

**Cross Plains
Mixed-Use Mountain Biking and Hiking Trail Proposal
South Conservancy Area**



**Presented by:
Cross Plains Mountain Biking Trail Volunteers and Enthusiasts**

**In Cooperation with:
Capital Off Road Pathfinders – www.madcitydirt.com & Facebook
International Mountain Bicycling Association – www.imba.com**

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1. Summary

After an initial discussion with the Village of Cross Plains Parks and Recreation Department (Village) and as requested by the Parks and Recreation Planning Committee, an unofficial group of local mountain biking enthusiasts and trail building volunteers (Trail Volunteers) has assembled the following proposal for expanded mixed-use mountain biking and hiking trails in the Cedar Hill, Cedar Glen, and Glacial Valley conservancies (South Conservancies). It is the Trail Volunteers' goal to promote the quiet enjoyment of the outdoors through the development of mixed-used mountain biking and hiking trails. In working towards this goal the Trail Volunteers have assembled a set of proposed trail plans that will increase accessibility to the south conservancies, create trails that are friendly towards all mountain biking ability levels, build trails that are sustainable and responsibly constructed, allow for separate hiking-only use, control access to the trails through established public properties, designate trailhead parking away from homeowners, coordinate with the future development of the Ice Age Trail, and promote local business by strategically locating the trailhead near Main Street. The Cross Plains Trail Volunteers are committed to planning, constructing, and managing mixed-use trails as is further detailed in this document.

2. Introduction

A number of Trail Volunteers belong to the Capital Off Road Pathfinders (CORP) which is non-profit organization established as the Dane County chapter of the International Mountain Bicycling Association (IMBA). Both CORP and IMBA provide an abundance of resources that are available to communities for the planning, financing assistance, construction, and maintenance of mountain biking trails. It is the intention of the Trail Volunteers to partner with CORP in establishing and maintaining the proposed South Conservancy trails. CORP currently manages 10 similar trail systems throughout Dane County including nearby Pleasant View Trails (Middleton), Blackhawk Ski Club Trails (Middleton/Cross Plains), Quarry Ridge (Fitchburg), and Blue Mounds State Park (Blue Mounds). In addition to these trails there are managed trails in Madison, Cambridge and Verona.

Mountain biking as a sport has grown exponentially in recent years and is driven by its ability to connect biking enthusiasts with the outdoors as well as provide them with an exciting physical workout. Statistics as furnished by IMBA and CORP show the following trends for 2015:

- +25% IMBA National Membership Growth in 2015**
- +44% IMBA Midwest Region Membership Growth in 2015**
- +71% CORP Dane County Membership Growth in 2015**
- 400+ CORP Affiliated Members in 2015**



Mountain biking has proven to span all age groups, young and old, as is seen by club statistics and expanding youth program participation. The Wisconsin High School Cycling League with races sanctioned by the National Interscholastic Cycling Association (NICA) has expanded to 24 teams for the 2016 season including a Madison West team. For younger participants, the local Blackhawk Ski Club and Cambridge Cam-Rock trail systems have previously implemented summer youth programs and seen a large amount of success. Blackhawk Ski Club reports limiting out at 88 participants for their 2016 summer youth program.

3. Benefit to the Community

The establishment of mixed-use mountain biking and hiking trails in the Cross Plains south conservancies would continue to promote the attractiveness of our community and provide residents with another source of enjoyable recreation. Allowing mountain biking in these conservancies would show our community's commitment to healthy living and would provide another way for our kids to stay active. In many cases, mountain biking has proven to be a life-long sport for enthusiasts as it is more active than hiking, it is considered low impact on your body, and it is a quiet way for enthusiasts to enjoy the outdoors.

Also, mountain biking has proven to be a great economy boost in many of the communities that host local trails. The Cam-Rock trail system located between the villages of Cambridge and Rockdale is a good example of a mix-use community trail system that is intertwined with local businesses. The Cam-Rock Trail system starts in the Village of Cambridge where the trailhead is located directly off of Main Street. The various mixed-use hiking and biking trails continue south along the Koshkonong Creek to where they link up with the Village of Rockdale. On nights and weekends you can see the trailhead packed with cars and the local Bike Shop and stores filled with people. Additionally, this trail system is owned by Dane County Parks who requires modest trail pass fees to help support and maintain the trails. In 2014 they reportedly sold 623 annual trail passes and collected a total of \$9,968.



In addition to increased public traffic due to a mountain biking presence, there is a potential for direct business creation as can be seen from CORP 2015 Gold Level sponsor statistics. Generally bicycle shops in the area have reported sales growth in the range of 3-12% and a number of new bicycle shops were opened including shops in Baraboo and Mount Horeb. Bicycle shops reported that offroad mountain biking sales grew almost 20% as a result of Madison metro area trail improvements and the introduction of winter “fat biking”.

The concept of a local mixed-use trail system in Cross Plains may also prove to be effective in creating strategic partnerships with local businesses. Over the years CORP has reached out to numerous non-industry sponsors and in return the club has held mountain biking events with these sponsors. Example sponsors being Ale Asylum, Capital Brewery, Camrock Café & Sport, Rockdale Bar & Grill, Metcalfes Market, and El Grito Taqueria. Also, trailheads provide a great opportunity to recognize sponsors and display their generosity to users of the trails. It would be the Trail Volunteers’ intent to engage local businesses and establish similar relationships with mutual benefit.

The addition of mountain biking as an outdoor recreation option for our community may also promote organized events in the area. Youth programs like the Wisconsin High School Mountain Biking League or a summer mountain biking program similar Blackhawk Ski Club would be great options for the proposed community trail system. Also there are a number of other events that trail systems may typically hold such as fun rides, youth outreach events, community learning activities, races, and fundraising events.

Lastly, we would propose that trails established in the South Conservancies be open to mixed uses as allowed by the Cross Plains community. We would propose that these trails be open to all users including mountain bikers, hikers, runners, dog walkers, snowshoers and any other allowed uses. There are many successful examples of mixed-use trails around the country and a few local references have been provided on the following page. We would be happy to provide additional references upon request.

QUOTE:

“... The local mountain bike community has a great track record with land stewardship, working with partners, and providing education to users... That balance would make them good partners as it relates to conservancy lands. Their affiliation with the International Mountain Bicycling Association (IMBA) is an important component in managing sustainable trails.... I think that opening up lands to new, responsible users helps build future conservation efforts and helps develop relationships between groups that can be beneficial in maintenance, preservation, and fundraising.

Jacob Tissue, CPRP
Warner Park Facility Manager
Parks Division, City of Madison”

Pleasant View – Middleton, WI

Owner – City of Middleton

Trail Description – Approximately 3 miles of single track mountain bike trails, pump track, and jump line, linked to Blackhawk Ski Club trail system

Other Uses – Shared parking lot with Pleasant View Golf Course, cross country skiing, snowshoeing, snow biking

Reference Person – Penni Klein,
City of Middleton Public Lands Manager,
(608) 821-8360

Blackhawk Ski Club – Middleton, WI

Owner – Club Owned

Trail Description – Approximately 3 miles of single track and double track mountain bike trails ranging in difficulty from beginner to advanced

Other Uses – Hiking, dog walking, ski jumping, downhill skiing, cross country skiing

Reference Person – William Lorman,
CORP President and Blackhawk Ski Club Member,
(608) 332-6247

Quarry Ridge – Fitchburg, WI

Owner – City of Fitchburg

Trail Description – Approximately 4 miles of single track mountain bike trails ranging in difficulty from beginner to advanced

Other Uses – Shared trailhead with all uses, paved bike path, hiking, dog walking, fishing

Reference Person – Tony Hartmann,
Fitchburg Common Council, District 4, Seat 8
(608) 215-4446

Camrock Park – Cambridge, WI

Owner – Dane County Parks

Trail Description – Approximately 9.5 miles of single track and double track mountain bike trails ranging in difficulty from beginner to advanced

Other Uses – Shared trailhead with all uses, road biking, hiking, dog walking, fishing, cross country skiing, snowshoeing, snow biking

Reference Person – Chuck Hutchens,
CORP Steward

Blue Mounds State Park – Blue Mounds, WI

Owner – Wisconsin DNR

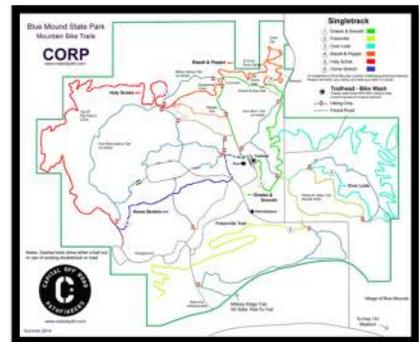
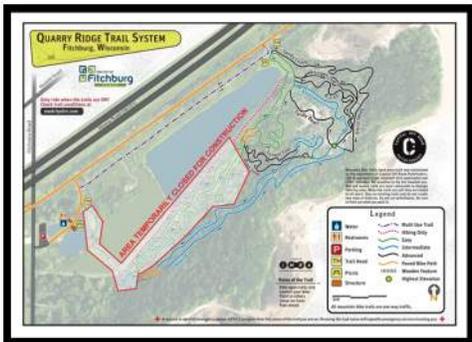
Trail Description – Approximately 13 miles of single track mountain bike trails ranging in difficulty from beginner to advanced

Other Uses – Shared trailhead with all uses, road biking, hiking, dog walking, cross country skiing, snowshoeing, snow biking, snowmobiling

Reference Person – Walt Hougas,
CORP Steward and Friends of Blue Mounds State Park member



www.madcitydirt.com



4. Misconceptions about Mountain Biking

People who are unfamiliar with the sport of mountain biking may jump to conclusions based upon what they've heard or a preconceived notion about the sport in general. Our hope is to inform the Cross Plains public about the people who make up the mountain biking community, many of whom are Cross Plains residents, and provide research supported information so that educated decisions can be made. The reality is that the mountain biking community is a responsible group of individuals who are dedicated to the quiet enjoyment of the outdoors. A few questions that you may have:

a. Do mountain bikes damage trails and the surrounding environment?

Scientific studies show that mountain bikers cause no more wear to trails than any other users. In fact a number of studies show that there is no statistical difference between measured bicycling and hiking effects. The important thing to understand is that trails deteriorate over time and a number of factors including moisture, grade, soil type, and use may slow or speed this impact. The solution is to construct sustainable trails as detailed in Section 5 and to prohibit use during wet periods.

See study references in Appendix C.

b. How do mountain bikes affect wildlife?

Science has yielded mixed results in comparing the impacts of hiking and bicycling on wildlife. A lot of the results are relative to how familiar wildlife is with human activity among a number of other complex factors. The general consensus is that mountain biking and hiking have similar effects on wildlife. It could be concluded that since there are already established hiking trails in the South Conservancies that mountain biking would have limited impact on the existing wildlife.

See references in Appendix C.

c. Is mountain biking noisy?

Looking back on your bicycle as a child, you may have a preconceived notion of a bike clinking and clanking down a bumpy trail. The reality is that modern mountain bicycles are very quiet and efficient. Mountain bikes are capable of moving quietly through the woods and in many cases provide opportunity to see more wildlife than other uses. We would anticipate no more disruption to the South Conservancies than is already present with the existing hiking trails.

d. Is mountain biking safe?

Like any bicycling activity, there are dangers that should be acknowledged and precautions that should be taken. Personal protective equipment (PPE) should always be worn to reduce the severity of injury. Another important precaution is properly maintaining your bicycle and understanding how to operate it. It is always important to ride your bicycle in a controlled manner in order to prevent injury to yourself or others around you. Also, there are a number of precautions that can be implemented during trail design which will slow travel, improve sight distance, reduce head-on encounters, and separate user groups.



Another concept to evaluate is one way versus two way trails. Two way trails have been implemented in other communities, but trail etiquette is more critical in these locations. The general rule of thumb is that mountain bikes yield to all other trail users. If head-on collisions are a concern, trails can be designated as one way to direct the flow of users.

Lastly, while intermediate and advanced level trails can be constructed on varying steep terrain, beginner trails are generally more suitable for flatter wide open areas. Although low grade beginner trails can be constructed on varying terrain, steep side slopes are generally not ideal because of the risk for running off the trail. We would recommend that beginner trails be limited to the Glacial Valley Conservancy area to take advantage of the more mellow grades.

e. Will mountain biking bring unwanted traffic to the area?

The mountain biking community is generally very courteous and respectful as can be confirmed by the residents surrounding many of the existing trail systems. Individuals in Middleton, Fitchburg, and Madison can attest to the fact that mountain bikers have cleaned up some of their existing open space areas and have helped to preserve these resources. Also as mentioned previously, mountain bikers will bring wanted business to local shops, restaurants, and bars.

5. Proposed Cross Plains Trail System



The Cross Plains Trail Volunteers propose to construct mixed-use mountain bike trails in the Glacial Valley, Cedar Hill, and Cedar Glen conservancies as detailed in the Appendix A – Proposed Trail Map. Trails would be generally constructed for beginner and intermediate users and would be constructed in phases based upon Village direction, Trail Volunteer commitments, and funding.

A discussion is required with the Village to determine the location and quantity of mixed-use trails that are desired. The defining question is: *Are we planning to construct a trail system that is considered a destination or simply for local use?* Per the proposed trail map, we would be able to construct approximately 6 miles of mixed-use trails in the Glacial Valley, Cedar Hill, and Cedar Glen conservancies. This length of trail would more than likely qualify our system as a destination in the mountain biking community and would increase the chances of seeing community benefits as detailed in Section 2 above. Although a more limited trail system in the Glacial Valley or Cedar Hill/Cedar Glen conservancies would be welcomed, this may be considered a local trail system in the mountain biking community and would not see the benefits of a destination trail system.

In order to address residential parking concerns and to promote local business, we propose that a signed trailhead be installed near the existing Zander Community Nature Park parking lot at Main Street and Mill Creek Parkway. Trail users would utilize existing paved trails and Bourbon Street to access the new mixed-use trail system. The ultimate build-out goal would be to have trail access points at established parks rather than through easements on private properties. These access points have been detailed as Phase 3 on the Appendix A – Proposed Trail Map.

For the new mix-use trail system, we propose to construct a mixture of beginner and intermediate trails in order to provide community residents with the largest benefit. Beginner trails are typically around 36” in width, have an average grade of 5%, and may have avoidable obstacles built into the trail. Intermediate trails are typically around 24” in width, have an average grade of 10% or less, and may have obstacles of 8” tall or less in the trail. In all scenarios we would propose to have a set of independent “hiking only” trails in each of the conservancies for users who are concerned with shared use trails.

The Glacial Valley conservancy has the most low grade terrain and is best suited for beginner trails. We propose to construct beginner trails in this area as part of “Phase 1” single track construction. Work would primarily be completed with volunteer labor and minimal Village assistance. The main access point for these trails would be Bourbon Road and could later be switched to Cedar Glen Park on Lunden Drive as part of Phase 3 construction.

The Cedar Hill and Cedar Glen conservancies are primarily located on steep side slopes and would be reserved for intermediate trails as part of the proposed “Phase 2” single track construction. Steep hills and side slopes are actually preferred by intermediate and advanced users and will make for a unique riding or hiking experience. The downside to these types of trail systems is that they typically require a larger hill cut which is difficult to construct with volunteer labor alone. Constructing these trails as part of Phase 2 would allow the Trail Volunteers to fundraise through the 2016 season and hire a professional contractor to construct these trails in 2017.

It is the Trail Volunteers’ goal to build sustainable trails that are exciting for all ability levels. The Trail Volunteers in cooperation with CORP have a number of people and resources that are available to support these goals. It is our intention to hire a professional trail builder who will configure trails using sustainable construction standards as published in IMBA’s Trail Solutions manual. The following are basic principles of a sustainable trail system:

- a. **Rolling Contour Construction** – This technique involves routing a trail perpendicular to a side slope rather than routing trails directly uphill or downhill.
- b. **Half Rule** – Trail grade must be at least half of the sideslope grade. For example a hill that has a 20% grade (Rise/run) should not have a trail that is steeper than 10%.
- c. **10% Average Grade** – A trail can be steeper or shallower than a 10% grade, but the average grade along an extended climb should not exceed 10%.
- d. **5% Outslope** – Trails should always maintain positive drainage which is typically achieved by constructing a 5% outslope in the downhill direction.
- e. **Grade Reversals** – Many times people envision straight smooth trails, but it is actually better to intentionally add grade reversals which will shed water more effectively.
- f. **Speed Control** – Trail chokes and corralling is a good way to slow speeds on a trail but is also a good way to make a trail more interesting to users.

Lastly, it is understood that the Ice Age Trail Alliance plans to construct a trail segment through the Glacial Valley Conservancy. We are committed to cooperating with the Ice Age Trail Alliance and feel that there is enough space in this area for the Ice Age Trail segment and a separate mixed-use trail loop. Further discussion is required on how to achieve this, but our thought is to coordinate a trail transition as part of our proposed three phase build out.

6. Estimated Cost

The estimated cost of construction includes several components that can be accounted for in different ways. As noted previously, it would be the Trail Volunteer's plan to construct the project in phases so that a mixture of volunteer work and professional work could be utilized.

CORP routinely partners with Landowski Trailworx as their preferred professional contractor. They have built trails for many of the local trails systems including Pleasant View, Blackhawk Ski Club, Trek Bicycles Private Trails, and Marquette Michigan. Professional cost estimates are based on previous CORP projects with Landowski Trailworx.



As it is understood, the Village does not have a budget to construct these trails and capital costs would be the responsibility of the Trail Volunteers to raise. As discussed with the Village parks and recreation department, any donated equipment or resources would be appreciated. Our plan to execute the project would be as follows:

Phase 1 – Glacial Valley Conservancy Beginner Trails – Summer 2016

Scope of work

- Trail Volunteers: Trail layout, construction by volunteers, tools donated by CORP
- Village: Survey and mark property boundaries, furnish trail markers

Capital Costs

- Professional layout – \$500
- Trailhead map - \$1000
- Trail signage - \$200
- Small bridge crossing - \$1000

Phase 2 – Cedar Hill and Cedar Glen Conservancy Intermediate Trails – Summer 2017

Scope of work

- Trail Volunteers: Trail layout, major construction by professional, minor construction by volunteers
- Village: Survey and mark property boundaries, furnish trail markers

Capital Costs

- Professional trail construction - \$45,000
- Trail signage - \$200
- Small bridge crossings - \$4000

Phase 3 – Cedar Glen Park and Holfelder Park Access Trails – Summer 2018

Scope of work

- Trail Volunteers: Trail layout, major construction by professional, minor construction by volunteers
- Village: Survey and mark property boundaries, furnish trail markers

Capital Costs

- Professional trail construction - \$15,000
- Trail signage - \$200

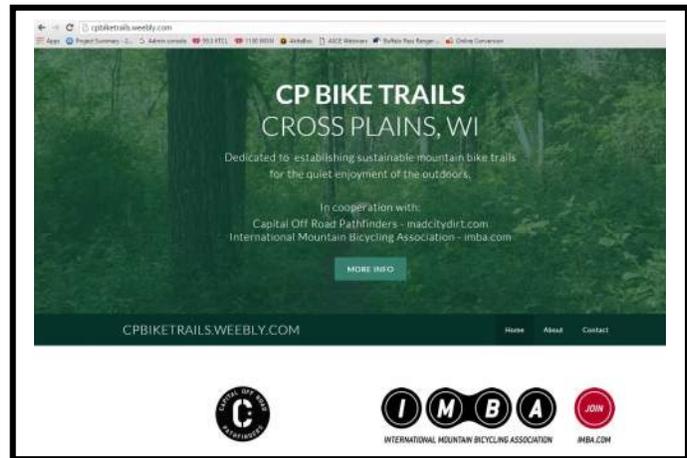
Total Estimated Capital Cost = \$67,000

**Note that professional service rates are discounted per CORP specific work agreement*

7. Fundraising

In order to raise funds for this work the Trail Volunteers will rely upon a number of various fundraising approaches. Fortunately CORP and IMBA have a number of resources and proven strategies for funding similar trail systems.

CORP is set up as a Wisconsin non-profit organization and all donations will be routed through CORP. A separate account will be set up within CORP's general ledger and all donations will go directly to the Cross Plains trail system budget.

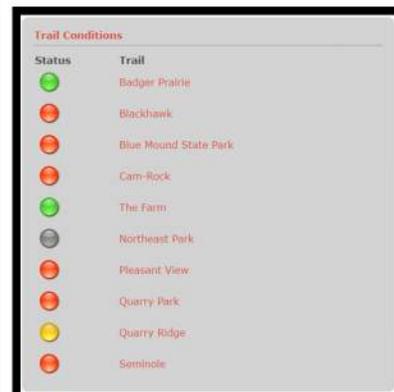
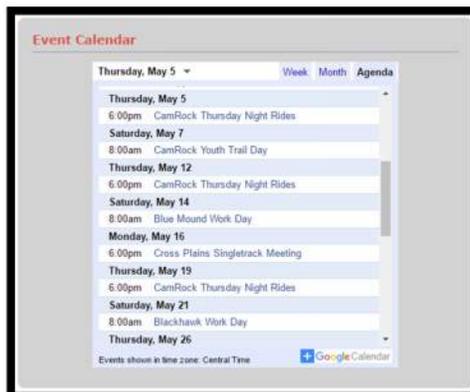


The first step in fundraising will be to set up a communication system and make the project visible to the public. Communication will be key in developing our volunteer base and for soliciting donations. In addition to communicating through the CORP website and Facebook page, a project specific website will be established to communicate volunteer opportunities, post events, post information, collect donations, and track fundraising progress.

The second step will be to begin investigating funding sources and assign volunteers to approach potential donors. Funding sources that have been utilized on other projects include local businesses, industry donors, grants, events, raffles, billboards, donation stations, trail passes, and individual donors. It is the Trail Volunteer's goal to fully fund this project through volunteer work and donations.

8. Trail Maintenance

Once a trail is established there is always a question of who will maintain the system going forward. CORP is currently managing 10 similar trail systems and is committed to managing the Cross Plains trail system in cooperation with the Trail Volunteers. The two main principles of CORP's trail maintenance program are that, 1) Each trail system must designate a trail steward and 2) The steward must organize trail maintenance and post trail conditions as required. Additionally, CORP organizes spring work days for each of the trails at the club level. Trail status and volunteer events are posted and tracked on the CORP website, www.madcitydirt.com, as shown below.



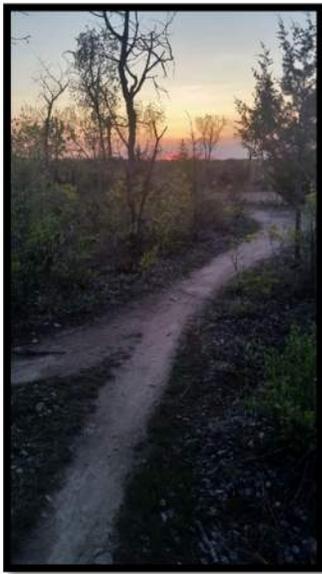
9. Conclusion

In conclusion, we hope that the Village and the community share in the Trail Volunteers' goal to promote the quiet enjoyment of the outdoors through the development of mixed-used mountain biking and hiking trails. The Cross Plains Trail Volunteers are committed to planning, constructing, and managing the proposed mixed-use trails and are willing to begin work as soon as the Village provides approval.

We appreciate the Cross Plains Parks and Recreation Committee taking the time to review our proposal and would be happy to discuss any questions further.

Sincerely,

Cross Plains Mountain Biking Trail Volunteers and Enthusiasts

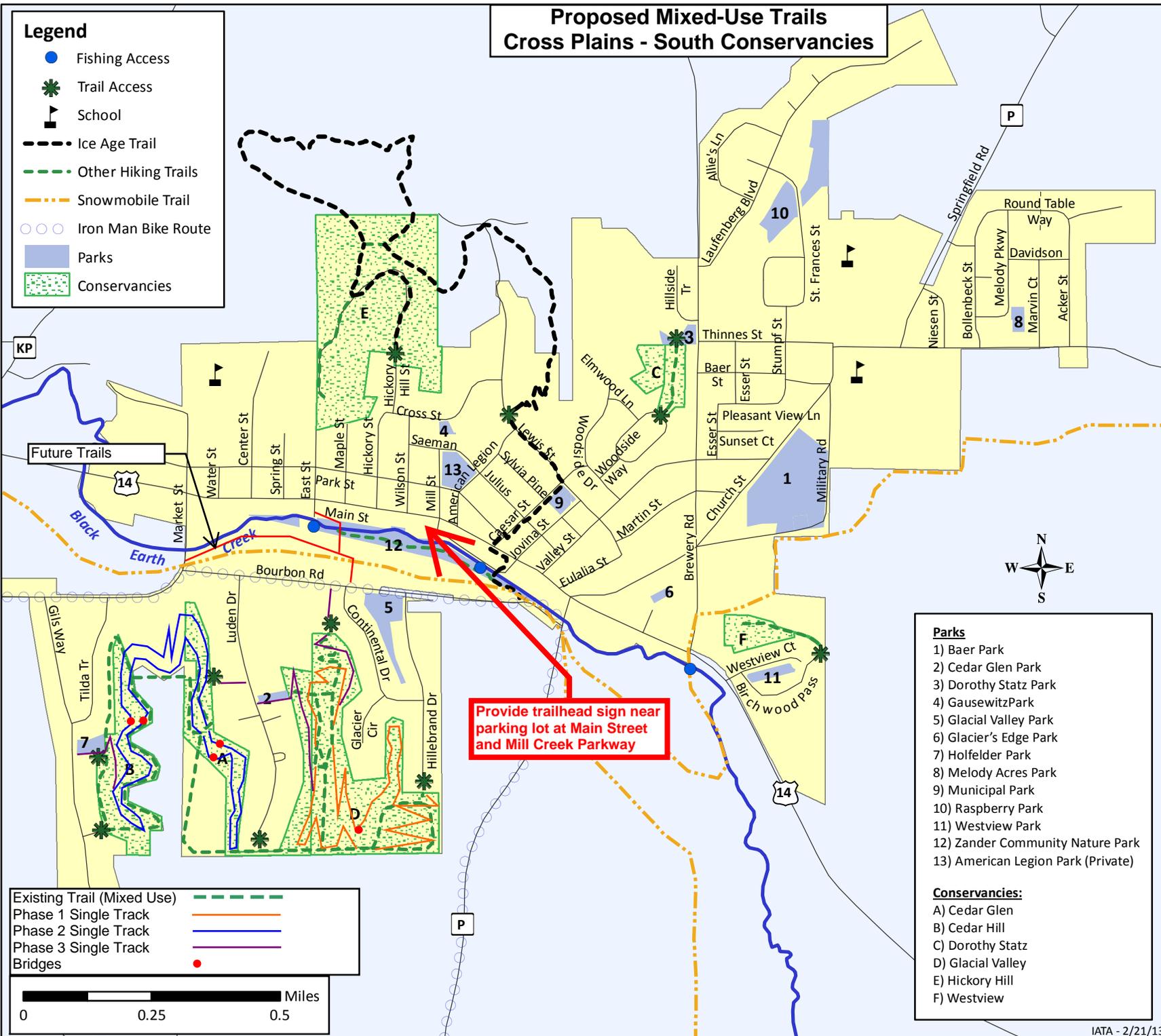


APPENDIX A
PROPOSED TRAIL MAPS

Proposed Mixed-Use Trails Cross Plains - South Conservancies

Legend

- Fishing Access
- ✱ Trail Access
- School
- Ice Age Trail
- Other Hiking Trails
- Snowmobile Trail
- Iron Man Bike Route
- Parks
- Conservancies



Future Trails

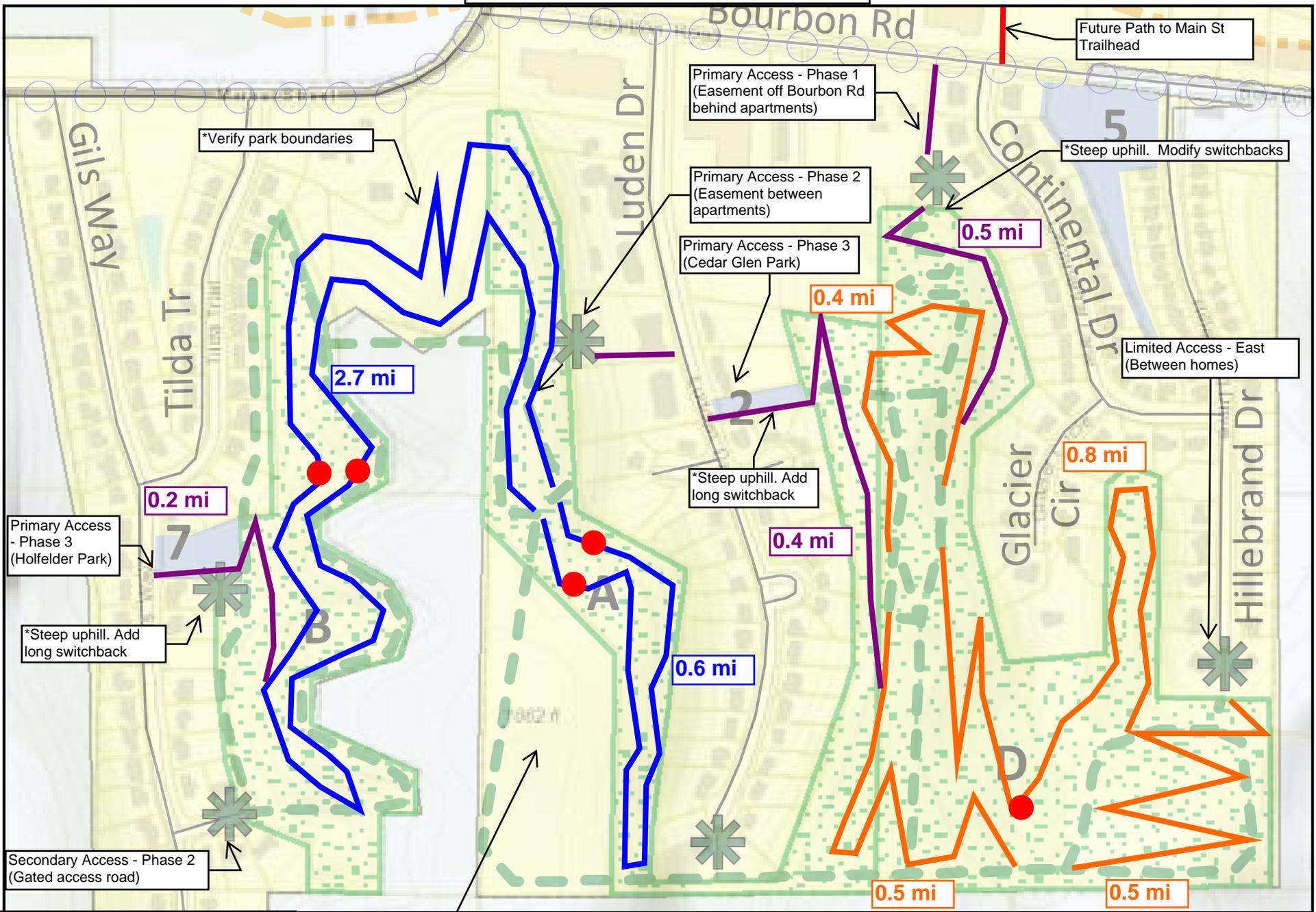
Provide trailhead sign near parking lot at Main Street and Mill Creek Parkway

- Parks**
- 1) Baer Park
 - 2) Cedar Glen Park
 - 3) Dorothy Statz Park
 - 4) Gausewitz Park
 - 5) Glacial Valley Park
 - 6) Glacier's Edge Park
 - 7) Holfelder Park
 - 8) Melody Acres Park
 - 9) Municipal Park
 - 10) Raspberry Park
 - 11) Westview Park
 - 12) Zander Community Nature Park
 - 13) American Legion Park (Private)
- Conservancies:**
- A) Cedar Glen
 - B) Cedar Hill
 - C) Dorothy Statz
 - D) Glacial Valley
 - E) Hickory Hill
 - F) Westview

- Existing Trail (Mixed Use)
- Phase 1 Single Track
- Phase 2 Single Track
- Phase 3 Single Track
- Bridges



Proposed Mixed-Use Trails Cross Plains - South Conservancies



Existing Trail	
Phase 1 Single Track	
Phase 2 Single Track	
Phase 3 Single Track	
Bridges	

*Good flat area for easy single track. Verify park boundaries.

APPENDIX B

REFERENCES

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