



**Appendix F
Drainage
Observations**

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Drainage Observations

Drainage Observations

02 October 2023 - Wilson & Company

The drainage investigation performed for this master planning effort consisted of a brief site visit; locating, downloading, and a brief review of existing documentation; and providing professional engineering observations and ideas for potential actions for four areas of focus within the Blodgett Open Space.

Southern Area between Pikeview Quarry and Allegheny Drive

This area is significantly impacted by runoff from the Pikeview Quarry. In the past the area was part of the quarry property, and it includes two stormwater control ponds for the treatment of runoff from the quarry area. The area contains two naturalistic waterways between the quarry access road and Allegheny Road. These waterways ultimately discharge to North Douglas Creek. The average gradient of the two waterways is steep at approximately 7 percent. Both waterways have localized areas that are steeper as the average slope of the land in the area as measured perpendicular to the contours is closer to 10 percent. The two waterways merge approximately 400 linear feet upstream of a double cell 10' span X 5' rise concrete box culvert that conveys their flow under Allegheny Drive. Review of historic aerial photos indicated that around 2006 approximately 600 linear feet of riprap armor and at least one stabilization wall was constructed in the waterway along the north side of Allegheny Drive just upstream of the culvert crossing. Vegetation and sediment currently obscure much of this armor from view.

The primary, or northern, waterway conveys stormwater from nearly all of the disturbed quarry area. Various studies that were reviewed indicate the 100-year peak flow in the waterway is between 500 and 800 cubic feet per second. The waterway is routed through a sedimentation/detention pond, but no information was located that indicates how much peak rate mitigation the pond was designed for. The 1981 Douglas Creek Drainage Basin Planning Study recommended armoring the entire waterway with riprap due to its steepness. In its current configuration, the majority of the waterway is unlined and has incised to depths close to 9' deep with nearly vertical side slopes in some locations. Due to the



Incised channel just south of the south pond to 10 depth

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presence of what appears to be a small perennial base flow, some trees and shrubs have established in the narrow invert of the waterway to help slow erosion, but over time the waterway will continue to incise. Stabilizing the waterway and raising its invert to better connect with its floodplain would be a significant improvement for the system.

The secondary, or southern, waterway conveys water from a small watershed approximately 8 acres in size that includes a portion of the quarry access road as well as the lower quarry office building. Runoff concentrates in the roadway just north of curve near the entry point to the site. The runoff is routed over a steep slope that is poorly armored as it leaves the roadway and enters the waterway. A large gully has formed at this location. Downstream of this point the concentrated flow has formed a narrow-incised channel that is 2 to 4 feet deep. Unless measures are taken to stabilize this channel it will continue to erode and incise.



Gully between Quarry Road and alluvial fan



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Upstream of the confluence with the primary channel, sediment from the eroding channel falls out of the flow and has created a small alluvial fan along the north side of Allegheny Drive. It appears that water and sediment are diverted into Allegheny Drive at this location due to the significant sediment deposits in the channel. Stabilization measures for the waterway are needed to mitigate this problem.

The southern pond appears to have been constructed by the quarry operators around 1994 as a final sediment control measure for stormwater flowing from the quarry. Only conceptual plans for the facility were located in our research. While the 1994 reclamation plan for the quarry seemed to indicate that the pond would have a storage volume of 26-acre feet, the conceptual plans and the existing footprint indicate a pond volume less than half of that. The 1994 reclamation plan also indicated that the pond would be non-jurisdictional, but due to its approximate dam height of 13 feet (invert of outlet pipe to spillway elevation) it would be considered as jurisdictional as defined in the current State of Colorado rules and regulation for dams. The facility is not shown as a recognized jurisdictional facility on the State of Colorado Dam Safety web site map.

The southern pond includes 2 perforated corrugated metal pipe (CMP) standpipe risers with 42" CMP outlet pipes discharging through the dam to the downstream channel. The facility is nearly 30 years old, and the inside of the CMP risers are showing some surface rust. CMP is only expected to last 40 to 70 years so at some point in the future the outlet works will need to be replaced in order to maintain the function of the outlet and stability of the dam. The plans for the facility indicated a concrete lined stilling basin would be constructed at the pipe outlets but that is not evident. The downstream channel invert is over 3 feet below the outlet of the discharge pipes and the pipes are undercut a bit which is not desirable at the downstream toe of a dam. The southern pond is full of sediment to the top of the CMP risers. If the pond was built in accordance with the concept plans, the existing depth of sediment in the pond is approximately 10 feet. A visual inspection of the dam around the pond indicates that fill may have been added to the dam since its



Perforated pipes at southern pond

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construction. Some portions of the top of the dam embankment do not have controlled engineered fill appearance and have loose piles of earth on them. This is undesirable from a dam inspection standpoint. There are several trees growing in the invert of the facility and a few trees and shrubs are growing on the dam. The trees in the bottom would hinder removal of sediment and the trees on the dam may hinder dam inspections and could affect dam stability over the long run.

The quarry reclamation plans are not explicit on this subject, but based on statements made in the August 26, 2019, Permit Amendment 4, Exhibit G, the existing sediment ponds as described in Technical Revision 7 approved in 1994, will remain in place to control sediment during reclamation and beyond. The 1994 document and plans refer to the southern pond as Pond 517. As it exists, the pond is only minimally functional as a sedimentation/detention pond due to the bottom being filled with sediment. This not only affects the collection of sediment, but with reduced storage volume the discharge rates for all storm events are increased as well. The over 10' deep vertical risers with their tops flush with the surrounding ground surface could present a safety hazard for people and animals. It is not obvious that the spillway is of the proper configuration and is sufficiently armored to pass overflow from the pond without compromising the integrity of the dam. While the storage volume of the pond is not very large, a rapid breach of the dam could result in flooding of downstream structures. Initial Recommendations for the southern pond, Quarry Pond 517, include the following if it is to remain in service:

- Stabilize channels located upstream of the pond to reduce the sediment load contributed to the pond.
- Clean the dam and its spillway of loose materials and have an inspection and survey performed to establish its condition and configuration. Include inspection of the outlet pipes and risers.
- Investigate the configuration of the spillway armoring.
- Collaborate with the State Dam Safety office to determine if the pond needs to meet the rules for jurisdictional dams.
- Unless pond routing calculations exist that match the existing facility, perform hydrologic and hydraulic analysis of the facility to determine the operational characteristics of the facility if the accumulated sediment is removed and determine the adequacy of the existing spillway and dam freeboard.
- Perform additional investigations that could include geotechnical services to verify the adequacy of the dam embankment.
- Construct adequate erosion protection at the discharge ends of the outlet pipes
- Repair or modify any deficiencies found in the inspections and analysis. Consider reconfiguring the pond to meet the criteria for non-jurisdictional dam status.
- Clean the sediment deposits from the pond to restore its function after any deficiencies are corrected and concurrence from the State Dam Safety office to do this is obtained. The adequacy of the facility should be determined before sediment removal because a larger volume of water stored behind the dam will increase the safety risk.
- Perform regular inspections and maintain as needed.

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Much less documentation appears to exist for the northern pond. Based on review of USGS mapping, the pond was constructed prior to 1961. Quarry operations are also shown on the 1961 mapping, but it is unknown if the pond was related to the operation of the quarry. It may have been constructed as a stock pond. No outlet piping was apparent during a short site visit to view this pond; however, it is possible that the outlet piping is buried.



Northern pond

Without outlet piping, the pond will operate as a sedimentation/retention pond with stored water only leaving the pond through evaporation and infiltration. In the existing condition the pond appears to have a small watershed with nearly all runoff from the quarry site being routed to the southern pond. Based on comparison of existing pond bottom elevations to elevations of the surrounding ground, sediment has likely been deposited in the pond since it was constructed.

The northern pond dam appears to have a jurisdictional height (the vertical height between the emergency spillway level and historic ground at centerline of dam) that is in jurisdictional status. It is not obvious that the emergency spillway located at the northeast corner of the pond is armored. In the current condition the pond could potentially be considered as a non-jurisdictional erosion control pond except that its storage volume below an ungated outlet appears to exceed the State's maximum of 2-acre feet. The facility is not shown as a recognized jurisdictional facility on the State of Colorado Dam Safety web site map. It is unclear if this pond is needed during the quarry reclamation process or after. Preliminary recommendations for it include:

- Perform research and analysis to determine if the pond is needed and if appropriate water storage rights are in place for it.
- If the pond is needed or desired to remain: survey, inspect, analyze, prepare plans, and revise the pond configuration to meet the criteria for non-jurisdictional dams and only store water consistent with rights.
- If the pond is determined not to be needed or desired: prepare plans to remove the dam and restore the area of disturbance in accordance with City and State regulations.

Blodgett Open Space /Oak Valley Ranch Filing 6 Drainage Interface

The Blodgett Open Space slopes steeply to the back of the Oak Valley Ranch Filing 6 subdivision which was platted in the 1990s. Stormwater runoff from the portion of the open space that slopes to the neighborhood is naturally directed to the back of lots in the subdivision. In some places the flow is dispersed and in others the terrain concentrates the flow. It is reported that stormwater from the open space has caused issues for some properties in the subdivision in the past.

The Preliminary/Final Drainage Report for Oak Valley Ranch Filing No. 5 and Oak Valley Ranch Filing No. 6, Dated August 1993, recognized the potential for issues with this and stated that adequate side yard swales would be needed for lots along the northern and western boundaries of the subdivisions to convey the offsite runoff through the lots and to the streets at the front of the lots. The report further identified additional concerns along the northern and western sides of Filing 6 where concentrated flows would be present and required that concrete-lined side yard swales be constructed in those locations. The report indicates that the required swales would need to be designed to pass the 100-year discharge and indicated that they could be rectangular in shape either 8' wide and 6" deep or 12' wide and 4" deep with minimum longitudinal slopes of 1%. The drainage report-required solution does not appear to have been implemented in the development of lots in the subdivision.

Ideas for mitigating the problems include the following:

- Homeowners having issues could improve side yard swales as called for in the original drainage plan and report.
- Any new trail building, or trail abandonment should follow best practices to avoid runoff diversions and avoid concentrating flow.
- Changes could be implemented to the communication antenna building access road to minimize concentrated discharge from the roadway. Grading the road to better maintain sheet flow discharged from the downstream side of the road on a continual basis may be beneficial in a small reduction of overall runoff and potential reduction in roadway maintenance. In addition, a small extended detention pond could likely be constructed in the lower gradient areas adjacent to the south side of the road south of the antenna building to achieve another small reduction in runoff.
- A structural diversion to collect the offsite flows and convey them to a safe discharge point could be considered in the open space tract of Oak Valley Ranch Filing 6 subdivision. Given the steepness of the terrain the diversion should likely be paved with concrete to allow it to be compact, durable and facilitate maintenance. The diversion could potentially discharge to the existing utility easement located south of the open space middle trailhead parking lot if the easement were improved to safely convey the runoff.
- Any changes in the watershed should be done in a manner that minimizes downstream impacts.

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Possible Future Orchard Valley Trailhead Parking Lot

The area located immediately northwest of the intersection of Orchard Valley Road and Woodmen Road is being considered as the location for a possible future trailhead parking lot. Primary access for the lot would be from the intersection which may be re-configured by Colorado Springs Street Department. A secondary access may be created from Woodman Road north of the intersection to better accommodate circulation through the lot without the need for internal turnaround areas. Some ideas to be considered in the design of the lot follow:

- The lot will likely need to be excavated into the existing terrain to achieve reasonable grades for the driveway connection to the intersection. Part of the soil from the excavation could be used to form a screening berm along the eastern edge of the parking lot.
- The new lot will be in the path of stormwater drainage from small adjacent drainage areas. Providing armored flow paths for this runoff as it enters the likely depressed parking area over steep slopes should be considered in the design of the lot.
- The parking lot design should be done in a manner that considers keeping the redevelopment area to less than 1 acre in order to avoid triggering permanent water quality treatment and detention requirements for the project. Even so the new pavement area should be minimized to the extent practical and green infrastructure should be considered if it is practical to do so.
- Stormwater runoff from the new parking lot will need to discharge to adjacent Woodman Road. The capacity of the roadway and the downstream storm sewer system should be verified to be sufficient to handle any extra discharge rates from the parking area along with the design of the lot. A small extended detention pond at the south end of the lot may be required if sufficient capacity cannot be demonstrated.



Possible Future Orchard Valley trailhead site

Northern Trailhead Parking Lot Expansion

The area located immediately west of the existing northern trailhead parking lot is being considered as the location for addition parking either single or double loaded off of the existing utilities access road. The potential parking lot location is sandwiched between a steep partially treed slope on the south and the upper slope of a large detention pond on the north.

Expansion of parking into the treed slope on the south if a double loaded layout is used will require 6- to 8-foot-high retaining walls along the south side of the lot and 1- to 3-foot-high retaining walls along the north side of the lot. Expansion of the lot only to the north as a single-loaded parking lot should be able to be accomplished with 1- to 3-foot-high retaining walls only on the north side of the lot.

The original pond plans “Woodman Road Embankment, Detention Facility at Peregrine” dated 5/24/93 were reviewed in relationship to current contour elevations. It appears that the current FIMs contours are approximately 5 feet higher than reflected in the pond plans. The lowest emergency overflow point for the pond appears to be located at northeast corner of the existing trailhead parking lot. Adjusting the 100-year and 500-year maximum water surface elevations by adding 5 feet to the elevations published in the original plans yields current topo maximum water surfaces of 100-year +-7082.5 and 500-year +- 7087.0 respectively. Unless the new parking lot is pushed a significant distance north into the pond area, it will not have a significant impact on the operation of the pond due to the fact that it will be outside of the pond’s storage pool.



Utilities access road looking west

Ideas to consider in the design of the parking lot expansion:

- It appears that runoff leaves the access road near the southwest corner of the existing detention pond and flows into the pond in the crease between the south and west pond side slopes. The flow erodes the crease. This should likely be formalized by a more defined low point in the access road along with armoring the crease to mitigate erosion there.
- The parking lot design should be done in a manner that considers keeping the redevelopment area to less than 1 acre in order to avoid triggering permanent water quality treatment and detention requirements for the project. Even so the new pavement area should be minimized to the extent practical and green infrastructure should be considered if it is practical to do so.
- It is assumed that stormwater from the new parking areas can be directed to the existing inlets in the existing parking lot. The capacity of the existing inlets to manage the additional drainage should be verified with calculations regarding the design of the new parking area.
- The parking lot will be fairly long. Thus, a turnaround area at the western end of it should be considered to accommodate potential users that drive through it but find it full.



**Appendix G
Trail
Standards**

Trail Standards

The key considerations in evaluating existing trail system, design of new trail system alternatives and management are grounded in the Blodgett Open Space Management Goals on page 46.

Natural and Cultural Resources

Protecting and sustaining the Open Space's natural and cultural resources is strongly supported by the public and mandated by the conservation easements and TOPS Ordinance for the property. The site assessment identified cultural resource areas, habitat corridors, and steep, erodible conditions on the property. The trail system design requires special consideration to minimize disturbance and maintain narrow tread width in these areas.

As stated earlier in the Master Plan, areas recommended for future resource protection and limited human disturbance, Wildlife Corridors, are indicated on a map on page 28.

Multi-Use Trails

The concept of multi-use trails is strongly supported by the public and a key tenet in the PRCS Department's philosophy. The Blodgett Open Space trail system will be open to all legitimate non-motorized user groups.

While it is the Department's practice to allow the appropriateness of a particular trail for a particular use (hiking, running, cycling) be determined by each individual's skill and experience level, the heavy use and rugged, steep terrain in Blodgett Open Space influenced a different approach. Several system trails are designated for hiking-or biking-only: one multi-use trail is one-way up only for bikes. Additional discussion on designated use trails is located in the Master Plan (page 31); designated use trails are indicated on the Master Plan map on page 36. All trails are rated by difficulty in a classification system similar to that used for skiing and discussed later in this section (page G-10).

Trail Experience

Trail experience is each individual trail user's subconscious interaction with the environment that thoughtful trail design enhances. This means each consideration during trail design and construction should aim to:

- Make the trail fun and rejuvenating;
- Provide passageway - not simply a transportation route;
- Provide compatibility for various trail user types – hikers, cyclists, elderly, children, and physically-challenged individuals;
- Integrate with the land, vegetation, ecosystems and wildlife;
- Interact with the environment; and
- Stimulate inquisitiveness with views and interesting features that create opportunities for self-guided interpretation without signs.

Two key components affect trail user experience. The first is trail *flow and rhythm*. Together, flow and rhythm are key components for trails popular with runners, cyclists and equestrians. The experience of travelling along a trail where one turn leads to the next, oncoming obstacles and trail traffic are visible, and one rise leads to a similar descent not only create enjoyable trail, but also create a more durable trail while reducing excessive

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cycling speeds and associated conflict with other trail users. The Blodgett Open Space terrain presents opportunities for physically and technically challenging trails. How each user group navigates these challenging trails - differences in speed, preferences for up or down hill travel, users' eye level and its impact on seeing other trail users ahead - all need to be taken into consideration during trail design and maintenance.

The second component is visual separation. Trail users should be able to enjoy the natural environment and natural vistas without viewing the surrounding development or nearby trails. While trail users anticipate interacting with cars, signage, and support facilities at trailheads and major crossings, the backcountry experience is compromised when trail users are continually exposed to residences, utilities and signage. The property lends itself to a reclusive escape while embedded in the northwest commercial and residential neighborhoods - this is both its beauty and its uniqueness.

Both trail design components, trail flow and visual separation, are typically accommodated by thoughtful trail design and maintenance. The physical and topographical diversity of this property allows both of these trail experience components to be achieved.

Sustainable Trails

Trail sustainability requires consideration of and attention to protection of the natural and cultural resources, trail safety, long-term durability, construction cost, structural integrity, social behavior and maintenance. Compliance with and proper execution of consistent design and construction standards that reduce entrenching, braiding, erosion and sediment loading, will best ensure durable, safe, sustainable trails. This is the recommended approach for the majority of the trail system.

Blodgett Open Space trails are recommended to remain at a slope of less than 1/3 of the existing cross slope and a maximum trail slope of 10% - preferably less than 8% - (except for designated challenging trails where slopes may exceed 1/3 of the cross slope) with the proper design to facilitate drainage. Coupled with proper alignment, aspect orientation, grade reversals, and construction techniques, the majority of the trails will be sustainable for generations.

The planning process revealed a strong public desire to retain and build several existing steep and challenging trail segments for the unique trail experiences they provide. In order to balance resource protection with the desire for public access, only challenging trails with limited impact on the natural and cultural resources identified in Section III: Existing Conditions and Site Assessment are included in the plan. Steep challenging segments will initially require a significant number of stabilization structures and braiding route closure and restoration; the challenging segments also commit the City to continual, ongoing maintenance into the future. Challenging trail segments are included in both the Blue and Black trail categories in the Master Plan.



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Less often considered components of trail sustainability are contextual trail design and construction knowledge, fiscal resources and manpower resources. These components often lead to a "pay now," with a big effort to install a sustainable trail design, or "pay later" incrementally and continually into the future with ongoing maintenance and resource degradation. Individual volunteer groups getting their members out for an after-work trail effort tend to focus on incremental maintenance or re-construction. Collaborative projects, pooling numerous groups' knowledge and manpower resources, offer an exciting opportunity to make the leap to a "pay now" focus resulting in well-built and designed solutions in challenging areas.

Wayfinding Nodes

The Blodgett Open Space trail system offers a range of trail difficulty levels on numerous interconnected trails over varied terrain. The current system can be challenging to navigate for frequent users and overwhelming for new visitors. For this reason, wayfinding nodes are proposed at 16 key trail intersections. Wayfinding nodes may include a trail system map, interpretive signage and a bench. Trail maps should contain a "you are here" notation, trail names and the trail etiquette triangle; node signs may possibly include additional etiquette notation such as, "Trails are intended to be enjoyed by all users. Trail users are expected to be in control at all times, which means properly yielding to slower users and users." Signs and benches will conform to Parks standards. Wayfinding node locations are designated on the Master Plan map (page 36).

Transitions at Key Trail Intersections

Transition zones at key trail intersections provide physical and visual clues for trail users to slow down when approaching roadways, trail intersections, and wayfinding nodes. Some transition signals occur naturally on the trail, but many require intentional design choices and/or construction. Trail conditions that slow speeds include concentrated trail obstacles, curves in the trail, narrowing trail corridor, uphill grades, and vegetation.

The transitions at key trail intersections will be implemented according to environmentally-friendly design principles including: management and utilization of stormwater runoff; the incorporation of the native landscape plantings; and the use of natural materials and proportions that blend into the surrounding context.

Pinch Points

Pinch points (also referred to as chokes) are trail corridor constrictions that align directly with the trail edge. Pinch points are an effective and natural-looking trail design tool to minimize excessive trail widening and to manage bike speeds. The high-use, erosive soils and naturally sparse vegetation have contributed to ever-widening trails in Blodgett Open Space, with some widening to 12 feet. Existing trails with naturally occurring pinch points are not widening, because they provide frequent opportunities to channel trail users onto the intended trail tread. As a speed and conflict management tool, pinch points encourage riders to slow down to navigate a tight or more challenging-looking trail feature. Pinch points are effective only when they occur regularly along the trail alignment.

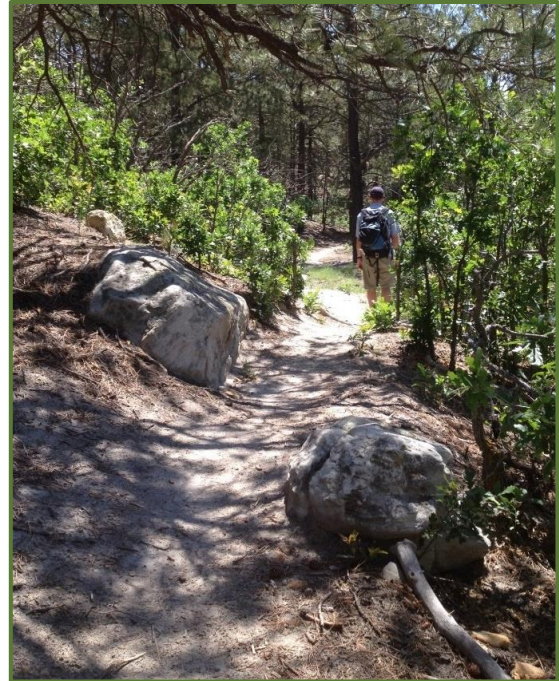


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Site observation during this study suggests that in Blodgett Open Space:

- Pinch points should be installed at strategic locations where trail widening, or excessive speeds are a known or potential problem;
- Pinch points located every 100-300 linear feet deter side-by-side walking and keep all trail users on the trail tread;
- Large boulders set in the earth, standing trees, thick shrubs, large tree trunks and fencing are effective pinch point materials;
- Mulch, small rocks and medium-size dead fall are not effective pinch points and do not keep users on the tread;
- Pinch points should be constructed of natural materials and proportions that blend into the surrounding context;
- Trail corridor clearing should be carefully planned to retain trees, branches, and features that serve as pinch points and discourage trail widening.



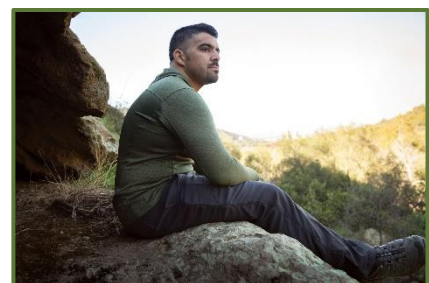
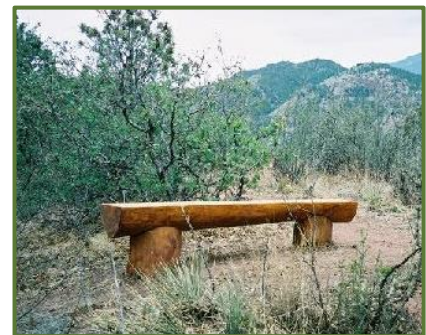
Benches, Picnic Tables and Furnishings

Informal park seating may consist of locally quarried block stone matching the in-situ rock in areas adjacent to stone formations and at trailheads and peeled logs in forested or open meadow areas. Benches in open meadows should be backless so as not to disrupt the open view (photo below top). Multiple benches may be appropriate for trailheads, wayfinding nodes and interpretive areas; all benches will be located by the PRCS design staff. Single benches may be sited by Park design staff as appropriate in remote areas or on mountain trails.

Other site furnishings shall be located at trailheads or special use areas and may include trash receptacles, bike racks, picnic tables (including ADA accessible tables) and other objects. These features can be constructed of metal, painted to match the natural elements of the site structures and should be consistent throughout the Open Space. Existing non-conforming items should be replaced with furnishings conforming to these recommendations.

Forest green, sage-green and brown may be used as accent colors, representing the vegetation on the site, and serving as a complement to the hues found in the in-situ stone. Adhere to the Parks' Wayfinding Guidelines.

All donation furnishings shall conform to the designs shown in the photographs and be sited at designated trailheads or the locations indicated in this master plan. All specific positioning of donor furnishings will be determined on-site by park staff in accordance with the PRCS Department Donation Opportunities policy.



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Walls, Culverts and Erosion Control Structures

Rock structures will be needed in areas of steep slope or where erosion problems may occur. Walls, culverts and erosion control structures may consist of mortared or dry-set pieces of random-sized stone. Structures may terminate in boulders or in a stepped-down form. Stone color should reflect the adjacent in-situ rock; and should fully obscure drainage pipes and other structures.. Existing structures of different materials may be replaced or remain with materials continued if the structure is expanded.

The use of stone representing the nearest in-situ rock whether in large slabs or laid up in walls, is encouraged.



Grade Separating Structures and Bridges

Bridges offer an opportunity to improve safety and enhance the trail users experience. Grade separation is a

method of aligning a junction of two or more trail alignments at different heights (usually the higher trail on a bridge) so that users will not disrupt the travel flow on the other trail when they cross each other. Grade separating trails in the downhill bike area allows for safe crossings for users of differing modalities (foot, bike, horse) and speeds.

Bridge design can be subtle while enhancing the enjoyment of all open space users. The photos illustrate places where communities have embraced creative, site sensitive bridge design that adds a unique experience for users. A bridge may be considered at the Quarry Trailhead access to the Chamberlain Trail over the riparian area.

Bridges in the Trail System

Water and drainage crossings are minimized in the trail plan to the extent practical. Where crossing is necessary, trail bridges may be used for crossing streams, drainages, and other trails to enhance safety and to protect the natural environment. For stream and drainage crossing, assessing potential environmental damage, as well as evaluations of less obtrusive alternatives to bridges such as culverts, fords, and trail relocation, should be considered before bridge construction or replacement. Bridges should be kept to the minimum size needed to serve trail users and other maintenance and preservation needs, and designed in harmony with the surrounding natural environment.



Taos, NM, above

Bentonville, AR, left

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City of Colorado Springs current bridge installations in parks and open spaces include:

- Fiberglass structures: abutments installed, and bridge assembled on site.
- Wood structures: abutments installed and assembled bridge transported to site.
- Timber structures: Park staff or contractor assembled on site.



*Fort Collins, CO,
above left*

*Newark, DE,
above right*

*Glorietta, Santa
Fe, NM right*

*Aspen Snowmass,
CO, lower right*

*Bentonville, AR
two left photos*



Illegal Trail Closure

The Blodgett Open Space trail system design considers and strives to balance many factors, including physical resources, natural and cultural resources, management capacity, social influences, and the public input received during this master planning process. The creation and acceptance of user-created illegal routes undermines the design and management effort.

Intentional trail closure techniques will be required in this heavily-used park. Blodgett Open Space currently has an extensive network of illegal trails. User-created illegal trails are problematic and need to be actively closed and restored. All trails not in the approved trail system (or subsequent management decisions) are user-created illegal trails and should be managed according to the following guidelines.

All Closures

- Observe and collect information about why the user-created illegal trail is occurring. If conditions on alternative, approved routes are the cause, correct them.
- Construct a new trail providing the access and experience consistent with the Master Plan *prior* to closing the existing route. Strategically plan and construct reroutes concurrent with the closing of old system and user-created illegal trails.
- When rerouting system trails, make the commitment to solve the whole problem area. For the closure of the original route to be successful, it is essential to provide a smooth transition between existing and new trail sections. Create alignments which effectively discourage creation and use of user-created illegal trails.

Active Closure

Most heavily-used illegal trails are in poor locations and are contributing to erosion and degrading other resources. These trails need to be actively closed and restored:

- Obliterate the closed trail tread to soften the soil, discourage continued future use, and promote revegetation. Stabilize with constructed check dams (wood and/or rock) and drains to shed and slow water, reduce erosion, and accumulate topsoil.
- Seed the area with native grasses to promote revegetation.
- In appropriate locations, cover the obliterated tread with biodegradable erosion control matting and natural materials such as rocks/woody debris.
- Monitor the closed trails for erosion, vegetation establishment, and weeds.
- For popular user-created illegal trails, install temporary or permanent fencing to clearly direct users away from the closed trail. See fencing below.

Passive Closure

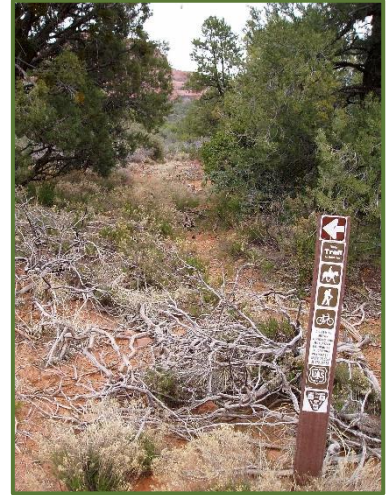
Some user-created illegal trails originate as game trails, are faint, sparsely-used and do not cause substantial erosion or resource management concerns. In these cases, most users will easily adapt to new trails providing desired experiences and passive closure is appropriate:

- Lightly scarify the tread surface to reduce compaction and facilitate revegetation.
- Randomly place rocks, woody plant material, and other natural-looking materials in the trail tread to obstruct and discourage travel, promote revegetation, and hide it from users.
- Allow natural vegetation to re-establish over time.

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Successful trail closure and the resulting resource protection require the commitment of resources, knowledge, and manpower. Major sections of unsustainable trail with major recommended trail reroutes are indicated on the Master Plan map.



active closure with smooth transition to reroute trail section, proper signage and intentional closure of illegal trail with obliterated trail, water diversions, and intentionally placed branches.

Install fencing to enforce the closure. Fencing must extend fully between two site obstacles such as a large rock outcrop or dense vegetation. When possible, buck and rail type fencing should be used as it creates a formidable obstacle that is difficult to climb over and is easy for volunteers to install as it does not require fence post holes. Split-rail and round-pole fencing is the Parks standard and will be the standard fencing in the open space.



buck and rail fencing

Existing Trail Restoration

In most cases, existing trails are recommended to be designated and integrated into the Park trail system. Some of these trails will likely require work to ensure long-term function and sustainability, such as the following:

- Restore and maintain trails to the standards established by the difficulty level (white, green, blue, black) established in the Master Plan;
- Installation of drainage dips in strategic locations;
- Excavation of the outer/lower berm along the trail to ensure adequate width and sheet or cross-trail drainage; and
- Short reroutes or tread reconstruction to fix steep or otherwise problematic segments.

Trail Difficulty Ratings

A system similar to that used for skiing has been adapted for trail classifications to indicate degree of difficulty. Coloradans are familiar with this system and understand it intuitively. Trails are classified as easy, intermediate, and difficult. A color designation for each class matches the system used for ski slopes: green for easy, blue for intermediate, and black for difficult. The color white is assigned to ADA accessible trails. Trails complying with universally accessible trail design are noted on the plan. The specific criteria for each type of trail are on the following pages.

Universally Accessible Trail Design

Universally Accessible Trail design is a different way to think about how you build a trail to allow for special equipment, without changing the character, challenge, and designation. Universally accessible trails consider minimum design standards (outslope, trail width, clearance zone and ride arounds, trail radius, off camber). It allows individuals of all abilities to have an opportunity to enjoy the trail. Universally accessible trails provide:

- Inclusion in outdoor recreation for everyone; people with disability, families with strollers, people with walkers.
- Line choice for differently-abled individuals. An example is some adaptive mountain bikers (aMTB) prefer more difficult trails, riders can choose the best route over the technical sections that offer alternative routes or are wide enough to pick lines.
 - Does not mean it needs to be easy. Double black trails can be universally accessible trails.
- A choice of trails. Not all trails need to be universally accessible, some can be narrower, but the goal is to provide alternative routes through the open space that are available for all users.
 - The whole trail system wherever possible, something that works for everyone.
 - Look at the trail differently to make it work for everyone.
 - Some spots of the trail need to be considered for the equipment used.

Trackchair program access is slightly different, and would be more traditional green rated wider paths (36-48”), with minimal obstacles. Additional information on universally accessible trail design can be found in Appendix I.

One way and Directional Trail Design Features

- Clearly define trail direction and user designations at all trail junctions with hiking-only, downhill biking-only, and multi-use with uphill only for bikes trails. Aggressively monitor and close intersecting user-created illegal trails for safety. The characteristics of the one way and directional trails are:
 - Hiking only Trail: One portion of rolling narrow trail to green standard and one portion of narrow trail with stone steps and rocks in steeper sections designed to a black standard
 - Multi-use Trail with Uphill Only Bike Travel: rolling climbing trail designed to blue standard
 - One-way Downhill Flow: rolling grade, dips, berms, banked turns, and jump options designed to a green/ blue with blue option lines
 - One-way Downhill Tech: rock gardens, vertical drops, banked turns, jumps, technical trail features designed to black standard with option lines and the double black standard with limited option lines.
- Clearly define the three routes as intermediate (blue or blue green), difficult (black), and expert (double black) downhill biking-only. Incorporate slowing and stopping area prior to Quarry access drive crossing.
- For hiking-only and downhill biking-only trails, utilize fencing and clear signage to ensure users access the correct designated trail portal for their travel mode, skill level, and direction of travel.

Appendix G

Trail Standards

White –Recreation Accessible Trail Loops

Recreation accessible trails provide wide-widths and smooth surfaces at relatively low degrees of slope and will avoid steps or other obstacles. Sustained slopes less than 5% and up to 8% with required landing/rest areas will be maintained along the alignment, wherever possible, or as designated by the Architectural and Transportation Barriers Compliance Board's (ABA) Regulatory Negotiations Committee on Accessibility Guidelines for Outdoor Developed Areas, most recent report. When possible, the intent is to construct these trails in compliance with the more stringent standards of the Americans With Disabilities Act (ADA). White trails require minimal attentiveness to negotiate.

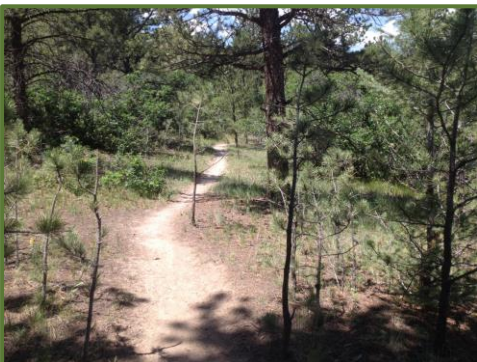
- o Typical width from 3' to 8'
- o Smooth surface without obstructions
- o The Park to Peak, which traverses the site from Allegheny to the Quarry Trailhead, will be soft surface with no shoulders and typically 5-8' wide (City's Tier 2 standard).
- o <https://www.access-board.gov/aba/guides/chapter-10-outdoor/>



Green - Easy Trails

These are trails that offer narrow to wide widths and smooth surfaces with minimal obstacles at relatively low grades. Green trails require minimal attentiveness to negotiate.

- Sustained slopes less than 5% with short sections up to 10%
- Typical width from 18-36"
- Smooth surface with very few obstructions



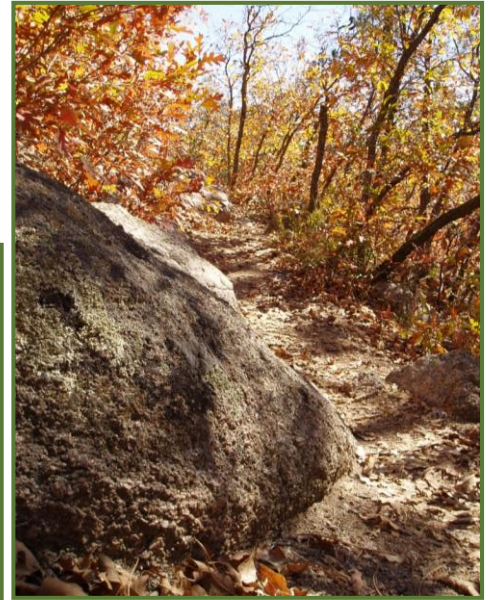
Appendix G

Trail Standards

Blue - Intermediate Trails

Intermediate trails may be narrower than the green trails and may have frequent challenges. Qualifiers - obstacles which demonstrate the level of difficulty that will be encountered along the trail segment and consistent with the blue designation - should be designed into the trails at every connection with a green trail classification. Blue trails require attentiveness to negotiate.

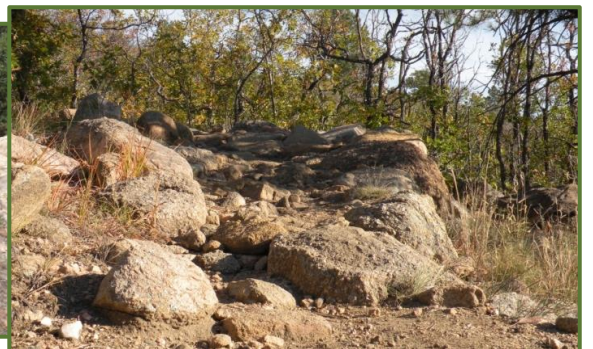
- Sustained slopes range from 0 – 10%. Sustained grades on intermediate trails should not exceed 10%, except for short distances up to 12%.
- Typical width from 18" to 36"
- Utilize native and imported rock to stabilize steep multi-use and single use trail surfaces
- Variable surface – Occasional obstacles including steps, water diversions, dips, roots, rocks, etc.



Black - Difficult Trails Double Black – Expert Trails

Difficult trails provide a challenging experience, including steeper grades, rougher surfaces, more frequent challenges and narrow widths. Trails may contain obstacles such as frequent water diversions, steps, switchbacks, cliff edges, significant drops, and roots or exposed rocks on their surface. Black trails may include recommended bike dismount sections and option lines, which are easier for trail users to negotiate. Qualifiers - obstacles which demonstrate the level of difficulty that will be encountered along the trail segment and consistent with the black designation - should be designed into the trails at every connection with a green or blue trail classification. Double Black trails provide continuous challenges.

- Sustained slopes range from 0-15% except for short distances up to 25%
- Downhill mountain biking trails are anticipated to sustain over 15% slope and require stone armoring
- Typical width from 12"-2' – additional width may be included for universal design
- Utilize native and imported rock to stabilize steep multi-use and single use trail surfaces
- Rough to variable surface – Frequent obstacles including steps, drops, built structures, water diversions, roots, rocks, etc.



Appendix G

Trail Standards

Resources

For more information on many of the above topics, the following technical resources are recommended:

Complete Guidebook | OSI Field Guides. Outdoor Stewardship Institute (OSI), most recent edition.
<https://www.voc.org/store/Complete-Guidebook-OSI-Field-Guides-p289235131>

The above Complete Guidebook Includes: **Climbing Tuns and Switchbacks | OSI Field Guides, Drainage Structures | OSI Field Guides, Ecological Restoration Overview | OSI Field Guides, Ecological Restoration Overview | OSI Field Guides, Flat Trail | OSI Field Guides, Rock Skills | OSI Field Guides, Trail Closure and Revegetation | OSI Filed Guides, Trail Overview, Construction and Maintenance | OSI Field Guides.**

Guide to Independent Stewardship for Trails. Outdoor Stewardship Institute (OSI), most recent edition.
<https://www.voc.org/store/Independent-Stewardship-for-Trails-A-Course-for-Trail-Adopters-c77157022>

Trail Construction and Maintenance Notebook. 2007 Edition. USDA Forest Service Technology and Development Program in cooperation with the Federal Highway Administration.
<http://www.fhwa.dot.gov/environment/fspubs/07232806/index.htm>

Guidelines for a Quality Trail Experience - Mountain Bike Trail Guidelines. January 2017. US Bureau of Land Management and IMBA.

California State Parks Trail Handbook. Chapter 6: Mountain Bike Trail Design. 2019. trails@parks.ca.gov

Trail Solutions: IMBA's Guide to Building Sweet Singletrack. 2004. International Mountain Bicycling Association. www.imba.com/resource/trail-solutions.

Bike Parks: IMBA's Guide to New School Trails. 2014. International Mountain Bicycling Association.
www.imba.com/resource/bike-parks-imbas-guide-new-%03school-trails.

Managing Mountain Biking: IMBA's Guide to Providing Great Riding. 2007. International Mountain Bicycling Association. www.imba.com/resource/managing-mountain-biking.

Mountain Bike Trail Development Guidelines for Successfully Managing the Process. 2022. International Mountain Bicycling Association. <https://www.imba.com/resource/mountain-bike-trail-development-guidelines>

Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds. USFS & USDOT.
www.fhwa.dot.gov/environment/fspubs/07232816/index.htm

Volunteers for Outdoor Colorado (VOC) Trail Design Handbook, most recent edition.

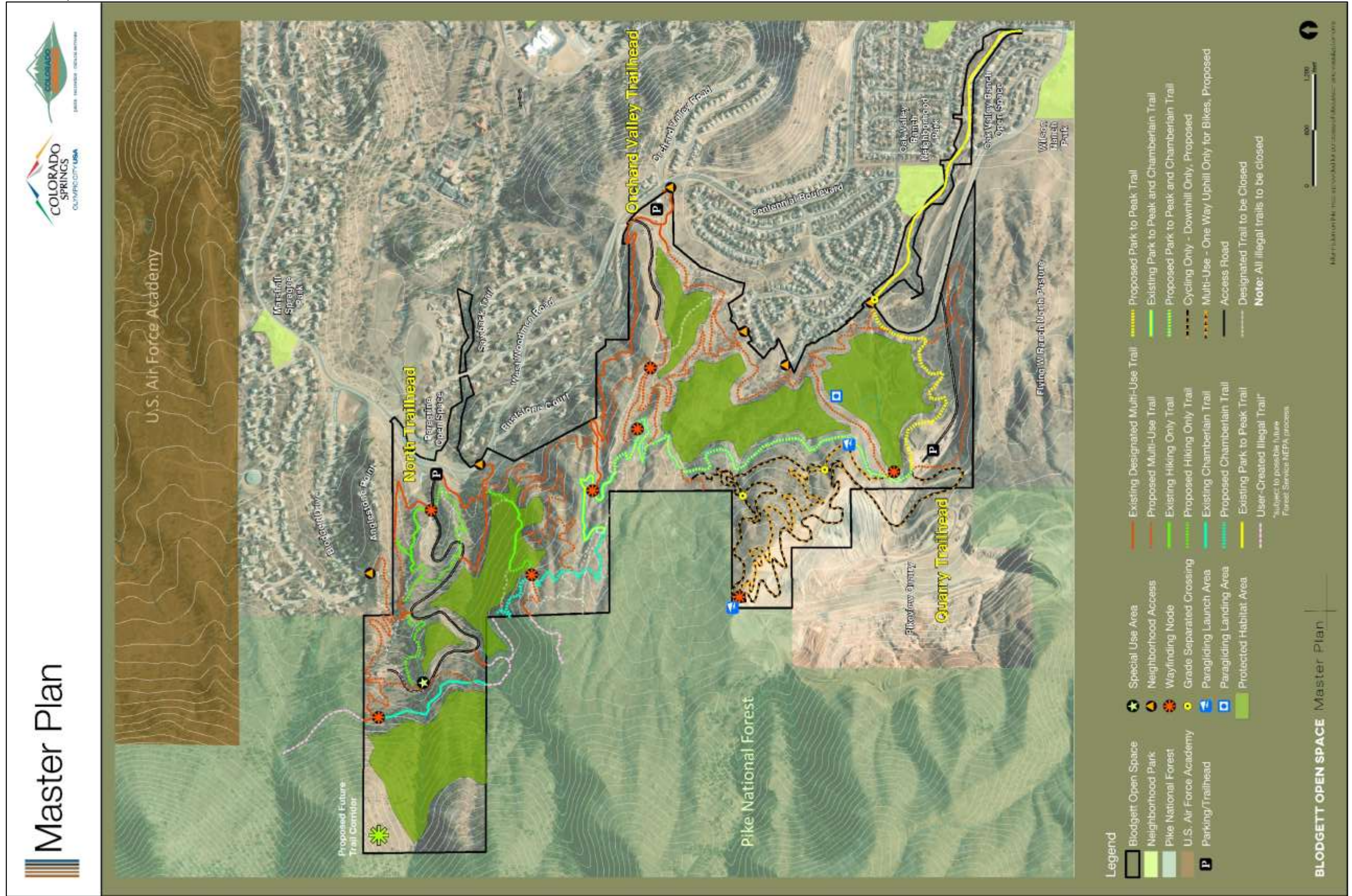
Universal Trail Design - #140. Re-Air Joe Stone, Teton Adaptive Executive Director,
<https://www.traileffectpodcast.com/re-air-joe-stone-teton-adaptive-executive-director-universal-trail-design-140/> And the video referenced in the pod cast <https://youtu.be/w8QnqZ1mEM?si=a9umkplS4X64T1E6>



**Appendix H
Master and
Management
Plan Maps 11"x17"**

Appendix H

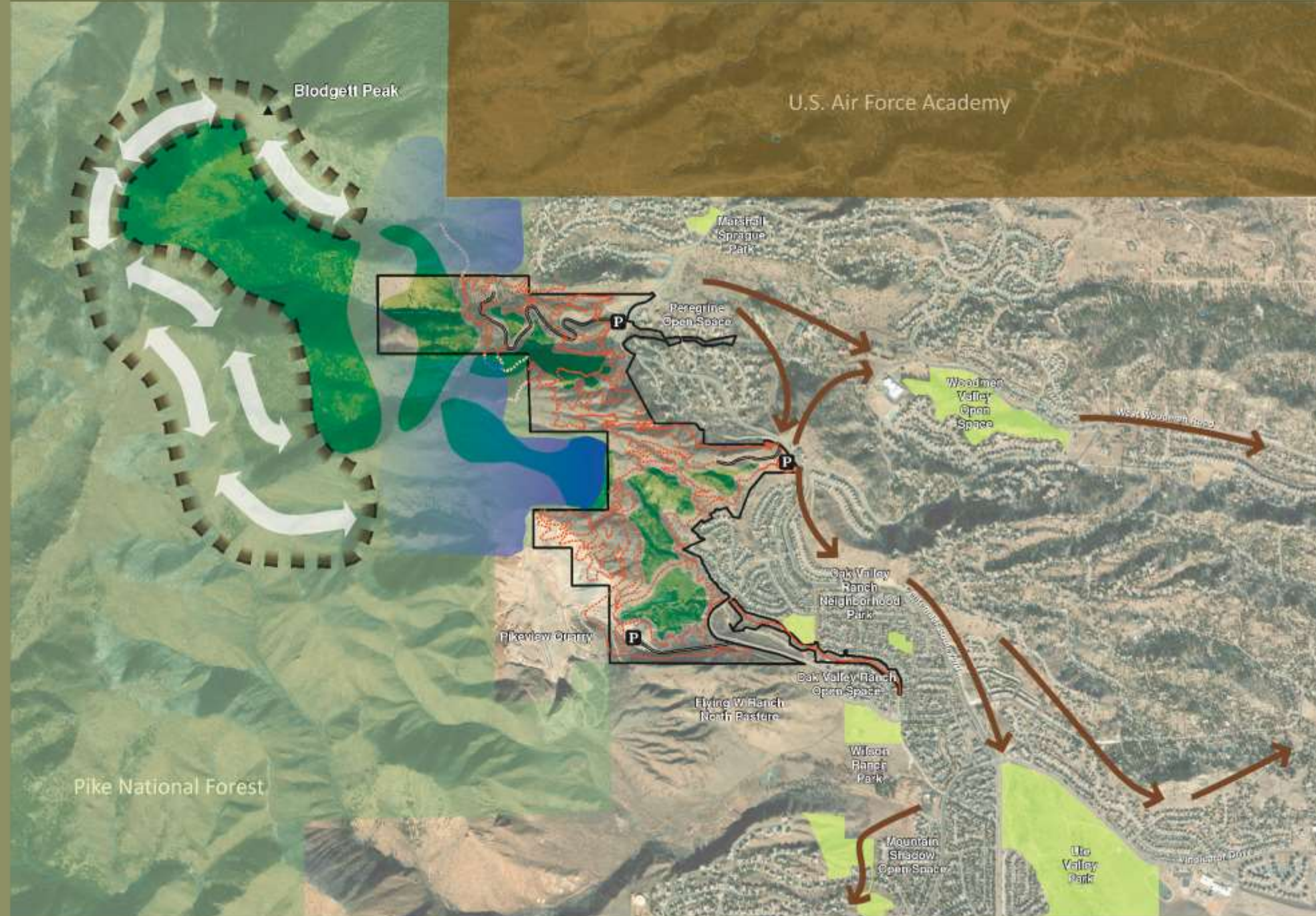
Master and Management Plan Maps – 11"x17"



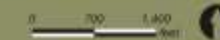
Connectivity Map



- Legend**
- P** Parking/Trailhead
 - Existing Trail
 - Proposed Trail
 - Access Road
 - User-Created Illegal Trail*
 - Blodgett Open Space
 - Neighborhood Park
 - Pike National Forest
 - U.S. Air Force Academy
 - Proposed Neighborhood Connection
 - Potential "Interface" Trail Zone*
 - Potential Peak Access Trail Corridor*
 - Consolidated Habitat Areas (Approximate)
*subject to possible future Forest Service NEPA process



BLODGETT OPEN SPACE Master Plan

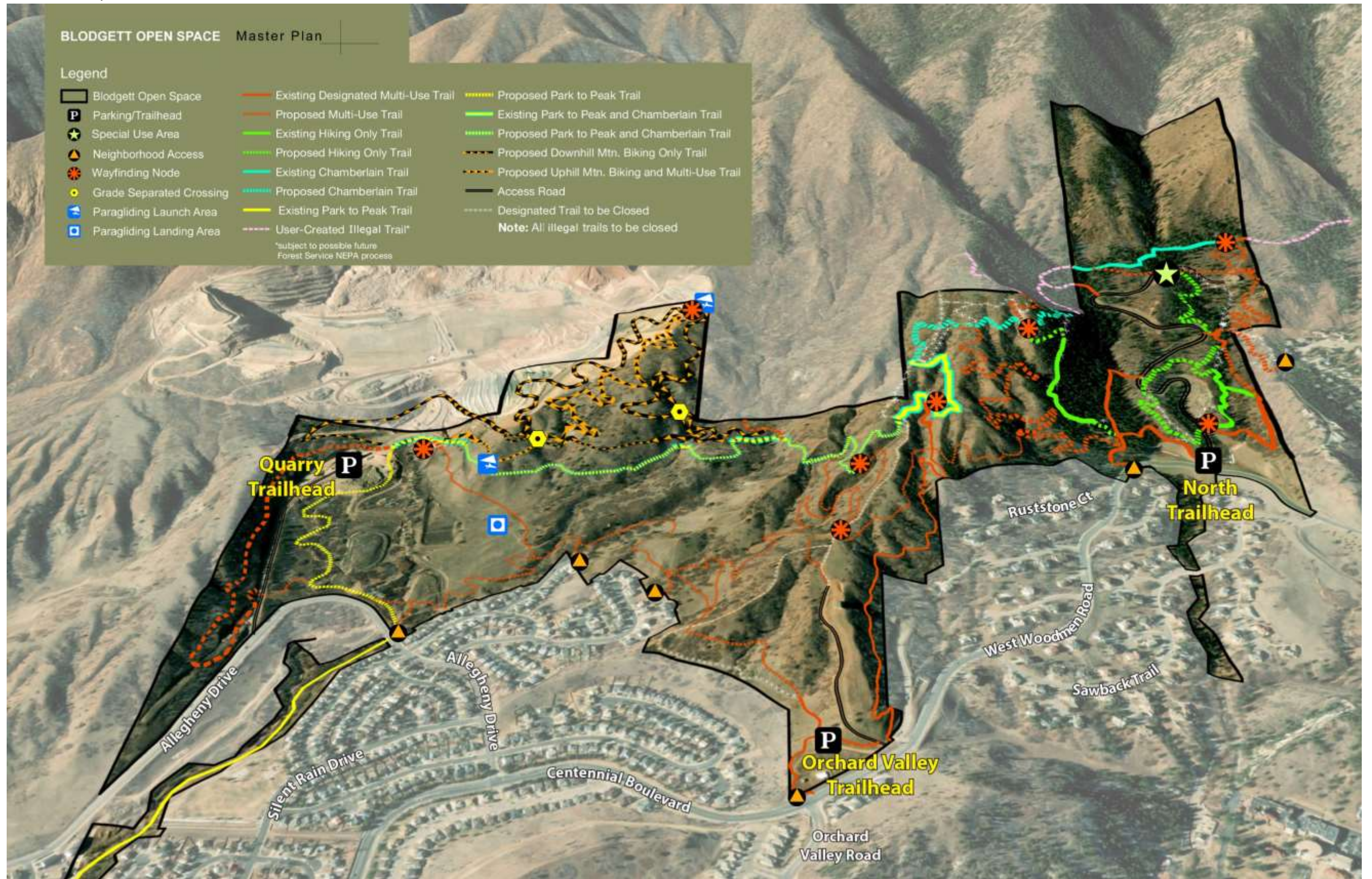


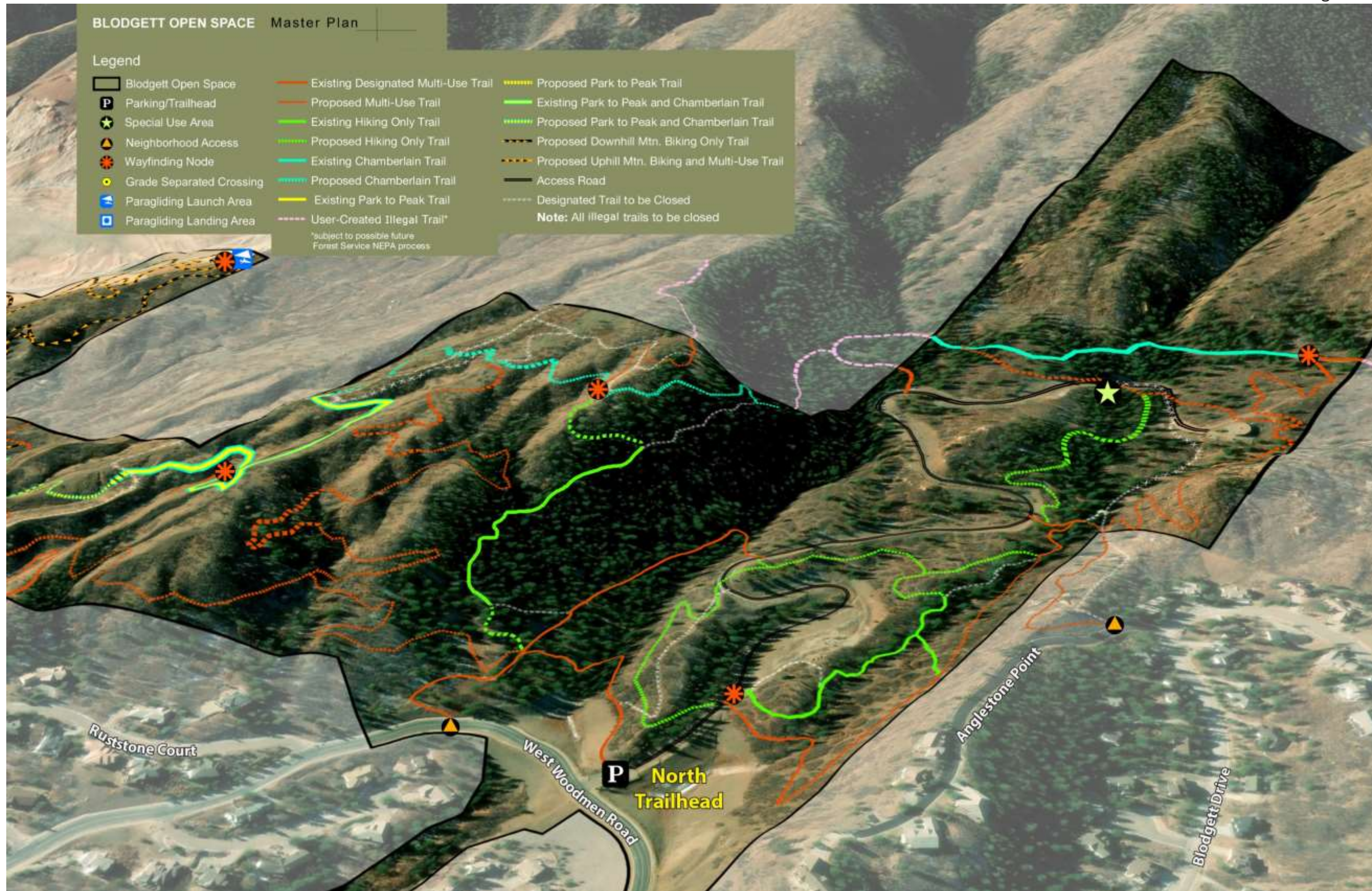
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Appendix H

Master and Management Plan Maps – 11"x17"

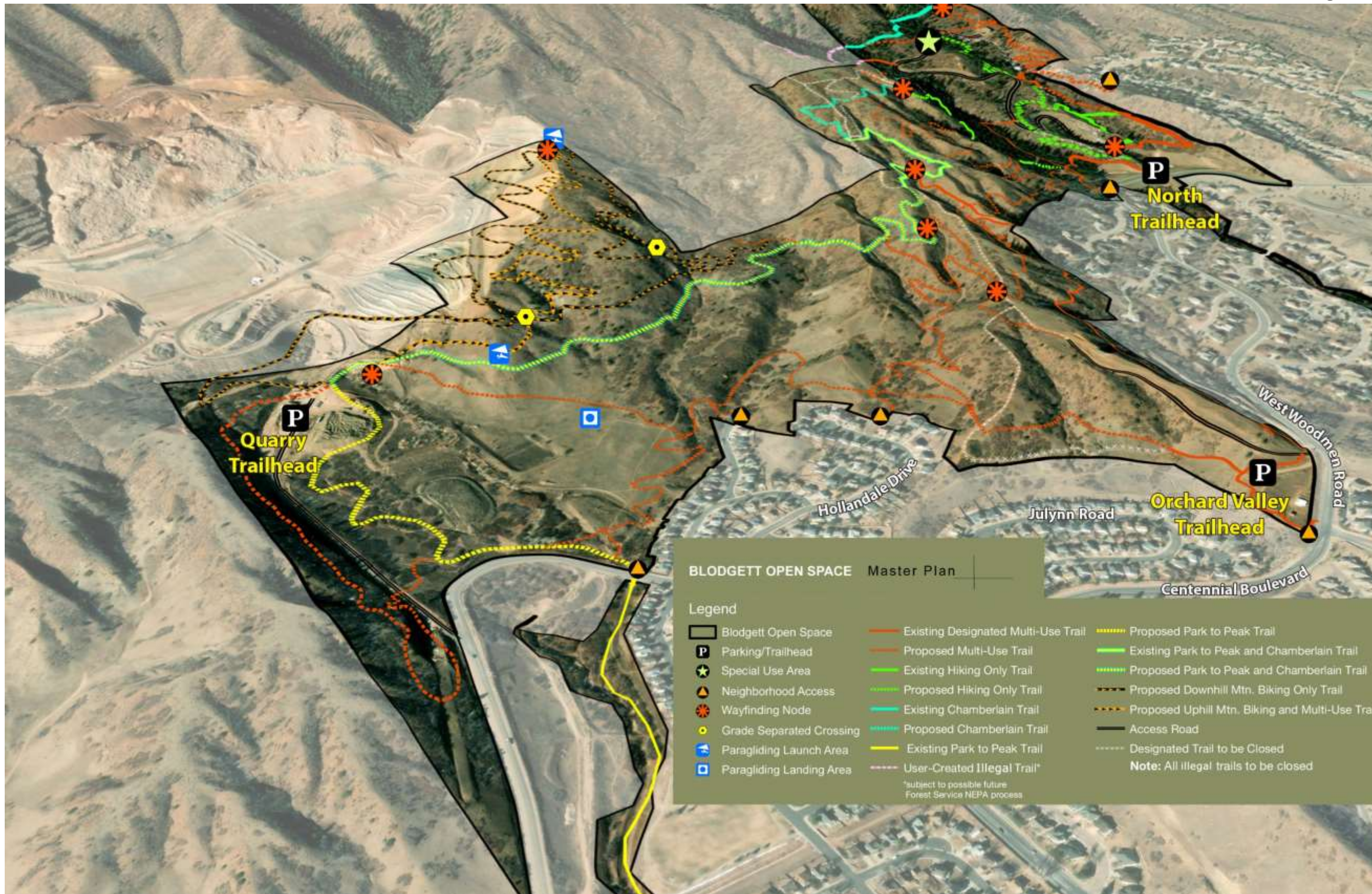




Appendix H

Master and Management Plan Maps – 11"x17"



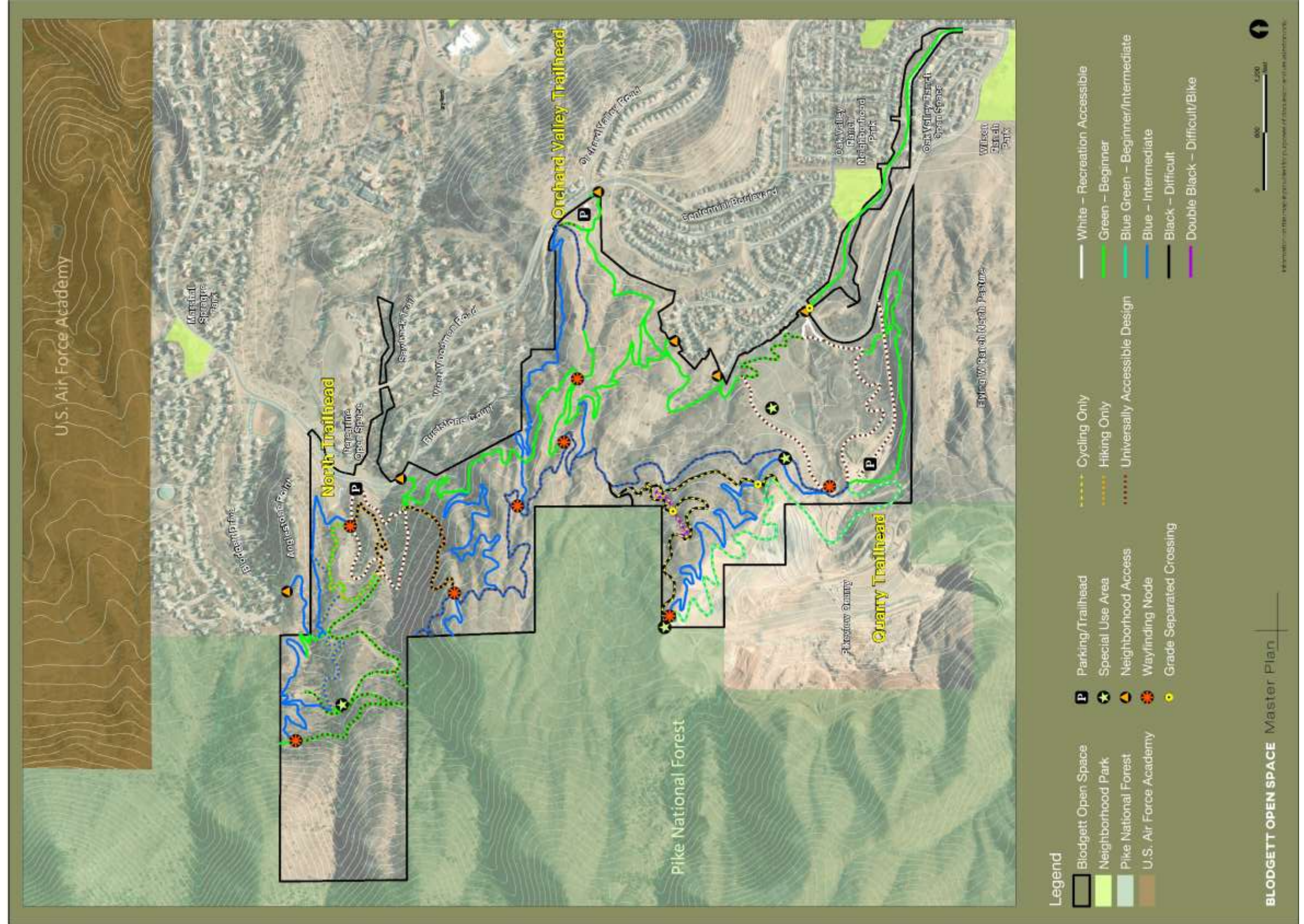


Appendix H

Master and Management Plan Maps – 11"x17"



Trail Difficulty Ratings

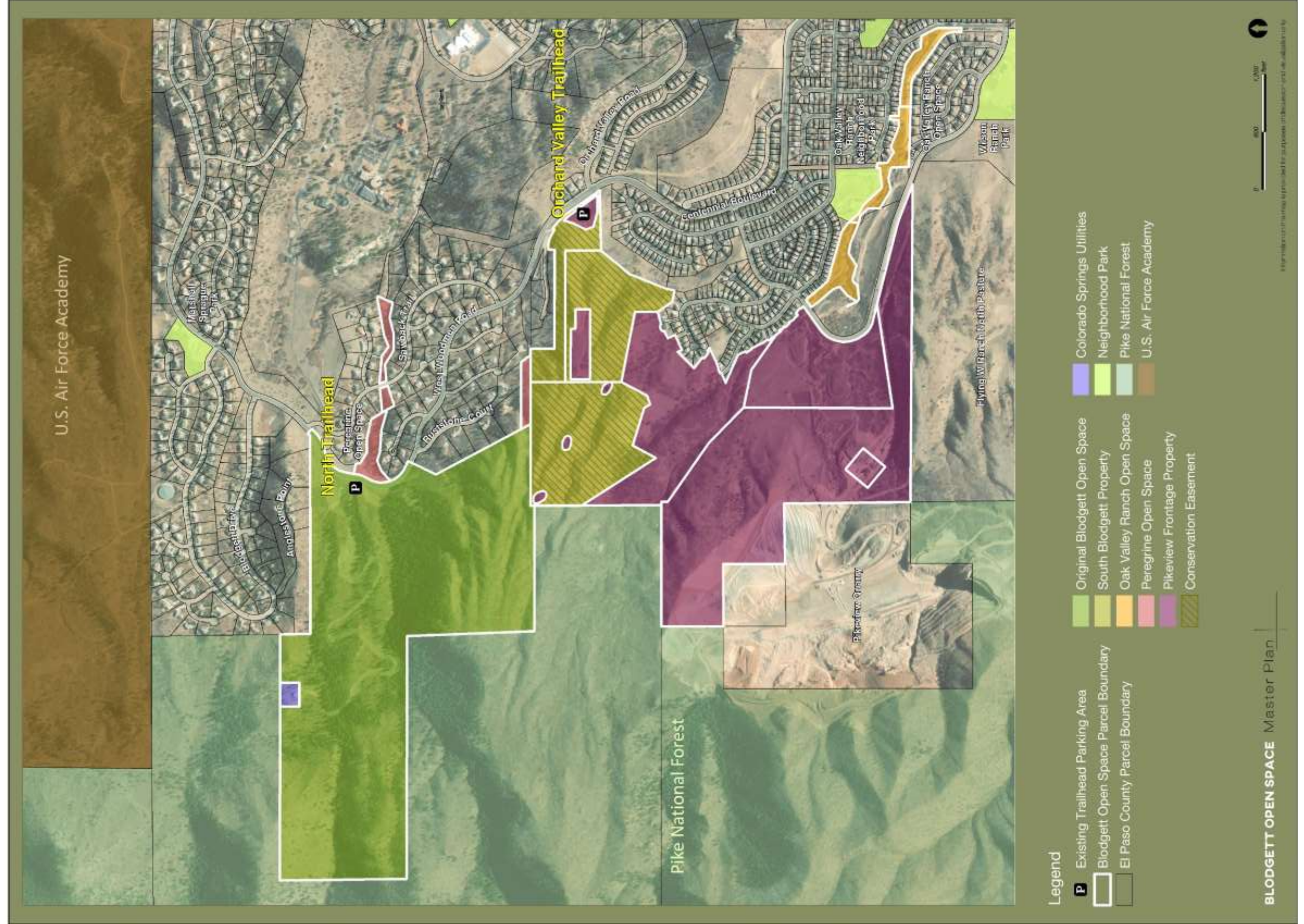


Appendix H

Master and Management Plan Maps – 11"x17"



Parcel Map





**Appendix I
Universally
Accessible Trail
Design**

82

OPDMD/aMTB		
Design Tread Width	4' min	
Passing Spaces	1000'. Space must be total of 8'w X 12' L. unless trea width is >8' (can be intersection of two trails)	
Type	Mostly stable. Some variability. Natural surface v. crusher fines v. road base.	
Design Surface	Gaps in tread surface such as bridge decking must be small enough to prevent passage of a 1/2" diameter sphere. Elongated openings should be placed perpendicular to the dominant direction of travel.	
Protrusions	4" maximum	
Target	0-8%	
Short Pitch Maximum	15%	
Maximum pitch density	20% of trail	
Design Grade	Where the grade is steeper than 5% the segment should have rest intervals at the top and bottom of each pitch or every x', whichever is shorter. Rest intervals must be 12' minimum length and be as wide as widest part of trail leading to the rest interval (if adjacent to trail must be 6' minimum width). Rest intervals must have a 2% maximum grade and outslope (5% if necessary for drainage and if surface is other than concrete, asphalt, or boards)	
Outslope	Target	2%
	Max	10%
Design Clearing	Height	8'
	Width	8'
Sight lines	Define a shoulder width or 1' either side, whichever creates a wider corridor	
Design Turn	20'-25' *diagram included	

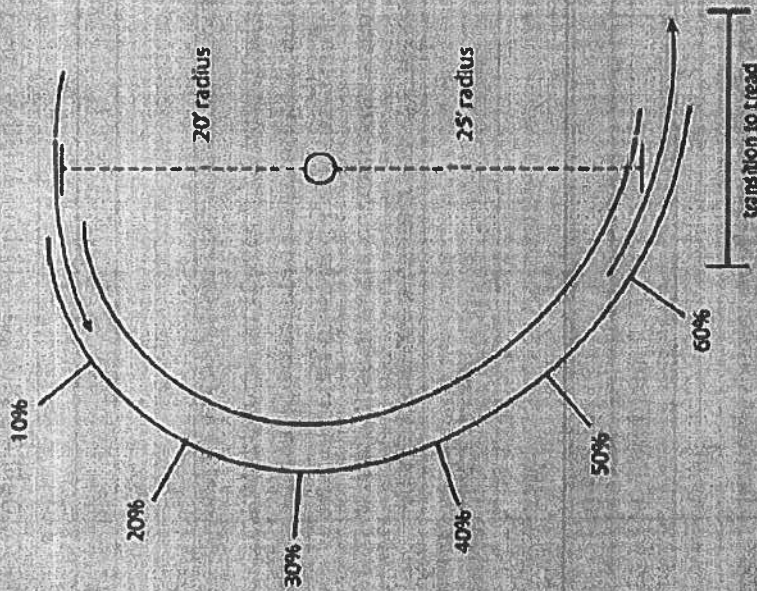
Increasing Radius aMTB Corner overhead view

As the trike accelerates through the corner, the corner radius should expand, accommodating the increased speed. The in-sloped gradient must also increase, in relation to both the increasing speed and expanding radius. The corner radius, in essence, opens up throughout the turn.

This diagram serves as an example to illustrate the principles of increasing radius corners with the added element of increasing inslope. Depending on site dynamics, not all corners will require as steep an inslope and the maximum inslope gradient may peak earlier in the radius. The actual gradient inslope of the turn should be determined by the speed of the bike, the height acceleration throughout the corner, the height differential of the turn and the actual turn radius, to a maximum of 60%. Any steeper threatens to tip the aMTB trike. Easy trails should have low gradient inslope and large, open radius corners.

The exit of the turn requires a gradual, gentle transition where the slope returns to regular tread gradient, while accommodating the exit speed & footprint of the Explorer trike and a low point to provide drainage.

● Trail Hoobastics



RADIUS

Boulder OSMP Accessible Trails and Sites Topher Downham

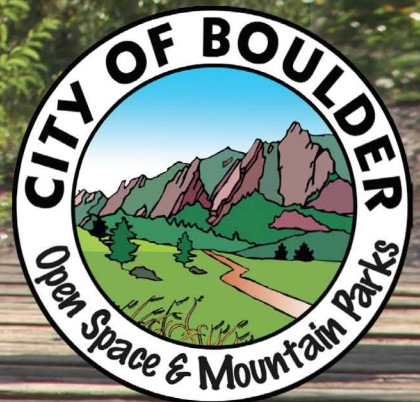


Photo by Kirk Williams

Welcome to the Accessible Trail Guide

One warm Boulder autumn night over 20 years ago, a friend and I decided to go for a midnight swim at the outdoor pool in his apartment complex. I decided to do a shallow dive and swim to the other side. My calculations were off and I hit my head on the bottom, breaking my neck at the lowest two cervical vertebrae. From that day on I was a quadriplegic able to move my arms but not my legs or hands.

Unable to hike into nature and wilderness as I had in the past, I started finding easier trails around Boulder where I could escape and connect with nature. Not only did pushing the wheelchair on these hikes help with my rehabilitation and strength, but also with my sanity. There was, and is, nothing better for my spirit than finding a nice pull-off along the trail with a stream flowing by, butterflies fluttering around a flower, a chickadee singing “cheese burger, cheese burger” from a branch nearby, and other critters scurrying through the lush, green, fragrant vegetation of a riparian area.

Over these last 20 years I have met a variety of people with disabilities whose lives have been enriched in similar ways by hiking our trails. Many people have helped make this guide a reality. This revised version of the Boulder Area Accessible Trail Guide is for everyone interested in connecting with and enjoying nature. We hope our guide serves your needs. We include more than just trail conditions and trail difficulties in this guide. We provide information on the vegetation and animals that you may see while on your hike, color photos of each area, and the history of these culturally rich lands.

I hope you enjoy these trails as much as I do.
Happy hiking!

Topher



Camping at the Buckingham Campground (4th of July Trailhead) - see page 35.

Trail Ratings

Currently our ratings are based on slopes, cross slopes, firmness, obstacles, shade, and surface type. Keep in mind, a single component like surface type may cause a trail to be ranked more difficult than one would think when considering all of the trail components. For example, a lot of trails with loose road base gravel, like Greenbelt Plateau, would be pretty easy if not for the gravel. Because of that one component, we rank the trail as moderate to difficult.

New Guidelines

Open Space and Mountain Parks is in the process of updating design standards for accessible trails based on federal guidelines. Design standards have been updated to incorporate the supplement to the Architectural Barriers Act Accessibility Standards (ABAAS), and the Outdoor Developed Area Accessibility Guidelines (ODAAG), developed by the Architectural and Transportation Barriers Compliance Board (U.S. Access Board).

It is important to note that OSMP manages a variety of trails. Every designated trail has a “designed use” and a “trail class” that drive its design and maintenance. Not all the trails in this guidebook were designed for wheelchair accessibility and only select trails will meet the new OSMP standards. The intent of this guidebook is to provide access information on a variety of trails that provide different levels of challenge.

Trail Conditions

The flood of 2013 destroyed or damaged parts of the trail system, making most of our wheelchair accessible trails completely inaccessible. OSMP’S trail crews have been working diligently to fix all of the trails including the accessible trails. They have worked hard and have made great progress but still have a ways to go.

OSMP lands are intricate and ever-changing as the flood showed us. Trail conditions can change overnight so we cannot promise our descriptions will always reflect the latest conditions. Please feel free to let us know if you notice any significant change in or deterioration of a trail. Information from the field is crucial for maintaining and improving our trail system.

Accessible Ratings, Guidelines, and Conditions

Patrick Eichelman



Fishing

There are some great accessible places to fish on OSMP lands. There are a variety of different opportunities for anglers: lakes and ponds hold bass, bluegill and sunfish, while the creeks are home to trout. Teller Farm has fishing piers on two of its lakes, #1 and #5.

Sawhill Ponds and Coot Lake have nice fishing piers and other access points on the banks. S Mesa Trail provides good access to the S Boulder Creek on the lower accessible loop. Wonderland Lake has an accessible peninsula where an angler can throw a line in. The 4th of July Trailhead has two good fishing access points on the North Fork of Middle Boulder Creek. A fishing icon on each trail page will indicate if fishing is available.

All Colorado Parks and Wildlife Fishing Regulations apply, including fishing license requirements for anglers 16 and older, and special catch size limits posted on-site. For more info on regulations, go to: wildlife.state.co.us/fishing/Pages/Fishing.aspx.












Parking and Parking Fees

You will notice a parking icon on the trail pages. Some of the icons have a dollar sign indicating that there is a fee for parking. The fee is only for vehicles registered outside of Boulder County. Local vehicles may park free. A wheelchair symbol on the icon indicates that there are designated parking spots for people with disabilities at the location.

Gates on OSMP

Many of OSMP trails have gates at the entrances. Fencing and gates are the best way to manage cattle, agriculture, and general access to these beautiful lands. The gates are typically 41" or wider with the exception of a 35" wide gate at the Marshall entrance to the S Boulder Creek Trail. Most gates are self-closing with a spring tension around 5 lbs. The toughest gate is at S. Teller Farm Trailhead with a tension of 8 lbs to open.

Symbols Used in the Profiles

-  Accessible Parking
-  Accessible Parking w. Fee*
-  General Parking
-  General Parking with Fee*
-  Restrooms
-  Picnic Table
-  Wildlife Viewing
-  Dogs Allowed
-  Bikes Allowed
-  Horses Allowed
-  Fishing Allowed

* Cars not registered in Boulder County must pay a parking fee of \$5/day or \$25 annual permit.

Visit Us Online for Updates...

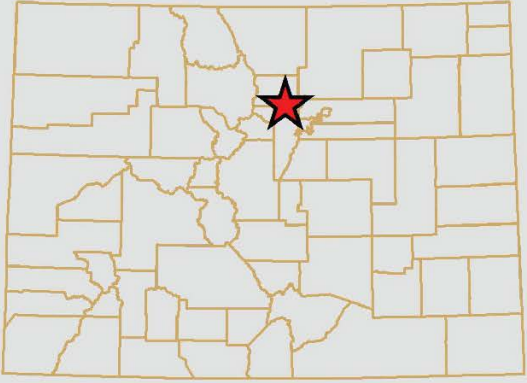
Open Space and Mountain Parks maintains a "Visitors with Disabilities" web page, where you can find updated information about accessible trails on our land system:

www.AccessibleOSMP.org

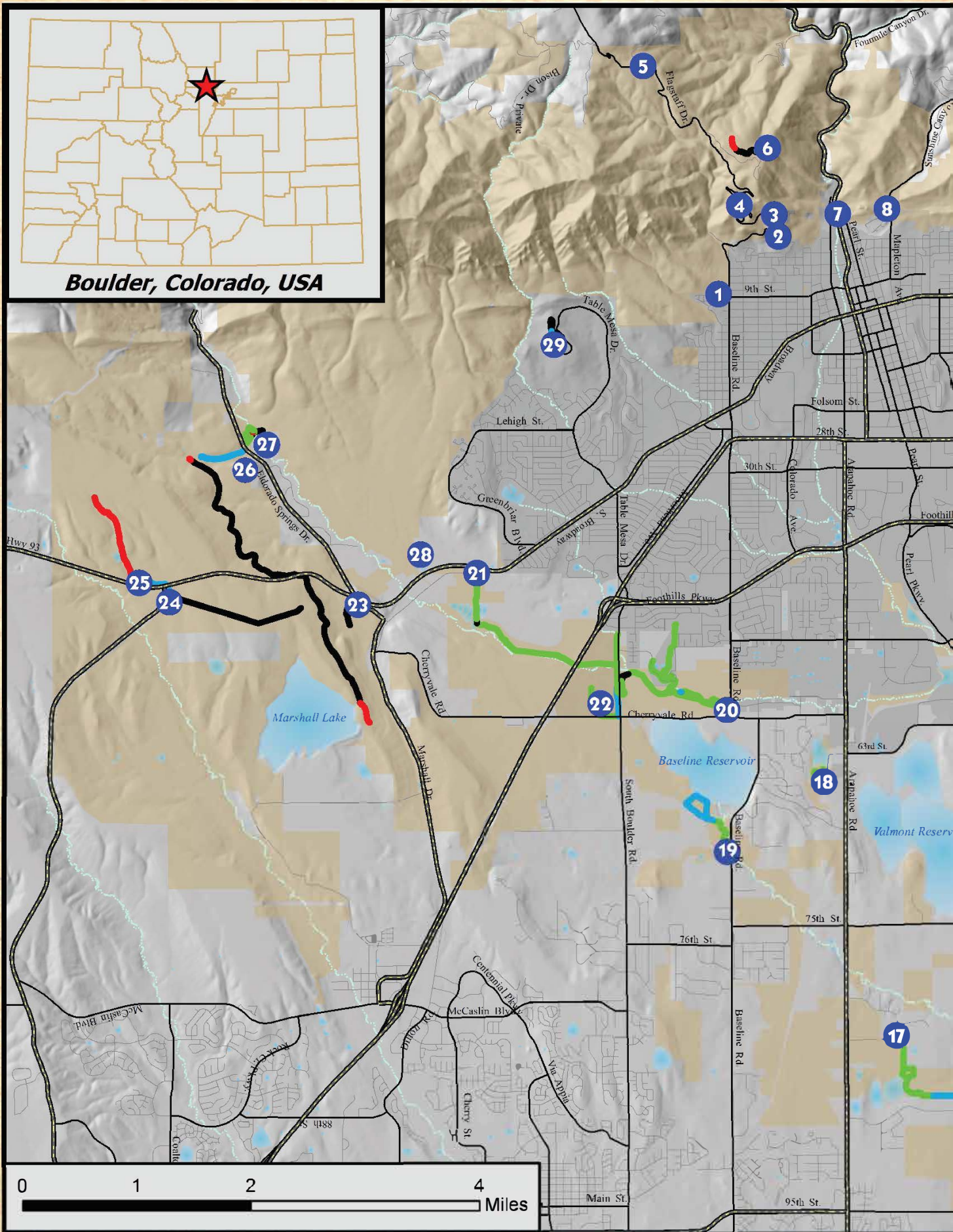
As trail conditions change, we will update this guide book. Between reprints, those changes will be reflected in the downloadable online version available on the web page.

...And Videos!

On the web page, you can also **watch fun 5-6 minute video profiles** of many of these trails hiked by wheelchair user Tophier Downham. Along the way he shows the obstacles encountered, local flora and fauna, and activities available at each location.



Boulder, Colorado, USA



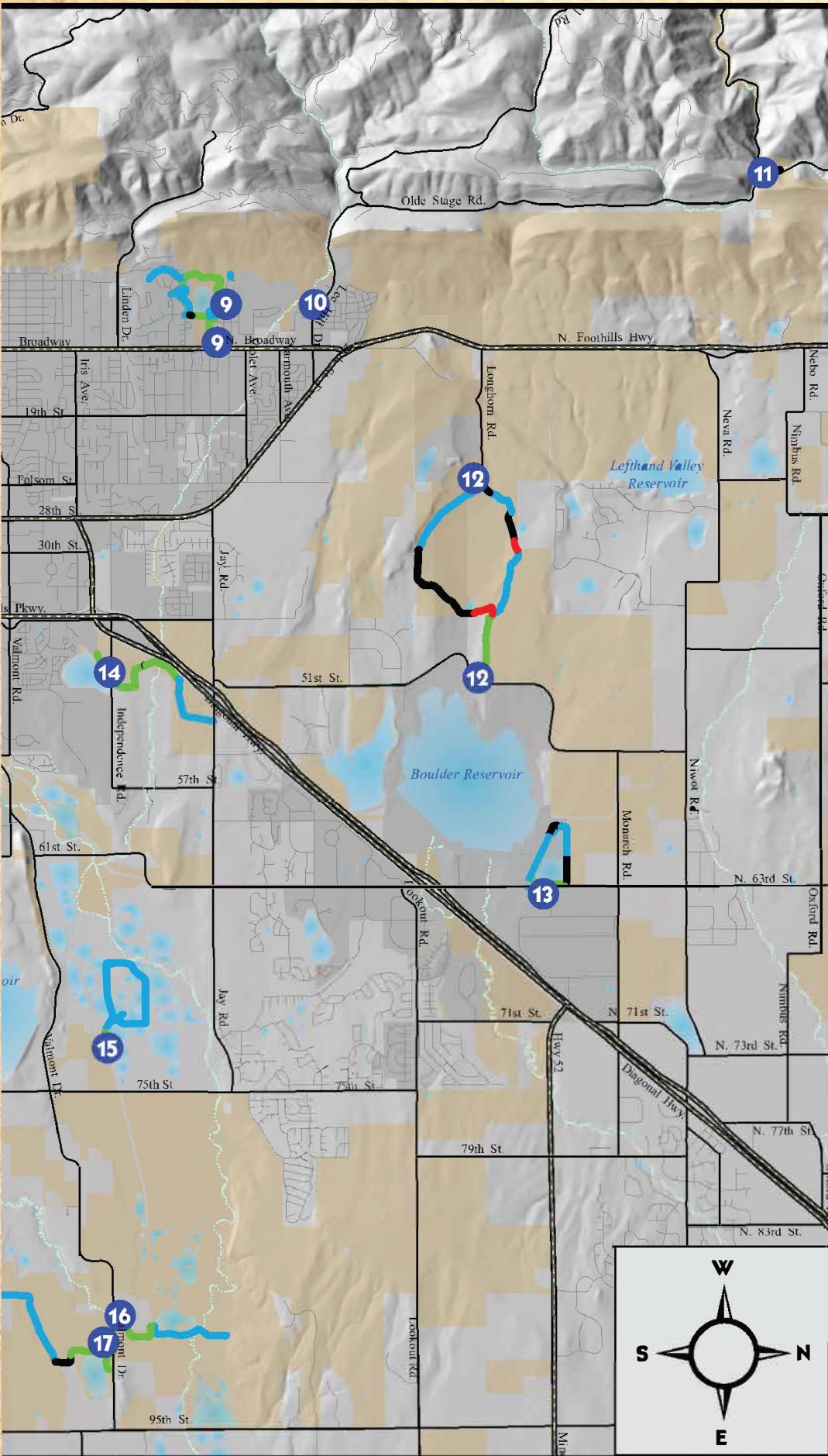
Boulder-Area Accessible Trails

- 1 Ranger Cottage
- 2 Panorama Point
- 3 Halfway House
- 4 Crown Rock
- 5 Lost Gulch Overlook
- 6 Flagstaff Summit
- 7 Settler's Park
- 8 Centennial
- 9 Wonderland Lake
- 10 Four Mile Canyon Creek
- 11 Buckingham Park
- 12 Boulder Valley Ranch
- 13 Coot Lake
- 14 Cottonwood
- 15 Sawhill Ponds
- 16 White Rocks Trail
- 17 Teller Farm
- 18 Sombrero Marsh
- 19 Dry Creek
- 20 Bobolink
- 21 South Boulder Creek (via Marshall Road)
- 22 Cherryvale
- 23 Marshall Mesa
- 24 Greenbelt Plateau
- 25 Flatirons Vista
- 26 Doudy Draw
- 27 South Mesa
- 28 South Boulder Creek West
- 29 NCAR
- 30 Buckingham Campground (not shown on map)

OSMP Managed Accessible Trails

- Very Difficult
- Difficult
- Moderate
- Easy

- Public Land
- OSMP Ownership
 - Boulder, CO City Limits



Fabulous Flora and Fauna

Using this guide, you can visit sites that support a remarkable diversity of plant and animal species that occur across many different habitats. The wildlands around Boulder provide a haven for many rare species as rapid development destroys much of the remaining wildlife and plant habitat on the Front Range.



Bill May

The entire world population of Bell's twinpod flowers exists on a handful of sites along the Front Range. It is protected on OSMP.

Boulder County is located at the junction where the Great Plains end and the Rocky Mountains begin. The land rises abruptly from 5,000' above sea level to over 14,000'. As a result, we have an unprecedented concentration of plants and animals within a small area.



Bill May

Calypso orchids grow in shady forested locations.

Botanists estimate that there are over 700 species of trees, shrubs, flowers, grasses and ferns on OSMP. Plants left over from the last Ice Age occur on some parts of OSMP, including the only stand of paper birches and only known white ad-

ders' mouth orchids in the entire state. The Ute ladies' tresses orchid (see p. 27) is listed as "Threatened" under the Endangered Species Act.

Abert's squirrels are often glimpsed in old-growth ponderosa pine forests.



Ilan Kelman

Boulder County has more mammal species than all of Kansas or Nebraska. At least 59 mammal species have been documented on OSMP, including the Preble's meadow jumping mouse (see p. 33), which is listed as "Threatened" under the Endangered Species Act.

OSMP's breeding birds include such rarities as golden and bald eagles, peregrine and prairie falcons, wild turkeys, goshawks, and flammulated owls. Bobolinks, another vanishing bird, nest in our wet hay meadows each spring. Surveys for breeding bird diversity and habitat across nearly 1800 sites in Colorado found that the Boulder area was the richest location in the whole state with 101 breeding bird species.



Daren O'Brien

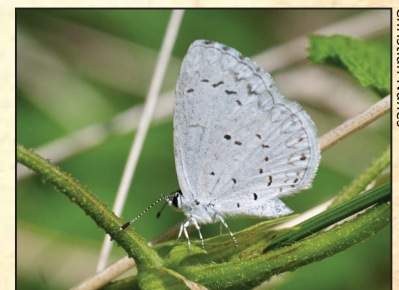
Burrowing owls still show up to breed in a few of our prairie dog colonies.

The Front Range has the fourth richest butterfly diversity in the United States, due to the compact collection of different habitat types found here.

Tallgrass prairie (see p. 33) is one of the most endangered vegetation types in the world. OSMP preserves some of the most significant tallgrass prairie remnants in Colorado.

Enjoy the knowledge that your OSMP lands are a biological box of treasures!

Hops-feeding azure, one of Colorado's rarest butterflies.



Christian Nunes

1 Chautauqua Ranger Cottage

Quick Facts

- Rating: easy
- Surface: pavement, wood
- Width: Avg: 6' Min: 3' 3"
- Cross slope: Avg: 0% Max: 8%
- Grade: Avg: 0% Max: 7%
(11% on sidewalk to the east of Ranger Cottage)
- Picnic: 1 table (easy)
- Shade: many shade trees



Dave Sutherland

Staff at the Ranger Cottage offer free maps and brochures as well as safety tips and recommendations for hikes. The cottage is also a museum, with mounted animals representing the area's fauna, interpretive displays, and hands-on nature activities for kids.

Getting There

The Ranger Cottage and Chautauqua Trailhead are located across from Grant Place on Baseline Rd. west of Broadway in Boulder, on the west side of Boulder's Chautauqua Park.

Site Notes

The Chautauqua Ranger Cottage is the hub of OSMP activity and information. The trails aren't very accessible here, but the cottage is. The best accessible parking is across from the Ranger Cottage on Gaillardia. Across Kinnikinnic Rd. is an easy path that takes you up to the porch of the Ranger Cottage.

A ramp with a 7% grade takes you to the rock garden, the trailhead, and an amazing view of the Boulder's towering Flatirons rock formations. A shady picnic table is located in the rock garden for a pleasant lunch outside.

Culture and History

In the late 1800's the Texas Board of Regents started a summer school for teachers in a cooler climate. Boulder was chosen for the Texas-Colorado Chautauqua because of its mountainous location and healthy environment. Activities, concerts, lodging, and dining are still available at the Colorado Chautauqua.

The Ranger Cottage was completed in 1984. The design combines Chautauqua's turn of the century historic spirit and mountain ranger rustic detailing.



Activities & Facilities



Bring a camera for photos of Boulder's signature Flatirons.

Steve Mertz

2 Panorama Point

Quick Facts

Rating:	easy-difficult
Surface:	crusher fines, wood
Width:	Avg: 6' Min: 5'
Cross slope:	Max: 6%
Grade:	Avg: 7% Max: 12.5%
Picnic:	3 tables, 1 grill
Structures:	scenic overlook (easy)
Restrooms:	1 set (most difficult) across the road in the Halfway House Historic Site

Scarlet gaura



Anish Palekar

Experience incredible views of Boulder and the plains beyond. Around the holidays, the city's light display is particularly colorful and impressive!

Habitat

Mountain lions inhabit this area. Coyotes, foxes, mule deer, and raptors are commonly sighted. During summer months, watch for butterflies like tiger and pale swallowtails, fritillaries, and painted ladies.

Culture and History

In 1919, the Lions Club erected Panorama Park Shelter House (now Halfway House) on Flagstaff Mountain and donated it to the City of Boulder; this began a half-century of the Club providing park facilities to the city.

Getting There

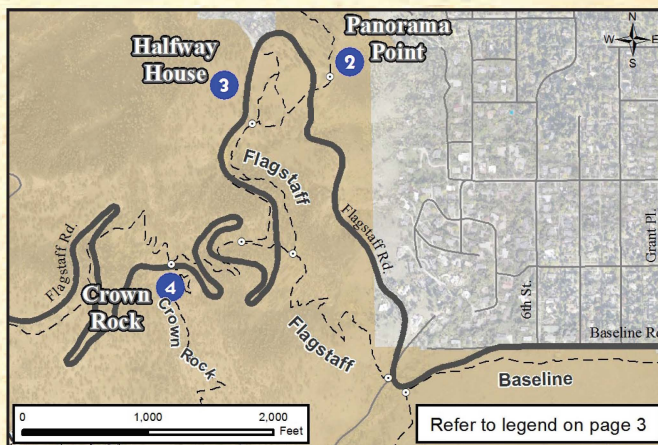
Panorama Point is on Flagstaff Rd. near the Flagstaff House Restaurant west of Broadway in Boulder, about 0.8 mile up from Chautauqua Park.

Site Notes

Panorama Point provides a spectacular view of Boulder and beyond. Because of the view and its convenient location adjacent to Flagstaff Rd., the site attracts many tourists and locals. The scenic overlook includes a sizeable wooden, raised-edge platform with a railing that has a partially cut-out section so that those using wheelchairs can have an unobstructed view. There is also a bench with back support on the platform. There are three attractive picnic sites with shade located about 150' from accessible parking. All tables are pedestal style and one of the sites has a grill. The crusher fines access route connecting the picnic areas to the overlook has an average running slope of 8% for 100' with a maximum grade segment of 12.5% for 15'.

Hard Spots

The 12.5% grade for 15' at the beginning of the picnic table access trail can be intimidating to people using wheelchairs. The trail has an 11% grade for 10' toward the last table. Sometimes the access trail gets some washed out areas that make it difficult in a wheelchair.



Activities & Facilities



3 Halfway House

Bramble hairstreak



Quick Facts

- Rating: easy-moderate
- Surface: crusher fines, inlaid sandstone
- Width: Avg: 4' Min: 2'
- Cross slope: Avg: 1% Max: 10%
- Grade: Avg: 6% Max: 11%
- Picnic: 3 tables, 1 grill (easy-moderate)
- Structures: shelter with patio
- Restrooms: 1 set (most difficult)



OSMP image

This picturesque stone picnic shelter offers spectacular views of Boulder and an easy-to-reach flagstone patio.

Getting There

Halfway House is on Flagstaff Rd. directly across from the Flagstaff House Restaurant west of Broadway in Boulder.

Site Notes

This unique stone shelter is just up the hill from Panorama Point and across the road from the Flagstaff House Restaurant. There is a lovely, scenic loop path about 420' long made of crusher fines that connects the shelter to the parking lot. On the western end near the parking area there is a shaded picnic table (the only shade at this site) and a bench. The path is bordered with timbers and maintains a minimum width of 4'6" with an average grade of 6%.

The shelter features a large stone patio with a stone wall surrounding it. There is a large cut out section facing south and portions of the wall have built-in stone benches facing north. Outside on the east of the building is a sizable picnic area with a double 2' high grill and 2 picnic tables. The only shade you'll get over the picnic area is in the late afternoon.

Hard Spots

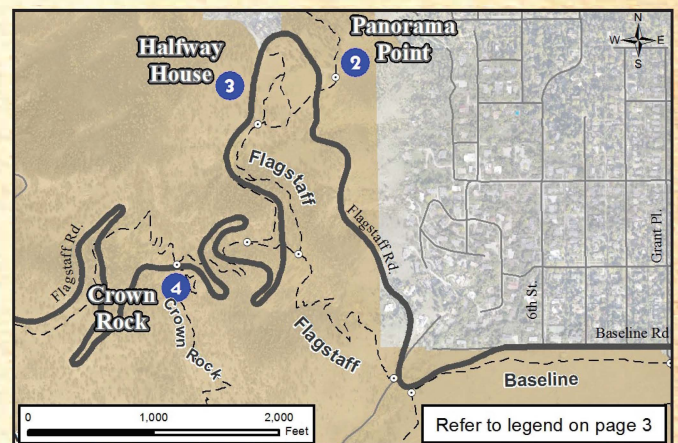
Unfortunately, the only way to get into the stone shelter building is via steps. The interior has a number of picnic tables and a raised platform with a fireplace and is only opened by request for special events. The restrooms are not accessible. They are about 223 yards away across a steep, single track trail and have no accessibility features.



Greg Loder

Culture and History

Originally constructed by the Lions Club of Boulder in 1919, the Halfway House was the first public picnic shelter in the Boulder Mountain Parks. The Civilian Conservation Corps (CCC) rebuilt the Halfway House and restroom in 1935 after the re-alignment of the road. The building is an end-gable stone structure with part of the building constructed into the hillside.



Activities & Facilities



4 Crown Rock

Quick Facts

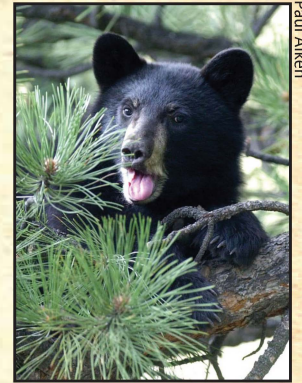
- Rating: easy-difficult
- Surface: crusher fines
- Width: Avg: 4' 6" Min: 3' 3"
- Cross slope: Max: 9% to bathroom
- Grade: Avg: 2% Max: 11.5% for 2' to bathroom
- Picnic: 1 table (easy)

Cliffrose



Habitat

Black bears and mountain lions inhabit this area. Many other wildlife species are common including birds of prey, mule deer, and coyotes. Red-tailed hawks and foxes are sometimes seen.



Paul Aiken

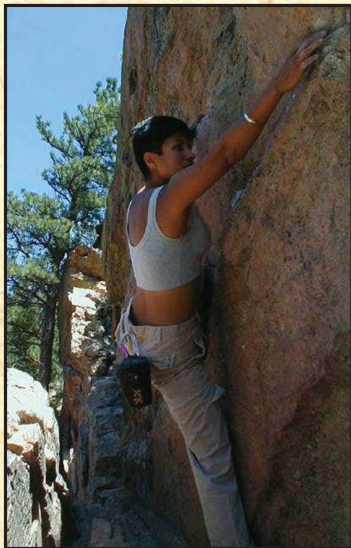
Getting There

Crown Rock is located approximately 2 miles up Flagstaff Road on the left side of the road.

Site Notes

Crown Rock is a beautiful rock climbing and bouldering spot just off of Flagstaff Rd. The parking lot has 1 disabled parking spot about 70' from the restroom. There is a 7-9% slope to the restroom with a couple of 2' sections at 11.5%. The beginning is sometimes rutted out so be careful. The picnic table is 230' from the parking lot on a fairly smooth trail with a maximum grade of 6%. Accessible ends of the table have a roll-under height of 28.5".

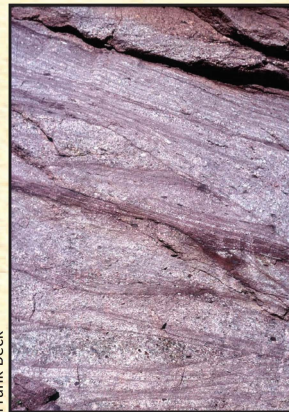
Bouldering, a style of rock climbing that doesn't use ropes or harnesses, is popular at Crown Rock.



OSMP image

Hard Spots

There are a couple of 2" roots and rocks to negotiate about 130' from the trailhead. Most of the trail does not have protection on the downhill side. A fence does give some security 86' before the picnic table. After the table, the trail gets a little rough and gnarly for wheelchair users.

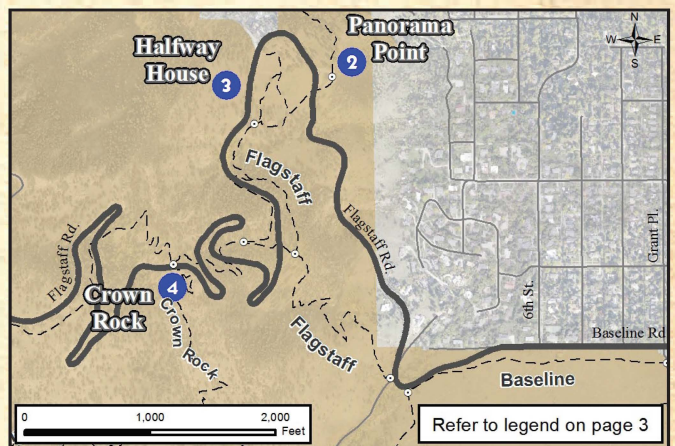


Frank Beck

Culture and History

Crown Rock is made of the same stone that makes up the Flatirons: 280 million year-old Fountain Formation sandstone. A long-vanished mountain range was once located to the west of Boulder. As these mountains gradually eroded, sand and gravel

washed down gullies and spilled out onto the plains, creating large fan-shaped piles of debris. Look closely at the stone that makes up Crown Rock. Can you find the banded layers of sand grains and pebbles deposited here by floods roaring out of those ancient mountains?



Activities & Facilities



5 Lost Gulch Overlook

Quick Facts

Shooting star



- Rating: easy-most difficult
- Surface: dirt, crusher fines, rock
- Width: Avg: 4' Min: 4'
- Cross slope: Max: 10 %
- Grade: Avg: 6% Max: 14.5%
- Picnic: 3 tables (difficult - most difficult)
- Structures: scenic overlook

Getting There

Lost Gulch is approximately 4 miles up from the base of Flagstaff Rd. west of Broadway in Boulder.



Heidi Seidel

Site Notes

Lost Gulch is a scenic overlook and picnic area that has a spectacular view of the Continental Divide and the Indian Peaks Wilderness. It is less visited than the Flagstaff Summit Area if you wish to avoid crowds. The entire packed-dirt parking lot has no defined parking spaces. Since the slope for parking ranges from 1.5 - 14.5%, be choosy about where you park. A scenic overlook deck facing northwest meets ADA structural specifications. The deck is about 80' from the least sloped parking area (west end). The path to it has a crusher fines base with a gentle grade until the last 10' where it becomes 9-13%. Max cross slope is 10%.

Hard Spots

Trails meander to picnic tables, benches, and viewing points. Unfortunately they are not very accessible by wheelchair unless you have a lot of assistance. Most of the picnic tables are difficult to reach. At the east end of the parking lot there is a 60' bumpy access route with a 9-12% grade leading to a standard picnic table. The table pad is about 20' off the route and has up to a 10% grade. Leg room under table ranges from 25-27".

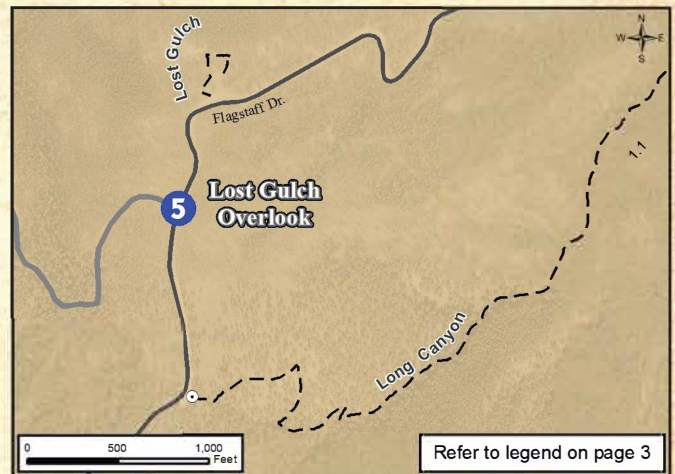


Frank Beck

Wood lilies, a rare Eastern flower seldom seen in Colorado, can occasionally be found in Lost Gulch.

Habitat

The wooded area below the overlook is part of the Western Mountain Parks Habitat Conservation Area (HCA). Rare moisture-loving plants, common in the cool forests of the East, maintain a tenuous presence here as a last remnant of once-vast Ice Age forests. Ferns, orchids and moss-covered rocks find a refuge in Boulder's arid climate.



Activities & Facilities



6 Flagstaff Summit

Getting There

The turnoff leading to the summit area is located 3.2 miles up Flagstaff Rd. from Chautauqua Park. The summit area features a number of sites including scenic overlooks, picnic and assembly areas, a nature center, and a historic amphitheater. Many of the sites can be reserved for special events by calling 303-441-3440 or visiting the City of Boulder Open Space and Mountain Parks website. Flagstaff Summit Rd. (the access road to the site) is open from May 1 through October 31. All of the parking areas and roads are paved.

Kinnikinnik



Ute/Sensory Trail

- Rating: moderate-difficult
- Distance: 0.4 mile
- Surface: crusher fines, hard pack
- Width: Avg: 6' Min: 26"
- Cross slope: Avg: 3% Max: 9%
- Grade: Avg: 6.5% Max: 13% for 20'
- Picnic: 2 tables (easy), 1 grill (easy)

Trail Notes



Dave Sutherland

The Sensory Trail gives hikers a low vision experience in the outdoors. Blindfold friends and take them on this signed trail, stopping at each station. Stations are designed to focus on sensations other than sight that can be used to connect

with nature. Enjoy the outdoors through smell, sound, and touch. Signs are also in Braille for low vision hikers.

Hard Spots

The 700' Sensory Trail starts at an 8% grade and 5% cross slope for about a 100'. It then flattens out to less than 5% grade on the upper loop. Hikers can skip the loop and continue on the Ute Trail for 0.3 mile to the top. After this is a 9% cross slope for 40'. Ute is difficult in some places, but the view at the top is worth the hike!

Culture and History

The Sensory Trail was designed in 1995 with input from local groups that deal with disabilities such as the Center for People with Disabilities and the Disabilities Task Force, as well as individuals with visual impairments.

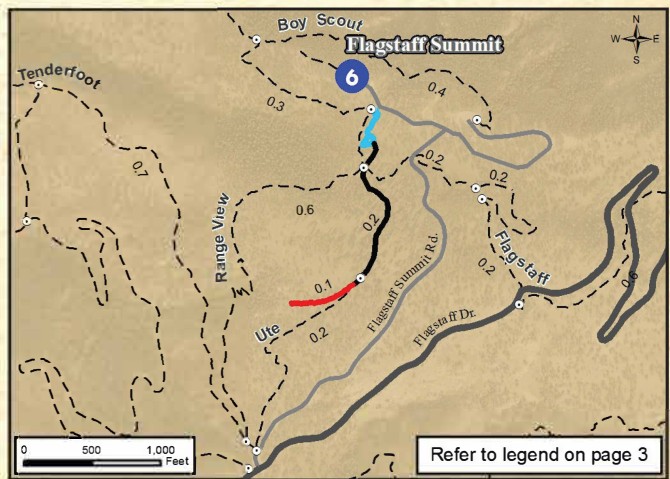
Other Sites

Artist Point (moderate-difficult)

This westernmost site is about 40' from parking and has a rocky, dirt path with a narrow section of 33" leading to two picnic tables with no extensions. The other tables are not accessible due to steps. It's a beautiful spot nestled among pine trees with views of the mountains.

Picnic pull off (moderate)

Adjacent to the road is a dirt pull-off with access to two shaded picnic tables and a grill across the road. The area is nearly level but has limited maneuvering space.



Activities & Facilities



Wood Shelter/Large picnic area (easy-moderate)

This site can be reserved for special events. From the same parking lot and path access as the Ute/Sensory Trail (above), there is a dirt/pine needle route with a grade of 4-6%. This path is about 140' long and leads to a large outdoor picnic area and shelter with a concrete floor and no walls. Underneath the shelter are 2 picnic tables and beside the shelter are 2 pinwheel-style picnic tables, and a 4-person table. The entire surface is dirt with a gentle slope. At the eastern end of this site is another single track access route (most difficult) leading to a smaller parking lot.

Stone Shelter/Assembly Area (moderate-difficult)

This site can be reserved for special events. Across the road from the eastern lot for the Wood Shelter is the Stone Shelter and assembly area. This small shelter has steps leading to its narrow entries and contains two picnic tables with minimal room for maneuvering. Adjacent to the shelter, however, is a very large, exposed assembly area with many long rows of concrete based picnic tables. The whole area has a packed dirt base on a slope of 2-6%. Small embedded rocks, roots, and steps between rows present some negotiating challenges, but many may find it manageable. This site offers a nearly 360 degree view.

Main parking lot (easy-moderate)

Although there are no designated spaces in this lot, there are ample regular spaces available over a 0-2% slope. At the eastern end of the lot is a viewing bench (moderate) which faces Boulder. This main lot is connected to a loop drive which begins by the Flagstaff Nature Center.

Flagstaff Nature Center (easy)

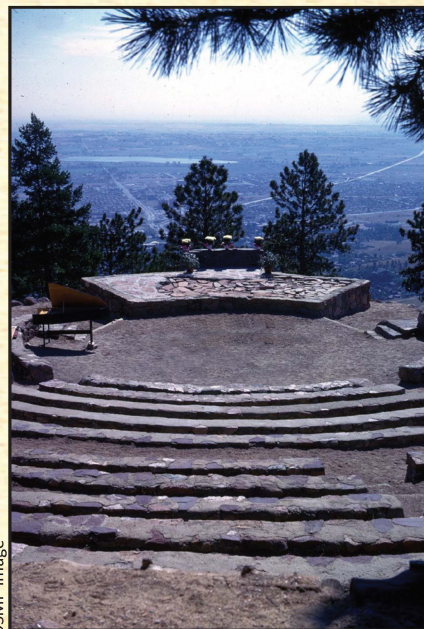
These two sites meet accessibility guideline standards and the Nature Center meets ADA structural standards. A few feet away is the access route to the Nature Center which is made of crusher fines and gently slopes to the front porch. The interior is one level and displays educational exhibits and information on local wildlife, the environment and human impact. (Call 303-441-3440 for hours of operation.) Just to the east of the Nature Center is a small parking lot with one designated space.

Flagstaff Nature Center picnic area (moderate-difficult)

About 40' south of the Nature Center parking lot are two picnic tables, one with an extension. The rough dirt path to get there has a grade ranging from 3-8%. Beware of embedded rocks, exposed roots and limited clear space around tables. There are several trees at this site which makes it desirable for shade.

East Picnic Area/Restroom (easy)

About 200' from the Flagstaff Nature Center is a great picnic area on the left side of the road and a restroom on the right. There is a small parking lot with one designated space next to the access route to the restroom. The picnic area features two tables with extensions on one of them, positioned to get a great view while being shaded. The soft dirt surface provides ample maneuvering space. The access route to the restroom on the other side of the road is about 70' long, has a grade of 2-8% and is at least 48" wide. The mixed gender, vault-style accessible restroom has a generous amount of clear space.



OSMP Image

Flagstaff Summit Amphitheater (moderate)

The easternmost feature of Flagstaff Summit, and also the main attraction, is the amphitheater. Designated as a historic site, this east-facing amphitheater was built with sandstone by the CCC between September 1933 and March 1934. It

seats more than 300 people. Often used for weddings and OSMP educational presentations, the amphitheater can be reserved for special events. An accessible path into the Amphitheater is to the south of the 3 disabled parking spaces. This 6' wide crusher fines path is about 200' long with a grade of 7-8% the whole way. Nearly the entire amphitheater is exposed to the sun until late afternoon limiting shade.

7 Settler's Park

Quick Facts

- Rating: easy-difficult
- Distance: 100'
- Surface: concrete, dirt
- Width: Avg: 6' Min: 4'
- Cross slope: Avg: 0% Max: 3%
- Grade: Avg: 5% Max: 14.5%
- Shade: many shade trees



Canada violet

Hard Spots

Although there is a designated parking space, it is not well designed for access to the sidewalk. The curb cut is located directly in the left front of the parking space so make sure you park as far right as possible. The access route from parking to the sites is concrete and includes a bridge with a grade of 12-14.5% for 50' leading to the bike/pedestrian path. The alternate east access requires a 10-13% climb for 100'. If you're feeling spunky and strong you may be able to navigate some of the Red Rocks Trail which can be accessed from the western-most picnic site. You could also head west on the bike path (8-10% grade) and underpass to Eben G. Fine Park which offers a variety of outdoor recreation opportunities and an accessible restroom.

Getting There

Settler's Park is at the junction of Canyon Blvd. and Pearl St. at the mouth of the Boulder Canyon, west of Broadway in Boulder.

Site Notes

Settler's Park offers three picnic tables with 11" extensions at the southern trailhead for Red Rocks Trail. It is adjacent to a Boulder Creek Bike/Pedestrian connector path. It features large trees that shade most of the site and smaller trees which give it a private feeling. The distance from the parking lot to the site is approximately 100'. Surfacing is mostly dirt at a 0-2% grade.

Christian Nunes



The Boulder Creek corridor teems with wildlife. Watch for the American dipper, a small gray bird that bobs up and down while walking in the water.

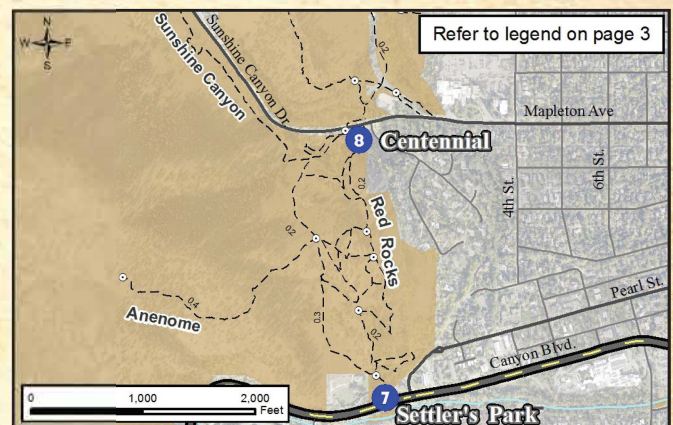
Culture and History

The first recorded settlers in Boulder came to Settler's Park on October 17, 1858. John Brierley built his home in 1871 in the 200 block of Pearl Street which is now OSMP's Settler's Park. He filled the land north and east of his home with cattle, flowers, and fruit trees including apple, peach, and pear.



Doug Goodin

Settler's Park provides views of the Red Rocks, towering sandstone cliffs on Boulder's west side.



Activities & Facilities



8 Centennial Trailhead

Quick Facts

- Rating: easy-difficult
- Surface: dirt, crusher fines
- Width: Avg: 3' 8" Min: 3'
- Cross slope: Avg: 2% Max: 8% for 4'
- Grade: Avg: 5% Max: 14% for 4'
- Shade: some

Fendler's waterleaf



Getting There

Centennial Trailhead is located on Mapleton Ave. less than ¼ of a mile west of the mouth of Sunshine Canyon, on the south side of the road.

Site Notes

The trailhead offers 3 picnic tables, two at the west side of the trailhead. It features large trees which shade most of the site and smaller trees which give it a private feeling. The distance from disabled parking to the site is approximately 165'. A small 250' trail follows the perimeter of the parking lot from the bathrooms to the far two picnic tables, passing another table along the way. This picnic table is about 100' from the disabled parking.

Hard Spots

The trail is crusher fines, but some of it is loose. The trail's narrowest point is 3', but typically closer to 4'. The first part of the trail is a 6-8% hill, but at 60' it is 14% for 4'. Right around the first picnic table the trail gets rutted and is difficult to maneuver for 10' without help. Accessing the west picnic tables from the parking lot requires going up an 11-14% slope for 15'.

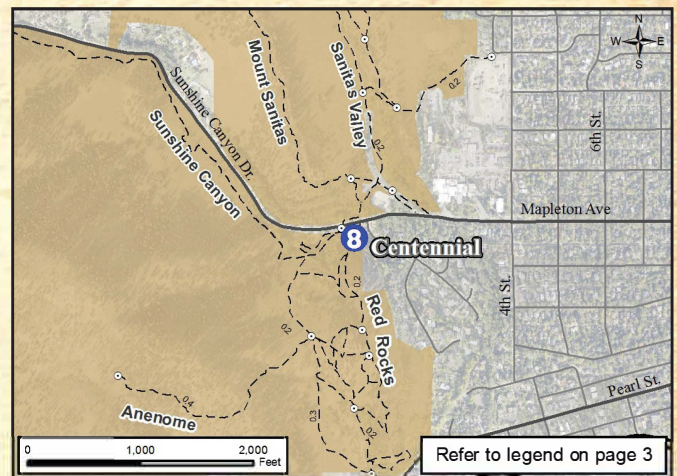
Culture and History

In the 1890's, 4th Street and Mapleton Ave. was the site of the Boulder-Colorado Sanitarium and Hospital. Some of the original buildings still stand near the Sanitas Trail. It was one of a series of John Harvey Kellogg's Battle Creek, Michigan, Sanitariums. Kellogg was one of the leaders of a growing movement in 'health building and training' called the Western Health Reform Institute. The institute promoted 'hydro-therapy, exercise and a vegetarian diet' as the way to good health.



A colorized postcard from the Colorado Sanitarium in its heyday, probably dating from the 1920's.

While our generation has come to understand that diet and exercise are essential to one's health and well-being, the concept was brand new and somewhat controversial in the late 1800's. Kellogg was determined to change the way Americans not only ate but lived, and developed the Battle Creek Sanitarium as a place where the patient's lifestyle could be completely controlled. The Sanitarium became a popular and profitable method of spreading the word. By the turn of the century, he and his brother, W.K. Kellogg began to mass produce their healthy foods (including some cereals we would recognize today!). More Sanitas information is available at the Boulder Carnegie Library and on the OSMP website www.osmp.org.



Activities & Facilities



9 Wonderland Lake

Quick Facts

- Rating: easy-moderate
- Distance: 1.75 miles
- Surface: crusher fines, paved, concrete
- Width: Avg: 8' Min: 3'
- Cross slope: Max: 3% for 5'
- Grade: Avg: 2% Max: 13% for 50' (avoidable)
- Shade: scattered locations around lake

Mariposa lily



Habitat

Fishing is popular here and is allowed from the dam and peninsula only. State fishing regulations apply. Birds of prey are common in this area. Mule deer, foxes and coyotes are also frequently seen as well as waterfowl on the lake. Mountain lions prowl the hogback ridges to the west. A wildlife sanctuary is located on the west and south sides of the lake.

Culture and History

In 1887, James P. Maxwell and George Oliver were late arrivals to the Colorado water rights game. All of Boulder Creek's water was already spoken for so Maxwell and Oliver found two new sources of water below Arapahoe Glacier: Silver and Island Lakes. Silver Lake Ditch was built to bring this water down to Boulder for storage. Known as Mesa Park Reservoir (1905), its name was changed to Degge's Lake, and finally Wonderland Lake. The lake was once home to a commercial fish farm, and fruit orchards bloomed just to the southeast.

Getting There

The Wonderland Lake Trailhead is on the west side of N. Broadway just south of Utica Ave. in north Boulder. The Foothills Nature Center (a small white house) is directly to the west of the Wonderland Lake

Trailhead and parking lot. Two designated parking spots are available in the lot. Other trail access points lie on Wonderland Hill Ave., Poplar Ave., and Utica Ave. Utica Ave. is the easiest, quickest access to Wonderland Lake.

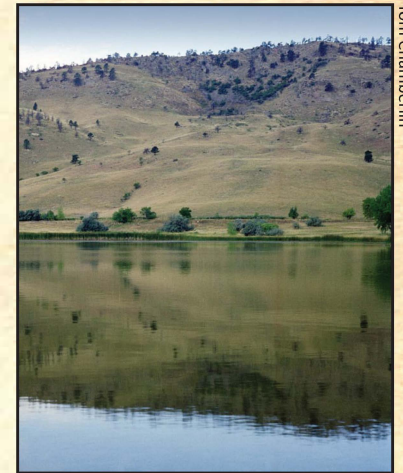
Trail Notes

This 1.75-mile crusher fines trail starts on the south side of the Foothills Nature Center. The trail crosses a grassy field. From this point, the trail circles the lake, some of it on paved sidewalk and some crusher fines trail.

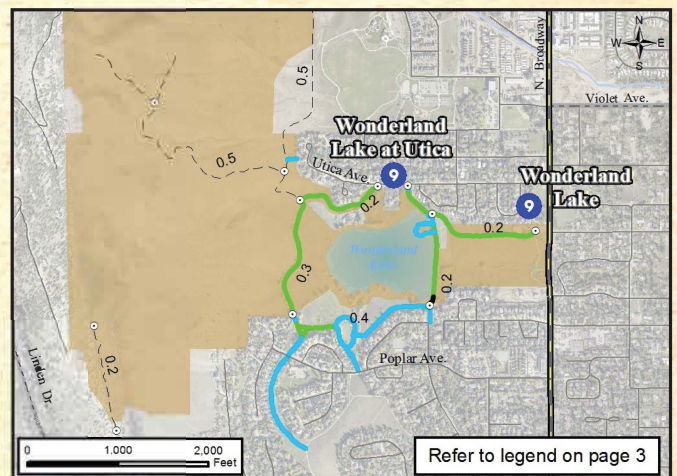
The peninsula on the northeast corner of the lake is great for fishing from a wheelchair since it brings you very close to the water.

Hard Spots

The canal area has a steep hill of 13% for 50'. You can skirt around most of it by taking the trail out to the peninsula. By the playground on the south side of the lake, the sidewalk reaches a grade of 9% for 70'.



Tom Chamberlin



Refer to legend on page 3

Activities & Facilities



Tom Chamberlin



Vijay Viswanathan

10 Fourmile Canyon Creek Trailhead

Quick Facts

Rating:	easy-difficult
Distance:	0.75 mile
Surface:	crusher fines
Width:	Avg: 8' Min: 8'
Cross slope:	Max: 3%
Grade:	Avg: 4% Max: 13% lip
Shade:	very little

Narrow-leaf cottonwood



Getting There

At the north edge of Boulder, the trailhead for Foothills Trail and Fourmile Creek Trail is located on Lee Hill Rd. 0.25 mile west of N. Broadway near its convergence with Hwy. 36. Unfortunately, due to flood of 2013, wheelchair access is no longer possible from the trailhead and is now limited to the access point near the Foothills Community Park and its dog parks. This is located north of Cherry Ave at 4510 7th St.

Trail Notes

This crusher fines trail is an easy route with some moderate spots. It maintains an 8' width throughout its entire length. Currently, the trail starts out alongside the dog park at Foothills Community Park with grades from 6%-9%. After about 400' this trail levels out with occasional grades up to 6% for the remainder.

There are several connecting trails along the way, including the Old Kiln Trail. You would be wise to avoid it if in a wheelchair because of its grade and small ditches (water bars) in the trail to help it shed water.

Hard Spots

The trail from the trailhead on Lee Hill Rd. is no longer accessible after 2013's flood. Also, the Foothills Trail goes all the way south to Wonderland Lake, but the last 400' section has grades from 10-17% with some ruts and loose surface material. It is very difficult in a wheelchair and not recommended.

Habitat

Mountain lions, coyotes, mule deer, rattlesnakes, and raptors are commonly sighted.

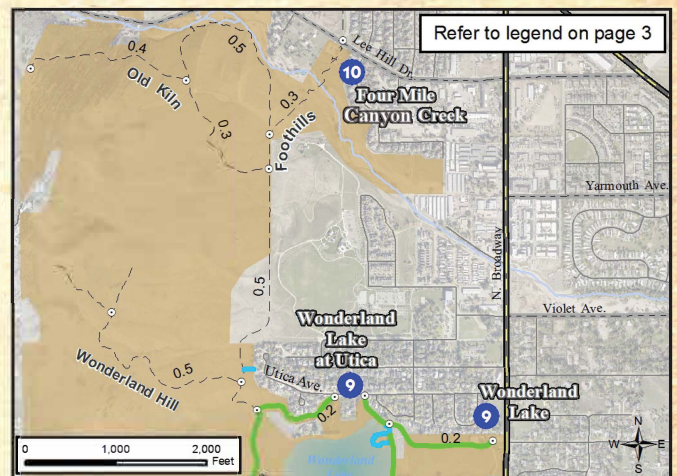


Dave Sutherland

The historic lime kiln was nearly destroyed in 2013 by the flooding creek when water undercut the bank beneath it. Fortunately it survived intact!

Culture and History

This was an early Native American hunting area. The Lee Hill Lime Kiln is a historic structure from days gone by. Limestone from the local outcrop was burned to produce quicklime, an important component of cement. Lime produced here may have been used in construction of some of the University of Colorado's earliest buildings. The roughness of the kiln's construction created much waste due to over or under burned lime.



Activities & Facilities



11 Buckingham Park

Quick Facts

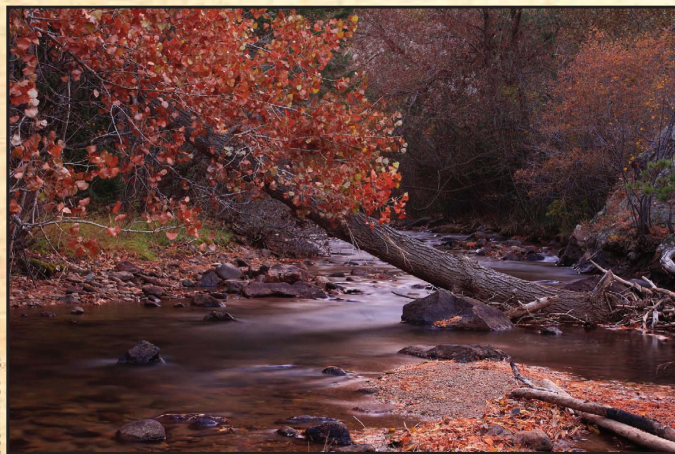
Blue clematis



- Rating: easy-difficult
- Distance: 700'
- Surface: crusher fines
- Width: Avg: 5' Min: 3' 6"
- Cross slope: Max: 11%
- Grade: Avg: 4% Max: 14% for 5'
- Picnic: 3 tables (easy-moderate), 1 grill at closest table
- Shade: very little, some trees

Getting There

Buckingham Park is located at the intersection of Lefthand Canyon Rd. and Old Stage Rd. north of Boulder and west of Hwy. 36. From Boulder, go west on Lee Hill Rd. to Old Stage and the junction of Lefthand Canyon Dr.



Joshua Coutts

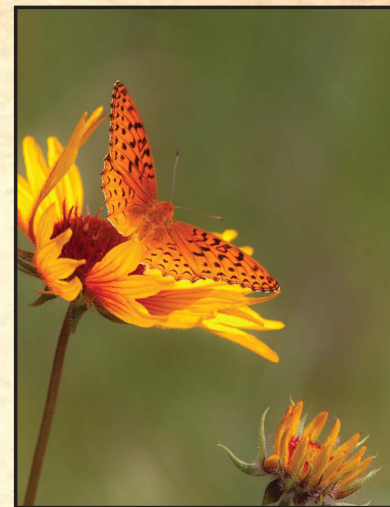
Site Notes

Buckingham Park is a beautiful area that sits next to Lefthand Creek. The parking lot is 50' from the restrooms and 150' from the nearest picnic table. The picnic tables have accessible ends with a roll-under height varying from 25.5" to 29". There is a 700' trail that loops around the area.

Hard Spots

There is a steep section on the trail after the first picnic table that reaches a 14% grade for 5'. Fishing is popular here, but it is difficult to reach the creek in a wheelchair.

Fritillary butterfly on a Gaillardia flower.



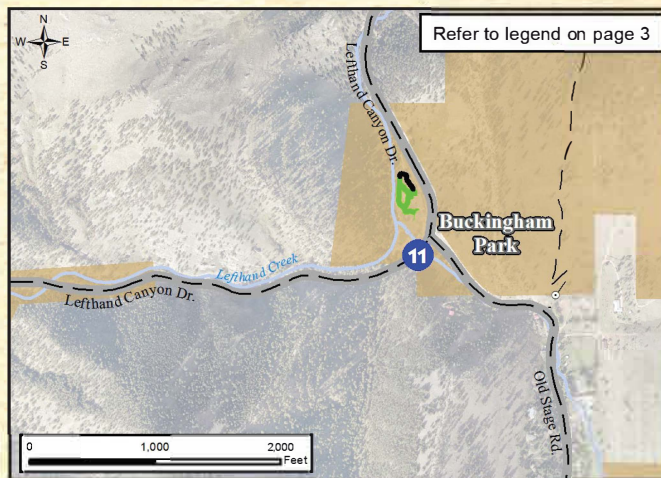
Doug Goodin

Habitat

Lefthand Creek is an ideal habitat for fish, aquatic insects, and a variety of birds. Mountain lions, bears, bobcats, and deer live in the area. Golden eagles roost in the nearby cliffs and may be seen soaring high above.

Culture and History

Buckingham Park was donated by deed to the City of Boulder by local banker C.G. Buckingham in 1929, to be used specifically for public recreation. It is a series of old mining claims running along Lefthand Creek. C.G. Buckingham also donated Boulder Falls to the city. His nephew, C. E. Buckingham, donated the campground at 4th of July Trailhead (see p. 35).



Activities & Facilities



12 Boulder Valley Ranch: Eagle/Sage Trails

Quick Facts

Rating: moderate-most difficult
 Distance: 2.6 miles
 Surface: crusher fines, road base
 Width: Avg: 10' Min: 3'
 Cross slope: Max: 5%
 Grade: Avg: 3% Max: 15% for 40'
 Shade: very little



Wax currant



Greg Joder

Hard Spots

There are a couple of steep hills (12 – 15%) on this trail on the eastern section. The trail does not have much cover, so it can get unbearably hot in summer months. This is definitely not a trail for people looking for an easy roll.

Habitat

Wildlife such as coyotes, raptors, waterfowl, and prairie dogs reside in this area. Vegetation is mostly grass, yucca, and cottonwoods.

Culture and History

The “Silver Nickel,” an adobe brick building at Boulder Valley Ranch, was constructed in the early 1900’s and is still in use. It is a converted barn that was used as a dance hall and livery stable. Cattle are grazed on the property and were utilized as a weed management tool.

Getting There

There are two trailheads for the Eagle/Sage Trail loop. The Boulder Valley Ranch Trailhead (Sage Trail) is on Longhorn Rd. east of Hwy 36 just north of Boulder. Eagle Trailhead is located off of 51st St. northwest of the entrance to Boulder Reservoir. Designated accessible parking is only available at Sage Trail.



Dan Fogelburg



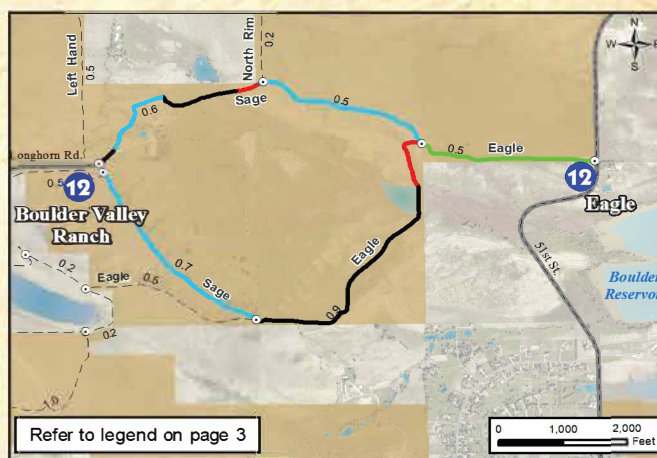
Klaus Girk

The Eagle Trail is a great place to see birds of prey, especially in winter. Look for bald eagles in the old cottonwood trees to the north of the trail.

Trail Notes

Starting at the Boulder Valley Ranch Trailhead, the rolling terrain of the Sage Trail goes south for 0.7 mile. At this point you reach Eagle Trail. Take the Eagle Trail to the east. The trail passes through a gate and down a 12% grade for 40'. Most of the trail from this point on has a 5-6% grade. Some spots can be a bit muddy and are often rutted.

Heading out of the BVR Trailhead to the north, the trail descends for 0.7 mile. The first section is a 12% drop for 20'. Most gates along the route are always open except for the gates at the trailheads which require 3 lbs. of force and are at least 36" wide.



Refer to legend on page 3

Activities & Facilities



13 Coot Lake (Parks and Recreation)

Quick Facts

- Rating: easy-difficult
- Distance: 1.16-mile loop
- Surface: crusher fines, road base, dirt
- Width: Avg: 6' Min: 3'
- Cross slope: Max: 16%
- Grade: Avg: 0% Max: 13% for 8'
- Shade: very little; trees cover a bench 0.25 mile north of parking lot.

Snowberry



Habitat

This trail encircles Coot Lake and some highly developed wetlands, so there is a wide variety of vegetation and birds in the area. Mid-March is a great time to see migrating waterfowl. Prickly poppy, birdfoot trefoil, cowboy's delight, and dwarf leadplant are some of the wildflowers that grow in the area.



Wendy Marie Stuart

The cattail marshes to the west of Coot Lake are home to the elusive American Bittern.

Getting There

From Boulder, drive east on Diagonal Hwy. Turn north on 63rd St. Coot Lake Trailhead. Parking is 1 mile northwest of Hwy. 119 near the Boulder Reservoir. Additional parking is located across the street at Tom Watson Park.



Topher Downham

Culture and History

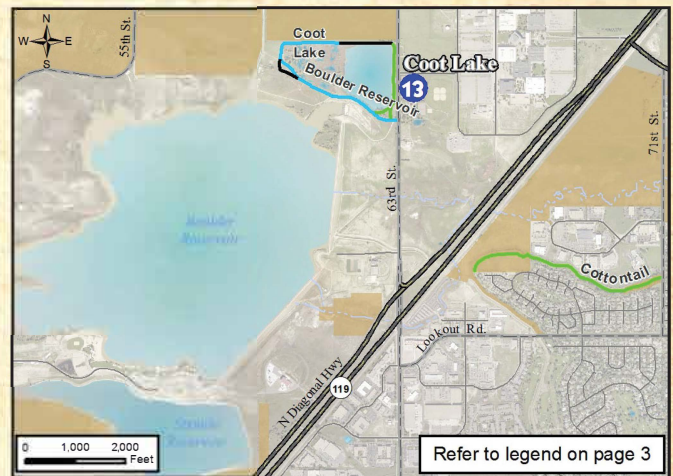
A former gravel weigh station is located on the service road part of the path on the south side of Coot Lake. During sweltering summer afternoons in the 1980's, this small building was used as a station for rangers to identify and ticket illegal naked bathers along the Coot Lake shoreline. These illegal naturists are gone, but the beautiful natural scenery is still here.

Trail Notes

A wheelchair-accessible fishing pier is adjacent to the parking lot. A crusher fines trail starts from the parking lot and heads in both directions around the lake. If you head south, the trail turns into a gravel service road for about 1000' and reconnects to the crusher fines trail circling Coot Lake and the wetlands.

Hard Spots

The trail has a 7% cross slope on the north side of the lake under the large cottonwood trees. There are some rutted sections of the trail in the northwest corner.



Activities & Facilities

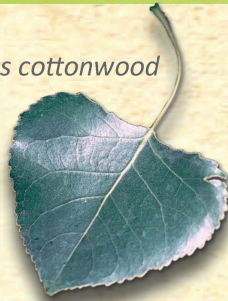


14 Cottonwood Trail

Quick Facts

- Rating: moderate
- Distance: 1.3 miles
- Surface: dirt and road base
- Width: Avg: 7' Min: 3'
- Cross slope: Max: 10% for 12'
- Grade: Avg: 1.2% Max: 14% for 11'
- Shade: moderate

Plains cottonwood



Getting There

From Boulder, drive east on Iris Ave. under Foothills Pkwy. Travel less than 0.25 mile, then make a right turn on Independence Rd. The parking lot is about 0.5 mile down the road on the right side.



Frank Beck

Trail Notes

To access the trail, cross Independence Rd. and enter through the opening in the fence. The trail starts out as a dirt path and turns to road base, dirt, and gravel maintaining a width of 8'. The trail weaves around following a line of trees and is generally flat with some grades of 1-2%. The road base makes for a very bumpy and jarring roll in a wheelchair. If any nuts and bolts are loose on your chair or walker, I would recommend taking a different trail. After crossing the bridge, the trail follows Four Mile Creek. The trail has a few rolling hills with 4-7% grades with a maximum cross slope of 8%.

Hard Spots

The most challenging section is the 14% grade for 11' off the bridge. The other hard section has a 7% grade for 3' about 0.5 mile down the trail as you approach a ranch access road.

Habitat

The vegetation in the area is mostly grasses and cottonwood trees (thus the name of the trail). Birds of all sorts can be seen, as well as occasional deer and plenty of prairie dogs.

Prairie dogs are vital to local ecosystems. Their burrows provide shelter to many other kinds of animals, like rabbits.



Dave Sutherland

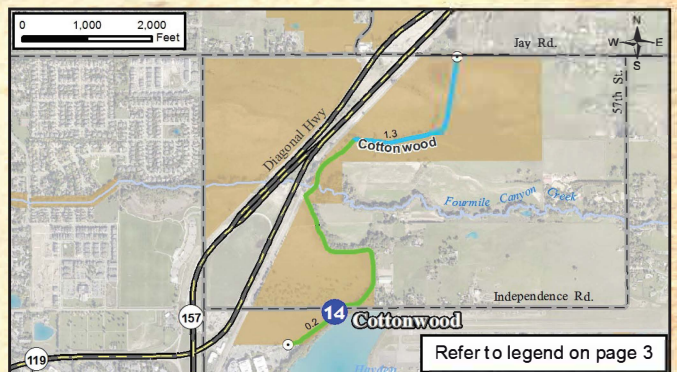


Klaus Girk

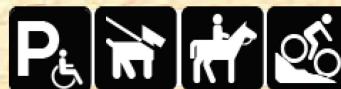
Many birds of prey breed on Open Space because prairie dogs provide them with an abundant food source.

Culture and History

The trail skirts around an 80 acre organic farm owned by the same family since 1893 when a miner purchased the land. The farm, originally 480 acres, was the first certified organic farm in Colorado. The majority of the acreage was sold to OSMP.



Activities & Facilities



15 Sawhill Ponds

Quick Facts

Rating:	moderate
Distance:	1.85 miles
Surface:	pea gravel, road base, dirt, gravel
Width:	Avg: 8' Min: 1'
Cross slope:	Max: 3%
Grade:	Avg: 1% Max: 5%
Shade:	trees scattered along trail provide good shade stops

Western meadowhawk



Hard Spots

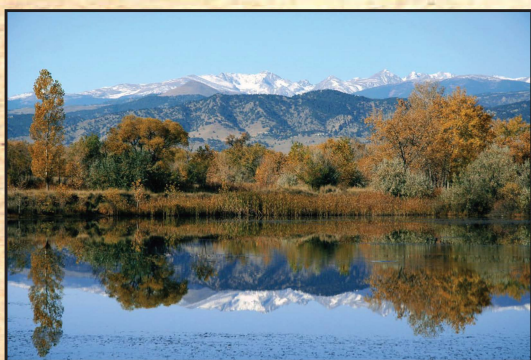
The trail is 8' wide, but some sections turn into two or three gravel tracks with plant growth between. The tracks can get as narrow as 12" but are negotiable in a wheelchair by riding with one wheel in the plant growth beside the track.

Habitat

A variety of wildlife dwells at Sawhill Ponds including muskrats, mink, beavers, herons, ducks, birds of prey, egrets, and geese. About 0.25 mile down the trail is an accessible bird blind for viewing birds. Anglers fish the ponds for bass, sunfish, bluegill, and carp. A wheelchair-accessible fishing pier extends into the pond adjacent to the gravel parking lot. Live bait is allowed in the first two ponds, but the rest require artificial lures. All state fishing regulations apply, including license requirements and catch and size limits posted on-site.

Culture and History

The 18 ponds at Sawhill are the result of a gravel mining operation and reclamation project. Boulder Creek, now at the northwestern boundary of the ponds, has traversed the entire area in the geologic past. This ancient floodplain laid down great quantities of sand and gravel, and these deposits were mined for several decades until the early 1970's. When mining ceased, groundwater filled in the pits, resulting in today's wetland.



This old gravel quarry has been converted to wetlands with a multitude of ponds.

Dave Sutherland

Getting There

Take Valmont Rd. east from Boulder. Turn north on 75th St. The Sawhill Ponds Trailhead is located on the west side of 75th St. between Jay Rd. and Valmont Rd. Turn off just north of railroad tracks. Follow the gravel road 0.25 mile until it ends at the Sawhill Ponds parking lot.

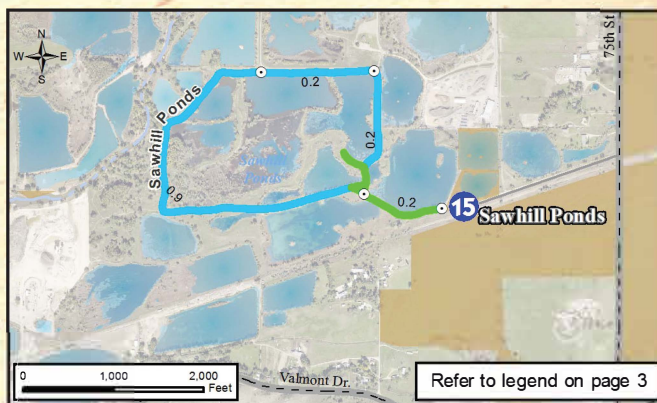
Trail Notes

Bird watching, or just strolling along the trail, are enjoyable recreational activities in the area.

The trail is approximately 1.85 miles. It is a loop that winds among the ponds and is a combination of pea gravel, road base dirt/gravel, and sandy, fine gravel. The trail is generally flat with most grades not exceeding 2%. The steepest grade is 5% for 50' along the backside of the loop. The cross slope is negligible with the worst being 3% for about 20'.



Wendy Marie Stuart



Activities & Facilities



16 White Rocks

Quick Facts

Rating:	easy-moderate
Distance:	1.25 miles
Surface:	crusher fines, road base, dirt, sand
Width:	Avg: 7' Min: 3'
Cross slope:	Max: 5%
Grade:	Avg: 0% Max: 9% for 20'
Shade:	some near ponds, plus a few cottonwood trees

Peach-leaf willow

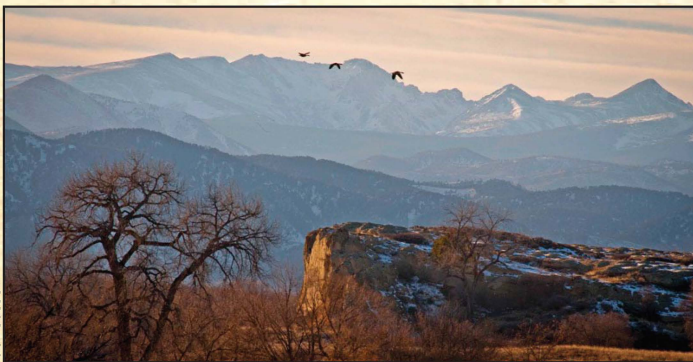


Getting There

The White Rocks Trailhead is located about 0.75 mile west of 95th St. on the north side of Valmont Rd. just northwest of the North Teller Trailhead. Only disabled parking is available (3 spots). Other vehicles can park at North Teller. A small trail adjoins the two lots.

Trail Notes

The trail starts off as crusher fines and maintains a width of about 5'. After about 0.5 mile, it crosses over railroad tracks (negotiable with a wheelchair) and turns into road base dirt/gravel. Maintaining a width of about 10', the trail runs along a fenced-off private lake and wetland area. At about 0.75 mile, the trail is washed out and covered with water due to the flood. Repairs will progress during 2016 and 2017. This is about as far as most wheelchair users can go.



Jack Sasson

This trail provides gorgeous views of the distant White Rocks, ancient cliffs of Foxhills Sandstone that formed 67 million years ago, where a tropical river emptied into the shallow sea that covered much of North America.

Hard Spots

About 50' down the trail, an 11% slope for 20' occurs. This section often gets washed out, creating some tricky little gullies. Hugging the right side of the trail seems to work the best.

Habitat

The White Rocks Trail winds through lush farmland and a riparian area. This makes it attractive to diverse wildlife and vegetation. Bald eagles, great blue herons, Canada geese, and many other birds can be seen in the area. The White Rocks Nature Preserve supports white-tail deer, bats, coyotes, foxes, snapping turtles, and snakes.



Wendy Marie Stuart

Culture and History

Artifact evidence suggests that the Colorado Militia, serving under John M. Chivington, may have mustered in the area on their march southeast where they engaged in the Sand Creek Massacre, November 29, 1864. The ponds in the White Rocks Nature Preserve were previously gravel pits mined and reclaimed by the Flatirons Company. The area has a rich agricultural history.



Activities & Facilities



17 Teller Lake North and South

Quick Facts

Hawthorn



- Rating: easy-difficult
- Distance: 2.5 miles
- Surface: dirt, gravel
- Width: Avg: 10' Min: 18" (avoidable)
- Cross slope: Max: 8%
- Grade: Avg: 0% Max: 8% for 43'
- Shade: very little, a few cottonwoods

Getting There

The South Teller Farm Trailhead is located east of Boulder. It is 1.5 miles west of 95th St. on the north side of Arapahoe Rd. The North Teller Farm Trailhead is about 0.5 mile west of 95th St. on the south side of Valmont Rd. Look for the brown City of Boulder Open Space and Mountain Parks signs. Be careful not to pass the trailhead turnoffs. They are easy to miss, especially the South Teller Farm Trailhead turnoff.

Trail Notes

The flat and easy Teller Farm Trail can be accessed from the north or south. It cuts through prairie and farmland. Because the trail is wide open, it offers some amazing views of the Front Range peaks. A wheelchair-accessible fishing pier is located on the lake nearest the South Teller Trailhead with an overgrown, difficult crusher fines trail leading to it.



Doug Goodlin

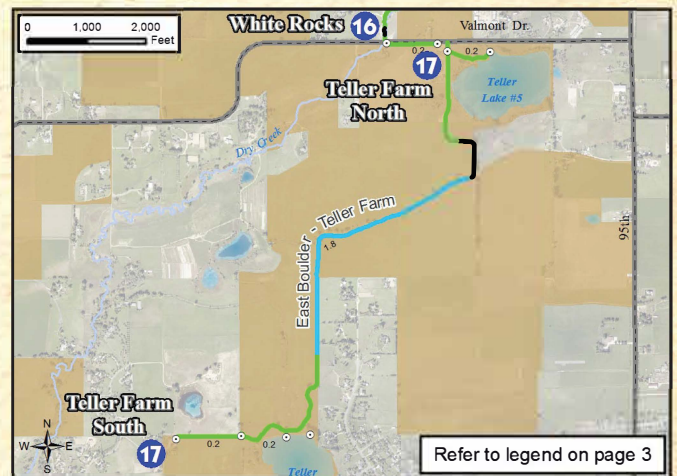
At North Teller Trailhead, the Teller Lake #5 Trail ends at a wheelchair accessible overlook of the lake about 0.14 mile up the trail. The average grade is about 2%, with one steep section, 9.6% for 6' about 400' down the trail. Prairie dogs love to dig holes in the trail so keep your eyes open.

Hard Spots

Some parts of the trail become very muddy after rainstorms. An old bridge half a mile from North Teller Trailhead is difficult to maneuver over with a wheelchair due to old boards and the 2-6" lip on each side of the bridge. There are 5 gates along the route - the 3 in the middle are usually open. The self-closing gate at the North Trailhead is 43" wide. The self-closing gate at the South Trailhead is 64" wide, with a tension of 8 lbs to open.

Culture and History

This area is named for early landowner Henry Moore Teller. He was a U.S. Senator after Colorado became a state, and later the 15th Secretary of the Interior. While not personally involved in the Sand Creek Massacre, he did later defend the action. Teller's stance on Indian rights seems contradictory. He was opposed to the Dawes Act, which called for the end of communal ownership of Indian lands. He felt it was a strategy to take land from Native Americans. But in a contradictory move, as Secretary of the Interior, Teller approved the "Code of Indian Offenses," which forbade Native American cultural activity in the U.S.



Activities & Facilities

Teller Lake North Trailhead



Teller Lake South Trailhead



18 Sombrero Marsh

Quick Facts

Red-tailed hawk



- Rating: easy-moderate
- Distance: 0.4 mile
- Surface: crusher fines and boardwalk
- Width: Avg: 4.5' Min: 3'
- Cross Slope: Max: 15% for 3'
- Grade: Avg: 3% Max: 12.7% for 10'
- Shade: very little, bird blind

Getting There



Take Arapahoe Rd. east out of Boulder. Turn right/south on 63rd St. Ignore the "no outlet" signs. After a short distance the road will turn left/east

and there will be a fence on your right beyond which you can see Sombrero Marsh. Continue driving until you see a set of gas pumps on your left. At the pumps, look to the right and you will see the Sombrero Marsh Environmental Education Center beyond the fence. The Center is easy to identify by its wind turbine and the solar panels mounted on the roof. Park along the fence and enter the marsh at the opening in the fence by the large Thorne Nature Experience sign.

Trail Notes

Several short trail loops with interpretive signs and a boardwalk skirt the eastern shore for use by the public and school groups. The boardwalk sports two viewing decks surrounded by 3" curbs, one 10' x 18' and one 20' x 8'. An accessible bird blind with a 3' high window provides stealthy bird watching opportunities for people of all abilities. An interpretive bird garden is



OSMP Image

located behind the Thorne Nature Center near the salamander pond.

Hard Spots

There are a couple of short steep sections along the trail no greater than 10%. A couple of 6' wide boardwalks skirt the pond, but do not have curbs on the edges so be careful. A couple of sections of trail south of the bird blind have some big cross slopes, but are avoidable if you stay on the opposite side of the trail. One short section of trail near the blind has some loose crusher fines gravel that may be tough to maneuver through.

Habitat

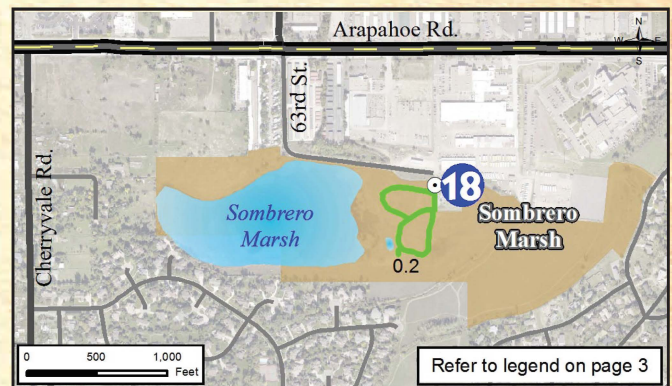
Sombrero is an alkali marsh, rare in this part of the United States. It is shallow and periodically dries out, leaving mud flats that provide unique habitat for emergent vegetation and nesting aquatic birds.



Daren O'Brien

Culture and History

Sombrero Marsh may have been the only perennial body of open water in Boulder Valley at the time of settlement. It was used as a garbage dump until 2000, when OSMP acquired the marsh and began restoring it. 55,000 cubic yards of trash were hauled out, then native alkali marsh vegetation was replanted.



Activities & Facilities



19 Dry Creek

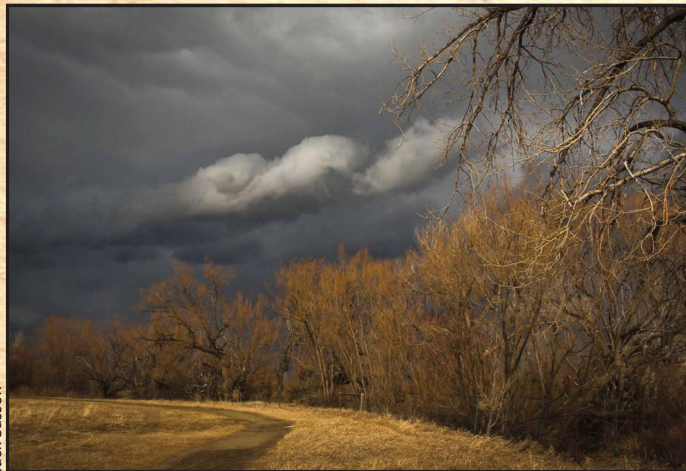
Quick Facts

- Rating: easy
- Distance: 1.4 miles
- Surface: crusher fines
- Width: Avg: 8' Min: 6'
- Cross Slope: Max: 9% for 20'
- Grade: Avg: 3% Max: 9.5% for 20'
- Shade: very little



Coyote willow

ing the third wooden bridge the trail forks three ways. Straight ahead or to the left, it turns into a crusher fines trail, making an easy 0.6 mile loop. The trail has an 9.5% grade for 20' with a 6% cross slope near the lone cottonwood tree at the westernmost part of the trail.



Jack Sasson

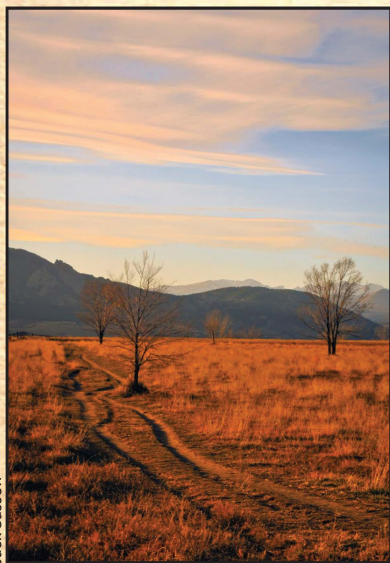


Dave Sutherland

Dry Creek is very popular with dog guardians.

Getting There

In southeast Boulder, Dry Creek Trailhead and parking are located on the south side of Baseline Rd. one mile east of Cherryvale Rd. (east of Hwy. 157).



Jack Sasson

Trail Notes

The Dry Creek Trail runs through the grasslands east of Boulder, attracting many dog walkers. Watch out for the many wet dogs running around. The trail aims south to a prairie dog colony for about 300' then turns toward Dry Creek. A little cover is provided by trees as the trail skirts along the creek. After cross-

Hard Spots

The self-closing gate from the parking area is 42" wide, with an opening tension of 6 lbs. The trail is generally easy, but moderately difficult in some sections and can be very muddy or rutted. Between the first and second bridges, there is a 100' section of trail with a 7.7% grade and a 3.2% cross slope. This can be difficult, especially when wet.



Activities & Facilities

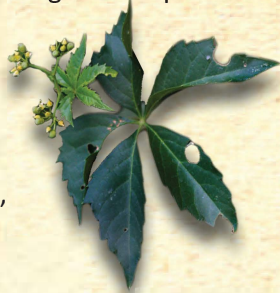


20 Bobolink Trailhead (South Boulder Creek Trail)

Quick Facts

- Rating: easy-moderate
- Distance: 1.4 miles
- Surface: crusher fines
- Width: Avg: 7'6" Min: 3'6"
- Cross slope: Max: 9.3% for 5'
- Grade: Avg: 2% Max: 12% for 10'
- Shade: The first 0.5 mile section of trail is shaded. The rest is fairly open.

Virginia creeper



Kaitlyn Merriman



Hard Spots

Near the end of this first section, the trail skirts the creek with a cross slope of 9.3%.

The next section to S Boulder Rd. has a steep section as it goes over an irrigation culvert, reaching a grade of 10.5% for 30'. There is a concrete bridge after the culvert which has an approaching slope of 8.5% for 20' with loose crusher fines.

Getting There

The South Boulder Creek Trail starts at Bobolink Trailhead, located on the south side of Baseline Rd., 2 miles east of Foothills Pkwy. (Hwy. 157). Parking is also available at East Boulder Community Center 5660 Sioux Dr. between S Boulder Rd. and Baseline Rd. east of Hwy 157. Bathrooms are available at the Community Center. Some street parking is available at the Marshall Rd. trail end (870 Marshall Rd., Boulder, Colorado).

Habitat

The South Boulder Creek Trail wanders through a lush riparian area with a large diversity of vegetation and wildlife, including the Preble's meadow jumping mouse and the rare bobolink blackbird.

Culture and History

Look for the picturesque Doran Barn (1900) just south of S Boulder Rd. on the west side. The historic Abernathy Barn is located at the south end of trail across from the creek.



Michael Morton

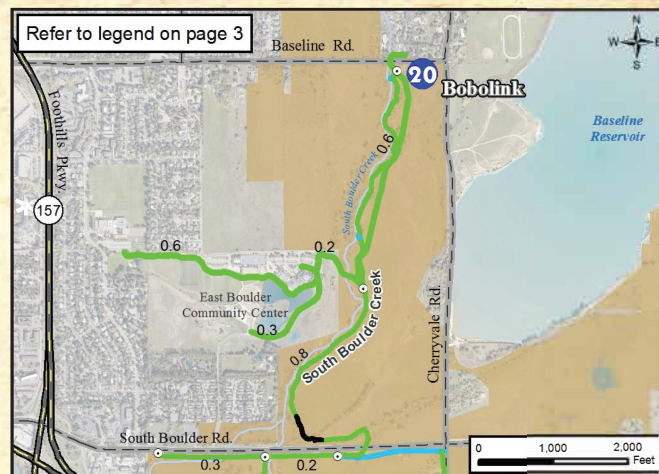
The bobolink, a ground-nesting bird of the prairie, gave its name to this trailhead. Protection of grassland habitats are vital to its survival.

Trail Notes

Small rolling hills are interspersed throughout the trail. The first hill has a grade of 12%

(cross slope 2.5%) with others being 10.5% or less. There are plenty of places to pull off the trail and relax alongside the stream. After the first 0.5 mile you can take the concrete path west over a bridge to East Boulder Community Center or continue along 0.9 mile on the crusher fines to South Boulder Rd.

If you continue through the underpass and head west, the trail goes for another 2 miles. This S Boulder Rd. to Marshall Rd. section of trail is relatively flat and is often used for cattle grazing.



Activities & Facilities

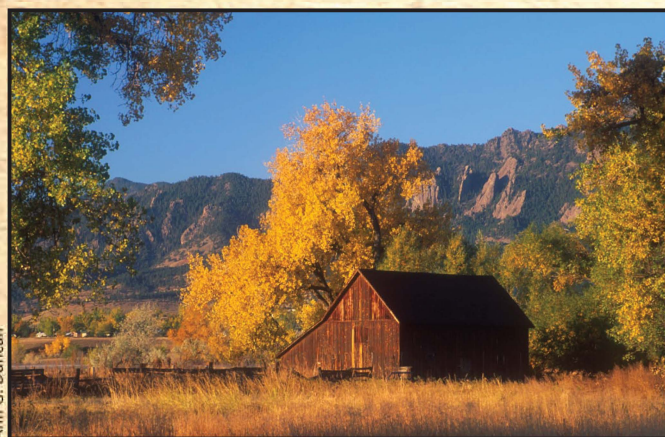


21 South Boulder Creek Trail (via Marshall Rd.)

Quick Facts

Rating:	easy-moderate
Distance:	1.8 miles
Surface:	crusher fines, road base gravel
Width:	Avg: 7'6" Min: 3'6"
Cross slope:	Max: 3%
Grade:	Avg: 1% Max: 10% for 5'
Shade:	not very much

Blue grama grass



Ann G. Duncan

The historic Doran barn, visible to the west of the trail near South Boulder Road, is photogenic in any season.

Getting There

The Marshall access point for the South Boulder Creek Trail is located on Marshall Rd. (870 Marshall Rd., Boulder, Colorado). Follow Broadway south, past Greenbriar Blvd. about 0.5 mile. Make a left onto Marshall Rd., then a quick right. The S Boulder Creek access point is on your left. Street parking is the only available option.

Trail Notes

The trail goes for 1.8 miles before it reaches S Boulder Rd. This Marshall Rd. to S Boulder Rd. section of trail is relatively flat, usually less than a 3% grade. It follows the South Boulder Creek but only comes within 50' of the water. It is an old ranch road that is popular among runners. There are 5 gates along the route, the narrowest 35" wide. The 3 gates in the middle are usually left open unless cattle are grazing.

Hard Spots

This section of trail is rough in some places because of the road base dirt/gravel. The trail has a 7-10% grade at the Hwy 36 underpass. It is currently (2016) a bit chopped up due to the Hwy 36 renovation.



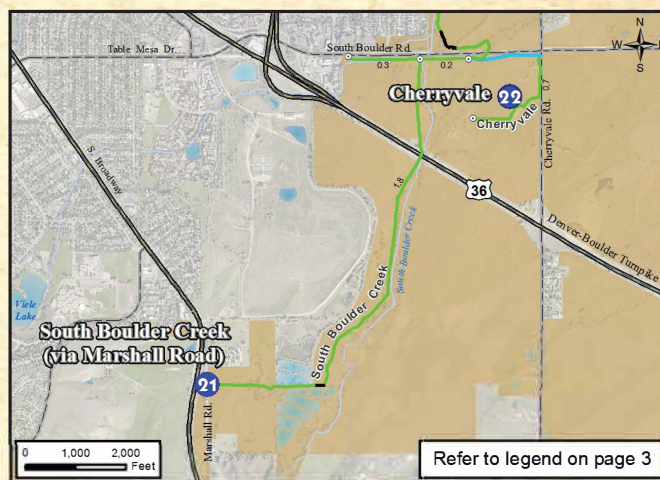
Wendy Marie Stuart

Habitat

The trail runs through moist tallgrass prairie and wetland habitats that are often grazed by cattle. The prairie dog colony near the Marshall Rd. access offers up-close viewing opportunities since the animals live right next to the trail and are habituated to people. Deer can sometimes be seen near the creek. Various birds including kingfishers, flickers, and meadowlarks can be spotted. Vegetation includes many grasses and wildflowers.

Culture and History

Remnants of the old Abernathy barn can be seen across S Boulder Creek as the trail nears the creek from the Marshall Trailhead. The historic Doran Barn (1900) remains are just south of S Boulder Rd. Ranching has been part of this area since homesteading in the mid 1800's. The area is still often used for cattle grazing.



Refer to legend on page 3

Activities & Facilities



22 Cherryvale

Quick Facts

- Rating: easy
- Distance: 0.7 mile
- Surface: crusher fines, road base gravel
- Width: Avg: 4' Min: 1' for 3' (need to roll one wheel on grass)
- Cross slope: Max: 4.5% for 2' near Cherryvale South
- Grade: Avg: 0% Max: 7% for 6'
- Shade: none

*Lance-leaf
chiming bells*



Getting There

From Hwy 36, drive east on S Boulder Rd. for 2 miles, turn right on Cherryvale Rd., travel about 0.25 mile and turn right at 66 S Cherryvale Rd. The parking lot is about 0.1 mile down the road on the right side.



Kristin Boyer

Trail Notes

From the parking lot, the crusher fines/road base trail goes in two directions. About 0.2 mile west, you'll reach the OSMP main office. Heading northeast for 0.25 mile, you'll reach the S Boulder Rd. The trail is generally flat with a minimal cross slope.

Hard Spots

The trail turns into road base gravel at S Boulder Rd., becoming rougher as you head west. The long slope to the S Boulder Creek Trail can get rutted. This, and the 7% grade in some spots, can make this trail difficult.

Habitat

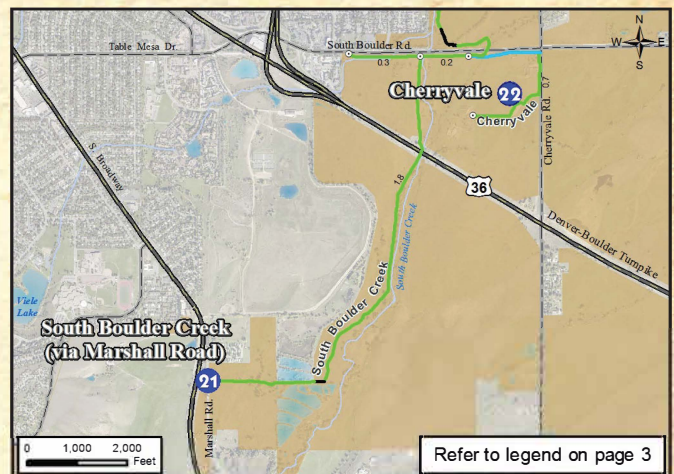
The vegetation in the area is mostly grasses, including some hay pastures. This area is significant for ground-nesting birds, raptors, rodents and small mammals. Fish and invertebrates are abundant in the creek (state fishing regulations apply). The creek and wet meadows also provide habitat for unique plant life such as the threatened Ute ladies' tresses orchid (pictured).



Linda Mahoney

Culture and History

The trail skirts around the Hogan's cattle ranch, OSMP land that was purchased from the Hogan family. Leo and Babe Hogan now lease it from OSMP for ranching their 500 head of cattle. Their great grandfather homesteaded here in Boulder. Look for the historic stone farm buildings on the corner of S Boulder Rd. and Cherryvale Rd., including the huge white Viele farm house.



Activities & Facilities



23 Marshall Mesa

Quick Facts

Rating:	difficult
Distance:	0.25 mile
Surface:	crusher fines, gravel, dirt, clay
Width:	Avg: 4' Min: 3'
Cross Slope:	Max: 11.4% for 12'
Grade:	Avg: 5% Max: 13% for 10'
Shade:	a couple of trees at the end

Prairie dog skull



Habitat

Birdwatchers can peruse the skies for a solitary red-tailed hawk floating the thermals. Coyotes and mule deer are common. Prairie dogs and grazing cattle share the landscape. Remnants of rare tallgrass prairie turn colors in the fall: tan, ochre, fawn, russet, and burgundy.

Getting There

Just south of Boulder, Marshall Mesa Trailhead is located on the SE corner of Hwy. 93 and Marshall Rd.



Troy Petersen

Trails around Marshall Mesa offer a variety of opportunities for adaptive off-road hand cycling.

Trail Notes

From the trailhead, you can get a pretty good idea of what's ahead of you on the trail. A 75' access path with a 5% average slope takes you to a 64" wide gate. The accessible crusher fines trail is immediately to the left. This goes for about 250'. The surface then turns to large dispersed pieces of rock and gravel on top of hard packed dirt. This rough and tough trail takes you over a couple bridges to a sandstone outcropping. This area is ideal for adventurous wheelchair types to play around and test their skills or just enjoy the view. Several juniper trees hunker here providing shade for weary hikers.

Hard Spots

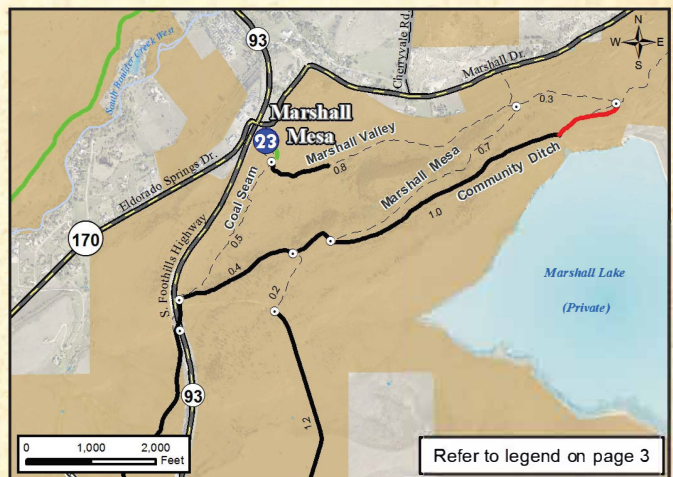
This difficult 0.25 mile trail is appropriate for wheelchair users who are looking for an extra challenge. Historically a coal mining area, the trail lacks cover and shade. It can be extremely hot during a summer afternoon hike.



J.B. Sturtevant

Culture and History

This was a coal mining area from the 1860's until the 1930's. Sink holes, old railroad grades, and earthworks dot the landscape. An interpretive sign at the trailhead provides historic information on the area. For a fascinating account of the coal mining at Marshall Mesa, download Joanna Sampson's brochure "Walking through History on Marshall Mesa" from the OSMP website boulder.colorado.gov/osmp/elearning



Refer to legend on page 3

Activities & Facilities



24 Greenbelt Plateau

Quick Facts

Rating:	moderate-difficult
Distance:	1.2 miles
Surface:	gravel, road base
Width:	Avg: 7' Min: 22" due to overgrowth in middle of road
Cross slope:	Max: 10% for last 100' (washout)
Grade:	Avg: 4% Max: 9.5% for 20'
Shade:	very little

Sand dropseed



Getting There

Just south of Boulder, the Greenbelt Plateau Trailhead is located on the NE corner of Hwy. 93 and Hwy. 128.

Trail Notes

To access the trail from the parking lot, you must pass a 41" wide self-closing gate. The trail has some long flat sections, but also has some long descents and ascents (0.1 mile with 8% and 0.3 mile with 7%). At 0.75 mile, there is a second 35" wide gate. After traveling 1.2 miles, the trail ends at the Community Ditch connector trail. This trail is not accessible. There are great views of Eldorado Canyon and the Flatirons along the way.



Ann G. Duncan

In spring, Greenbelt Plateau bursts into flower when the prairie blooms. Look for orange arnica (pictured), sand lilies, chiming bells, loco weed, and Easter daisies.

Hard Spots

This trail is moderate to difficult in a wheelchair due mainly to the trail surface. It consists of road base and dirt, thick with loose gravel. The trail's center is overgrown in areas so you have to follow a single tire track.

Habitat

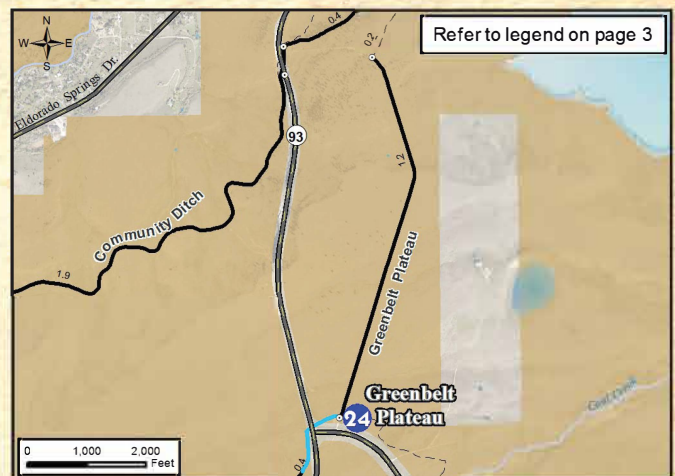
The trail runs along the border of the Southern Grasslands Habitat Conservation Area, a prairie preserve of outstanding biological significance in North America. Look for examples of rare tallgrass prairie grasses, wildflowers, and an occasional yucca. A few ponderosa pine trees are scattered haphazardly along the plateau. With luck, you may see a herd of elk, especially in winter! Many birds such as killdeers, meadowlarks, and vesper sparrows nest on the ground here during spring and summer.



Andy Pelster

Culture and History

This was a coal mining area in the 1860's.



Activities & Facilities



25 Flatirons Vista

Quick Facts

Rating:	easy
Distance:	210'
Surface:	crusher fines, road base
Width:	Avg: 4' Min: 4'
Cross slope:	Max: 3%
Grade:	Avg: 5% Max: 8%
Shade:	very little



Habitat

Coyotes, songbirds, birds of prey, mule deer, and bobcats are common year round. Bears can be sighted spring through fall. Bluebirds may gather here in the spring. Watch for golden and bald eagles overhead in the winter. Many birds, such as killdeers, meadowlarks, and vesper sparrows nest on the ground during spring and summer.

The dry (xeric) tallgrass prairie at Flatirons Vista is one of the most endangered vegetation types in the world. OSMP preserves some of the most significant tallgrass prairie remnants in Colorado. Big bluestem grass (right) can grow over 6 feet!



Dave Sutherland

Getting There

South of Boulder on Hwy 93, the Flatirons Vista Trailhead is located just south of the intersection of Hwy 93 and Hwy 128. There are two disabled parking spots.



Malcolm Daly

This area is great for adaptive off-road hand cycling.

Trail Notes

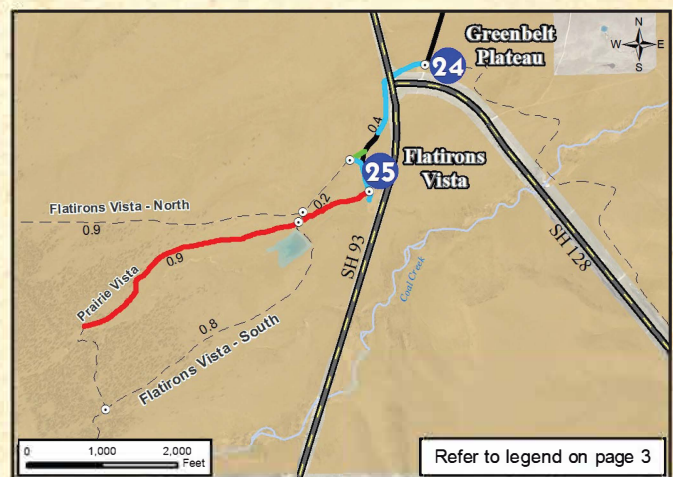
The Prairie Vista Trail is short and sweet. About 200' from the parking lot, the trail continues but becomes inaccessible to mobility devices. Many kinds of wildflowers brighten up the area. Taking the Greenbelt Connector Trail instead can give you a good opportunity to see wildflowers, birds, and wide-open landscapes. This trail ends at the intersection of Hwy 93 and Hwy 128, crossing the highway at a traffic light to Greenbelt Plateau.

Hard Spots

To access the trail from the parking lot, you must negotiate a 63" wide gate. The Greenbelt Connector Trail starts out with about 230' of loose road gravel ranging from slopes of 8% to 10.5%, making it difficult for a wheelchair. Once you're on top of the hill, it's smooth sailing. Take the first crusher fines path to the right for an easy, beautiful hike that goes fairly close to the highway.

Culture and History

Agriculturally, this is a current and historic grazing area. There is also a lot of evidence of Native American camps set up in this area.



Activities & Facilities



26 Doudy Draw

Quick Facts

- Rating: moderate
- Distance: 0.4 mile
- Surface: granite crusher fines
- Width: Avg: 6' Min: 36"
- Cross slope: Max: 3%
- Grade: Avg: 5% Max: 8.6% for 20' at top (bridge)
- Shade: very little



Bronze copper

Habitat

Wildflowers are seasonally abundant here, and there are great views of the foothills. Many of the songbirds that nest in the cottonwood trees and shrubs in summer spend their winters in the steamy tropical rainforests of Central America. Look for orioles, lazuli buntings (pictured), yellow-breasted chats, and spotted towhees.

Culture and History

The picnic area site sits on a former homestead and dairy farm. Ruth Dunn grew up in the Dunn House, part of which still stands just west of the South Mesa Trailhead about half a mile from this picnic area. In 1928, Ruth married Henry Helart and lived at the site of a stone foundation at the northern end of the picnic area. This house was moved from the mining town of Marshall, about 3 miles away, after the coal strike in 1914. The Helarts ran a dairy farm with as many as 50 cows for several years. You can make out a concrete foundation and several fence posts from the corrals just south of the restrooms. The only building remaining is the milk storage shed near the creek, just north of the picnic area. Milk was kept cool with creek water circulating through the shed.



David Mendosa

Getting There

From Boulder, follow Hwy 93 (Broadway) south and turn onto Eldorado Springs Dr. Go west for 2 miles. Doudy Draw is on the south side of the road.



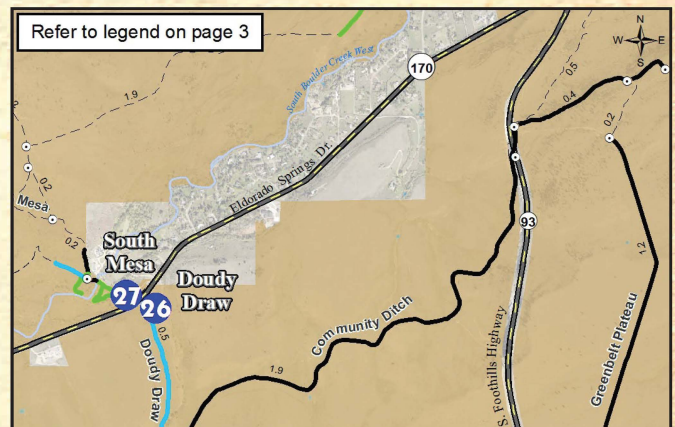
Jack Sasson

Trail Notes

This crusher fines trail is slow going, but worth the 0.4-mile trek. Once you've reached the picnic area and restrooms up the 5-6% grade, the trail continues on for another 500' to the bridge. The trail is not considered accessible from this point on. Community Ditch Trail also intersects at this point.

Hard Spots

The gate from the parking area is 63" wide. The picnic area is accessed through a 63" gate; the bathroom is accessed through a separate 65" gate. Because of the gusty winds in the area, the spring tension on the restroom doors is set very high, making it tough to negotiate with a wheelchair.



Activities & Facilities



27 South Mesa Trailhead

Quick Facts

- Rating: easy-difficult
- Distance: 2 miles
- Surface: crusher fines, road base
- Width: Avg: 9' Min: 3'
- Cross slope: Max: 2%
- Grade: Avg: 3% Max: 10.8% for 150'
- Shade: lots of shade at beginning, sparse after bridge

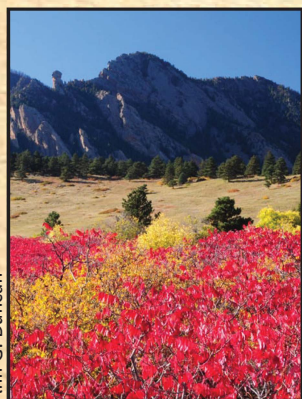


Three-leaf sumac

Habitat

The easier portion of the trail starts out in a stream-side area along South Boulder Creek and opens up onto grasslands in the foothills of the Rockies. This lends itself to a diversity of plant life and animal species. Deer, black bears, and cougars spend time here. The area is rich with birds including peregrine falcons, red-tailed hawks, and songbirds. Anglers fish the creek for trout.

Getting There



Ann G. Duncan

The trailhead is 1.7 miles west of Hwy 93 on Eldorado Springs Drive (Hwy 170). A parking lot with parking fee is on the north side of Eldorado Springs Drive. Parking is not allowed on Hwy 170.

In fall, the beautiful reds of the sumacs accent the dramatic sky line.

Trail Notes

The flat, lower loop between the two bridges is an easy trail with many wildflowers. It's a riparian area with lots of cover and good accessible fishing. Be careful of the poison ivy though!

At the top of the hill by the historic Dunn House, turn left on the Towhee/Homestead Trail. Follow Homestead, taking a left at the Creek Overlook sign for a nice view. Homestead Trail is too difficult in the other direction.

Hard Spots

After crossing the second bridge about 0.1 mile along the trail, the Mesa Trail has a gradual uphill grade as you head north with some long, steep grades of 10.8%, making it a difficult trail to hike in a wheelchair. Only the first 2 miles of it is somewhat negotiable in a wheelchair. The rest becomes too narrow, steep, and rocky.

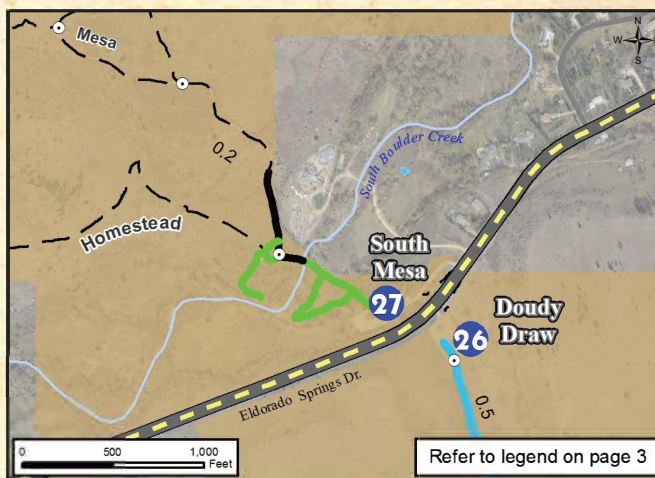
Shady trails loop through the forest near South Boulder Creek.



Topher Downham

Culture and History

The trail crosses the Doudy/DeBacker/Dunn homestead. The original homesteads, now no more than a shadow on the landscape, date back to early homesteading in the 1850's. The stone house standing above the stream belonged to John DeBacker, who sold the home and ranchland to his son-in-law, John Dunn for \$1 in 1901. In 1902, Dunn shot and killed a young neighbor near this site over what was most likely an argument about water rights, for which he served one year in jail.



Activities & Facilities



28 South Boulder Creek West Trailhead

Quick Facts

Rating:	easy–most difficult
Distance:	500'
Surface:	pea gravel, dirt/mud
Width:	Avg: 8' Min: 2'
Cross slope:	Max: 6% for 5'
Grade:	Avg: 2% Max: 11% for 20' (avoidable)
Shade:	some at picnic tables and along trail

Prairie cordgrass



Getting There

The South Boulder Creek West Trailhead is just south of Boulder. It is on the west side of S. Broadway/Hwy 93, 1 mile south of Greenbriar Ave. and the southernmost stoplight in Boulder.

Site Notes

There are two accessible parking spots with fee parking for vehicles registered outside of Boulder County. Two shady picnic tables accommodate wheelchairs. An accessible bathroom with easy doors is about 200' from the parking lot. All dogs must be leashed in the Trailhead Leash Area.



Tamara Corel

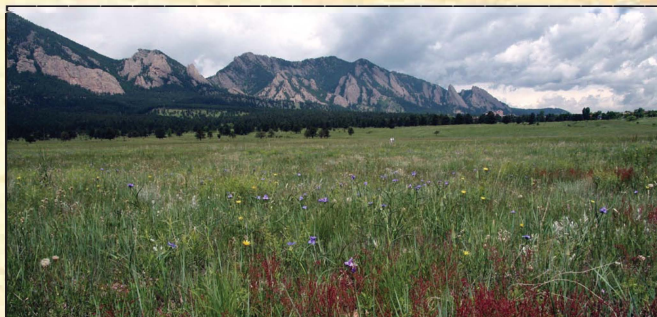
Dogs are allowed under Voice and Sight on some trails. Others require leash. Be sure to check the reg board at the trailhead.

Hard Spots

The first 25' are crusher fines at 4.5% grade. After that it levels off to the bathrooms. There is a 500', mostly level but difficult pea gravel trail to the cottonwood grove and shade. Just past the bathroom the trail becomes very muddy with ruts and a 6% cross slope in places. This is a better destination for picnicking than hiking.

Habitat

This is an excellent area to explore the grassland ecosystem. Deer commonly graze here in the early morning. The area also provides hunting grounds for many of our local raptors, foxes, and coyotes. In early May, large numbers of wild irises bloom along the upper Big Bluestem Trail.

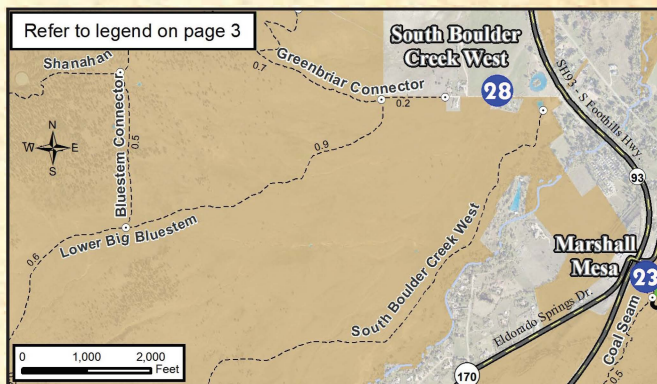


Dave Sutherland

The tallgrass prairie adjacent to the trailhead is so rare that it received special protection as a Colorado State Natural Area in 1994. The Ute ladies' tresses orchid and Preble's meadow jumping mouse (at left), both protected by the Endangered Species Act, occur here.

Culture and History

Chased out of Minnesota by Indians around 1860, the Shanahans were headed to California. When the whole family got sick on the way up Bear Canyon, they wintered there. In the spring, Edward and Margaret Shanahan decided to stay in this area rather than continuing on to California. The family still ranches here today.



Activities & Facilities



Quick Facts

- Rating: moderate-difficult
- Distance: 0.2 mile
- Surface: crusher fines, pavement
- Width: Avg: 7' Min: 3' 6"
- Cross slope: Max: 7.7%
- Grade: Avg: 8% Max: 15% for 5'
- Structures: National Center for Atmospheric Research, two benches
- Shade: plenty of trees

Milbert's tortoiseshell



Hard Spots

This trail has a typical grade of 8 – 15% with a few flatter spots along the way. If you are using a wheelchair, you might want assistance on this trail because of the steepness and washed out areas. Also, a few of the forks on this trail are not accessible with lots of rocks in the way. The forks to the north are more groomed.

Habitat

Black bears and mountain lions inhabit this area. Coyote, fox, mule deer, and a variety of raptors may also be observed. This is also a great place to look at wildflowers, especially in the early spring.

Culture and History

The nature trail was named after Walter Orr Roberts (1915-1990), the founder of the National Center for Atmospheric Research (right). An astronomer and atmospheric physicist, he was one of the first scientists to warn that technology was changing the earth's climate.

The Walter Orr Roberts Trail provides spectacular views of the rocky crags of Boulder's Front Range, including Seal Rock (pictured), the Flatirons, The Slab, and Bear Peak.



Steve Mertz



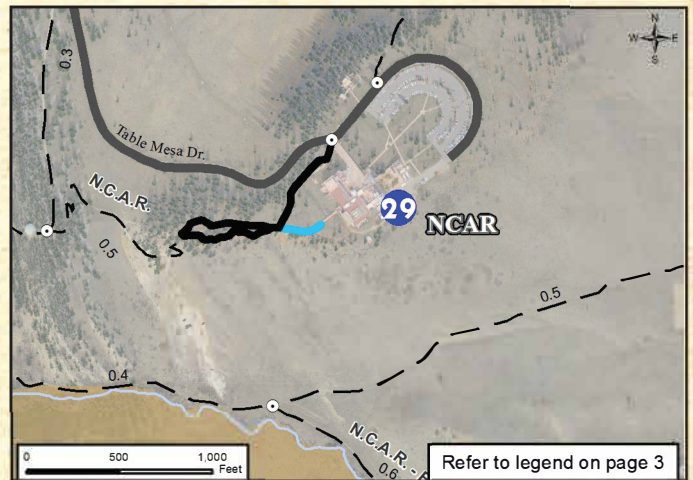
Logan Garby

Getting There

Take Table Mesa Drive west 2.4 miles from Broadway until it ends at the National Center for Atmospheric Research in south Boulder.

Trail Notes

The interpretive Walter Orr Roberts weather trail is about 0.2 mile to the top. It's a great place to visit for spectacular 360 degree views nestled in pine trees, grass and wildflowers. From parking to the beginning of the trail is about a 300' sidewalk with a consistent 8% grade. At the end of the sidewalk, you can go left up another 200' incline with an 8% grade to use the restroom facilities inside NCAR or take a tour of the science displays. Otherwise, the red crusher fines route begins across the road. There are about a dozen 2.5' high interpretive signs highlighting weather-related information. Towards the end of the route there are two stone slab benches in shady areas with magnificent views.



Refer to legend on page 3

Activities & Facilities



30 Buckingham Campground (4th of July Trailhead)

Quick Facts

Rating:	moderate
Distance:	416'
Surface:	dirt, forest duff, and crusher fines
Width:	Avg: 4' Min: 3'
Cross slope:	Max: 4% for 5'
Grade:	Avg: 4% Max: 10% for 3'
Shade:	Plenty - this is a forested area

Parry's primrose



Hard Spots

The most challenging section is the 12% grade for 5' leaving the campsite. There is another hard section at 10% for 3' a little farther down the trail as you skirt between two trees. Bathrooms are accessible, but it would be prudent to park next to them since the road access up to them is steep and rocky.

Habitat

This is a beautiful alpine area filled with streams, forests, and meadows. The location is ideal for wildflower viewing in the summer. In the fall months, the sounds of elk bugling slice the air and bright yellow leaves of aspens accent the already majestic mountain views.

Getting There

From Boulder, follow Canyon Blvd. (SR 119) west 18 miles through Nederland. Just south of Nederland, travel west on CR 130 through the town of Eldora (4.5 miles). Shortly beyond Eldora, the pavement becomes a fairly rough dirt road. After approximately 0.7 mile, the road forks; follow the right fork approximately four miles to Buckingham Campground.

Trail Notes

4th of July Campground is the hidden alpine gem of OSMP. It is the only place on OSMP lands where camping is allowed and there is a camping spot for people with disabilities complete with a picnic table and a level crusher fines camp pad. There is access to the stream (North Fork of Middle Boulder Creek) on a trail through the woods. Camping is also possible along that path. Fishing the creek from a wheelchair is possible at the flat area at the end of a short creek access trail from the campsite.

An additional disabled parking spot and trail are located at the end of the road next to the access gate if you go straight and don't turn right toward the bathrooms. Access the creek trail through the 3' opening to the right of the gate. The trail/road is hard pack crusher fines and dirt. It starts with a 6.5% section for 25' and remains fairly flat until you reach a crusher fines path to the left at 217'. This 200' section gently descends to an 8' x 12' viewpoint on the bank of the creek. The steepest section is 10% for 3'. There is very little cross slope except for a short section at 4%. The viewpoint provides another fishing opportunity for anglers with disabilities.

Culture and History

Some stories say 4th of July Trailhead got its name because the road is impassable until the 4th of July. It's actually named for the 4th of July Mine located on a scenic bench about two miles up the trail. Mr. and Mrs. Carl E. Buckingham (nephew of early Boulder bank president and philanthropist Charles G. Buckingham, who arrived in Boulder in 1874, see p. 16) donated 35 acres of land near Eldora for this campground in 1960. 4th of July Campground served as the "base camp" area for the annual Arapaho Glacier hike and breakfast sponsored by the Boulder Chamber of Commerce between 1938 and 1974.



Activities & Facilities



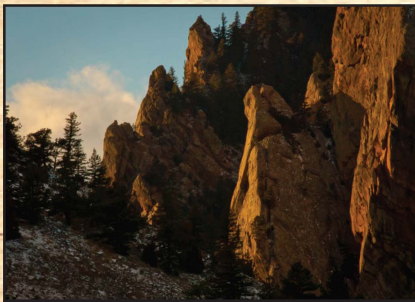
Accessible Trails - Other Local Agencies

Other land agencies and city programs provide accessible outdoor recreational opportunities in the Boulder area. Here is a sampling of locations to check out, and contact information.



Wax currant

Eldorado Canyon State Park



Jack Sasson

Fowler Trail is a beautiful easy 0.4 mile trail that runs along one of the cliffs of Eldorado Canyon. It offers incredible views of Eldorado Canyon's cliff walls and the many cliff-nesting birds that reside there.

Streamside Trail, as the name suggests, takes you close to the S Boulder Creek. It is only about 125' long but a very beautiful area.

More Information:

cpw.state.co.us/placestogo/parks/EldoradoCanyon/Pages/Trails.aspx
or call 303-494-3943.

For general information about accessible opportunities on Colorado Parks & Wildlife lands, visit:
cpw.state.co.us/aboutus/Pages/Accessibility.aspx

Boulder County Parks & Open Space

Boulder County has several accessible trails, but many were affected by the flood of 2013.

Walden Ponds is off of 75th St. between Arapahoe and Jay Rd. It is the big brother that Sawhill Ponds aspires to be. It is a fabulous place with accessible hiking, bird watching, and fishing. Plenty of disabled parking spots are available. The Wally Toevs Pond is a special fishing pond for elderly people and people with disabilities. Cottonwood Marsh has a great accessible wooden boardwalk that brings you out over the marsh.

Pella Crossing on 75th St. near the town of Hygiene was an amazing accessible trail around several lakes but was completely wiped out by the 2013 flood. It is currently closed for repairs.

Lagerman Reservoir (see photo below), on 75th St. near Niwot is a nice lake with accessible areas. It has accessible bathrooms, a picnic shelter overlooking the lake, and 2 disabled parking spots.



Emily Olivo

Hall Ranch near Lyons is another beautiful site. Disabled parking is in the upper lot. The bathrooms are accessible, but there is a 3" lip to get into them. The trails are not very accessible, but there are some great views to be enjoyed at the picnic shelter.

Niwot Loop is a long loop trail in Niwot. It is about 3.7 miles long that goes on road, bike path, and trail. One disabled parking spot is at the main lot on 79th St. near Hwy 52.

Twin Lakes is located on Twin Lakes Rd. in Gunbarrel. It is another good flat wetland trail that is good for hiking, fishing, and walking dogs. The trail loops around two lakes, thus the name. The best accessible access is off Nautilus Dr.

Carolyn Holmberg Preserve at Rock Creek Farm is an oasis of calm in the midst of urban life. Tucked between Broomfield and Lafayette at Dillon Rd. and 104th St., the wheelchair-accessible trails allow you to come here to fish, walk your dog, or enjoy a beautiful mountain view.

More Information:

BoulderCountyOpenSpace.org or call 303-678-6200.

City of Longmont

Golden Ponds Park and Nature Area has flat, accessible trails and an accessible fishing pier. Some of the trails are concrete while others are crusher fines. Accessible bathrooms, parking spots, and picnicking are available.

Fairgrounds Lake and Roger's Grove Arboretum and Outdoor Learning Center is a nice area. Fairgrounds Lake has an accessible concrete and crusher fines trail around it. Sidewalks meander through the arboretum. Accessible parking is available at Fairgrounds Lake and Roger's Grove. Bathrooms are located at Roger's Grove.



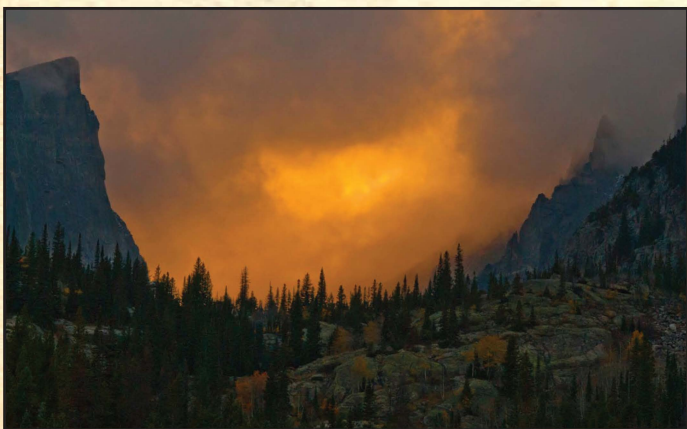
Emily Olivo

More Information:

longmontcolorado.gov/departments/departments-n-z/parks-open-space-trails/directory-of-parks-trails
or call 303-651-8446.

Rocky Mountain National Park

Sprague Lake and Bear Lake (pictured) have beautiful accessible trails around them. Sprague Lake also has an accessible campsite about 0.5 mile down the trail.



Jack Sasson

Lily Lake is located just south of Estes Park along the Peak to Peak Highway, is also a great place to go for a mile long loop hike.

Coyote Valley Trail on the park's west side, offers a mile-long level grade that parallels the head waters of the Colorado River in the Kawuneeche Valley.

Beaver Boardwalk Trail and Holzwarth Historic Site are other accessible trails in RMNP worth checking out.

More Information:

nps.gov/romo/planyourvisit/accessible_trails.htm
or the Disability Traveler's Companion website at:
tdtcompanion.com/NPS/Rocky/

City of Louisville

Warembourg Open Space has a relatively flat 8-10' wide crusher fines trail which leads to a small pond. Two parking areas exist. Park to the east (ADA parking only) and travel 0.2 mile to a small fishing pond. Other accessible trails exist within the City of Louisville.

More Information:

louisvilleco.gov/about-us/trails-and-maps
or call 303-335-4735.

SportsAbilities

SportsAbilities is the premier resource for people with physical disabilities to find recreational, advocacy, support, and adaptive sporting activities nationwide.

More Information or to sign up for their newsletter:

sportsabilities.com or call 303-435-6116.

City of Boulder's EXPAND

This municipal program has great activities for people with disabilities. City of Boulder Parks and Recreation runs the Exciting Programs Adventures and New Dimensions (EXPAND) program. EXPAND helps people who have disabilities improve and gain new recreation and leisure skills that will enhance participants' overall well being and their quality of life.

More Information

bouldercolorado.gov/parks-rec/expand-program-for-people-with-disabilities or call 303-413-7200.



Troy Petersen



Mary Balzer



OSMP Image



Topher Downham



Dave Sutherland



Steve Mertz



Mary Balzer



Robin Bolduc



Mary Balzer



**Appendix J
Colorado Springs
Utilities Notes on
Electric Service**



Colorado Springs Utilities Notes on Electric Service

Discussion related to electric service for commercial uses with Utilities Mary Hoaglund 10.18.23

Reviewed draft master plan map and potential activities that could occur on Blodgett Open Space or the future City acquisition of Pikeview Quarry.

Identified electric service line (aerial line) that would be impacted by the use of buildings, arrangement of recreation amenities (may include a motorized bike/chair lift), and potential paragliding opportunities. Minimum clearance around aerial powerlines is 10-20 feet, though requirements for paragliding would likely differ. See maps.



Questions to inform the master plan include:

1. There is an existing 120v aerial line – what would be the costs to bury? **Shared costs.**
2. What would be cost of higher v or amperage service (for bike/chair lift or other rec amenities)?
The existing service meter would be sufficient to supply projected needs.
3. Are there options to relocate electric service? **See below.**

Appendix J

Colorado Springs Utilities Notes on Electric Service

Verified electrical service.

- Utilities owns and maintains electric drop to the property line. Anything past this point belongs to the existing landowner.
 - For instance, the Quarry installed the aerial power connection past the Utilities meter (12.5kV Primary Meter: OH000987) for the use of their rock crusher or to the weigh station on the south end of the property. It is their responsibility to maintain or split.
 - Up on the sale, the seller/buyer can keep the existing electrical or choose to dismantle/disconnect at the meter or complete a new drop at their expense.
- Relocating the electrical service drop may be an option, however, it is best to contact Utilities for review of the electrical need and work with them on design and requirements for service.
- Current service identified is 12.5 kV at the primary meter. This would be sufficient for higher commercial service requirements, but consultation with Utilities is recommended when additional details on power needs are identified.
- Burying overhead electric could be an option and Utilities has provisions in Chapter 10 to outline a method of cost-sharing for a commercial project – aka customer in aid to construction.
 - Utilities could be requested to assist with planning and design, install transformers or other supporting equipment and other party would contribute the installation trench (meeting requirements set by Utilities, example 4' wide by 42" deep for the whole length.)
- Final recommendation is that when City Parks is ready, to contact Utilities for assistance with the design and requirements through the Customer in Aid in Construction according to Chapter 10. Any costs quantified in this process would be between City Parks and Utilities (an enterprise of the City) and maybe of no cost or equal division.

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