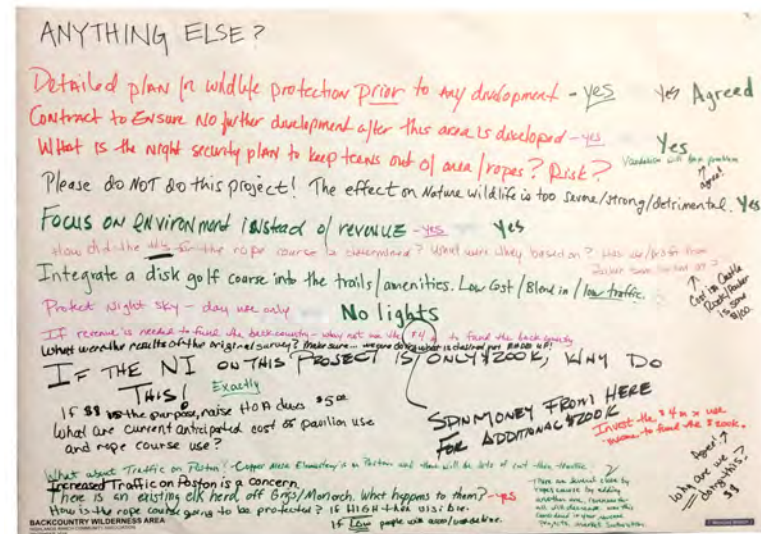


Figure 46. Community Input Board Site 3 Concept C

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #3 COMMENT SHEET

I am all for all facilities proposed.
It will be a great addition to
the community & needed facilities
for young people.

Name (optional): _____

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #3 COMMENT SHEET

All uses limited to DAYTIME.
NO ACTIVITIES AFTER SUNDOWN.

REVENUE GENERATION SHOULD BE
SECONDARY CONSIDERATION --
NOT A DRIVER.

Name (optional): Jan Caswall

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

Figure 47. Comment Cards

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #3 COMMENT SHEET

Being a HR resident, I want to
hear/listen to every question. It
was NOT a hostile environment. We
asked and desired an open forum. This
way everyone hears ALL the discussions
~~Separating~~ Separating us is a tactic
to limit our discussion. Only a
Name (optional): handful of people showed up

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org over →

At least you can do us the
^{courtesy}
~~favor~~ of letting us participate
100%. I showed up. The other
97% residents didn't.

Talked to 3
others who
AGREE!

Figure 48. Comment Cards

HRCA BACKCOUNTRY WILDERNESS AREA PLAN
COMMUNITY MEETING #3 COMMENT SHEET

I believe the ~~the~~ BEST people
to work on and plan this is
some one who LIVES in
Highlands Ranch. They have a
vested interest and not a salary
financial based interest.
There are plenty of architects/planners
Name (optional): in our community.

To submit comments electronically, please email them to Mark.Giebel@hrcaonline.org

Figure 49. Comment Cards

**Backcountry Wilderness Area
Highlands Ranch Community Association
Community Open House Meeting 4**

Meeting Summary for February 28th, 2017

At 6:00 pm on February 28, 2017, Highlands Ranch Community Association held an open house at Eastridge Recreation Center to present the preferred conceptual plan and gather feedback from the community. Approximately 13 attendees signed the sign-in sheets. Mundus Bishop helped facilitate the event. The agenda included:

- A PowerPoint presentation explaining the Backcountry's background and purpose given by Mark Giebel.
- A verbal presentation (with boards) covering: proposed program elements, the preferred concept plan, and how the plan was developed per survey data and community feedback (See PDF of PowerPoint for presentation images and content.)
- An Open House segment to gather the community's ideas, preferences, and comments on the preferred plan and draft phasing.

During the Open House portion of the evening, attendees were invited to share their ideas and comments by reacting to images and questions. Attendees wrote their responses on large sheets of paper.

The community expressed a range of opinions regarding the preferred plan and preliminary costing and phasing. Most attendees supported the proposed program and were excited about its potential implementation.

The following is a summary of the responses from the community.

Which of the proposed Backcountry amenities would you like to see implemented first?

- Recommend pavilion first. There are a lot of trails that I use daily (am/pm) and see relatively few people, so trails second.
- Definitely the pavilion to generate the revenue to return to the Backcountry.

Which of the proposed Backcountry amenities would you use the most?

- Existing trails. Would HR have events at pavilion and not just for day camps?
- Ropes/trails

Which of the proposed Backcountry amenities is your favorite? Why?

- Pavilion- more meeting/event space is needed in HR and I love the outdoor feel.
- Trails- the addition of 3.5 miles of trails is fantastic. Anything we can do to get the residents and youth of experience the Backcountry is good.
- Pavilion and expanded trail system

Which Backcountry activities would you (and your family) participate in?

Anything else?

- Could the 'orange' trail network be dog-friendly? (not many of our trails are)—good? I see dogs on trails they aren't allowed on weekly.
- Could the pavilion have a large stone fireplace for people to gather around as the evenings cool off? (safely)
- Could we have more overnight camping events in the Backcountry?

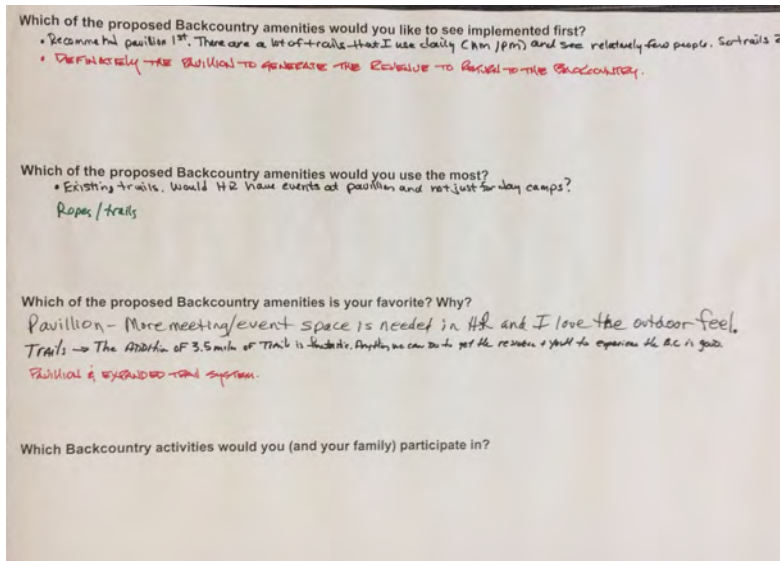


Figure 50. Community Input Board 1

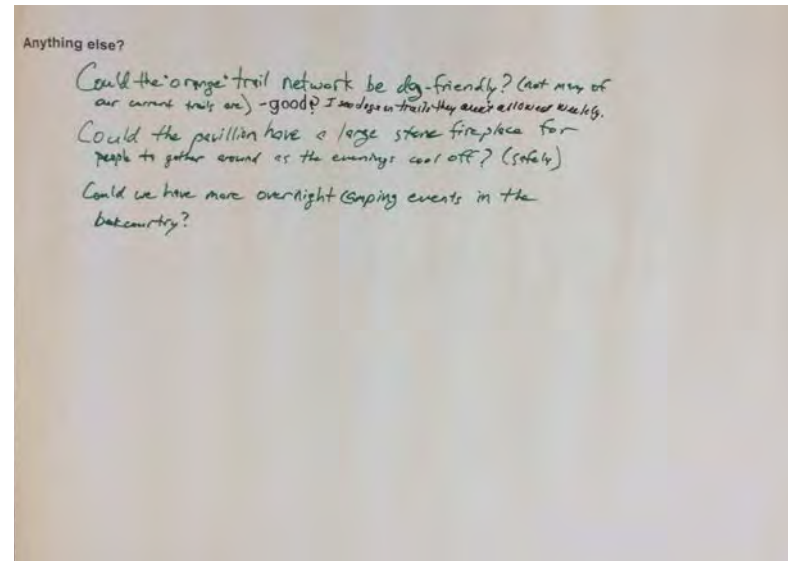
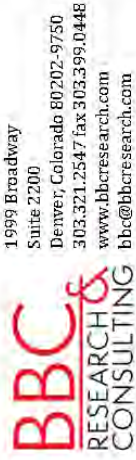


Figure 51. Community Input Board 2

APPENDIX C - FINANCIAL ANALYSIS OF PROPOSED IMPROVEMENTS

Summary

- BBC conducted a financial analysis of operations for four proposed improvements in the Backcountry
 - Archery Range Expansion
 - Examined financial data from HRCA and other comparable archery sites to estimate how expansion might affect visitation and fees, and thus revenues and expenditures, compared to current operations
 - Horse Facility Replacement
 - Examined how an increase in horse camp attendance would increase revenues and expenditures, compared to current operations, based on financial data from HRCA
 - Addition of Rope Course
 - Modeled after rope courses at Epic Sky Trek Challenge at Phillip S. Miller Park, and the Genesee Rope Course at Genesee Mountain Park
 - Addition of Pavilion
 - Modeled after the Chief Hosa Lodge at Genesee Mountain Park
- The archery and horse activities currently generate positive annual net operating cash flows. The proposed facility improvements are estimated to increase the combined operating net cash flows by about \$17,500 per year, with about \$137,000 in combined annual operating revenues and \$80,000 in annual operating expenditures.
- The proposed rope course is estimated to generate \$204,000 in revenues and \$121,000 in expenditures, for an annual net cash flow of \$83,000
- The proposed pavilion facility will be used to host special event reservations such as weddings, birthdays, and family and corporate gatherings. It will also be able to host additional youth camps throughout the year. The estimated annual operating revenues are about \$218,000, with annual expenditures of \$89,000, for a net annual cash flow of \$129,500.
- Overall, the total annual revenues associated with archery, horse activities, the rope course and the pavilion are expected to generate \$559,000 in annual revenues and \$290,000 in annual expenditures.



MEMORANDUM

To: Highlands Ranch Community Association
From: BBC Research & Consulting
Re: Financial Analysis of Proposed Improvements at the Backcountry Wilderness Area
Date: November 18, 2016

In August 2016, the Highlands Ranch Community Association (HRCA) began exploring options for adding potential amenities and improvements at the Backcountry Wilderness Area (BWA). The process is overseen by the HRCA Board of Directors, District Delegates, and Backcountry Planning Areas Advisory Committee. The proposed improvements will be located on approximately 20 acres, situated on 499 acres of Planning Area owned by HRCA.

BBC Research & Consulting (BBC) has been retained to perform a financial analysis of selected improvements at BWA, including: 1) the expansion of the archery range; 3) the addition of a rope challenge course; and 2) the addition of a 5,000 square foot pavilion. This memo provides a description of the BBC methodology, modeling assumption, and results of this analysis.

Methodology

In order to estimate the impacts of the proposed improvements on BWA visitation and its operating revenues and expenditures, BBC establishes a baseline for each of these measures based on historic BWA data¹. This allows BBC to gain an understanding of current visitation and operating characteristics of BWA, as well as any changes due to recent improvements, such as increased summer camp capacity. We construct scalable metrics such as revenues and expenditure per visitor that can be used to estimate changes in operations based on anticipated changes in visitation.

BBC examines the proposed improvements at BWA and compares them to facilities and amenities at comparable sites, collecting financial and visitation data where possible. This process provides insights into the potential financial and visitation effects of each proposed BWA improvement, based on the experiences and operating characteristics of similar facilities.

The BWA historical baseline characteristics are combined with the data collected from other facilities to estimate the effects of each improvement on baseline BWA visitation, revenues, and expenditures. The impacts of each improvement are presented separately, and then aggregated to present an overall impact of the proposed improvements.

¹ BWA financial and operating data was provided by HRCA staff via email in early November, 2016.

Expanding the BWA Archery Range to Olympic Size

Current layout and expansion. The archery range at BWA is currently configured in a basic layout on one half of an acre, with 14 stationary targets at distances of 10 to 60 yards. The range is open from sunrise to sunset, from April 1st to October 31st. Archery guests have access to parking and a restroom, however no other permanent structures are associated with the range. HRCA has proposed to expand the archery range to include Olympic distances and targets, and to potentially include a 3-D course. The current parking and restroom access for guests will remain unchanged.

The standard shooting distance for Olympic archery is 70 meters, although some events call for distances from 9 to 100 meters. In order to provide the full range of Olympic distances, BWA will need to add several new lanes and targets. Larger archery ranges in the state tend to have about 30 lanes, twice as many as currently available at BWA. BBC assumes that the BWA archery range will have approximately 30 lanes after expansion, doubling its current capacity¹. Other likely improvements to the site include adding a 3-D archery course featuring life-size game animals, and covering the lanes to protect archers from inclement weather and the sun.

Revenues. The current annual membership fee for the BWA archery range varies depending on whether purchased by an individual or family, resident or non-resident. By expanding the archery range to include Olympic distances, 3-D shooting, and improved facilities, BWA will likely be able to charge higher fees and attract more archers each year, generating additional revenues via annual pass and lesson sales. BBC estimates that BWA could increase annual pass fees by approximately 10 percent after expansion due to the improved facility and archer experience, while still remaining competitive with other comparable archery range prices in the area².

There will also likely be an increase in annual visitation following the expansion of the BWA archery range, due to increased demand for a higher-end archery experience. This increase will depend upon the scope of the improvements and public outreach efforts by HRCA to generate awareness and interest. For this analysis, BBC estimates that the number of annual passes sold will increase by 30 percent³, from 473 to 615.

Combining the higher fees and increased annual pass sales, BBC estimates that the annual fee revenue generated by the BWA archery range will be approximately \$16,000 after expansion, an increase of \$4,800 (43 percent) over current range fee revenues (\$11,200)⁴. The first panel of Figure 1 illustrates these fee revenue calculations.

¹ A detailed Archery Facility Planning Guide can be found at <http://www.esd.fory.gov/FacilityGuide/pdf/ArcheryFacilityPlanningGuide.pdf>.

² See Appendix A.

³ Based on a phone conversation with HRCA staff on November 15, 2016.

⁴ Revenues are based on the average annual revenue per annual pass sold, \$11,200 in annual revenue divided by 473 annual passes sold equals \$23.68 average revenue per pass. A ten percent increase results in \$26.05 in annual revenue per pass sold.

BWA also generates archery revenues through lessons provided by a contractor. During the summer lessons are available at the BWA archery range, and indoor lessons are held from November through March at the Westridge Recreational Center. Archery lessons currently cost \$15 for residents and \$18 for non-residents. BWA receives 30 percent of all contractor archery lesson revenues. According to HRCA, the annual revenue collected by BWA for archery lessons is \$7,500, based on a total of \$25,000 in contractor lesson sales.

As with annual pass fees, BWA's contractor will likely be able to charge a higher price for archery lessons following expansion, due to the increased capacity and improved facilities. BBC estimates that lesson prices could be increased by approximately 20 percent after expansion, while remaining competitive with lesson prices at other facilities¹. The number of BWA archery lessons sold is also likely to increase as a result of the proposed improvements. BBC estimates that the number of archery lessons sold will increase by 35 percent², from 1,515 per year to 2,045.

The joint increase in lesson prices and purchases are likely to generate almost \$41,000 in lesson sales, or \$12,300 in BWA revenues, based on the 30 percent shareback agreement. This represents an increase of nearly \$4,800 (64 percent) over current annual BWA lesson revenues. The second panel of Figure 1 presents the revenue estimates for archery lessons at BWA.

HRCA is also considering the potential for archery-oriented youth camps as a new revenue stream. For our initial analysis of archery camp revenues, BBC assumes that BWA will hold six youth archery camps per year, with a capacity of 20 archers per camp². Based on the occupancy rate for other camps, BBC assumes that archery camps will have an average attendance of 65 percent of capacity, for an annual total of 78 archery camp attendees. After reviewing other camp fees at BWA, BBC anticipates an archery camp fee of \$300. Under the archery camp assumptions described above, BBC estimates that BWA will generate \$23,400 in archery camp fee revenues. The third pane of Figure 1 provides the results of our archery camp revenue analysis.

The combined archery-related revenue generated by range fees, lesson fees, and camp fees is estimated at \$51,688 after expansion, an increase of about \$33,000 (176 percent) compared to current archery-related revenues.

Expenditures. While the BWA archery range improvements will result in increased revenues, the expanded facilities and increased usage will also generate additional expenditures necessary for staff, operations, and maintenance costs. Based on historical data, each annual archery range pass corresponds to an average of \$6.34 in operating costs for targets and maintenance³. Given the increased size and visitation after expansion, BBC estimates that the average operating cost per pass will increase

¹ See Appendix B for lesson prices at other archery ranges.

² Based on a phone conversation with HRCA staff on November 15, 2016.

³ \$3,000 in annual archery range expenditures divided by 473 annual passes sold equals an average of \$6.34 in annual expenditures per pass.

by 50 percent to \$9,511, due to higher repair and labor costs for all aspects of the larger archery range operations. Combined with the projected annual pass sales calculated above, BBC estimates that annual archery range expenditures will increase by \$2,850 compared to current expenditures, to \$5,850. These calculations are presented in the fourth panel of Figure 1.

The creation of archery camps will also generate new operating costs for BWA in the form of operations and staffing expenditures. Based on a review of BWA youth camp financial operations, BBC calculates that each BWA camp attendee is associated with \$85 in operating costs and \$100 in staffing costs¹. These costs are multiplied by the anticipated 78 archery camp attendees, corresponding to an estimated \$14,400 in annual archery camp expenditures. The final panel of Figure 1 shows these calculations.

Net Cash Flow. The total revenue from all archery activities following expansion is estimated at \$51,688, while the total operating expenditures are estimated at \$20,250. The associated net cash flow estimate for all archery-related activities is nearly \$31,500, more than double the current net cash flow of \$15,700 generated by range fees and lesson sales.

¹ Based on 2016 Youth Camp attendance of 390, camp operating costs of \$33,000, and camp staffing costs of \$39,000.

**Figure 1.
Financial Analysis of Backcountry Wilderness Area Archery Activities**

	Current	Projected	Change	% Growth
Archery Range Fee Revenues				
Membership Costs				
Resident Individual - Day Pass	\$4.00	\$4.50	\$0.50	12.5%
Resident Individual - Annual Pass	\$35.00	\$38.50	\$3.50	10%
Resident Family - Annual Pass	\$55.00	\$60.50	\$5.50	10%
Non-Resident Individual - Day Pass	\$6.00	\$6.75	\$0.75	12.5%
Non-Resident Individual - Annual Pass	\$55.00	\$60.50	\$5.50	10%
Non-Resident Family - Annual Pass	\$75.00	\$82.50	\$7.50	10%
Estimated Average Revenue Per Pass ¹	\$23.68	\$26.05	\$2.37	10%
Annual Passes Sold	473	615	142	30%
Total Archery Range Fee Revenue	\$11,200	\$16,016	\$4,816	43%
Archery Lesson Revenues				
Resident Lesson Price	\$15.00	\$18.00	\$3.00	20%
Non-Resident Lesson Price	\$18.00	\$22.00	\$4.00	22%
Average Lesson Price	\$16.50	\$20.00	\$3.50	21%
Estimated Lessons Sold	1,515	2,045	530	35%
Total Lesson Revenue	\$25,000	\$40,905	\$15,905	64%
HRCA Lesson Revenue (30%)	\$7,500	\$12,272	\$4,772	64%
Archery Camp Revenues				
Annual 1-Week Archery Camps	-	6	-	-
Archery Camp Attendee Capacity	-	20	-	-
Archery Camp Attendance Rate	-	65%	-	-
Archery Camp Attendees	-	78	-	-
Camp Attendance Fee	-	\$300	-	-
Total Archery Camp Revenue	-	\$23,400	-	-
TOTAL ARCHERY REVENUES	\$18,700	\$51,688	\$32,988	176%
Archery Range Operating Expenditures				
Estimated Operation Expenditures Per Pass ¹	\$6.34	\$9.51	\$3.17	50%
Annual Passes Sold	473	615	142	30%
Operating Costs (targets, maintenance)	\$3,000	\$5,850	\$2,850	95%
Total Archery Range Expenditures	\$3,000	\$5,850	\$2,850	95%
Archery Camp Operating Expenditures				
Archery Camp Attendees	-	78	-	-
Operation Expenditures Per Attendee ²	-	\$85	-	-
Staff Expenditures Per Attendee ²	-	\$100	-	-
Total Archery Camp Expenditures	-	\$14,400	-	-
TOTAL ARCHERY EXPENDITURES	\$3,000	\$20,250	\$17,250	575%
NET ARCHERY CASH FLOW	\$15,700	\$31,438	\$15,738	100%

Note: (1) Revenues and expenditures per pass are calculated by dividing historic archery range fee revenues and expenditures by the total number of annual passes sold. According to data provided by HRCA, 473 season passes were sold for the BWA archery range in 2015, for total revenues of \$12,000. Operating costs that year were reported at \$3,000 for targets and basic maintenance.

(2) Operating and Staff expenditures per camp attendee are calculated in a similar manner using Youth Camp financial data from HRCA.

Source: Highlands Ranch Community Association; BBC Research and Consulting.

Replacing Existing Horse Facilities

Current facility and replacement. The HRCA has proposed to replicate and replace the existing horse facilities at BWA, which are comprised of corrals with moveable panels, temporary canopies, and fencing for pastures. The new facility will have similar features, with the only changes being the addition of 20 parking spaces, a shade shelter for up to 20 people, and a vault toilet shared with the proposed pavilion.

The current facility serves as the base for horse camps and trail rides. HRCA staff indicated that they do not expect trail ride operations to be affected by the replacement. However, they do anticipate an increase in camp attendance with this improvement, which will generate additional revenues and expenditures.

Revenues. Horse activities at BWA include horse trail rides, with a fee of \$35 per hour. Based on data provided by HRCA staff, there are currently 1,000 trail rides per year, generating \$35,000 in annual revenues. BBC estimates that there will be no incremental revenues from trail rides after the new facility is constructed, assuming that the number of trail riders and fee remain constant.

BWA also generates revenues through horse camp registration fees. BWA offers twelve weeks of full-day camps with a maximum of ten attendees per week. Camp registration fees range from \$410 to \$485, with an average of approximately \$420. The annual BWA horse camp attendance is currently 91, which represents 75 percent of the total attendance capacity. Based on the reported attendance and average camp registration fee, BBC estimates current annual horse camp revenues of \$38,000.

HRCA staff anticipates that the attendance rate will increase to 100 percent, or 120 attendees, with the addition of 20 parking spots and the new facility. Given an average registration fee of \$420, BBC estimates that the BWA horse camps will generate \$50,400 in annual revenues after the facility is replaced. This represents an increase of \$12,400 in annual camp revenues (33 percent).

Expenditures. The current total annual operating expenditures for horse activities are \$49,000, based on data provided by HRCA staff. BBC calculates the average operations and staff expenditures for each camp attendee in order to estimate the incremental expenditures generated by increased camp attendance. As mentioned above, HRCA staff does not expect trail ride operations to be affected by the new facility.

BBC estimates that each camp attendee generates approximately \$178 in operations expenditures, and \$185 in staff expenditures, for a current total of \$32,830 in current annual horse camp expenditures¹. Multiplying these figures by the anticipated 120 camp attendees after the horse facility is replaced, BBC estimates that horse camps will require a total of \$43,512 in annual expenditures, an increase of \$10,682 (33 percent).

¹ BBC assumes that 67 percent (\$32,830) of total annual horse activity expenditures are associated with horse camps, while the remaining 33 percent (\$16,170) is associated with trail rides.

Net Cash Flow. The total revenue from all horse activities following improvements is estimated at \$85,400, while the total operating expenditures are estimated at \$59,682. The total net cash flow estimate for horse trail rides and camps is nearly \$26,000, a seven percent increase of \$1,718 over the current net cash flow of \$24,000. Figure 2 below presents the results of the horse activity financial analysis.

**Figure 2.
Financial Analysis of Backcountry Wilderness Area Horse Activities**

	Current	Projected	Change	% Growth
Horse Trail Revenues				
Trail Ride Fee per Hour	\$35.00	\$35.00	\$0	0%
Annual Trail Rides	1,000	1,000	0	0%
HRCA Lesson Revenue (30%)	\$35,000	\$35,000	\$0	0%
Horse Camp Revenues				
Annual 1-Week Horse Camps	12	12	0	0%
Horse Camp Attendee Capacity	10	10	0	0%
Horse Camp Attendance Rate	75%	100%	25%	33%
Horse Camp Attendees	91	120	29	33%
Average Horse Camp Attendance Fee	\$420	\$420	\$0	0%
Total Horse Camp Revenue	\$38,000	\$50,400	\$12,400	33%
TOTAL HORSE ACTIVITY REVENUES	\$73,000	\$85,400	\$12,400	17%
Horse Trail Expenditures				
Annual Trail Rides	1,000	1,000	0	0%
Estimated Operation Expenditures per Trail Ride	\$7.92	\$7.92	\$0	0%
Estimated Staff Expenditures per Trail Ride	\$8.25	\$8.25	\$0	0%
Horse Trail Operation Expenditures	\$7,920	\$7,920	\$0	0%
Horse Trail Staff Expenditures	\$8,250	\$8,250	\$0	0%
Total Horse Trail Expenditures	\$16,170	\$16,170	\$0	0%
Horse Camp Expenditures				
Horse Camp Attendees	91	120	29	33%
Operation Expenditures Per Attendee	\$178	\$178	\$0	0%
Staff Expenditures Per Attendee	\$185	\$185	\$0	0%
Horse Camp Operation Expenditures	\$16,080	\$21,312	\$5,232	33%
Horse Camp Staff Expenditures	\$16,750	\$22,200	\$5,450	33%
Total Horse Camp Expenditures	\$32,830	\$43,512	\$10,682	33%
TOTAL HORSE ACTIVITY EXPENDITURES	\$49,000	\$59,682	\$10,682	22%
ANNUAL HORSE ACTIVITY NET CASH FLOW	\$24,000	\$25,718	\$1,718	7%

Source: Highlands Ranch Community Association; BBC Research and Consulting.

Addition of a Rope Course Facility

A third proposed improvement to BWA is the addition of a rope challenge course. In order to estimate the potential financial impacts of adding a rope course at BWA, BBC examined two nearby rope challenge courses to better understand annual visitation, pricing and revenues, and operating and maintenance activities and expenditures. Figures 3 and 4 provide an overview of the Epic Sky Trek Challenge at Phillip Miller Park and the Genesee Rope Course at Genesee Mountain Park.

**Figure 3.
Comparable Rope Course Characteristics**

Description	Notes
Epic Sky Trek Challenge at Phillip S. Miller Park	
Visitor Capacity	100 people
Climbing Elements	110
Climbing Season	Mar-Sept: 7 days a week Oct-Feb: Fri/Sat/Sun only
Adult Fee (access to all 4 levels)	\$49
Kid's Course Fee (access to lower level only)	\$29
Visitation Share of Adults	80%
Visitation Share of Children	20%
Visitation	100 climbers per weekday, 150-200 per weekend day (high season) 50 climbers per day (low season)
Annual Visitation ¹	10,000
Annual Revenues ¹	\$300,000
Expenditure Considerations	Annual: Reseal wood decks, Replace boards every 5 years. Monthly: Salary and wages, harnesses, helmets, safety system and lanyards, bolts, refreshments. Staff estimates \$100 in monthly expenditures for equipment.
FTEs	3-4 full time managers, but only one is FTE / salaried
Guides (part time)	6-8 guides per day (high season) 3-4 guides per day (low season)
Notes from Staff	Epic Sky utilizes a Krystal Turn Design (model KT90), which allows for very low operating costs and high client-to-guide ratio. This keeps revenues high and expenditures low. Canopy Tour facilities, for example, are much more expensive to operate.
	Epic Sky was fully financed and is operated by private entity within Phillip Miller Park. It required a \$2 million investment to construct.

Notes: (1) Epic Sky Trek annual visitation and revenues estimated by staff on a November 14, 2016 phone call.

Source: Genesee Rope Course website and staff; BBC Research and Consulting.

**Figure 4.
Comparable Rope Course Characteristics**

Description	Notes
Genesee Rope Course at Genesee Mountain Park	
Visitor Capacity	120 people (minimum of 8 per group)
Climbing Elements	60
Climbing Season	April - October
Adult Fee - Full Day (6 hrs)	\$50
Non Profit	\$65
Community Organization (i.e. churches)	\$80
Corporate	
Student Fee (grade school - college) - Full Day (6 hrs)	\$42
Visitation Share of Adults	15%
Visitation Share of Students	85%
Annual Visitation ¹	8,000 average
FTEs	Currently 2 FTEs (used to have 3, one recently left)
Guides (part-time)	12-14
Notes from Staff	We are based more on education and team building - that's a major point of attraction for our visitors, and big distinction between us and the commercial pay-to-play models.
	We do a progression, starting on the ground with ice-breakers to loosen people up. Then we split into smaller groups and do an 'initiative' group problem solving task. We spend the rest of the morning doing 'lows' - i.e. pulls, platforms, etc. After a lunch break, climbers put on helmets and harnesses, complete safety training, and move to the 'high' elements, which include dynamic belaying, etc.

Notes: (1) Genesee Rope Course annual visitation and revenues estimated by staff on a November 15, 2016 phone call.
Source: Genesee Rope Course website and staff; BBC Research and Consulting.

Based on the characteristics of the rope courses presented above, BBC estimates the potential visitation and operating revenues and expenditures generated by a similar a rope course at BWA. BBC conservatively assumes that the BWA rope course would be 50 to 75 percent smaller than the two described above, with 50 climbing elements and a capacity of 80 visitors. Due to the smaller size, BBC assigns slightly lower fees of \$40 for adults and \$30 for children.

BBC assumes that 60 percent of visitors will be children, based on the popularity of children's camps and programs at BWA, while the remaining 40 percent are adults. The projected annual visitation for the BWA rope course is 6,000 annual visitors. Based on the projected fees, visitor shares of adults and children, and total visitation, BBC estimates that the proposed rope course would generate \$204,000 in revenues per year.

Expenditure data was not provided by either rope course examined above. BBC therefore utilizes HRCA data on all BWA program operations to estimate the potential operating expenditures of the new rope course. Based on 2014-2017 budget data provided by HRCA, the average ratio of operating expenditures to revenues for all BWA programs is 0.593. In other words, for each dollar in revenue collected from BWA programs, 59.3 cents are spent on operating expenditures.

Applying this ratio to the projected revenues from the BWA rope course, BBC estimates that annual operating expenditures will be nearly \$121,000. The resulting net cash flow from rope course operations is estimated over \$83,000. Figure 5 presents the results of the rope course financial analysis.

**Figure 5.
Financial Analysis of
Backcountry Wilderness
Area Rope Course**

Source:
Highlands Ranch Community Association;
BBC Research and Consulting.

Financial Analysis	
Backcountry Wilderness Area Rope Course	
Visitor Capacity	80 people
Climbing Elements	50
Adult Fee	\$40
Kid's Course Fee	\$30
Visitation Share of Adults	40%
Visitation Share of Children	60%
Annual Visitation	6,000
Annual Revenues	\$204,000
BWA Ratio of Operating Expenses to Revenues	0.593
Estimated Rope Course Operating Expenditures	\$120,972
NET ROPE COURSE CASH FLOW	\$83,028

Addition of a 5,000 Square Foot Pavilion

HRCA has proposed to construct a new 5,000 square foot pavilion at BWA with an estimated capacity of approximately 200 people. The pavilion will generate revenues primarily through event reservations, including weddings, birthday parties, corporate events, and other family or business gatherings. The addition of a pavilion will also allow BWA to host more youth camps throughout the year, with a higher capacity for attendees.

In order to develop a financial model of pavilion operations, BBC examined the facility and operating characteristics of the Chief Hosa Lodge at Genesee Mountain Park¹. Figure 6 below provides an overview of Chief Hosa Lodge characteristics.

**Figure 6.
Chief Hosa Lodge at Genesee Mountain Park Characteristics**

Chief Hosa Lodge at Genesee Mountain Park	
Capacity	125 people
Site	3,340 sq. ft.
Hourly Rental Fees	High / Low Season¹
Monday - Thursday, AM	\$135 / \$110
Monday - Thursday, PM	\$135 / \$160
Friday AM	\$350 / \$270
Friday PM	\$300 / \$240
Saturday AM	\$480 / \$270
Saturday PM	\$270 / \$190
Sunday AM	\$270 / \$215
Sunday PM	
Annual Event Reservations	200
Amenities	Staging kitchen (cold prep only) Large patio Bridal room Gas fireplaces On-site event facilitator
Rules	4 hour rental minimum Rental times must include set up, clean up and any rehearsal Beer, wine, champagne and hard liquor may be served but NOT sold.
Rental Items	Price / Quantity
6' round tables (seat 10)	\$7.50 / 4
5' round tables (seat 8)	\$7.50 / 1
8' banquet table (seat 10)	\$7.50 / 4
6' banquet tables	\$7.50 / 2
4' banquet table (seat 6)	\$7.50 / 2
30" round table	\$7.50 / 1
Multigamy folding chairs	\$1.00 / 125
White folding resin chairs	\$1.00 / 125
Average Price Per Table Seat	\$1.19
Average Price Per Chair Seat	\$0.008
Kitchen Fee	\$200 / day
Expenditure Considerations	Staff costs, facility and equipment maintenance and repair, cleaning supplies.

Note:

(1) High season is May 1 - September 30, plus every Friday, Saturday and Sunday in December.

Source:

Denver Parks and Recreation website and staff; BBC Research and Consulting.

¹ Based on conversations with HRCA staff. BBC also looked at the Newton Stromberg facility at Newton Park at the request of HRCA; however, this facility was not used as a model for the BWA pavilion as Newton Park staff reported that it is aging rapidly and declining in popularity.

Revenues. BBC assumes that the event rules and amenities at the BWA pavilion will be similar to those at the Chief Hosa Lodge, based on conversations with HRCA staff. Specifically, reservation fees will be hourly, with a four hour minimum reservation. Guests may rent chairs and tables as needed, and will be responsible for event set up and clean up. Additional amenities are likely to include a staging kitchen, dressing rooms, heating and air conditioning, electricity, and an on-site facilitator during events. BBC estimates that BWA could charge hourly pavilion reservation fees of \$300 during weekends and holiday, and \$130 during weekdays, based on the current reservation fee schedule at the Chief Hosa Lodge.

After reviewing Chief Hosa Lodge operations, BBC assumes that the BWA pavilion will host 100 annual weekend and holiday events and 50 weekday events. The total 150 events per year is equivalent to a 41 percent annual occupancy rate for events. This figure is lower than the 200 annual events at the Chief Hosa Lodge because the new BWA pavilion will not likely have the recognition and draw of the historic Chief Hosa Lodge initially.

BBC estimates an average of 75 guests per weekend event, and 30 guests per weekday event, based on conversations with Chief Hosa Lodge staff. Under these operational assumptions, BBC estimates that the BWA pavilion would generate \$146,000 in reservation fee revenues per year.

A review of the Chief Hosa Lodge equipment rental fees suggests that the average rental cost of tables and seating is about \$1.20 per guest. For this analysis, BBC assumes that the BWA pavilion will offer similar rental amenities at a similar cost. Combining the number of annual events and the average number of guests per event, BBC estimates that chair and table rentals will generate \$10,800 in revenue each year, for a total of \$156,800 in event reservation and equipment rental revenues.

Another potential source of revenue at the new BWA pavilion is the expansion of youth camp offerings. Currently, youth camps are limited to the summer months, and during spring and fall school breaks. By constructing a pavilion, BWA will be able to host camps year round, and increase attendance capacity.

BBC estimates that the pavilion will allow BWA to host six new youth camps during the off-season¹. Currently, the reported capacity per youth camp is about 43 attendees. BBC estimates that the capacity of each new camp will increase to 50, since they will be hosted indoors in the large pavilion. Based on the current attendance rate of 65 percent for youth camps, the six new off-season camps will likely attract approximately 195 attendees per year. Using historical revenue-per-attendee data from HRCA, BBC estimates the youth camp revenue associated with the new pavilion is \$61,425. The combined annual revenue generated by pavilion event reservations and youth camps is \$218,225.

Expenditures. Events hosted in the new BWA pavilion will each have corresponding operating expenditures that depend on the number of events held each year. These expenditures will include staffing costs, utility costs, equipment and materials, and repair and maintenance. Chief Hosa Lodge staff report that an event facilitator is present at all events, at a cost of \$17 per hour. Since Chief Hosa Lodge staff could not provide data on their financial operations, BBC estimates the average annual

¹ Based on conversations with HRCA staff.

expenditures per building square foot at BWA based on available financial data from several parks and reservoirs in the area^{1,2}. The anticipated BWA per-square-foot expenditures are presented in the third panel of Figure 7. Based on these operating expenditure assumptions, BBC estimates that the BWA pavilion will require \$10,200 in event staffing expenditures, \$15,000 in utilities, \$25,000 in annual repairs and maintenance, and \$2,500 in annual equipment and materials each year. The annual pavilion event operating expenditures total \$52,700.

Youth camps will also require operational expenditures at the new pavilion. BBC again uses youth camp data on operations and staff expenditures per attendee to estimate annual pavilion expenditures of \$36,075 associated with youth camps. The total annual operating expenditures for event reservations and youth camps hosted at the new BWA pavilion are \$88,775. The resulting annual net cash flow estimate from pavilion-hosted events and camp activities is \$129,450.

¹ Boulder Reservoir, Horsetooth Reservoir, Lake Dillon, Standley Lake Park, Cherry Creek Reservoir, Chatfield Reservoir, Boyd Lake, and Eleven Mile State Park.

² Because visitation and building usage tends to decrease substantially at these parks during the winter, BBC assumes that the BWA pavilion will require approximately double the per-square-foot expenditures.

**Figure 7.
Backcountry Wilderness
Area Pavilion Financial
Analysis**

Source:
Denver Parks and Recreation website and
staff; BBC Research and Consulting.

Event Reservation Revenues		
Capacity Size (sq. ft.)		200 people 5,000
Hourly Reservation Fees ¹		\$300
Weekend & Holiday Weekday		\$130
Annual Event Reservations ¹		
Weekend & Holiday	100	
Weekday	50	
Annual Total	150	
Average Guests per Event		
Weekend & Holiday	75	
Weekday	30	
Annual Reservation Revenues		\$146,000
Average Seating Rental Cost per Guest		\$1.20
Annual Seating Rental Revenue		\$10,800
Total Event Reservation & Rental Revenue		\$156,800
Youth Camp Revenues		
New Youth Camps	6	
New Youth Camp Capacity ¹	300	
New Youth Camp Occupancy Rate	65%	
New Youth Camp Attendees	195	
Average Revenue Per Youth Camp Attendee ³	\$315	
New Youth Camp Revenues		\$61,425
TOTAL PAVILION REVENUES		\$218,225
Event Reservation Expenditures		
Annual Event Reservations ¹	150	
Pavilion Cost Factors		
Event Facilitator Staffing Cost (per hour) ²	\$17	
Annual Utilities Cost (per sq. ft.) ³	\$3.00	
Annual Equipment & Materials Cost (per sq. ft.) ³	\$5.00	
Annual Building Repair & Maintenance (per sq. ft.) ³	\$0.50	
Annual Facilitator Staffing Expenditures	\$10,200	
Annual Utilities Expenditures	\$15,000	
Annual Repair & Maintenance Expenditures	\$25,000	
Annual Equipment & Materials Expenditures	\$2,500	
Total Pavilion Event Expenditures		\$52,700
Youth Camp Expenditures		
New Youth Camp Attendees	195	
Operation Expenditures Per Attendee ²	\$85	
Staff Expenditures Per Attendee ²	\$100	
Total Youth Camp Pavilion Expenditures		\$36,075
TOTAL PAVILION EXPENDITURES		\$88,775
ANNUAL PAVILION NET CASH FLOW		\$129,450

Overall Effects of Proposed Backcountry Wilderness Area Improvements

Figure 8 presents a summary of the overall estimated effects of the proposed BWA improvements based on the assumptions and calculations above. The capital improvements for archery and horse activities combine for an increase of about \$17,500 in annual net operating cash flows over current operations, while the new rope course and pavilion are estimated to generate a combined \$212,500 in annual net cash flows.

BBC estimates that the combined total revenues after these four improvements will be approximately \$559,000 annually, while total estimated annual expenditures will be almost \$290,000. The estimated overall annual net operating cash flow after the four proposed improvements is almost \$270,000. We hope this analysis is useful to HRCA in thinking about how to prioritize improvements and finance operations.

Figure 8.
Overall Effects of Proposed Backcountry Wilderness Area Improvements

Source:
BBC Research and Consulting.

	Current	Projected	Incremental Effect
Archery Range Operations			
Annual Passes	473	615	142
Lessons Sold	1,515	2,045	530
Operating Revenues	\$18,700	\$51,688	\$32,988
Operating Expenditures	\$3,000	\$20,250	\$17,250
Total Archery Net Cash Flow Impact	\$15,700	\$31,438	\$15,738
Horse Activity Operations			
Annual Trail Rides	1,000	1,000	0
Camp Attendance	91	120	29
Operating Revenues	\$73,000	\$85,400	\$12,400
Operating Expenditures	\$49,000	\$59,682	\$10,682
Total Archery Net Cash Flow Impact	\$24,000	\$25,718	\$1,718
Combined Archery And Horse Incremental Operating Net Cash Flow			
			\$17,455
Rope Course Operations			
Annual Visitation	-	6,000	6,000
Operating Revenues	-	\$204,000	\$204,000
Operating Expenditures	-	\$120,972	\$120,972
Total Rope Course Net Cash Flow	-	\$83,028	\$83,028
Pavilion Operations			
Annual Event Reservations	-	150	150
Annual Pavilion Youth Camps	-	6	6
Annual Pavilion Youth Camp Attendance	-	195	195
Operating Revenues	-	\$218,225	\$218,225
Operating Expenditures	-	\$88,775	\$88,775
Total Pavilion Net Cash Flow	-	\$129,450	\$129,450
Combined New Facility Incremental Operating Net Cash Flow			
			\$212,478
TOTAL			
Total Operating Revenues	\$91,700	\$559,313	\$467,613
Total Operating Expenditures	\$52,000	\$289,679	\$237,679
Total Net Cash Flow	\$39,700	\$269,633	\$229,933

**Appendix A.
Colorado Archery Range
Features and Range Fees**

Note: This list is not exhaustive, but intended to provide an overview of the range of facility descriptions and range fees.

Source: Respective archery range websites.

High Altitude Archery (Longmont) <i>37 indoor lanes, 10-20 meters</i>	
Range Fee (day)	\$7
Range Safety Orientation	\$10
Equipment Rental (day)	\$10
Range Punch Pass (10)	\$60
Monthly Membership - Single	\$50
Monthly Membership - Couple/Sibling	\$90
Monthly Membership - Family (5)	\$150
Chayenne Mountain State Park (Colorado Springs) <i>10 covered outdoor lanes 10-80 yards, 3-D target course</i>	
Daily Range Permit (no 3D)	\$7
Daily 3D Permit Fee	\$3
Annual 3D Permit	\$30
Annual Permits Sold (FY2015)	164
Daily Permits (FY2015)	2,834
Empty Quiver Archery (Broomfield) <i>28 indoor lanes archery range</i>	
Range Fee	\$7
Youth Program Fee	\$10
Equipment Rental	\$5
No Limits Archery (Denver) <i>Indoor 3-D archery range, 20-40 yards</i>	
Coach's Fee	\$20
Range Fee (adult)	\$7
Range Fee (youth)	\$6
Bow Rental (incl. Range Fee)	\$10
Family Shooting Center (Cherry Creek State Park) <i>10 outdoor positions, 10-40 yards</i>	
Adult Range Fee	\$16.50
Military / Police Range Fee	\$13.50
Youth Range Fee	\$10
Senior Range Fee	\$10
Bear Creek Lake Park (Lakewood) <i>12 bale targets, 10-80 yards; One moveable target</i>	
Range Fee included in park admission fee	\$10
Quickdraw Archery (Highlands Ranch) <i>20 indoor lanes</i>	
Range Fee	\$8
Adult Rental Package	\$17.50
Youth Rental Package	\$12.50
Monthly Membership, Unlimited Individual	\$50
Monthly Membership, Unlimited Family (up to 3)	\$75
Monthly Membership, Unlimited Family (4+)	\$100
Punch Card x5 (includes target fees)	\$35
Punch Card x10 (includes target fees)	\$70
Rocky Mountain Archery (Fort Collins) <i>33 indoor lanes, 10-20 yards</i>	
Range Fee	\$7
Range Fee with Bow Rental	\$13
The Archery Hut (Colorado Springs) <i>29 indoor lanes, 20 yards, moveable targets</i>	
Adult Range Fee	\$10
Child (<15) Range Fee	\$7
Full Rut Archery (Parker) <i>Indoor (30 yards) & outdoor (80 yards) lane and 3-D ranges</i>	
Annual Membership - Single	\$25
Annual Membership - Family	\$45
Indoor Range Fee - Adult	\$8
Indoor Range Fee - Youth	\$6
Indoor 3-D Range Fee (3 people required)	\$25
Outdoor 3-D Range Fee	\$15

**Appendix B.
Colorado Archery Range
Lessons and Fees**

Note: This list is not exhaustive but intended to provide an overview of the range of facility descriptions and lesson prices.

Source: Respective archery range websites.

High Altitude Archery (Longmont) <i>37 indoor lanes, 10-20 meters</i>	
Level 1 Class	\$55
Level 2 Class	\$90
Level 3 Class	\$100
Private Lesson (30m)	\$30
Private Lesson (1hr)	\$60
Advanced Private Lesson (30m)	\$35
Advanced Private Lesson (1hr)	\$70
Quickdraw Archery <i>20 indoor lanes</i>	
Private Lesson with Pro	\$45
Private Lesson	\$35
Group Lesson (2-5 people, each)	\$30
Group Lesson (6-10 people, each)	\$25
Group Lesson (10+ people, each)	\$20
The Archery Hut (Colorado Springs) <i>29 indoor lanes, 20 yards, moveable targets</i>	
Intro to Archery	\$25
Archery 101 (6 sessions)	\$120
Full Rut Archery (Parker) <i>indoor (30 yards) & outdoor (80 yards) lane and 3-D ranges</i>	
Junior Olympic Archery Development Class	\$12
Archery School of the Rockies (Colorado Springs) <i>52 indoor lanes, 9-18 meters</i>	
Individual Program (1-4 people, six 75 minute classes)	\$78
Group Program (5-10 people, six 75 minute classes)	\$68

APPENDIX D- COST ESTIMATE

BID ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
General Requirements					
017123-1	Construction Surveying	LS	1	\$ 5,000.00	\$ 5,000.00
014616-1	Quality Control and Materials Testing	LS	1	\$ 2,000.00	\$ 2,000.00
014616-2	Temporary Facilities	LS	1	\$ 2,500.00	\$ 2,500.00
015639-1	Tree Protection	LS	1	\$ 3,000.00	\$ 3,000.00
015713-1	Sediment Control Logs, Concrete Washout, Vehicle Tracking	LS	1	\$ 10,000.00	\$ 10,000.00
Demolition					
024100-4	Remove and Salvage Boulders	LS	1	\$ 25,000.00	\$ 25,000.00
311100-1	Clearing and Grubbing	SF	132000	\$ 0.05	\$ 6,600.00
Gravel Paved Parking					
312000-1	Earthwork	LS	1	\$ 5,000.00	\$ 5,000.00
321313-1	Gravel Paving (6" depth) w/curb and wheel stops	SF	34200	\$ 12.00	\$ 410,400.00
321313-3	Accessible Parking with Ramp with Curb	LS	1	\$ 20,000.00	\$ 20,000.00
321540-2	Crusher Fines Paved Trail - 5' width	SF	2500	\$ 8.00	\$ 20,000.00
323253-1	Boulder Well (s)	LS	1	\$ 10,000.00	\$ 10,000.00
Gravel Paved Access Road					
312000-1	Earthwork	LS	1	\$ 4,000.00	\$ 4,000.00
321313-1	Gravel Paving (6" depth)	LF	1800	\$ 25.00	\$ 45,000.00
	Concrete Paved Drop-off	SF	3600	\$ 10.00	\$ 36,000.00
323300-1	Vehicle Gate	EA	2	\$ 5,000.00	\$ 10,000.00
	Revegetation	SF	36000	\$ 0.50	\$ 18,000.00
Gravel Service Road					
312000-1	Earthwork	LS	1	\$ 2,000.00	\$ 2,000.00
321540-1	Gravel Paving	LF	10560	\$ 8.00	\$ 84,480.00
323300-1	Vehicle Gate	EA	2	\$ 3,000.00	\$ 6,000.00
Hiking/Biking/Equestrian Trails					
	Hiking Trail (soft surface, graded) - 2 miles in length	LF	10560	\$ 3.00	\$ 31,680.00
	Mountain Biking (1.5 miles in length)	LF	7920	\$ 4.00	\$ 31,680.00
	Equestrian (at grade)	LF	10560	\$ 2.00	\$ 21,120.00
	Overlook Shelter	LS	1	\$ 25,000.00	\$ 25,000.00
Pavilion					
	Building	SF	5000	\$ 200.00	\$ 1,000,000.00
	Electric Service	LS	1		\$ 10,000.00
	Propane	LS	1		\$ 10,000.00
	Water	LS	1		\$ 500,000.00
	Septic	LS	1		\$ 50,000.00
Pavilion Site					
312000-1	Earthwork	LS	1	\$ 10,000.00	\$ 10,000.00
321313-1	Concrete Paving (6" depth)	SF	5280	\$ 10.00	\$ 52,800.00
321540-2	Crusher Fines Paving	SF	2640	\$ 8.00	\$ 21,120.00
	Natural Lawn / Low Plantings	AC	1	\$ 30,000.00	\$ 30,000.00
329300-1	Trees (evergreen in various heights)	EA	50	\$ 550.00	\$ 27,500.00
323300-2	Site Furnishings - benches, trash, recycle, picnic tables	LS	1	\$ 15,000.00	\$ 15,000.00
323253-1	Boulder Wall (s)	LS	1	\$ 25,000.00	\$ 25,000.00

	Outdoor Classroom	LS	1	\$ 50,000.00	\$ 50,000.00
	Equestrian (Horse) Facility				
	Corral(s)	LS	1	\$ 100,000.00	\$ 100,000.00
	Shade Structure	LS	1	\$ 20,000.00	\$ 20,000.00
323129-1	Wood Fence	LF	1000	\$ 25.00	\$ 25,000.00
323129-1	Pasture Fencing	LF	5000	\$ 3.00	\$ 15,000.00
323300-2	Site Furnishings - benches, trash, recycle, picnic tables	LS	1	\$ 10,000.00	\$ 10,000.00
	Electric Service	LS	1		\$ 10,000.00
	Propane	LS	1		\$ 2,500.00
	Water	LS	1		\$ 20,000.00
	Water Quality	LS	1		\$ 2,000.00
	Ropes Course				
312000-1	Earthwork	LS		\$ 7.00	\$ -
	Climbing Elements / Structure (50 elements)	EA	50	\$ 5,000.00	\$ 250,000.00
	Shade Structure	LS	1	\$ 20,000.00	\$ 20,000.00
323300-2	Site Furnishings - benches, trash, recycle, picnic tables	LS	1	\$ 20,000.00	\$ 20,000.00
	Archery				
312000-1	Earthwork	LS	1	\$ 3,000.00	\$ 3,000.00
321540-1	Gravel Paving - parking and road repair	LF	2640	\$ 10.00	\$ 26,400.00
321313-3	Accessible Parking with Ramp with Curb	LS	1	\$ 5,000.00	\$ 5,000.00
321540-2	Crusher Fines Paving	SF	2000	\$ 8.00	\$ 16,000.00
323129-1	Wood Fence	LF	1000	\$ 25.00	\$ 25,000.00
	Archery Equipment	LS	1	\$ 30,000.00	\$ 30,000.00
	Signage				
	Park ID Sign	EA	1	\$ 4,000.00	\$ 4,000.00
	Ped Park Orientation Sign	EA	5	\$ 5,000.00	\$ 25,000.00
	Signage - Regulatory and Wayfinding	EA	30	\$ 150.00	\$ 4,500.00

Base Bid Subtotal	\$ 3,269,280.00
5% Mobilization	\$ 163,464.00
10% Construction Contingency	\$ 326,928.00
12% Design & Engineering Fees	\$ 392,313.60
Base Bid Estimated Total	\$ 4,151,985.60