

TRAIL CORRIDOR PLAN



October 2014
(amended Dec. 2014)

City of Scottsdale McDowell Sonoran
Preserve – Phase 2C Area

DESCRIPTION OF PLANNING AREA

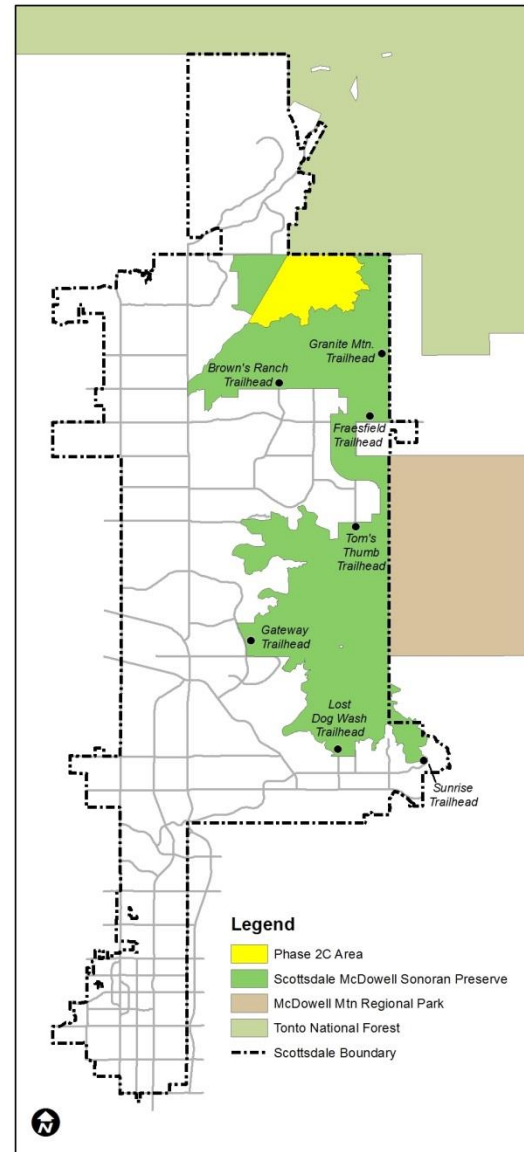
The Phase 2C Area contains approximately 3,100 acres (approx. 5 square miles) and is located in the northern region of The City of Scottsdale McDowell Sonoran Preserve.

The area is bounded on the west by the Western Area Power Administration (WAPA) high voltage powerline, on the north by the Tonto National Forest, and on the south and east by existing Preserve trails.

It is located in the Upper Sonoran Desert vegetation zone. Predominant tree species include palo verde, mesquite, ironwood, and crucifixion thorn. Common shrub species include turpentine bush, bursage, and creosote. Various species of cacti also inhabit the area, including saguaro, barrel, teddy bear cholla, buckhorn cholla, and hedgehog. A few species of yucca are also found here, including soaptree and banana yucca. In addition, there are unique plant species present in the area including juniper trees and barberry.

The soils of the Phase 2C area are comprised predominantly of decomposed granite. Much of the area is made up of deposits of alluvial material of various ages and depths. Some large bedrock outcrops and boulder formations are also present, particularly in the south and southeast portions of the Phase 2C area.

The elevation of the area ranges from 2,600 to 3,040 feet above sea level. The area is bisected roughly in half by a watershed divide that runs in a north/south direction. The wash corridors in the eastern half drain to the east/southeast, and the wash corridors in the western half drain to the west/southwest. Slopes in the area are generally gentle to moderate, with the exception of the south central and southeast portions, where exposed bedrock and deep washes increase the slope of the land.



Location of the Phase 2C Area

PLANNING PROCESS

The City of Scottsdale convened a group of Preserve trail users to provide feedback and share ideas on their expectations for trails in the Phase 2C area. The input from the group will be used by the City to understand the expectations from a broad representation of trail users.

The group was comprised of equestrians, mountain bikers, hikers, and trail runners. Representatives from adjacent land managing agencies were included in the group, along with staff from the Arizona Game and Fish Department.

A series of ten meetings was conducted with the group to gather feedback on overall goals for trail planning in the Preserve, trail corridor locations for the Phase 2C area, and user expectations and design parameters for each trail corridor. Two field visits were also held to familiarize the group with the Phase 2C area and discuss trail design and construction elements.

Once the initial plan was drafted, two public open houses were conducted to give the general public an opportunity to review the draft plan and provide comments. A web page was also created for people to review the draft in electronic format and submit comments directly through the web page. The open houses and web page were promoted through posters placed at the major trailheads and through digital media. Forty-three people signed in at the open houses and 11 comments were submitted. The Phase 2C web page was viewed by 245 people, and 16 comments were submitted electronically. Between the open houses and the webpage, a total of 27 comments were received. The complete comments are listed in Appendix F.



AUGUST 5TH, 2014 MEETING OF THE WORKING GROUP



OCTOBER 4TH, 2014 OPEN HOUSE AT BROWN'S RANCH TRAILHEAD

Preserve Ordinance Goals

Chapter 21 of the Scottsdale Revised Code (aka The Preserve Ordinance) establishes the purpose and management objectives for the Preserve. The group was asked to review the Preserve Ordinance and use it as a foundation to develop a list of trail-related goals for the Phase 2C area. The summarized list of Preserve Ordinance goals developed by the group, in priority order, is found below. Items with the same number/letter are equal priorities. For a detailed list, see Appendix A.

1. Honor and maintain the Preserve
 - 1a. Respect and maintain wildlife and plant habitat
 - 1a. Maintain scenic views
 - 1a. Protect cultural resources
 - 1a. Support the management objectives of the Preserve as listed in the Preserve Ordinance
2. Provide superior opportunities to enjoy the Preserve
 - 2a. Provide trails and appropriate access areas for passive recreation

Planning Goals

In the discussion about Preserve Ordinance goals, ideas were suggested by the group that related specifically to the planning and layout of trails. The summarized list of Planning Goals, in priority order, is found below. For a detailed list, see Appendix B.

1. Trail location and design should be responsive to the terrain.
 - 1a. Trails should be sustainable.
2. Safety should be considered (signs, standards, sight lines, etc.).
 - 2a. Trail system should provide logical connectivity and appropriate access to the trail system.
3. Trail design should encourage self-sorting of users and minimize conflicts between the user groups.
 - 3a. Trails become more primitive the further you are from the trailheads.

User Goals

The group also suggested a series of goals that relate directly to the users of the trails. The summarized list of these User Goals, in priority order, is found below. Items with the same number/letter are equal priorities. For a detailed list, see Appendix C.

1. Trail design shall support multiple users.
 - 1a. Trails should provide multi-level and multi-use trail opportunities.
 - 1a. Trails become more primitive the further you are from the trailheads.
2. A comprehensive trail user management approach should be implemented.

TRAIL CORRIDORS

Following establishment of the Preserve Ordinance Goals, Planning Goals, and User Goals, the group was tasked with developing a map of proposed trail corridors for the Phase 2C area. Trail corridors were defined as a conceptual linear region in which a trail could be located. The corridors do not represent actual trail alignments on the ground, but instead general regions in which trails could be located.

Each corridor shown on the trail corridor plan will contain one (1) trail alignment, with the exception of Corridor #1 which may contain an additional route through the sandy wash, and Corridors #7 and #8 which may contain more than one main trail with short alternate lines. All other existing trails in the Phase 2C area will be permanently removed and restored to as natural a state as possible.



Group Field Visit (9/7/14)

To develop the conceptual trail corridor plan, the group was broken into smaller teams, with each team containing a mix of various types of trail users. Baseline information about the area was given to the groups on biotic communities, elevation, slope, and geology. Each group was given a large aerial photo of the Phase 2C area, and asked to draw conceptual trail corridors according to the desires of their group. Staff then compiled the plans from the small teams into a single unified plan. The group accepted this plan and it became the baseline for the remainder of the group discussions. This plan includes eight trail corridors, and is found on Page 7.

The group identified corridor opportunities, desired user experience and trail standards for each of the corridors they identified. The team also identified several items that apply to all corridors, and those are listed on Page 5. Several items were also identified that apply to corridors #7 and #8, and those are listed on Page 6.

ITEMS THAT APPLY TO ALL PHASE 2C TRAIL CORRIDORS

(See Descriptions of bold/italicized terms on Page 26)

General

- Trails must be **sustainable**
- Use old trails when practical
- Design to encourage self-sorting and to accommodate multiple user groups
- Avoid sensitive soils where practical – those that can be damaged easily when wet.
- Encourage sharing of trails between user groups

Trail Flow

- Respect the flow of the land
- Consider **flow** or rhythm of the trail
- Use gradual transitions in the flow of the trail
- Keep trails “predictable” – no mound of snow in the bunny hill
- Use drainage elements, such as **grade reversals**, that accommodate all user groups

Turns

- No turns in washes
- Maintain good sight lines

Signage

- Use same type of signage and sign content as in other areas of the Preserve

Vegetation

These general guidelines to be considered during the trail layout and construction process, with preference given to avoiding plants when possible.

- Avoid root zones of saguaros
- Avoid large trees, and consider the growth potential of tree canopies
- Avoid ocotillos
- These guidelines apply to all trail corridors in this plan:

	Plant Type	Approximate Dimension*
Vertical Vegetation Clearance	All plants	10 feet
Horizontal Vegetation Clearance	Brush without thorns	At edge of trail
	Small cacti such as hedgehogs and pin cushions, barrel cacti, prickly pear, and brush with thorns (other than catclaw acacia)	12 inches
	Staghorn cholla, banana yucca, catclaw acacia, teddy bear cholla, and chain fruit cholla	24 inches. Distance may be increased where needed (turns and other challenging spots)
	Saguaro	48 inches

* The vertical clearing dimension is measured vertically from the surface of the trail, and the horizontal clearing dimension is measured horizontally from the edge of the trail to the edge of the plant canopy.

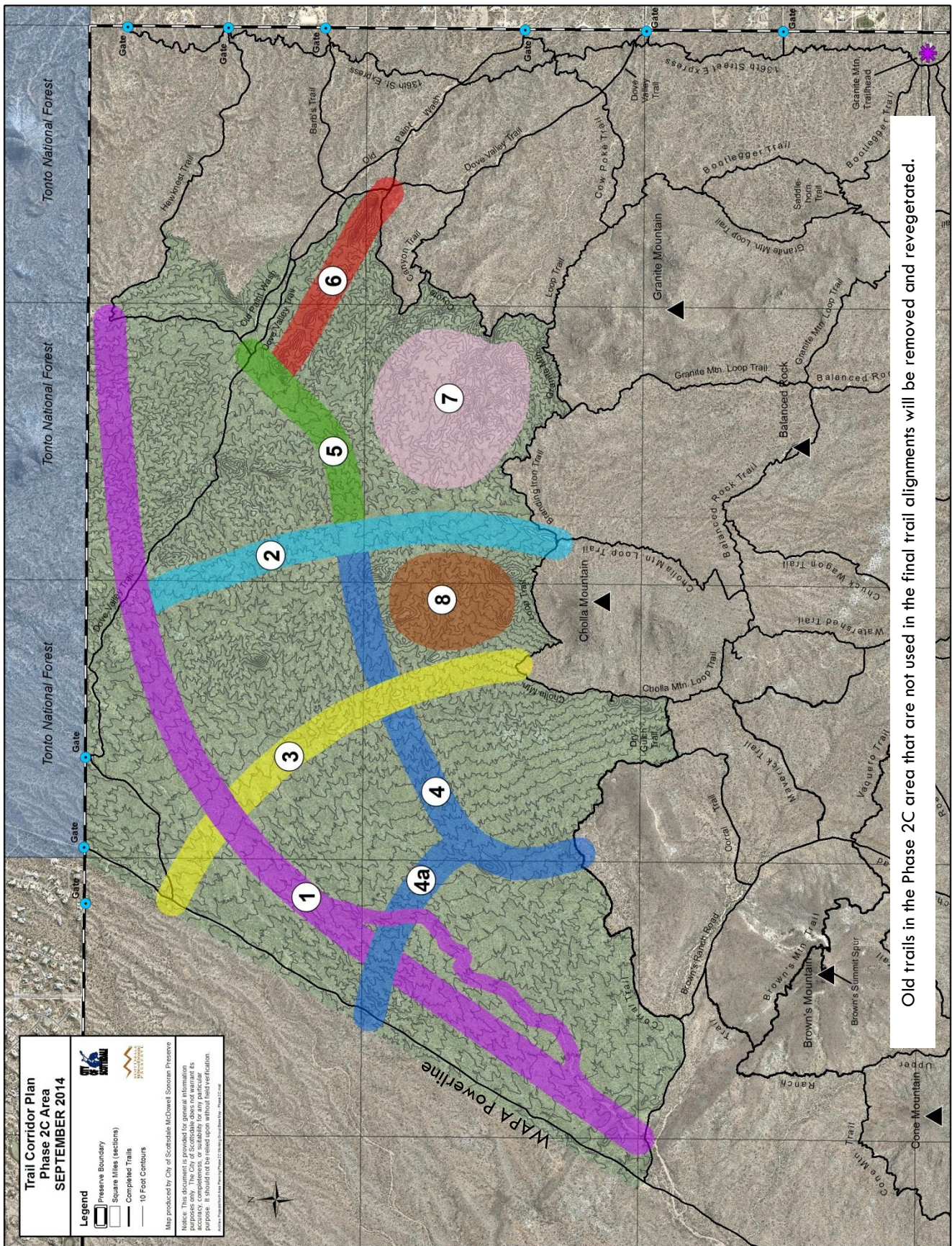
ITEMS THAT APPLY TO TRAIL CORRIDORS #7 AND #8

General

- These areas to have limited controlled access points with main trail line to and around some of the boulder features with the opportunity for a few **alternate lines** on some of those features.
- Trail should not access all rock features within the areas.
- Rock features to be evaluated for prior disturbance, sensitive flora/fauna, & archeological resources.
- Features with prior use should be favored over ones that are undisturbed.
- Features with archeological significance will be avoided.
- Signage/marketing of main trail and alternate lines is important.
 - Use vertical posts (steel or flex posts) when possible.
 - On bare rock areas use reflectors or small flush steel markers.
 - Markers should blend with natural surroundings but be visible to users.
 - Do not use paint markers.

Access

- Areas #7 and #8 should share an access point along Corridor #2.
- Avoid connecting to highly used main trails (Cholla Loop, Granite Loop, Branding Iron).
- Consider visibility – don't make access routes so circuitous that it encourages cross cutting. Consider this for access to the #7 and #8 areas, but also from boulder pile to boulder pile within the areas.
- Consider access from the north into #7 and #8 – from corridors #4 and #5.
- Consider access to #8 from #3 and access to #7 from Coyote Canyon Trail.



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #1 - DESCRIPTION

Terrain Description

- **Length** – ~ 3.75 miles
- **Elevation:**
 - South End – 2,620'
 - North End – 2,870'
 - High Point – 2,940' at watershed divide
 - Low Point – 2,620' at south end
 - Total Elev. Change - 320'
- **Soils:** Decomposed granite
- **General Description:**
 - Elevation changes over long distance – long gradual uphill/downhill
 - Southern portion runs parallel to drainage pattern, trail could follow low ridgelines between washes, minimizes wash crossings.
 - Middle section really flattens out (at junction w/ corridor #3).
 - North/Northeast section crests out over watershed divide, and drops slightly (~100 vert. ft.) to west of Hawknest Trail. Crosses a couple washes in this stretch.



Corridor Experience/Opportunity

- *Long distance and provides connectivity to other Preserve areas
- Vistas both east and west
- *Loop opportunities
- Access to the Tonto National Forest
- A+ (meaning the group likes it)
- Low intensity riding (effort the user expends)
- Fast, Good Sightlines, Flowing
- *Opportunity for wash trail as well, (bypass)
- Not a technical trail, smoother, less tight turns, drops
- Increase access
- Sustainable trail could be constructed

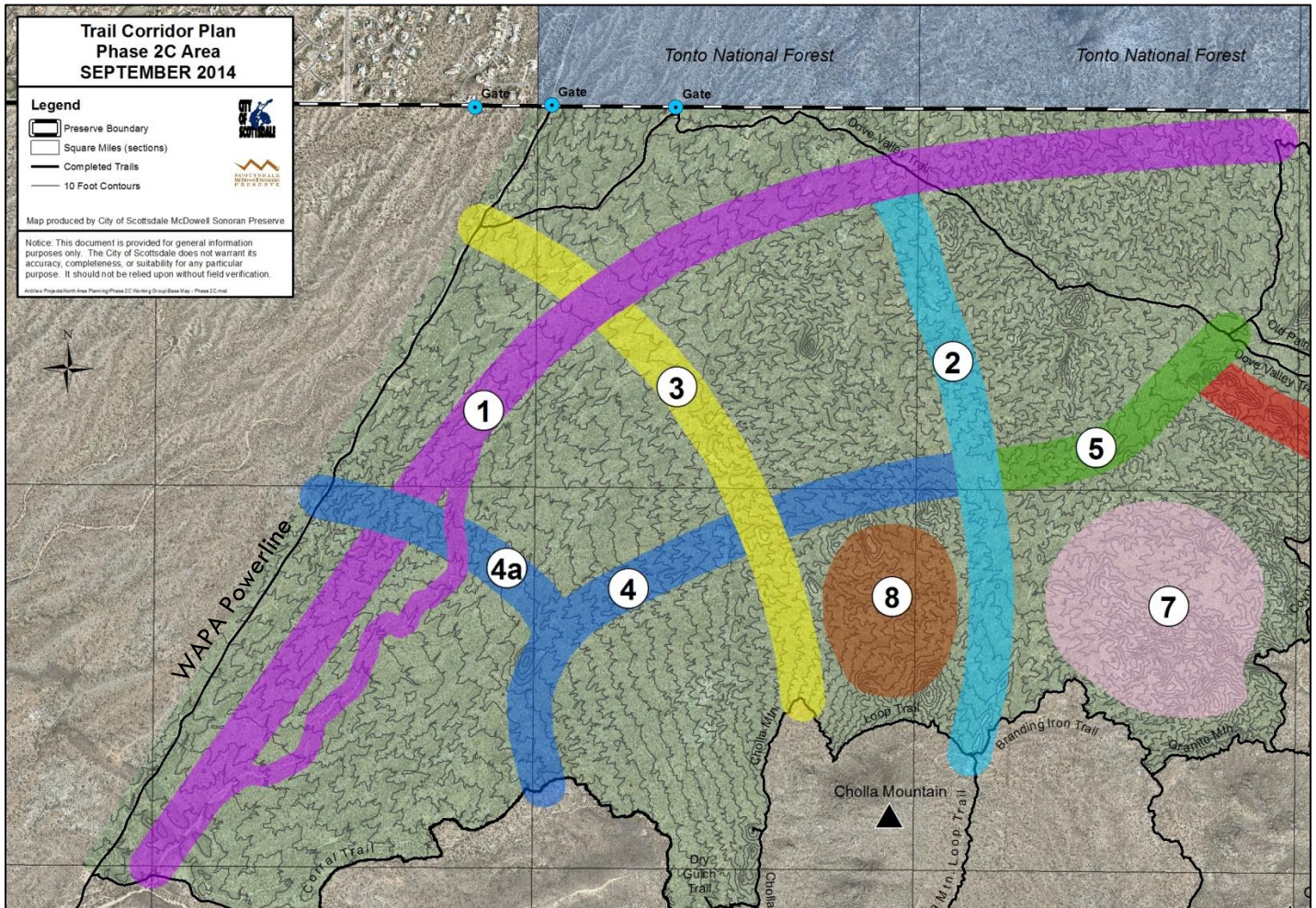
* Asterisks indicate that the item was identified by more than one group. The more asterisks, the more groups identified the item.

Trail Construction Standards

Trail Width	36 inches
Trail Slope	Minimal slope, follow contour or parallel contour
Turn Radius Target/Min	Target 15 feet - minimum 10 feet
Trail Surface	Decomposed granite
Technical Features	Minimal to none
Alternate Line	No

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #1 - MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #2 - DESCRIPTION

Terrain Description

- **Length** – ~ 1.5 miles
- **Elevation:**
 - South End – 3,000'
 - North End – 2,930'
 - High Point – 3,000' at south end
 - Low Point – 2,930' at north end
 - Total Elev. Change - 70'
- **Soils:** Decomposed granite
- **General Description:**
 - Follows watershed divide – good views all around
 - Some elevation lost as corridor comes off base of Cholla Mtn
 - Stays pretty level for remainder – at approx. 2,940' elevation
 - Corridor passes significant boulder outcrops near junction of corridors #4 and #5
 - Could provide access to Areas #7 and #8 on east and west sides of corridor



Corridor Experience/Opportunity

- **May have opportunity to use existing trails
- ***View points and Vistas, enjoy views
- **Non-technical, non-strenuous
- **Minimal turns
- **Connects to other trails and area 7 and 8
- **Bail-out opportunity
- *Future trailhead access on north alignment
- *Loop opportunities
- Primitive trail opportunity, distance from access points

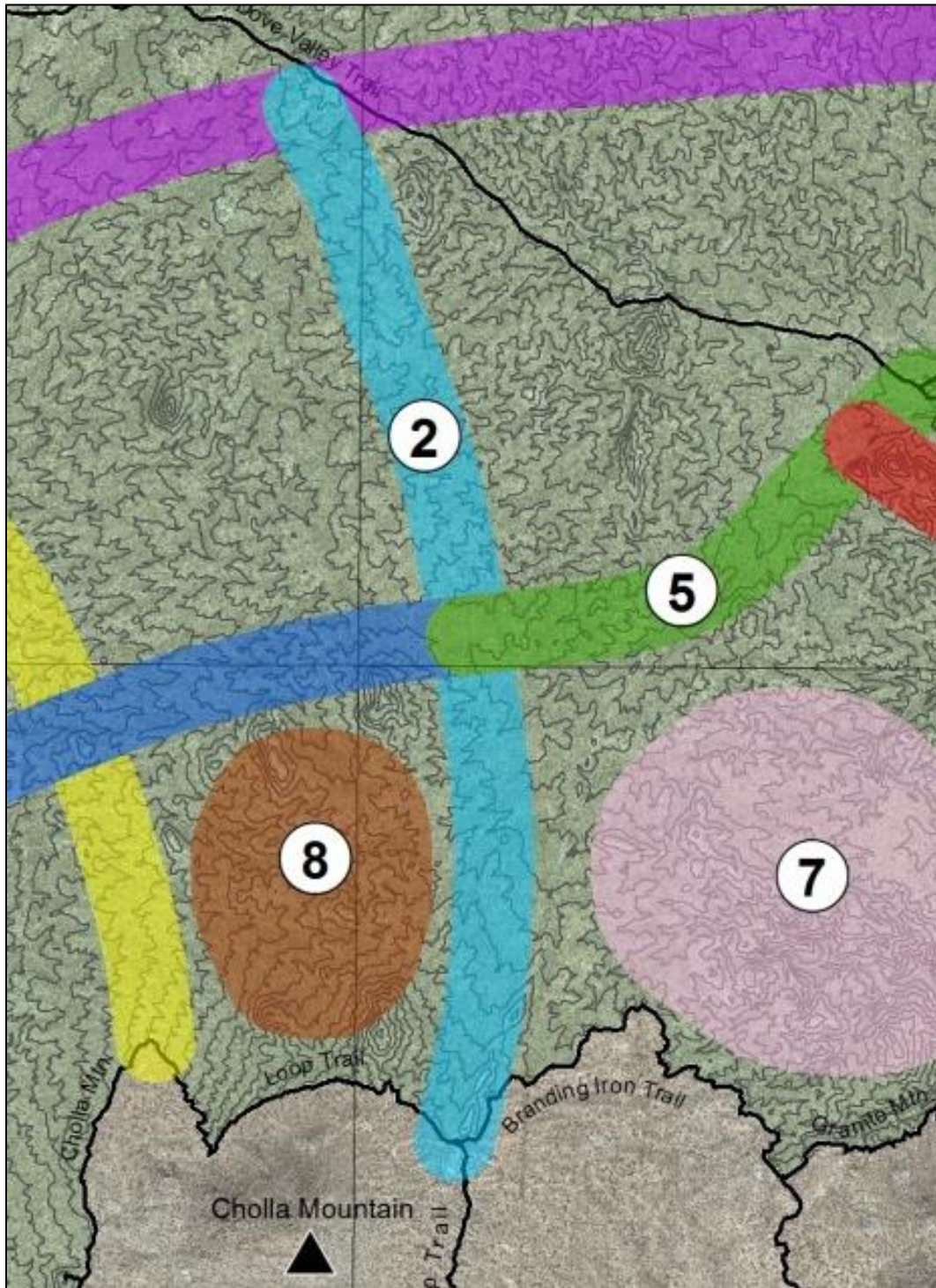
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Trail Construction Standards

Trail Width	32 inches
Trail Slope	Minimal slope, follow contour or parallel contour
Turn Radius Target/Min	Target 15 feet - minimum 10 feet
Trail Surface	Decomposed granite
Technical Features	Minimal to none
Alternate Line	No

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #2 - MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #3 - DESCRIPTION

Terrain Description

- **Length** – ~ 1.5 miles
- **Elevation:**
 - South End – 2,890'
 - North End – 2,810'
 - High Point – 2,890' at south end
 - Low Point – 2,810' at north end
 - Total Elev. Change - 80'
- **Soils:** Decomposed granite
- **General Description:**
 - Stays more or less on contour
 - Runs perpendicular to drainage pattern - Crosses ~18 significant wash channels
 - Passes just to the west of bouldery area (Area #8)
 - Northern portion really flattens out – where it crosses corridor #1 and then intersects with WAPA powerline.



Corridor Experience/Opportunity

- ****Link** to existing old route called Western Express on west side of WAPA powerline
- ***Use** portions of the old trail 22, but only the good portions
- ***Use** longer turns that follow contours across the ridges to make the wash crossing turns not as twisty
- *****Use** rock outcrops on the south side of the corridor
- ***More** recreational less destinational
- Will require design details to maintain sustainability
- Travel through the scenic vegetation (saguaro forest)
- Primitive trail
- ***Fun** trail using natural features of the area

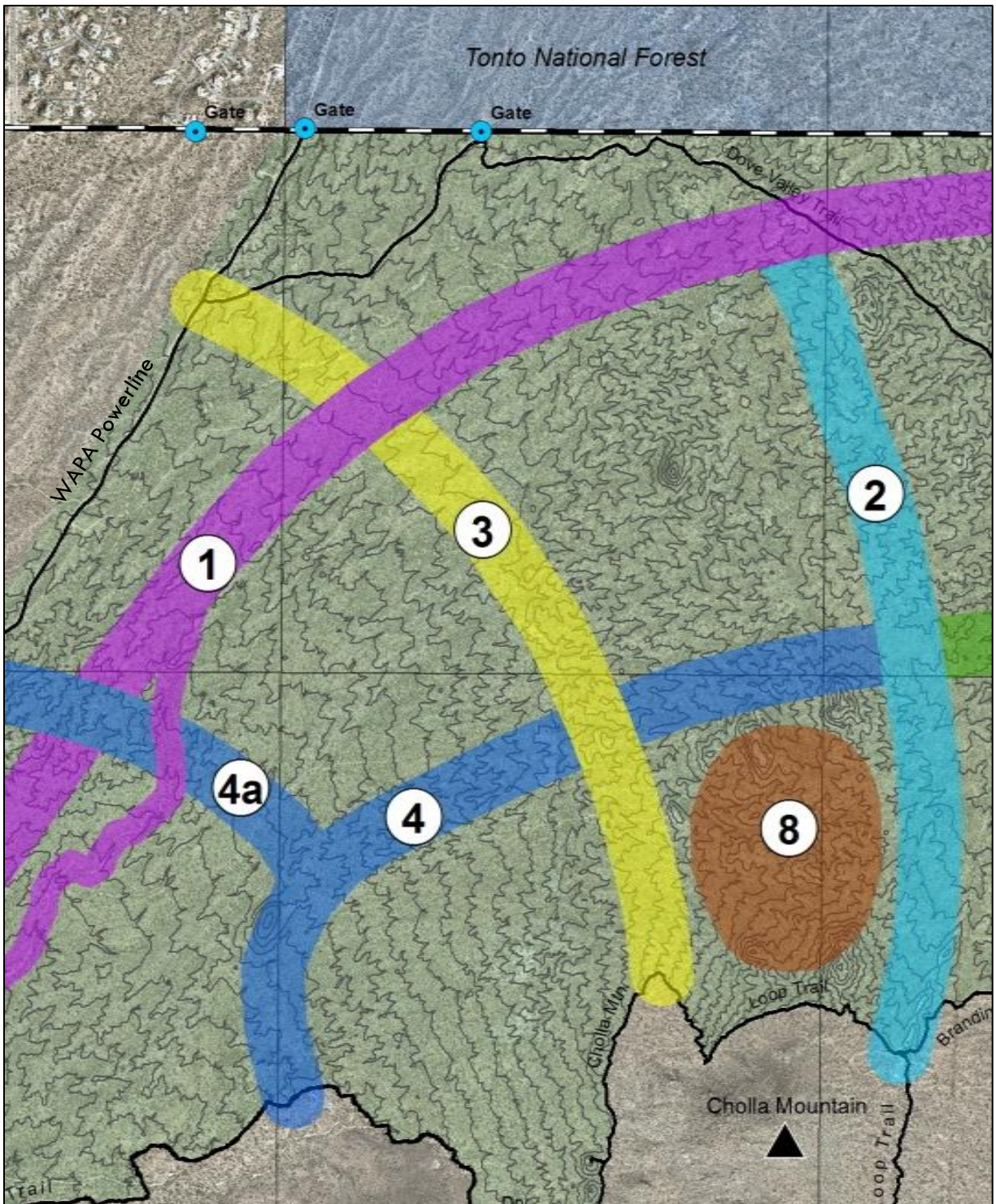
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Trail Construction Standards

Trail Width	32 inches
Trail Slope	Find areas to increase slope/undulations
Turn Radius Target/Min	Target 15 feet - minimum 8 feet
Trail Surface	Decomposed granite
Technical Features	Some moderate at moderate level of difficulty
Alternate Line	Limited to none

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #3 - MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #4 - DESCRIPTION

Terrain Description

- **Length** – ~ 1.5 miles
- **Elevation:**
 - Southwest End – 2,660'
 - Northeast End – 2,930'
 - High Point – 2,930' at NE end (watershed)
 - Low Point – 2,660' at southwest end
 - Total Elev. Change - 270'
- **Soils:** Decomposed granite
- **General Description:**
 - Elevation changes over long distance – long uphill/downhill
 - Runs primarily parallel to drainage pattern – minimizes wash crossings
 - Passes along north side of boulder features in Area #8
 - Passes by prominent hill north of the Corral Trail
 - Tops out at the watershed divide



Corridor Experience/Opportunity

- *Variety of experience – varied terrain, *hills, rocks, elevation changes
- *Closer than corridor #1 to existing trails to the south
- *Connectivity
- *Bailout options
- More primitive than Trail Corridor #1
- Flow, surf the ridgeline
- Look at old trails #5 and #17
- Connection from Corral Trail
- Look at shorter loop opportunity from Corral Trail

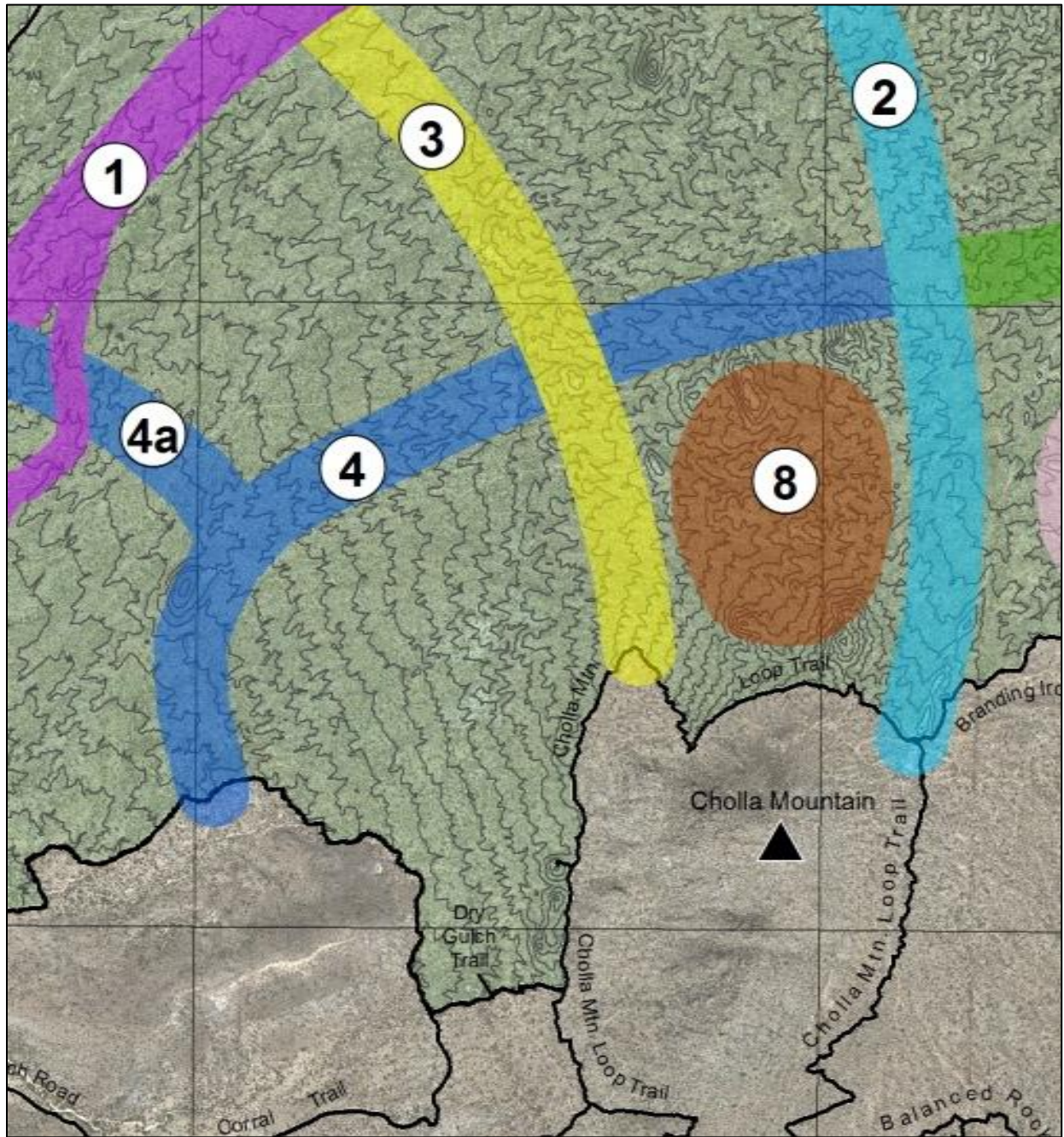
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Trail Construction Standards

Trail Width	24 inches
Trail Slope	Find areas to increase slope
Turn Radius Target/Min	Target 15 feet. minimum 8 feet
Trail Surface	Decomposed granite
Technical Features	Some technical features/ moderate difficulty
Alternate Line	Limited

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #4 – MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #4A - DESCRIPTION

Terrain Description

- **Length** – ~ 0.75 miles
- **Elevation:**
 - Southeast End – 2,760'
 - Northwest End – 2,730'
 - High Point – 2,760' at southeast end
 - Low Point – 2,730' at northwest end
 - Total Elev. Change - 30'
- **Soils:** Decomposed granite
- **General Description:**
 - Stays more or less on contour
 - Runs perpendicular to drainage pattern - Crosses ~ 5 significant wash channels



Corridor Experience/Opportunity

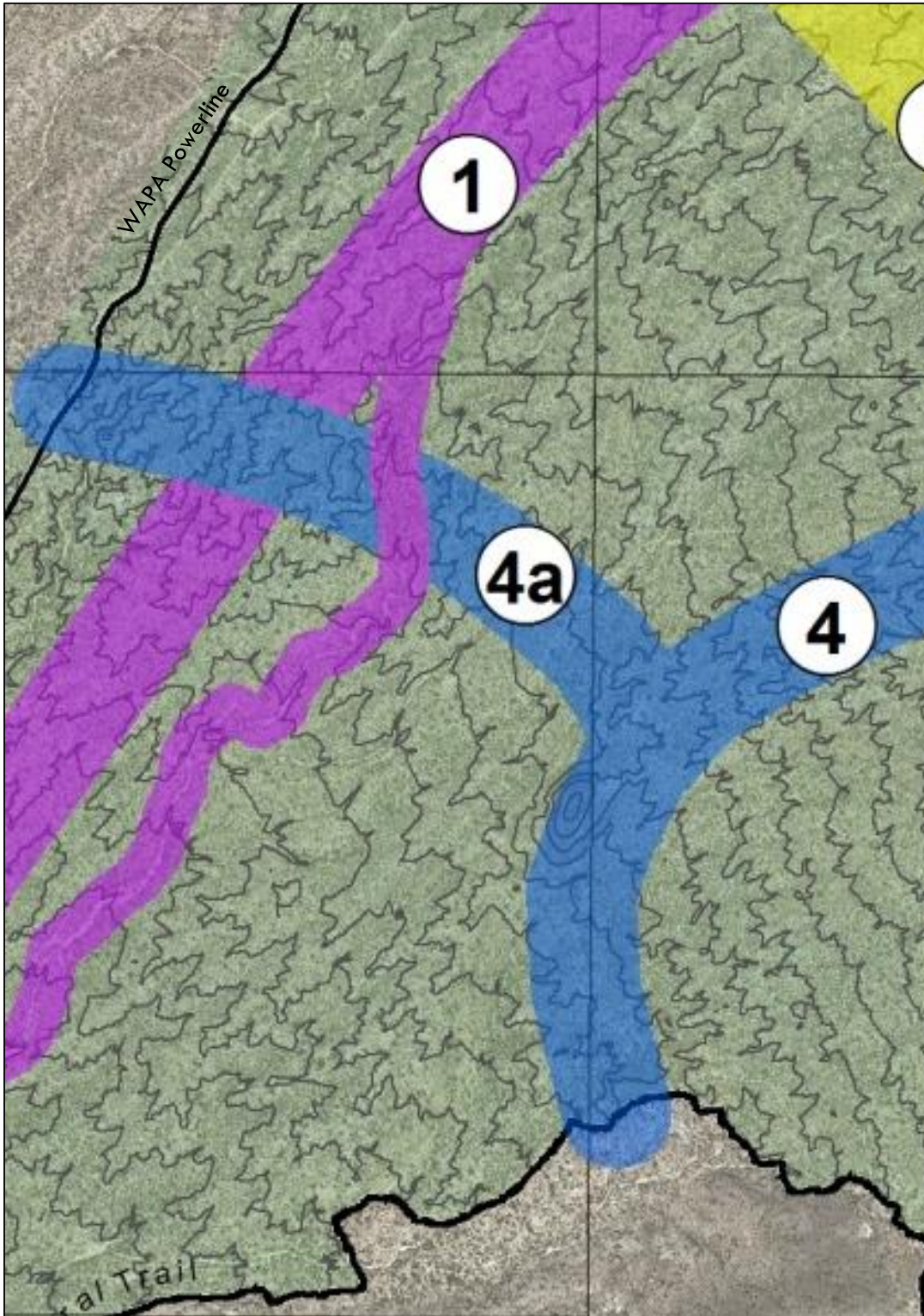
- Use existing trails when practical
- Provides connection between corridor #4 and #1 and WAPA Powerline
- Provides opportunity to connect to potential future trails on west side of WAPA Powerline

Trail Construction Standards

Trail Width	24 inches
Trail Slope	Find areas to increase slope
Turn Radius Target/Min	Target 15 feet. minimum 8 feet
Trail Surface	Decomposed granite
Technical Features	Some technical features/ moderate difficulty
Alternate Line	Limited

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #4A - MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #5 - DESCRIPTION

Terrain Description

- **Length** – ~ 0.75 miles
- **Elevation:**
 - West End – 2,930'
 - East End – 2,820'
 - High Point – 2,930' at W end (watershed)
 - Low Point – 2,820' at east end
 - Total Elev. Change - 110'
- **Soils/Geology:** Decomposed granite
- **General Description:**
 - Downhill from watershed divide (junction with #2 and #4) to Dove Valley Trail and junction with corridor #6)
 - Parallels drainage area – follows a tributary feeding the large wash at Dove Valley Trail
 - Opportunity exists to route trail along low ridge along south side of drainage area to keep trail on side hill and out of low area
 - Prominent ridge runs N/S off the north side of the corridor



Corridor Experience/Opportunity

- Connectivity – especially to the north and east – not in the wash but get to existing system
- Experience diverse vegetation
- Different viewable wildlife
- *Feeling of remoteness – primitive experience – more desert than wash
- Loop opportunities
- Scenic vistas
- *Access to area #7
- Ridges
- Bailout from washes

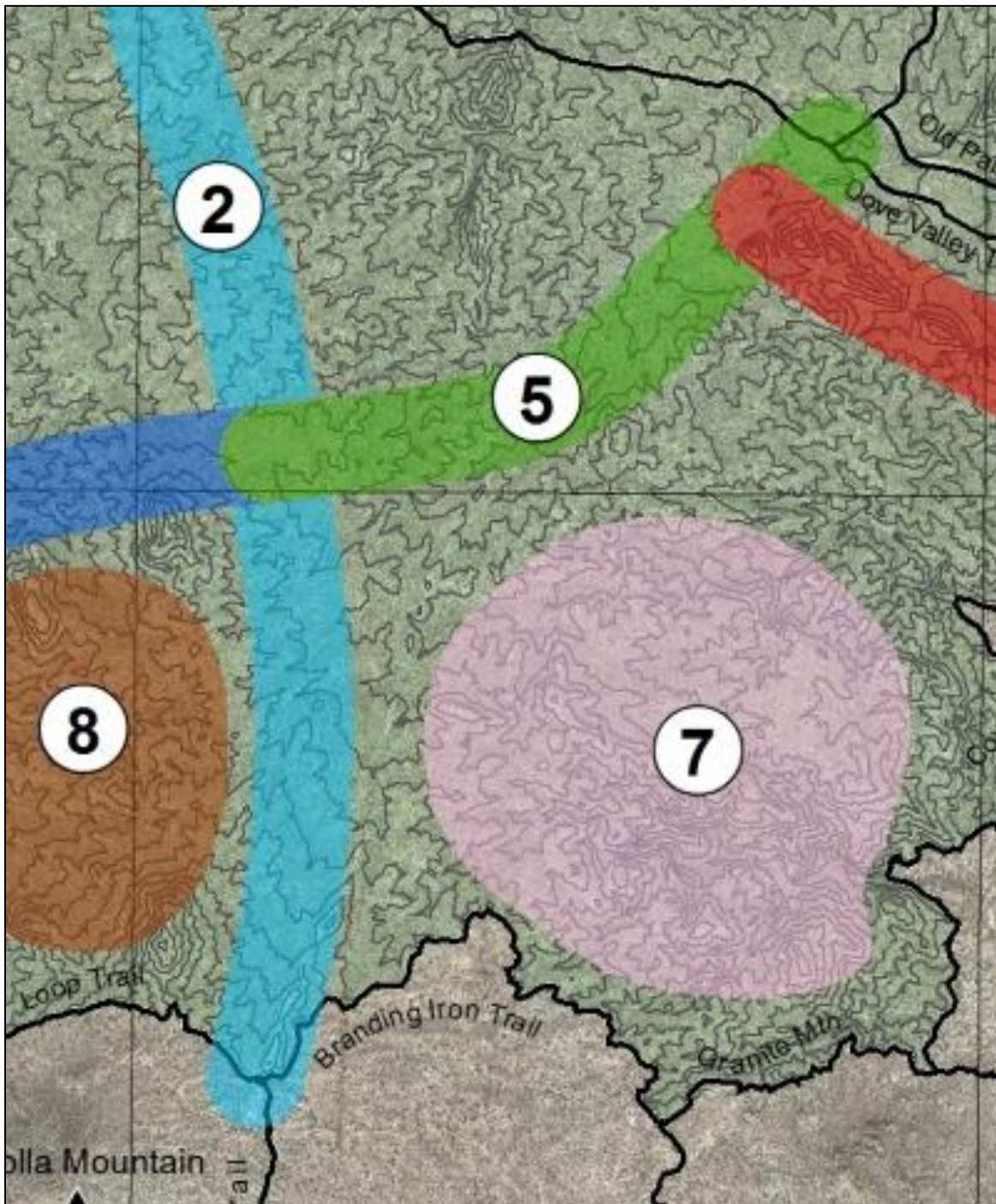
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Trail Construction Standards

Trail Width	24 inches
Trail Slope	Find areas to increase slope
Turn Radius Target/Min	Target 15 feet. minimum 8 feet
Trail Surface	Decomposed granite
Technical Features	Some technical features/ moderate difficulty
Alternate Line	Limited

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #5 - MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #6 - DESCRIPTION

Terrain Description

- **Length** – ~ 0.75 miles
- **Elevation:**
 - West End – 2,830'
 - East End – 2,740'
 - High Point – ridge high is 2,870'
 - Low Point – 2,740' at east end
 - Total Elev. Change - 130' (using ridge high)
- **Soils/Geology:** Decomposed granite
- **General Description:**
 - Corridor follows narrow ridge which has several breaks in it
 - Opportunity to swing trail from one side of ridge to other through the breaks.
 - Challenge will be to gain/lose elevation over short distance to get from high part of ridge to gaps in between



Corridor Experience/Opportunity

- **Great views from multiple viewpoints
- *Alternate from Dove Valley Trail
- *Variety of experiences
- ***More of a workout experience (turns and elevation)
- *Self-select type of trail for uses (washes)
- Connectivity
- Loop/access to corridor #7
- Ridge breaks create challenging trail for all users
- Bailout to Dove Valley

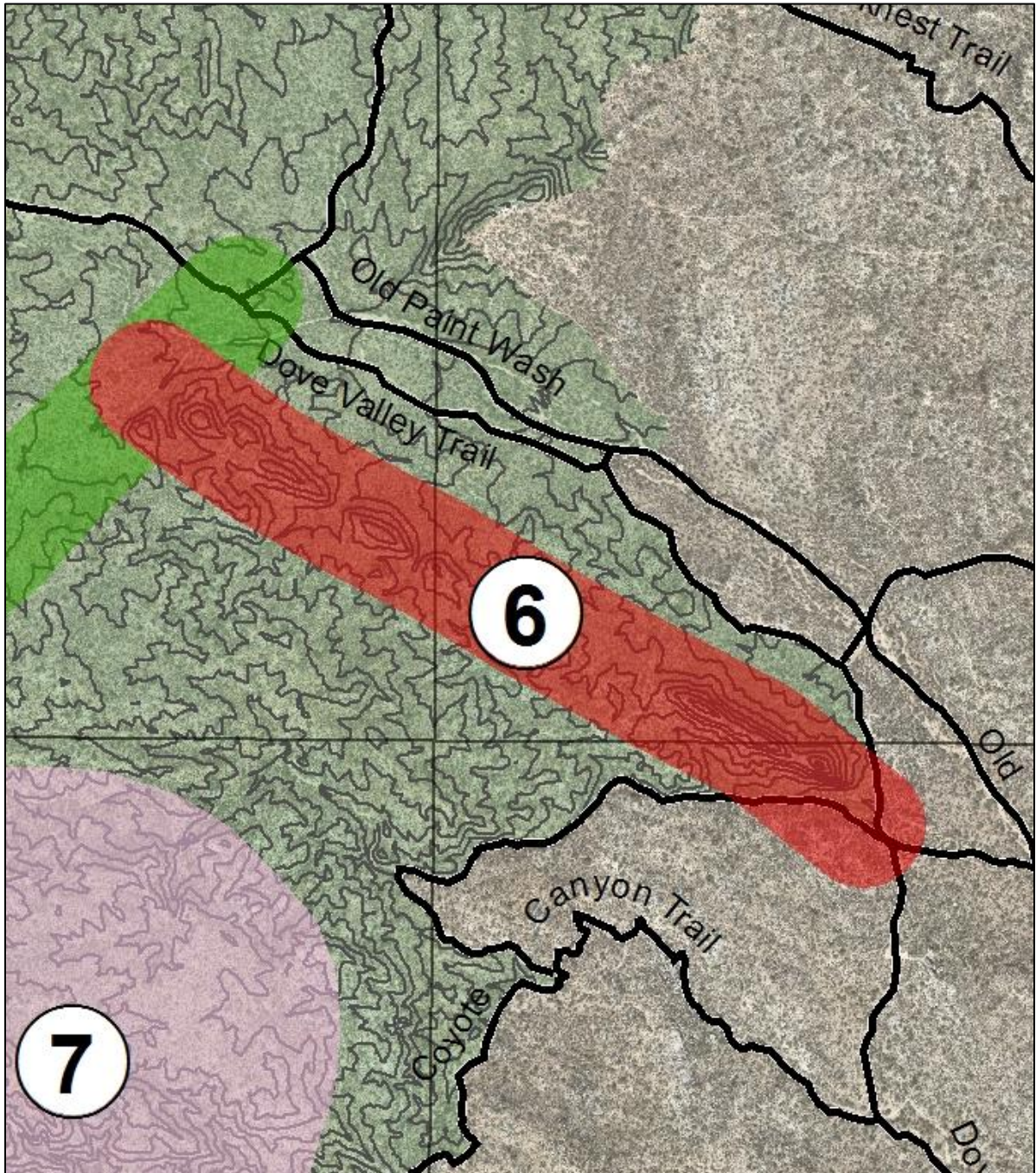
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Trail Construction Standards

Trail Width	32 inches
Trail Slope	10% maximum slope
Turn Radius Target/Min	Target 15 feet. minimum 5 feet
Trail Surface	Decomposed granite
Technical Features	Some technical features/ moderate difficulty
Alternate Line	More choices

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #6 - MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #7 - DESCRIPTION



Terrain Description

- **Length** – TBD
- **Elevation:**
 - High – 2,900' (terrace area in N section)
 - Low – 2,830' (wash in S section)
 - Total Elev. Change - 70'
- **Soils/Geology:** Decomposed granite
- **General Description:**
 - This area has a flatter higher elevation (terrace-like) section in the center
 - Deep washes/ravines have eroded into the southern side of the terrace area
 - Many exposed boulder and bedrock features
 - Has greater slopes over short distances
 - Area could be accessed on all sides by corridors #2, #5, and #6, and existing Branding Iron, Granite Mountain Loop, and Coyote Canyon Trails (see notes about access on Page 6 – Items that Apply to Trail Corridors #7 and #8)

Corridor Experience/Opportunity

- Lots of access opportunities
- Sustainable
- Skills area that may self-select
- *Destination for scenic vistas and technical trail features in the rock areas
- Trails to be a destination – not used for traversing the region
- Area of biodiversity – i.e. microclimates, junipers, etc.
- Lots of opportunities to avoid the sensitive habitat in terrain.
- Stay on ridges
- Nearby places for great views
- Access points that exist
- Routes may not follow normal standards
- Rocks can allow erosion protection
- Need to deal with landing zones
- Also see Page 6 for additional items that apply to Corridor #7

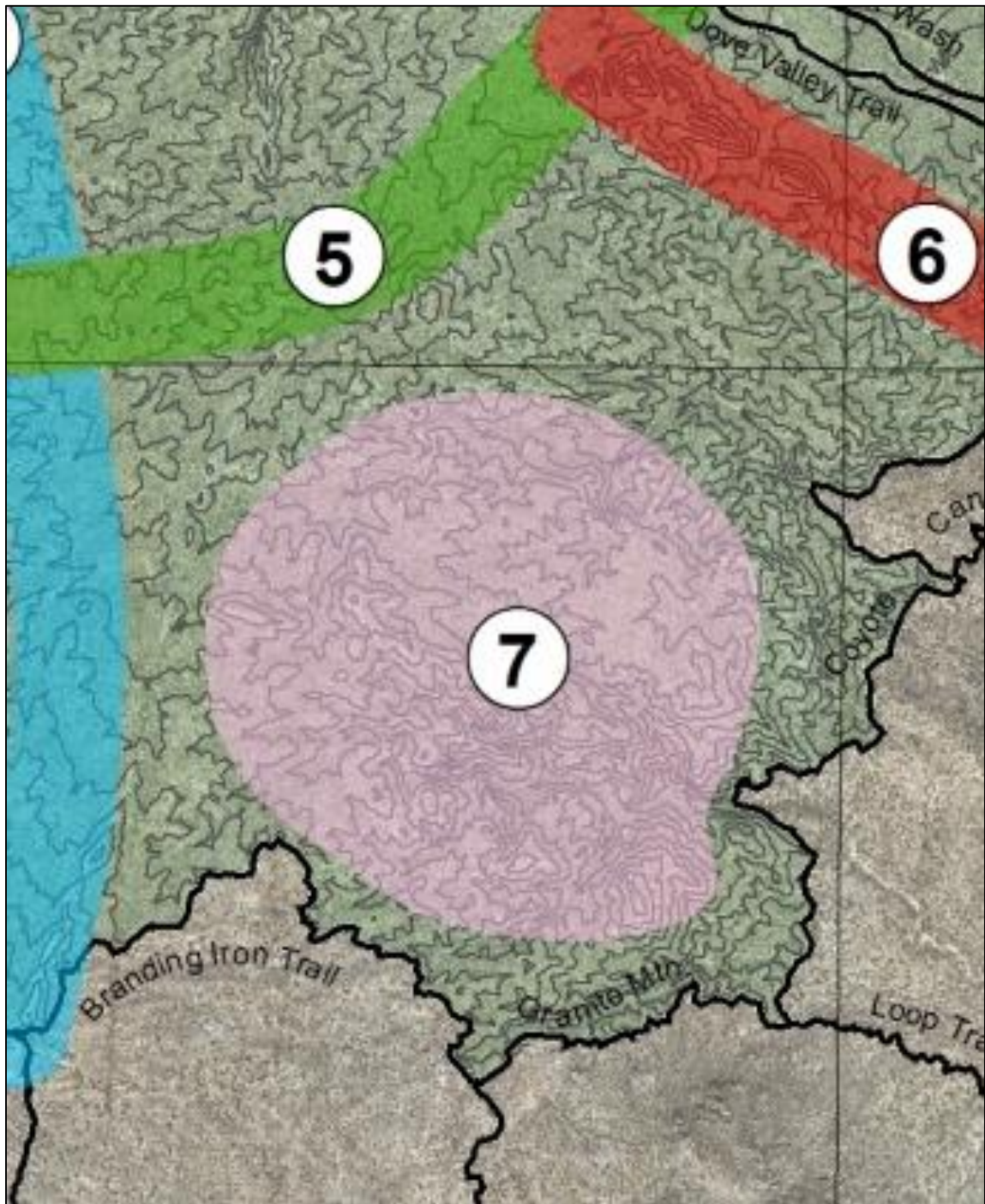
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Trail Construction Standards

Trail Width	24 inches maximum
Trail Slope	10% maximum slope – possibly higher on bedrock
Turn Radius Target/Min	Target 15 feet. minimum 5 feet
Trail Surface	Decomposed granite
Technical Features	Yes – higher difficulty
Alternate Line	Many choices

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #7 - MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

TRAIL CORRIDOR #8 - DESCRIPTION

Terrain Description

- **Length** – TBD
- **Elevation:**
 - High Point – there are a few high spots topping out in the 3,000' range.
 - Low Point – lower portions of this area are in the 2,900' range.
 - Total Elev. Change - approx. 100'
- **Soils/Geology:** Decomposed granite
- **General Description:**
 - This area contains multiple boulder formations and areas of exposed bedrock
 - Ground in between formations is moderate, and not as undulating as Area #7 to the east
 - Can be accessed on all sides from other corridors - #2, #3, and #4, and existing Cholla Mountain Loop Trail



Corridor Experience/Opportunity

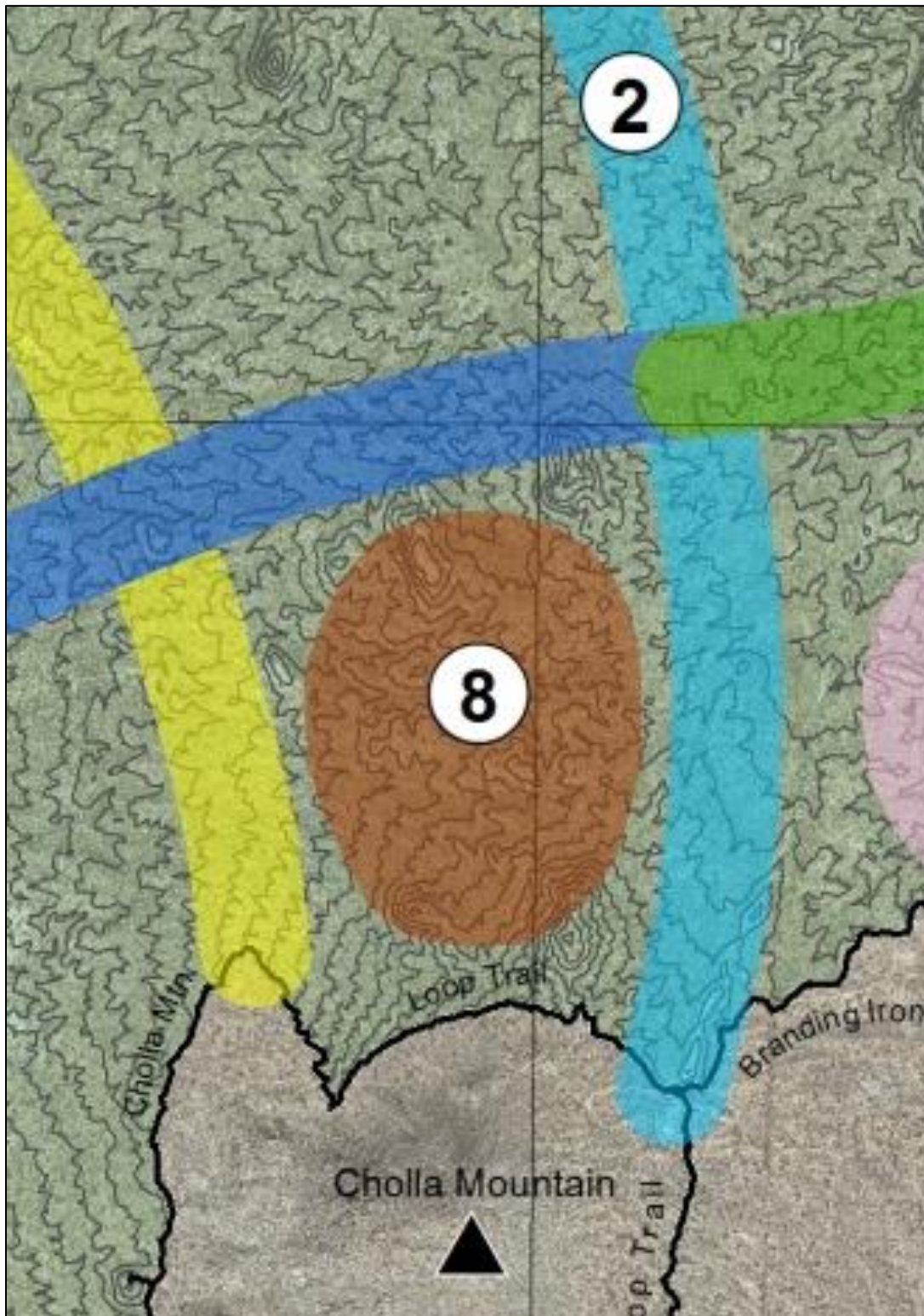
- Multiple access from other trails
- Existing trails have opportunities for great views (Cholla Mtn.)
- Connectivity to other corridors – pass through area
- Destination spot
- Similar use like area #7 – access rock features in the area
- Look at existing alignments
- Also see Page 6 for additional items that apply to Corridor #8

Trail Construction Standards

Trail Width	24 inches maximum
Trail Slope	10% maximum slope- possible higher on bedrock
Turn Radius Target/Min	Target 15 feet. minimum 5 feet
Trail Surface	Decomposed granite
Technical Features	Yes – higher difficulty
Alternate Line	Many choices

See additional information on Page 5 for items that apply to all trail corridors.

TRAIL CORRIDOR #8 - MAP



Old trails in the Phase 2C area that are not used in the final trail alignments will be removed and revegetated.

DESCRIPTION OF TERMS

The following are descriptions of trail-related terms discussed with the group.

- **Grade Reversal** – A reverse in the trail grade – usually a short dip followed by a rise – that forces water off the trail. Grade reversals are known by several different terms, including grade dip, grade brake, drainage dip, and rolling dip. Frequent grade reversals are a critical element of *sustainable* trail design.
- **Flow** – The rhythm, “feel” or tempo as determined by the landscape and the sequence of turns, ups and downs, and trailside objects (control points). Trails with good flow enhance the user experience, do not alter the speed of the trail, reduce user conflict, minimize user-caused soil displacement and avoid abrupt transitions that are likely to move soil from the trail and cause erosion, widening and unsafe conditions.
- **Trail Width** – The cleared distance from edge to edge of the trail surface.
- **Vertical Vegetation Clearance** – The clearing limit for vegetation measured vertically from the surface of the trail.
- **Horizontal Vegetation Clearance** – The clearing limit for vegetation measured horizontally from the edge of the trail to the edge of the plant canopy.
- **Trail Slope** – The slope, or steepness, of a trail, measured in percentage of rise divided by run.
- **Turn Radius** – An arc or curve that connects two straight trail segments, measured in feet.
- **Turn Radius Target** – The radius dimension that a turn should not be less than under ideal circumstances. Radii may be less than the target when the target is impractical (see Turn Radius Minimum).
- **Turn Radius Minimum** – The minimum turn radius to be used. Applies to areas where the target radius is not practical.
- **Trail Surface** – The composition of the surface of the trail.
- **Technical Trail Feature** – A natural obstacle in a multi-use trail that provides challenge to the users. Could be abrupt vertical or horizontal changes, pinch points, climbing or descending rocks, uneven surfaces, drop offs, steps, or sand. Drop offs to not exceed 12 inches for the main trail, but could be more than 12 inches on alternate lines. Fall line ruts worn by previous motorcycle use are not to be considered technical features. Materials are not to be imported into the Preserve for construction of technical features. Signage is important to advise users of difficulty.
- **Alternate Line** – Intentional design of trails to provide users with options for alternative routes. An alternate line is fairly short, is more challenging than the main trail, and leads to the same place as the main trail. Signage or other means of delineating alternate lines is important to demarcate routes, particularly on bedrock.

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DESCRIPTION OF TERMS (CONTINUED)

- **Rule of Half** – Defined by the International Mountain Bike Association, it is a general rule of thumb for trail slope, where the running slope of the trail should not exceed half the slope of the hill that the trail traverses. For example – the slope of a trail should not exceed 10% when the trail is traversing a hill with a slope of 20%. If the slope of the trail exceeds half the slope of the hill, then it is considered a fall line trail and is prone to soil erosion. At times, opportunities in trail design will allow to break the rule of half – for example, when the trail is on rock.
- **Fall Line** – The most direct line down a hill slope. Constructing a trail on the fall line encourages water to run down the trail and leads to erosion. Fall line trails are typically not *sustainable*.
- **Sustainable Trail** – The International Mountain Biking Association (IMBA) lists 11 principles for designing and locating sustainable mountain bike trails to allow water to drain off the trail and keep users on the trail:
 - 1. Locate the trail on a sidehill:** It is much easier to drain water away from a trail located on a slope than one on flat ground, and it is easier to keep users on the trail.
 - 2. Avoid the fall line:** Trails should always climb or descend a slope gradually, rather than travelling directly up or down it. Trails that travel directly up or down hills (fall-line trails) create a path for water that erodes soil and creates gullies. Riders may then widen trails by riding around gullies.
 - 3. Use the ‘half rule’ to guide trail alignment:** A trail’s grade should never exceed half the grade of the sidehill it is located on. Grade is the elevation gained divided by the distance of the segment of the trail (expressed as a percentage). A trail across a sideslope of 20% should not exceed 10%.
 - 4. Follow the ‘ten percent average’ guideline for sustainable grade:** The average trail grade is the slope of the trail for an entire uphill section. Generally, an average grade of 10% or less is most sustainable.
 - 5. Maximum sustainable grade:** typically, the maximum sustainable trail grade is 15% for a short distance, but is site-specific and varies with trail alignment, use of the half rule, soil type, annual rainfall, vegetation, use of grade reversals, type of users, number of users and level of difficulty.
 - 6. Grade reversals:** most trails benefit from grade reversals every 6-16 meters. A grade reversal is a spot at which a trail drops subtly and rises again, which forces water to drain off the trail.
 - 7. Outslope:** most trails should be built with a 5% outslope. An outslope is a tilt on the downhill or outer edge of the trail, which encourages water to sheet across and off the trail in a gentle manner instead of funneling down the trail’s center.
 - 8. Adapt trail design to soil texture:** uniform soil dominated by one particle type such as sand are most sensitive. A mix of different types of soil particles drains well and holds together. The presence of rock and gravel can improve a soil’s ability to withstand erosion.
 - 9. Minimize user-caused soil displacement:** Soil displacement by users can be reduced by three tactics: consistent flow, insloped turns and armoring. Consistent flow avoids abrupt and inconsistent turns that make riders brake hard or skid. Insloped turns (or bermed turns) improve trail flow and reduces skidding. They must be carefully designed to drain water and withstand user impacts. Armoring involves hardening the surface with gravel, rocks, synthetic materials or wooden boardwalks. It can be used to elevate the trail tread, especially in soft or wet terrain, or to armor the trail against user-cause erosion.
 - 10. Prevent creation of unauthorized trails:** unauthorized trail creation can be reduced by having a stable and predictable surface and providing a high quality experience that meets riders’ needs.
 - 11. Maintenance:** trail maintenance, as well as trail design, should focus on allowing water to drain off the trail and containing users on the trail.

- **Trail Corridor** – A conceptual linear region in which a trail could be located. A trail corridor does not represent an actual trail alignment on the ground, but instead a general region in which a trail could be located.

APPENDIX A

Preserve Ordinance Goals (Trail Corridor Check Points)

Prioritized goals:	Original Team Comments (6/24 mtg. & 7/9 mtg)
<p>1 - Honor and maintain the Preserve (Preserve Pristine Quality)</p>	<ul style="list-style-type: none"> • Preserve Pristine Quality • Honor and maintain the Preserve • Priority=Preserve
<p>1A - Respect and maintain wildlife and plant habitat (Locations and design of trails to provide adequate space and separation for habitat)</p>	<ul style="list-style-type: none"> • Respect/Maintain wildlife space • Consider wildlife in every aspect of design • Native Plant • Consideration for density of Trails??? • Biologic Diversity
<p>1A - Maintain scenic views</p>	<ul style="list-style-type: none"> • Maintain scenic Views
<p>1A - Protect cultural resources</p>	<ul style="list-style-type: none"> • Protect Cultural Resources (added by Staff)
<p>1A -- <i>Support Management Objectives</i></p>	<ul style="list-style-type: none"> • Management objectives to Support: <ul style="list-style-type: none"> ○ Tourism ○ Education ○ Habitat restoration
<p>2 - Provide superior opportunities to enjoy Preserve</p>	<ul style="list-style-type: none"> • Superior opportunities to enjoy Preserve • Provide superior opportunities
<p>2A - Provide trails and appropriate access areas for passive recreation (hiking, wildlife viewing, mountain bicycling, horseback riding and rock climbing)</p>	<ul style="list-style-type: none"> • Maintain passive focus • Provide enough access area • Consider Access – how do we get to 2C? • provide passive outdoor recreational opportunities for residents and visitors

APPENDIX B

Planning Goals

Summarized and Prioritized Goals:	Original Team Comments (6/24 mtg. & 7/9 mtg)
<p>1 - Trail location and design should be responsive to the terrain (Use what is there (terrain, boulders, features, old trails, etc.) when practical)</p>	<ul style="list-style-type: none"> • Respect the flow of the land • Respect the terrain • Terrain should dictate the type of trail • Use existing trails as much as possible • Use what is there
<p>1A - Trails should be sustainable</p>	<ul style="list-style-type: none"> • Trails should be sustainable • Sustainable design
<p>2 - Safety – signage, standards, sight lines, etc.</p>	<ul style="list-style-type: none"> • Clear sight lines/safety • Sight lines/safety • Safety • Appropriate signage
<p>2A - System to provide logical connectivity and appropriate access</p>	<ul style="list-style-type: none"> • Connectivity • Decrease the number of trails coming from access points
<p>3 - Trail design to encourage self-sorting and minimizing of conflicts between user groups</p>	<ul style="list-style-type: none"> • Minimize conflicts between the various users • Design trails that encourage /allow self-sorting
<p>3A - Trails become more primitive the further you go out from the trail heads</p>	<ul style="list-style-type: none"> • Trails become more primitive the further you go out from the trail heads

APPENDIX C

User Goals

Staff draft of prioritized goals:	Original Team Comments (6/24 mtg. & 7/9 mtg)
<p>1 - Design shall support Multi use</p>	<ul style="list-style-type: none"> • No user restrictions • Design shall support Multi use
<p>1A - Provide multi-level and multi-use trail opportunities (Utilize stacked loops, alternate lines, bale out routes, etc. to accommodate different types and levels of users)</p>	<ul style="list-style-type: none"> • Provide multi-level trail use • Various types of loops for different types of users • Consider various user types, levels, abilities, strengths, etc. • Escape/bale routes
<p>1A - Trails become more primitive the further you go out from the trail heads</p>	<ul style="list-style-type: none"> • More technical trails deeper within the preserve • Design some aggressive trails further out. Consider the various types of users
<p>2 - Implement comprehensive trail user management approach (Education, signage, share the trail, etc.)</p>	<ul style="list-style-type: none"> • Good signage (example) Share the Trail triangle • Trail user management including: signage, education awareness, enforcement
Specific Goals:	
<ul style="list-style-type: none"> • Provide new opportunities • Soften curves or turns • Consider the flow 	<ul style="list-style-type: none"> • We will address these in more detail as we discuss the trail corridor mapping and trail standards at future meetings

APPENDIX D – GROUP MEMBERS

Members of Working Group

Jean Anderson
Carole Burton
Jay Danek
Brent Demmitt
Con Englehorn
Andi Felton
Bob Gordon
Jan Hancock
Curtis Herbert
Terry Holmes-Stecyk
Rand Hubbell
Patrick Kell
Mike Milillo
Howard Myers
Sheri Novkov
Bret Parke
Jenny Powers
Korina Riffin
Alan Shelton
Paul Staker
Theresa Thraen
Melanie Tluczek
Dale Wiggins

City of Scottsdale Staff

Greg Bestgen, Citizen Liaison
Kroy Ekblaw, Preserve Director
Scott Hamilton, Preserve Planner
Liz Hildenbrand, Preserve Manager
Christy Hill, Citizen Liaison
Claire Miller, Preserve Coordinator
John Loleit, Preserve Coordinator
Bill Murphy, Community Services Executive Director

APPENDIX E – MEETING NOTES

JUNE 6, 2014

Announcements

Meeting attendees were asked to sign in and wear a name tag and complete a table tent name plate.

Team members introduced themselves and spoke to what they liked best about the Preserve

Kroy Ekblaw (Preserve Director) identified team members who were not in attendance.

Our Facilitator (Greg Bestgen) went through the meeting ground rules, which are attached. No team member had any discussion on the ground rules so they will guide the meetings.

These meetings will be respectful of your time, start and end on schedule.

Discussion

Kroy thanked everyone for their interest and participation. He summarized the Preserve History, speaking to how the Preserve initiative was citizen driven and funded by our citizens' voting to tax themselves two different times. The City successfully purchased the land from the Arizona State Land Department between 2009 and 2013. He spoke about the prioritization to control the motorized access to the Preserve and to the need to get trails in place prior to the trailheads being opened in 2013.

An important component of this team's effort will be to bring the perspective of the various user groups into the process. Area 2C was pointed out and it was explained that even though we have lots of old motorbike trails out there and also an approved corridor master plan, that this process will be looking at the area as a blank slate. If new approvals need to take place that will not be a factor in the decision to go that direction or not, that can happen if needed. There is not a forced time frame or necessary construction schedule.

Everyone in the room is a trail user, but we need to find balance between use and protection. Also need to balance user enjoyment and maintenance required.

Roundtable

Carole Burton asked about the current master plan. Kroy answered that we would consider all options and if new approvals were needed due to the team decisions that could happen.

Dale Wiggins talked about how the old motor trails out there made without planning and the variety of conditions that exist out in the area.

Korina Riggins spoke of using existing trails rather than building new trails.

Brett Park spoke to field trips and mapping resources.

Melanie Tluczek said she would be making some trips to the area and folks were welcome to come with her.

Carole Burton mentioned that videos of the trails were available.

Mike Milillo asked about getting all team members to same knowledge level and some of the resources that are available to them.

Kroy advised that all resources can be provided to the team.

Patrick Kell spoke to the Tonto National Forest Planning efforts. Kroy shared that he is involved in that and coordination is being addressed.

Time was spent working through people's availability and potential meeting schedule. Staff needs to check meeting space availability.

It was determined that the next meeting would be June 24, 4:30 to 6:00 pm at FEN unless team members were notified about a change in location.

"Homework" for the next meeting is to include:

- 1) Review the Preserve Ordinance (in particular the Purpose and Management Objectives sections and
- 2) Think about and be prepared to identify/discuss your goals for what trail corridors in the 2C area should offer to future trail users in the Preserve.

Kroy said schedule and the existing trail master plan would be sent to everyone.

JUNE 24, 2014

Team Members Present

Bob Gordon
Paul Staker
Brent Demmitt
Carole Burton
Jenny Powers
Theresa Thraen
Rand Hubbell
Melanie Tluczek
Sherri Novkov
Howard Myers
Con Englehorn
Jean Anderson
Mike Milillo
Curtis Herbert (and guest)

COS Staff:

Bill Murphy
Scott Anderson
John Loleit
Kroy Ekblaw
Christy Hill
Greg Bestgen

Meeting started at 4:30 and all members were asked to use the name plates to ease communication. Our facilitator Greg reminded us that in being respectful of every ones time the meeting would start and end on time as decided by the ground rules. He introduced Christy Hill would is also assisting in the facilitation of this group.

Kroy reviewed the notes from the last meeting. – There was no input from the team.

Discussion

Christy started the discussion on the Chapter 21 the Preserve Ordinance. The team members had reviewed in preparation for the meeting. The group was asked what the pulled out of the preserve purpose and management objectives as most important. The following items were identified as top priorities by members of the team:

- ✓ Preserve pristine quality, Trail Access, Native Plant Life
- ✓ Superior opportunities to enjoy Preserve
- ✓ Maintain Passive focus
- ✓ Provide enough access areas
- ✓ Priority=Preserve
- ✓ Use existing trails as much as possible
- ✓ Provide multi-level trail use
- ✓ Consider Preserve Commission's purpose, powers, and duties

Theresa asked about the Commission and how that relates to Council decisions. Kroy explained the roles of the McDowell Sonoran Preserve Commission and that we had two representatives on the team and how that related to items the City Council need to make decisions on. If our process outcome requires council action it would be pursued.

The question of user goals was raised by the facilitators. Sherry spoke that access to areas was very important to her and raised the question of 136th street and who is responsible for it north of Dove Valley. Kroy was comfortable there is existing ROW but not sure who manages as the city and county have a shared boundary there. Jenny then asked about access from the west, north of Pima and Dynamite. Kroy reviewed the map with the group and talked about the state land still in the recommended study boundary but not yet in the COS ownership.

Howard brought up multiuse and low maintenance as well as design to minimize conflicts.

Sight lines were discussed by several team members and loop opportunities. Less trails deeper in to give more of a primitive experience. "Being out there". Carole asked that try to use existing trails in the 2C area as much as possible and give a multi-level experience. There was some discussion regarding designated use days for user types and single use trails. Jenny brought up that it is really the user experience they are looking for not the type of user always. She talked about how on one horse she looks for a faster more flowing trail yet on another she need one that the animal need to stay focused and more controlled. The group generalized that providing a variety of experiences and trail types could encourage self-selection.

Exercises

The facilitators then led the team through two exercises to develop check points and identify user goals.

These were summarized by the facilitators and then grouped into suggested categories by staff. Staff is proposing the team review these at the next meeting to see if there is agreement with the groupings. Those lists are attached.

Field trip sign-up sheets were passed around and Kroy is coordinating two opportunities. June 27th and July 6th.

Two maps were handed out for the teams use.

"Homework" for the next meeting:

- 1) Each user, from their perspective write down what an easy, moderate and difficult trail is to them.

JULY 9, 2014

Team Members Present

Terry Holmes-Stecyk

Alan Shelton

Bret Parke

Dale Wiggins

Bob Gordon

Carole Burton

Melanie Tluczek

Howard Myers

Jean Anderson

COS Staff:

Bill Murphy

Scott Hamilton

John Loleit

Kroy Ekblaw

Christy Hill

Greg Bestgen

Meeting started at 6:05 our facilitator Greg reviewed the agenda for tonight.

Kroy summarized the Sunday, June 6th site walk. Several people who attend the walks also were at this meeting.

Discussion

Greg presented the items that the group noted in the check point discussion. Staff took the items and put into three groups, Preserve Ordinance – Planning Goals and User Goals. Initially it was confirmed that these categories and the items in them were acceptable by the group. The point was made that at any time these could be added or subtracted from, they are dynamic in the process. Secondly the list had items that were very similar or actual duplicates. It was decided that staff would make an effort to consolidate and then bring back to the group for review. Melanie added Preserve Connectivity of the land and biotic diversity to the Preserve Ordinance list and Brett added items from the management objectives. Discussion about access for parking and Kroy explained at this point no additional access areas are approved but some areas would be considered for potential parking. Howard suggested that Passive may need to be further explored as to what it means to the group. Protecting plants and biotic diversity was mentioned.

User Goals: Trail use and what no restrictions meant. Liz clarified that that came after the comment regarding days or the week for certain user types, not no rules. It was suggested that both of those be removed from user goals list. Bob spoke to the ordinance limiting certain things and degrees of trail use. There was group consensus that design should support the multiuse trail goal. Some sustainability discussion and Melanie spoke to that topic. She also said that the standards should be given out to the group prior to the topic being discussed.

Homework from Previous Meeting

Kroy handed out the responses. They were varied and those concepts mean different things to not only different user types but also different people of the same user group. Alan spoke that most of the levels of trails come from Slope/Grade, Distance and Technical Features. (Such as trail width, trail surface/footing, etc.). Howard added that overall elevation gain was also a factor. There was discussion of alternate lines as options. Discussion on trail ratings and commonalities between user groups continued.

Kroy suggested that these be synthesized in the corridors description process.

Scott then brief reviewed and explained the resource maps that were on the walls.

Discussion about the Tonto National Forest and future opportunities for shared access, trails and parking there.

Kroy introduced the idea of Big Picture Goals for the 2C area. Howard spoke to it being remote and thus limits the user groups or at least numbers of certain user groups. He also spoke that the idea of additional access points may not be such a good idea if the remoteness wanted to be maintained.

Some of the suggestions for use goals were long continuous trails, suggesting a main artery or perimeter trail. Additionally access and opportunity to have trails in areas of granite boulders/outcrops was identified, which led to a discussion of the concepts of “Free Ride” or “Playgrounds” areas associated with the granite features.

Scenic view points along the trails, such as high pints in old trail/scar areas as opportunities were mentioned.

Homework:

Kroy said be prepared for breaking into to small groups to begin working on trail corridor identification at the next meeting.

Whether fieldtrips should be held before or after next meeting were discussed and the group determined after would be more beneficial.

Next meeting: July 22nd 6:00 pm at Florence Ely Nelson Desert Center.

JULY 22, 2014

Team Members Present

Rand Hubbell
Sheri Novkov
Andi Felton
Con Englehorn
Mike Milillo
Curtis Herbert
Theresa Thraen
Alan Shelton
Bret Parke
Dale Wiggins
Bob Gordon
Howard Myers
Jean Anderson

Meeting started at 6:05 our facilitator Christy reviewed the agenda for tonight. Team members were asked to put names into containers demonstrating the primary mode of trail use in the preserve for small working group team selection.

Kroy summarized and presented staff's effort at consolidating the checkpoints. Howard asked for them to be presented in a priority order. Kroy commented that the Preserve Ordinance does not assign priority but that staff would attempt to order and return to the group for comment/input. No other comments to the goals/checkpoints were made.

Groups were randomly selected with folks representing each user type in each small group. Supplies and reference maps/information were available and the planning teams went to work.

Group Work-

The groups worked and discussed for almost an hour on a corridor plan and accompanying description. A presenter was chosen by each group and a summary of their thoughts and corridor plans were given to the group at large.

Staff took the information and will overlay all the groups' information and see what ideas were unique to a group and what were consistent between all the groups. This will be discussed at the next meeting.

AUGUST 5, 2014

Team Members Present

Jan Hancock
Sheri Novkov
Andi Felton
Con Englehorn
Mike Milillo
Theresa Thraen
Alan Shelton
Bret Parke
Dale Wiggins
Bob Gordon
Howard Myers
Jean Anderson
Melanie Tluczek
Korina Riffin
Carole Burton
Brent Demmitt
Jenny Powers
COS Staff
Kroy Ekblaw
Bill Murphy
John Loleit
Claire Miller
Scott Hamilton
Liz Hildenbrand

Meeting started at 6:00 our Kroy reviewed the agenda for tonight. Team members were asked to sit in same small working groups as the July 22nd meeting. Those members not present for the July meeting, were divided to each of the working groups.

Kroy summarized and presented staff's effort at grouping the checkpoints in a priority ranking. He explained the Preserve Ordinance does not assign priority but that staff attempted to group in a logical sequence and pairings

Group Work-

Kroy presented the staff compilation of the trail corridors identified in the small group work done at the July 22nd meeting. There was discussion that this did represent what the groups had presented. The question was raised as to the possibility of additional corridors being identified as the process continues. Kroy responded that we could continue to look at additions/changes or deletions as the process continue.

Scott then presented the terrain descriptions for each of the corridors. After each corridor the small groups then discussed the user experience and opportunities that they would envision a trail in this corridor would present. The ideas from each of the groups were captured on a master corridor description form. Corridors 1 through 4 were completed and are attached.

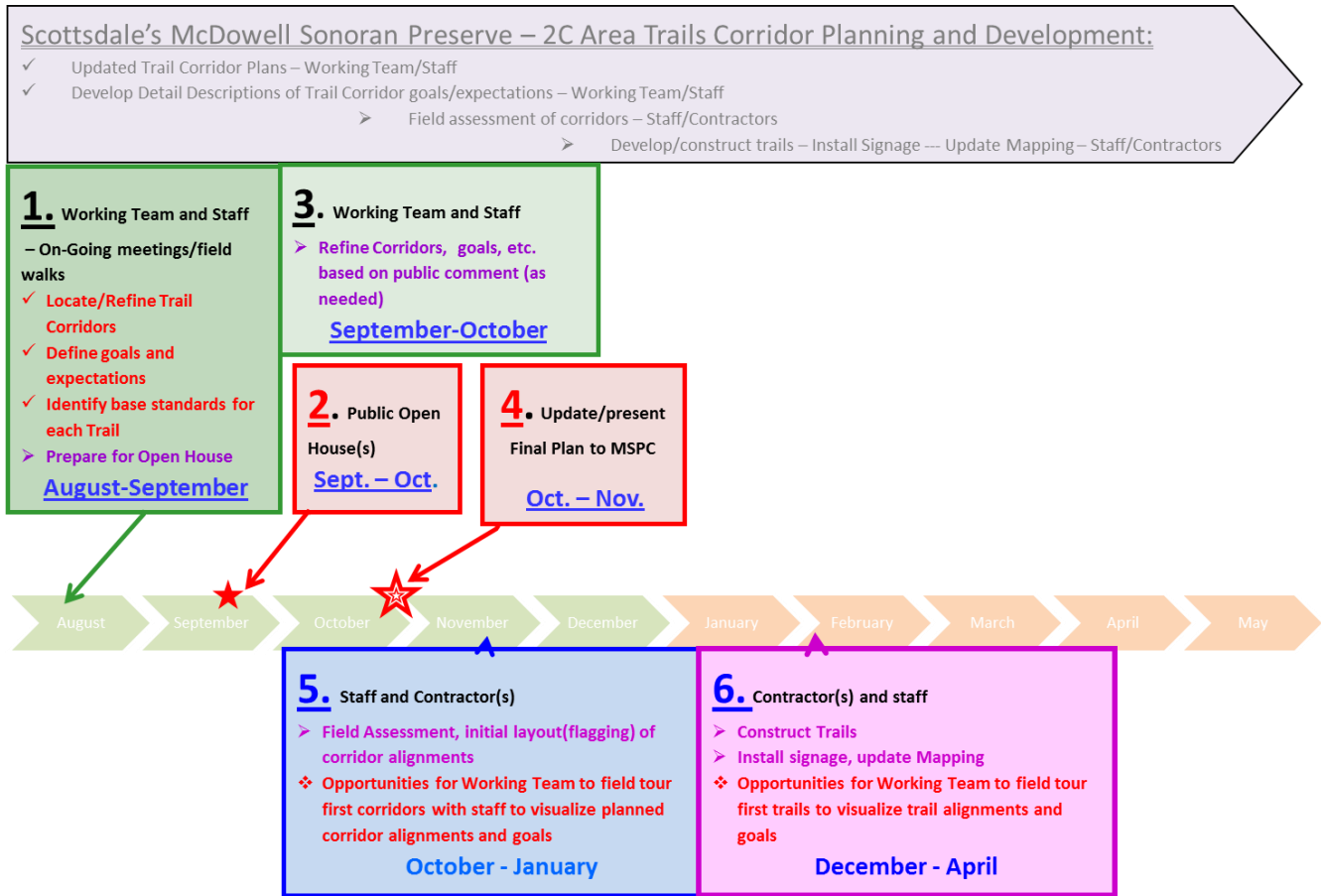
AUGUST 12, 2014

Team Members Present

Con Englehorn
Theresa Thraen
Bret Parke
Bob Gordon
Howard Myers
Jean Anderson
Melanie Tluczek
Carole Burton
Jenny Powers
Rand Hubbell
COS Staff
Kroy Ekblaw
Bill Murphy
John Loleit
Scott Hamilton
Liz Hildenbrand

Meeting started at 6:08. Kroy reviewed the agenda for tonight. Team members were asked to sit in same small working groups

Kroy presented a process timeline outlining the group finishing up the corridor plans, public meetings and the proposed construction schedule. He stress that all of this was dynamic and if we need more time we can take it, but wanted to give some outcome direction to the group. Draft timeline is on the next page.



Group Work-

Scott continued to present the terrain descriptions for corridors 5 thru 8. After each corridor the small groups then discussed the user experience and opportunities that they would envision a trail in this corridor would present. The ideas from each of the groups were captured on a master corridor description form. Corridors 5 through 8 were completed and all 8 descriptions have been attached below.

After completing the corridor discussion, we started the discussion on review of the phase 2C area and how it fits or does not fit into the Preserve Check points.

Bret commented that the area was centered in the Preserve and that was important to remember. He also spoke that some of the checkpoints may benefit from a glossary that defines the terms within the goals/checkpoints. Howard mentioned that one of the reasons he asked the checkpoints be prioritized was that his user goals could be and most likely are different from another users goals. Superior opportunities are going to vary depending on the user and this will be a challenge to the team.

AUGUST 20, 2014

Team Members Present

Theresa Thraen
Bob Gordon
Howard Myers
Jean Anderson
Melanie Tluczek
Carole Burton
Jenny Powers
Mike Millilo
Alan Shelton
Terry Stecyk
Korrina Riggan
Sheri Novkov
Andi Felton

COS Staff

Kroy Ekblaw
John Loleit
Scott Hamilton
Liz Hildenbrand

Meeting started at 6:01. Kroy asked if anyone had comments or concerns on the corridor descriptions and user experience/opportunity descriptions that were posted and also sent out to the at large group. There were no comments.

He then described how we were going to proceed through the meeting tonight to discuss what the physical vision (standards) for each of the trails in the corridors.

Sherri asked an initial question for the definition of a corridor vs the physical trail. Scott described how the corridor was a broad area that the trail would be located through. Sherri asked if there would be a single trail thru the corridor. Scott replied that for the most part that was the thought, there may be some connectors/links that are additional trails and that areas 7 and 8 may have not one single trail depending on the discussion outcomes. Staff and contractors would work from the descriptions and the standards (plan) to develop the trail resource within the corridor. He reminded the group that we have a goal to use existing trails where we can to incorporate in the trail planning but if not used and not part of the plan the other trails in the area would be mitigated.

To be sure that the team members had the same base knowledge because we have a variety of levels of experience in our group, Scott presented information on sustainable trail building, which the group has all agreed is a goal and checkpoint.

We then started discussing standard elements for each corridor. Because of the stated user goal of a variety of trail experience the team was asked to determine if the standards for each of the corridors should be the same or different. To assist in comparison so we addressed each standard element for every corridor before proceeding to the next element. Elements that were addressed at this meeting were width, vegetation clearance and slope.

Points was made that much of this will be dictated by the resource (terrain) that is out there.

The team got through 4 of the 8 standards that will be discussed and will continue this process at next week's meeting. All this information will be presented in a draft format in the plan report where all team members will have the opportunity to see it as a whole for review/comments/discussion.

These discussions outcomes are captured on each of the corridor descriptions (attached) but notes were not taken of the specific discussion points.

Possible field trip to discuss slope and turn radius was projected but no date/schedule determined at this time. Kroy also mentioned Sep. 3 and 10 as potential dates but many group members had conflicts with other city public meetings. Kroy did discuss that he hoped all team members could be available to support the final plan outcome at the public meeting that is also not scheduled on a firm date. (Possible in September).

AUGUST 26, 2014

Team Members Present

Theresa Thraen
Bob Gordon
Howard Myers
Mike Millilo
Sheri Novkov

COS Staff

Bill Murphy
Kroy Ekblaw
John Loleit
Scott Hamilton
Liz Hildenbrand

Meeting started at 6:15. (We waited to see if we had late arrivals)

We continued the discussion of the standard elements for each corridor. Because of the stated user goal of a variety of trail experience the team was asked to determine if the standards for each of the corridors should be the same or different. To assist in comparison so we addressed each standard element for every corridor before proceeding to the next element. Elements that were addressed at this meeting were turn radius, trail surface, technical feature and alternate lines.

Group developed a description for technical feature and alternate line:

Technical Feature

A natural obstacle in the multi-use trail that provides a challenge to users. Can be abrupt vertical or horizontal changes, pinch points, climbing rocks, uneven surfaces, drop offs (max 12 inches), steps or even sand. Group did not want motor grooves to be considered a technical feature or for obstacles to be built with imported materials. Signage of these areas was discussed and determined to be important.

Alternate Line

Provides an option or alternative to a particular route. The group decided that an alternate line should be the more challenging route, fairly short and lead to the same place as the main trail.

In addition we reviewed the planning goals for all trail corridors and got clarification where staff had questions. All this information will be presented in a draft format in the plan report where all team members will have the opportunity to see it as a whole for review/comments/discussion.

These discussions outcomes are captured on each of the corridor descriptions (attached) but notes were not taken of the specific discussion points.

Next meeting date, open house date and field trip date will be coordinated with entire team by email.

Field Trip Topics:

Turn Radius, technical features, sightlines

SEPTEMBER 11, 2014

Team Members Present

Theresa Thraen
Bob Gordon
Carole Burton
Andi Felton
Con Englehorn
Paul Staker
Jean Anderson
Melanie Tluczek
Jenny Powers

COS Staff

Bill Murphy
Kroy Ekblaw
John Loleit
Scott Hamilton
Liz Hildenbrand

Meeting started at 6:02.

Kroy spoke to tonight's schedule and plan to review the draft report. Copies were available. If review is completed at this meeting and revisions seem to be minor the open house will be the next item to be scheduled. Phase 2C planning team participation at open house will be important and staff is hoping everyone is able to attend. Looking at a commission update in November, then construction activity.

Draft Report Review

Scott provided a briefing on some of the field trip discussion and the questions that came up for the group and that those would be addressed as we went through the report. We then started looking at the document page by page with questions and suggestions from the group. Edit and suggestions that the group reached consensus on are made and tracked in the report and not detailed out in these notes:

There was a discussion on "primitive" and how the standards address this as well as if and when additional trailhead would be developed those items may need to be reviewed, but this plan was going to assume the current access area plan.

The group discussed if any additional corridors should be identified. A connection between corridor 4 and the WAPA power line was determined to be the only additional one needed at this time. This corridor will have the same standards as corridor 4.

It was again discussed and emphasized that those old motor trails not on the plan or incorporated with the planned corridors would be mitigated and restored.

Vegetation clearance was discussed and the standards for the plants identified at 48 inches were modified to 24. It was confirmed that this is from the edge of the trail surface and to the plant canopy. The only plants left at the 48 inches category were saguaro, teddy bear and chain fruit cholla. These standards were confirmed for each of the corridors during the review.

Kroy led the discussion for areas 7 and 8. He explained how the staff interpreted the comments from the group as to how the approach to the area trail planning. Limited controlled access points with main trail line to and around some of the boulder features with the opportunity for a few alternate line routes on some of those features. It was mentioned that not all boulder features would be incorporated in the trail alignments and that both archeological and flora and fauna would address what ones were more appropriate for this type of trail access. It was also mentioned that those most previously damaged by the historic motor use in the area would be more appropriate than utilizing a feature currently undisturbed. It was acknowledged that these areas would take some additional discussion and that the group would have the opportunity to participate in this discussion as the trail planning in the area moves forward. General comments were that we may not want connections to these areas from the phase one trails and that if there were sightlines to the area from surrounding trails we would not want the connections too circuitous as that could lead to short cutting trails. May have to deter some access with limiting features (boulders/plants/ etc.).

Scott then showed some examples of possible marking methods for these types of areas. It was determined that clear markings were appropriate for many reasons. The group did not like the idea of using paint.

After completing the report review – the group looked at the Preserve checkpoints to see if they felt like the corridor plan met the goals for the preserve identified in the ordinance. Melanie spoke to having done some research on appropriate trail density and that there is not a lot of specific information available especially for the Sonoran desert. In her opinion the plan was reasonable and that it would require monitoring and if unacceptable conditions started to happen then we would have to look at how to address at that point.

Possible open house dates:

9/29, 9/30, 10/2 (after Commission mtg), 10/6.

Kroy will communicate with group to determine best date for maximum participation.

Kroy (and staff) thanked the group for all the time dedicated to this effort.

DECEMBER 18, 2014

Team Members Present

Bob Gordon
Paul Staker
Jean Anderson
Rand Hubbell
Howard Myers
Korina Riggin
Alan Shelton
Sheri Novkov
Bret Parke
Brent Demmitt
Dale Wiggins

COS Staff

Bill Murphy
Kroy Ekblaw
John Loleit
Scott Hamilton
Liz Hildenbrand

Meeting started at 6:08.

Kroy welcomed and thanked the group for meeting. Two things that we would be working thru in tonight's discussion:

The Corridor Plan Report and the Implementation Process.

First check point: Is the group ok with the plan? Once that question is addressed we will go forward to discuss the implementation (which includes the design and building of the actual trail(s)). Kroy said no time schedule or expectation of when any or all work has to be completed has been set, however with rain/moisture in the soils, this is a good time of year to be constructing trails. He also mentioned that our process outlined back in June dictated that we be respectful of time and of each other.

First Question: Are there questions or fundamental concerns with the Plan?

Alan: half rule (rule of half) and times when he believed it could be broken such as on rock to improve flow and the user experience. Following contours only, can be problematic, need undulations.

Korina: make the half rule (rule of half) a guideline not a requirement – leeway when applying

Bret: Define “sustainable” and spoke about social sustainability as well as physical sustainability.

Alan: further clarification regarding the rule of half

Bret: spoke on water movement/ridges and water flow

Howard: Everything should be taken into context and he believes the discussion was getting too detailed. Plan document was not to drill down into the details of each trail. Need to focus on overall goals

Sheri: Agreed with Howard comment.

Korina: Said design is missing in the process and asked about Design vs. Implementation

Kroy: explained design is a part of Implementation as is construction.

Korina: spoke to social sustainability, serving a wide variety of users. Everyone will be happy - well maybe not everyone. With a wider variety of trails people won't make their own trails which is already happening. Faster users see the features differently than slower users. (user types not individuals). Same designer/builder/staff will create trails that have the same feel/look as phase one –want a system that will bring in users from all over and that would bring in \$.

Howard: Many users already coming to the Preserve and important to keep the multiuse aspect and that speed can create problems with multiuse. Especially the equestrian experience. Spoke to the Preserve rules and users enjoying the Preserve as a Preserve. Supports all the trails and the Preserve purpose was not the users of the Preserve, Preserve goals are what we should meet first.

Alan: spoke to flow and its many definitions depending on who is talking about it. He does not feel it necessarily means speed and can be used as a way to control speed. Important to not have abrupt transitions in the flow of a trail. Somewhat agrees with the purpose of the Preserve but thinks recreation is a purpose as well.

Bret: What is sustainability? Talked about vegetation clearance and that 24 inches on either side seems drastic. User conflict can be mitigated thru design, thoughtful trail design

Korina: spoke about properly designed trails

Liz: asked for clarification on what specific change to the report that Korina was looking for.

Bret: spoke to a higher level plan (several members expressed viewpoints and discussed this issue)

Kroy: Spoke to the differences within the Preserve terrain/compared to the terrain in the county park – Did the group want to add a definition of flow, (Alan spoke here as well) Should flow be defined to enhance a user experience and not be defined as just enhancing speed for the the user.

Howard: Most users are very happy, think of a bell curve, not going and should work to meet all and 80% was pretty good

Flow and the issue of trail design for multi-use/control (team members expressed viewpoints and discussed this issue)

Dale: thinks more of a rhythm than flow, Techno, smooth jazz, key is avoiding abrupt changes in that rhythm

Sheri: Spoke to her work experience and this Corridor Plan related to programming and schematic design. She believes that the Corridor Plan provided that level and that we have the right people to do the detailed work and that it is not the role of the working team to design and build the trails.

Kroy: High confidence that this document brings the vision of the team and that staff and the design/builders can then implement it the field with opportunities for the interested/available team members to see the filed progress and provide feedback to the staff/designers/builders as we progress. Staff is proposing a process that will start with field assessment, flagging and construction in the portions of corridors 1,3,4 and 4a that are connected (graphic to be prepared by staff to clarify these geographic areas), which will give us a sampling of several trail widths, terrain and different corridor/trail goals. Once that area is completed, we would proceed to remaining portions of corridors 1, 3 & 4 and include corridors 2, 5 and 6 (still involving the working team by some type of regular field opportunities (such as every or every other Friday afternoon or weekends) for feedback on progress. The last areas would be corridor 8 followed by corridor 7, again while keeping the working team involved in the implementation phases.

Rand: Spoke to the importance of a process including/utilizing field design with detailed flagging work and review and encouraged the team to stay engaged.

Liz: Spoke to the process of coordination between the staff (mainly Scott) and the contractors and the close and consistent coordination and working together in the field exactly as Rand was describing is utilized in the County Park system.

Discussion ensued regarding changing the corridor one trail width from 48 to 36 inches. The working team members present agreed with that change (Variety of individual comments from several members)

Long detailed discussion regarding the definition of sustainability and the various principles of sustainable trails resulted in:

Bret: Referenced the IMBA (International Mountain Biking Association) 11 principles of trail (track) design and location.

Bob: Spoke to not planning in areas where we have challenging soils and liked the reference Bret made to adapt trail design to soil texture, and suggested even avoiding certain textures, (like the clay soils on the northern side of Browns Mtn Trail due to long term maintenance challenges.

It was decided by the group that the definition of sustainability would be expanded and included in the definition of terms (page 26) and page 5 would reference page 26. (could identify terms throughout the report that are defined on page 26).

Alan asked how contractors were selected

Staff explained in detail the RFP process and that selection is based on ability not low bid.

Kroy said the next steps would be to send out the edited plan to the entire working team prior to finalizing the changes and that he would send out the process and dates for opportunities to view the trail flag lines.

Howard commented that he liked the process.

Kroy: Thanked everyone for coming

Meeting concluded shortly after 8pm

APPENDIX F – PUBLIC COMMENTS ON DRAFT CORRIDOR PLAN

#	Comment
1	Please, mountain bike trails that are more challenging and technical. Use some natural features ie. rocks to ride up or down on or squeeze between
2	I am a highly experienced and technically advanced mountain bike rider. I understand that this park cannot be made too difficult, but it is nice to see a destination for newer or less skilled riders. Keep the North part by Tom's Thumb tough! Thank you for the effort and time put forth!
3	One of the biggest improvements that would benefit 2C and the Cholla/Granite Loops is to build a trail heading northeast out of the Browns Ranch TH. This would allow users to more directly approach the areas in question. It would have the added benefit of getting a lot of mountain bike traffic off the Brown's Ranch Trail, significantly reducing user conflicts.
4	First, thanks for soliciting comments. It would be really nice if the next set of trails were more challenging. Some of the existing trails out that way (44, 22, 25) were really fun - except in the areas where they were rutted and just not sustainably built. It would be great to keep some of the steeper grades and use some of the existing features (like rocks and rock faces) to keep at least some parts of the trail challenging. Trail sections that you don't "get" every time are actually nice to have. Builds skills and gives you something to gauge your progress. Also, bring back whoop de doos and berms. They make the downhill - even slight downhill - way more fun. And you can design the whoops to be rollers. That way water drains off and you still get the "pump track" feel. There is a section on Maverick that is sorta like that.
5	Narrower, trickier trail options would be great. I mountain bike and hike with my family on these trails all the time. They definitely need some variety. Also, some singletrack on the east side of Brown's Ranch Rd heading back to the trailhead from, say Watershed, would be great. There's a big empty spot there that should have a trail to ease the flow around there. Thanks!
6	Thank you for taking the public's concern into account when planning the trails out here. I am a mountain biker and use the trails regularly. I would like to see some of the trails have a slightly higher degree of difficulty (not just smooth sidewalk trails). A little more rocky with some stair like features would be great (just some). I think you all have done a fabulous job out there, keep up the great work!
7	Hi, I'd like to add a few observations and wishes for how best to develop a system of trails in the Phase 2Ca area. First, having mountain biked the current Browns Ranch area, I feel the current trails are a good first attempt. They cover a lot of area, and provide access to beautiful desert. However, they are extremely groomed in my opinion. This encourages mountain bikes to go faster and faster. adding to potential user conflicts. By incorporating natural features and even having some rocks in the trails, this tends to slow riders down. This also greatly enhances the experience for mountain bikers. With the current trails, there is a nice beginner system that is close to the trail head. With Phase 2C, I'd like to see more technical trails be more of a focus. This adds to the remote feel of the desert and makes users that want that experience work for it, by placing these trails far from the trailhead. I feel that there is an excellent opportunity to enhance the trail system at Browns Ranch, and am encouraged by the content of the corridor plan. Hopefully the new set of trails can be hand built as much as possible. Machine built trails tend to turn into smooth race tracks. Which I hope could be avoided since that is what the current network of trails are. If volunteer work days are to be part of the building process for Phase 2C I will gladly help. Thank you for continuing to add to the wonderful trails in the greater Phoenix area. And your willingness to be open to more technical multi-use trails.

8	<p>First of all, a huge THANK YOU to everyone involved with the trail system around Brown's Ranch. I've been mountain biking there for about 5 years now and have been thrilled with the new trailhead and trails. My girlfriend and I are in the preserve about 3 days per week, mostly mountain biking. I was happy to trade the more technical trails through the rock features originating at Pima/Dynamite for the new mileage of trails. That being said, I would LOVE to have some trails that had a more intimate relationship with the existing rock features in the preserve. I totally get the balance between being a park and a preserve, it would just be nice to have something a bit more challenging than pointing the front wheel and pedaling. As a mountain biker, I decide where I want to ride based on what type of riding I want to do. If I want relaxing and scenic, I go to Brown's Ranch. If I want to climb, I go to Apache Wash or Brown's Ranch (thanks for the trail to the top of Brown's mountain!). If I want technical, I go to Trail 100 or out in Mesa, or even Sedona. There is a real opportunity to make the preserve THE place to go in Phoenix regardless what type of riding you want to do. The Phoenix area is routinely rated one of the top mountain biking cities in the country, and what you are doing in the preserve is going to further that reputation. Thanks again for everything- we're super pumped about the additional trails. PS- one more question that I've never gotten an answer to. I get why it's required to pick up dog poop on the trail, why is it considered acceptable to leave a huge pile of horse poop on the trail? thanks again!</p>
9	<p>I went to the open house and have the following comments: 1. First and foremost, thank you for all your effort to bring us this great resource. Take my comments as constructive criticism because I think overall you have done just a great job. 2. I am a mountain biker, hiker, and trail runner. I am out in the preserve often. I understand you need to make the trails near the TH and the main trail up to Browns suitable for a larger number of people of varying abilities. However, there is really no reason to make all the trails so wide and smooth. I go out there a lot, and even when the parking lot is full once you get off the browns trail it is few and far between people. A wide smooth trail is simply not necessary and not wanted by most people who venture off the main browns trail. The preference is a narrower single path. The wide and smooth trails create a larger wound in the natural landscape, undoubtedly cost more, and are less interesting. It is okay to have some rocky or rough terrain. It is okay to be narrow. 2. It would be nice if in some (not all) locations the trail would route up an over some of the pitches instead of cutting the trail into the hillside. It would add some to the technical nature and add some more vigor to the hike/ride. I understand that trail sustainability is concern, but there are plenty of examples where the old trail went up and over and remained in good shape after many years. It is also more costly and obtrusive to the environment to cut the trail so many times into the hillsides. The one example that I think of the most is the one on the connector trail from Fraesfield to Toms Thumb. There is a spot where a lot of effort was put into cutting into the hillside (and it is a bit of an eyesore to boot) where it would have been great to go up and over. 3. I think there are locations where bike or horse specific trails could be made without a lot of effort. In particular, in zones 7 and 8 there are places through the rocks which would make fantastic single track bike trails. Again, no need to remove all the rock...it adds to the technical challenge and makes it more interesting for trail running and hiking. 4. Trail damage after rain - You should consider closing the preserve after heavy rains. I refrain from going on the trails after heavy rains. I wish others, especially the horses would do the same. I am not anti-horse and actually like seeing them out there. Seems to fit in well considering we live in AZ. However the horses make severe divots in the trail after the ground is softened by a heavy rain. And it takes months for the trail to recover. A single horse does more damage than a score of hikers or bikers... but regardless I am willing to do my part and stay off after rain. I would like to see the equestrians do the same. Usually it means staying off for only one day to allow the trails to dry - no big deal. Is there some way we can get a message to the equestrian community to respect the trails and stay off for a day after the rain. Otherwise, I say just close the preserve outright as needed. I will respect the closure and hope others would do the same. Thanks for your time.</p>

10	I would like to see mountain bike specific trails. Trails that are built to maximize flow by incorporating berms and other sustainable trail features. Additionally, I would like to see more technical trails with sustained descents.
11	I am an equestrian user of the preserve. I would like to signage similar to what is on the Prescott trail system alerting bikers and hikers to yield to horses. The current signage is too small and not dramatic enough. Typically MOST people are courteous, but nearly every time I ride, I run into a bicyclist that is rude. They are flying down a hill, with their head down and headphones on. This is a very threatening picture to a horse! Several of these bicyclists have yelled at me and been belligerent about moving off the trail. This is for both my safety and the safety of the bicyclist. I have a photo of the signage from the Prescott area.
12	Impressed with multi-user process. Appears to be more variety in the difficulty of proposed trails, which Mountain Bike community was seeking. Would like to see alternate lines used if any significant technical spots on trails 4, 4a, 5 & 6. Equestrian damage during wet conditions is significant and long lasting so would like to see, wherever possible, alternate trails for equestrian use. The plan lacks specification for the use of undulations, based on the running slope of the trails. Undulations are a more effective tool for managing water than just relying on the 1/2 rule and outslope. Please consider adding this design specification to your Trail Construction Standards. Request the City give the mountain bike community the same consideration as given to the equestrian community, (for example, Coyote Canyon), and consider adding some purpose built trails for mountain biking using banked turns, etc.. Thinking outside the box, to provide a great user experience should be allowed as long as consequences and no other users are at risk. Critical to success is the ability of the trail construction crew to flag and build a great trail (undulations, length of dips, etc.). Suggest, wherever possible, flag lines be run or ridden in both directions to ensure good "rhythm" of the trails. Preferably, let users check out flag lines (as Dale W. did on Hawknest trail which resulted in improvements to the original flag line.) Thank you for your excellent process and work.
13	As a mountain biker, hiker, and equestrian I am hoping that everyone can get along and share the trails:) Sounds silly but when riding my bike a whistle or cheery 'whoop whoop' coming around blind turns can save someone's life...Would be great if bikers were open to using bike bells..
14	I love what you have done out there! As you think about the overall AZ Riding community, more Technical and Challenging trails would complimentary to the existing network. I could envision cut offs, 1/2 loops across the network. This would also alleviate the intermediate and higher riders get off the trails where they may be intimidating to hikers and beginner bikers. Thank you again for investing in AZ's Health!!!

15	<p>Hi! I'm a mountain biker. I have lived in Legend Trail for over 10 years and have ridden in 2C for about 20 years with a growing group of riders and have a vested interest in keeping "my backyard" a fun destination for all. Here is my condensed opinion: The 4-4a trail should incorporate as much of the existing trail #22 as possible. This comment has been made already and I would like to 2nd it. Though unmaintained, I ride it consistently and it has held up extremely well against the elements over the years. Aside from 1 or 2 short segments, 95% or more should remain intact in my opinion. What a fun mile and a half it is to ride 22 east to west from existing trails 5/25 intersection to the powerline. However once it hits the powerline, the remaining few 100 meters of 22 that continues south should be closed due to erosion. The trail plan for the #2 zone trail should incorporate all of existing trail #25 and the continuation of #22 going in the north-westerly direction. These two north-south trails are unmaintained yet have stood the test of time and need little if any, rerouting as they connect jeep road 3 to destination area 8. Having ridden both the 22 and 25 existing trails consistently for years, I have NEVER seen equestrian traffic on them, not once. This should be taken into account in the decision to build any new trail in these corridors. The existing 22 & 25 trails are far enough from any trailhead that their primary (if not only) users will be mountain bikes in my experience. In areas 5 & 7, there are many closures necessary due to erosion (mostly existing trail 5 north of Granite) That being said, it would be a tragedy to see a route closed that includes existing trails 44,24,& 5 starting from roughly jeep road 3, then heading south and west to the new Coyote Canyon trail. Again, this route is unmaintained yet extremely fun and challenging, not to mention one of the more scenic areas of the northern preserve and should remain open in my opinion. In the NE section of the 1 zone, there is an unnumbered existing trail that goes south and west to the 5 zone that should remain open due to fun factor and durability. Starting at the Stagecoach parallel fence, it takes one from the Tonto to old jeep trail 3 in the most entertaining route that exists. I would be happy to take the time to go over any of these existing trails with the individuals charged with building/improving/closing trails anywhere in 2C corridor. I feel that less closure of existing trails in 2C is better for attracting users. I realize new trails are going to be built and I feel that if done right, they will make what is, in my opinion, the best riding in the area even better.</p>
16	<p>I have been mountain biking, hiking and running in the Browns Ranch area since 2011. I am out there 3-5 hrs a week and it was exciting when the new trailhead went in. The trail changes and eliminations were good for hiking and running, as well I'm sure for horse use but was bitterly disappointing for advanced mountain biking. Even the trails with the best flow currently are filled with sharp dangerous corners and placed often at the bottom of a drop/wash which then requires cyclists to nearly stop and lose all momentum and then climb back up the other side. In most cases this design is not needed for other users or for erosion control. It would seem the only explanation is to discourage use by mountain bikers. As best I can tell, cyclists are the largest user group on these trails, especially more than 1-2 miles from the trail head. It would be VERY appreciated if the trails in the next phase would put a lot more effort into making cyclists use of the trails a more rewarding experience. Give us some challenges by leaving old flow trails more intact with banked turns, whoop-de-does, steep climbs, boulder features etc. I have designed, built and maintained mountain bike trails before and am more than happy to join as a volunteer to help maintain these areas.</p>
17	<p>As a regular user and resident of Scottsdale, mountain bike usage mainly. My concerns are sustainable trail building which is not being practiced currently i.e. northwest side of Brown's Ranch Mountain trail is rutted from recent rains and unrepairable and should be closed until it's repaired. Please consider not closing the older trails. Also, I'm concerned about safety and we should consider a two trail system in certain areas. Trail width is also a concern as most of the new trails are overgrown by vegetation and the trails are getting smaller. Willing to volunteer.</p>

18	Liz and Scott have been amazing with their receptive attitudes, their willingness to work with the community and the passion that they hold for the Preserve. They've done a fantastic job in spearheading the new trails and making sure that the neighbors are listened to. They're the best! The county should take lessons from you all!
19	Great job!
20	Would like to see Granite Mountain area develop trails up in the rocks to experience views, etc.
21	Dove Valley trail from Coyote Canyon. The trail is very sandy (deep) and the drops harbor rattlers that cannot be seen or avoided. Please re-route out onto the slopes. Regular trails are heavenly.
22	I'd like to see some trails with longer, straighter sections that allow mountain bikes to pick up speed. Use sweeping turns rather than sharp turns. Place more emphasis on going over obstacles like boulders rather than around them.
23	I am very interested in access to the Tonto National Forest. I am interested in how access fits into this plan. I really appreciated the information on the trails. Additional information that would be helpful: a) More detail on the experience for each individual group (hiker, biker, equestrian) b) More detail on the elevation change on the trail (not just high and low points). I really like Trail #1. This looks like a fun trail with flow. The Preserve needs a few (just a few) trails that are really FUN for mountain bikers.
24	Great idea. Awesome!!
25	Would like to see a better trail on the final climb to Brown's Mountain, railroad ties (natural staircase?) on the last 2/10 th mile would be great. Trailhead on north side.
26	Looks good – great idea.
27	I love the presentation on-site and the wonderful efforts of the Preserve staff and volunteers. I hope the Pima/Dynamite trailhead passes!