



Scott County Rural Regional Trail Development & Design Guidelines

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Introduction

Regional Framework Background: *Excerpts from Met Council 2030 Regional Parks Policy Plan*
Regional recreation open space is defined as "...land and water areas, or interests therein, and facilities determined by the Metropolitan Council to be of regional importance in providing for a balanced system of public outdoor recreation for the metropolitan area including but not limited to park reserves, major linear parks and trails, large recreation parks, and conservatories, zoos and other special use facilities." (Minn. Stat. 473.121, subd. 14)

Trail corridors are intended to provide for recreational travel along linear pathways throughout the metropolitan area. They are selected to follow natural or linear features that traverse areas of scenic appeal and/or historical, architectural and developmental interest while assuring that the trail treadway will have no adverse effect on the natural resource base. The regional trails are selected to pass through, or provide access to, elements in the regional parks system. The parks and park reserves perform the important function of providing places for parking, comfort facilities, safe water supplies, etc. Trails also are selected for their ability to intersect with local trail networks, with the regional trails functioning much like regional highways that interconnect with more local arterials and collector streets.

Experience has indicated that people tend to prefer trails that are relatively close to where they live. In the metropolitan area, a 1998-99 Council survey on users of regional trails found a strong local-use pattern. More than 75 percent of trail visitors surveyed lived within 3 miles of the trails they used. However, trail users are traveling from one city or county to another. It is this inter-jurisdictional trail length that makes these trails regionally significant.

How to Use Trail Guidelines:

The trail guidelines outlined in this document are intended to assist local and County officials, staff, and residents in preparing master trail plans for regional trails. These guidelines are not to be construed as "standards" nor dictate any specific trail design or management practices. Each new trail route should be evaluated on a case-by-case basis, taking into account actual field conditions and trail route/land use relationships.

Scott County acknowledges that unforeseen factors and environmental constraints may exist in the design and construction phase of trail development that may hinder certain trail segments from meeting certain standards. Scott County expects to research all possible trail realignments, remediation scenarios, land use impacts, negotiation strategies and community partnerships before determining that the minimum standards cannot be met. These guidelines do not substitute or replace any existing codes, rules or regulations of land managing and permitting agencies that may govern trail development, but are in addition to them. Permits required from overlapping agencies must be obtained when trail alignments result in impacts to their jurisdictional areas.

The intent of these guidelines is to direct Scott County as it incrementally implements the 2030 Comprehensive Plan Update while adhering to these four beliefs:

- to build a realistic trail system that effectively meets the needs of Scott County residents;
- to respect private property rights through due process in the detailed planning and design of trails;
- to provide responsible trail management; inform the trail user that the idea of "shared-use" includes respecting adjacent land uses; and
- to implement trails involving private property with the landowner as an active participant in the process.

Rural Regional Trail Guidelines

A. Reasons/Basis for Trails

- A-1. The purpose of regional trails in Scott County is to provide a unique linear recreational experience that connects people and places while protecting quality natural resources and implementing conservation practices.
- A-2. Regional trails may be classified as destination, linking, or both as defined in the Metropolitan Council *2030 Regional Parks Policy Plan*. However, it is the intention of Scott County to create regional trails that serve as destinations themselves while also connecting users to regional and state park systems and surrounding communities.
- A-3. The goal of the rural regional trail system is to provide off-road trails within or along Natural Area Corridors and other high-quality natural resource features as much as possible. Alignments will be chosen that maximize trail length along natural features and minimize length along roadways.
- A-4. Strive to provide the majority of trail miles off-road. However, in some instances it may be necessary for a segment of trail to be adjacent to or on-road to bypass natural or man-made barriers or private property. These portions of trails should be designed to safely accommodate Group C (novice/young children) bicyclists.
- A-5. Attractive settings contribute strongly to the quality of trail recreational experience. Since trails are linear elements, areas along water bodies (rivers, lakes, wetlands, etc.) are excellent candidates for incorporation into the regional trail system. Natural features adjacent to the trail treadway serve ecological and environmental educational purposes too. Restoration and management practices emphasizing native species can maintain and enhance the aesthetic, habitat and other resource values of these areas.
- A-6. In addition to regional parks, regional trails may also provide connections to local destinations (schools, community parks, civic centers, etc.). In identifying potential alignments, Scott County should coordinate trail planning with local communities to identify appropriate connections to these destinations and other parts of the community's trail system.

B. Trail Uses

Primary Uses:

- B-1. The regional trail system will be developed to accommodate uses consistent with pedestrian (walking, jogging, etc.) and biking (primarily Group B [recreational] and C [novice/young children] bicyclists) activities.
- B-2. Motorized vehicles shall be prohibited, with the exception of motorized wheelchairs and public safety and maintenance vehicles.
- B-3. Snowmobiles, ATVs, and other off-road vehicles will not be allowed within regional trail corridors.

Secondary Uses:

- B-4. Secondary uses for regional trails include in-line skating and Group A [experienced/high-speed] bicyclists. These uses may be limited on certain segments or temporary alignments of regional trails due to the trail surface.
- B-5. Certain regional trails may not be plowed in the winter. For non-plowed trails, passive winter activities, such as walking, snow shoeing, cross country skiing, and similar activities will be permitted. The winter use and maintenance of trails should be defined in the regional trail master plan.
- B-6. Additional uses, such as hiking, mountain biking or equestrian may be considered as part of a regional trail master plan. These uses require an exclusive trail surface that may be provided in segments or loops, but do not need to be provided along the entire trail corridor. Additional corridor width will be required in areas where these uses are provided.

C. Rural Regional Trail Alignments

Corridor Location/Width:

- C-1. The public lands or easements that comprise the regional trail corridor should provide width sufficient for management and/or buffer space from adjacent uses so as not to preclude the viability of those uses.
- C-2. For trail segments located within or along Natural Area Corridors, the corridor should be wide enough to encompass the quality natural resources that are being preserved plus additional width to adequately buffer the natural resources from adjacent uses.
- C-3. General regional trail corridor width guidelines: *
 - Minimum corridor width: Twenty (20) feet
 - Typical corridor width: One hundred (100) feet
 - Maximum corridor width: Based on size of Natural Area Corridor*Minimum corridor widths may be appropriate for trail segments that utilize local roadways (on-road or off-road) or are retrofitted into existing developments via private property easements. In these instances, the design and width of the trail corridor shall limit impacts to private property, provide adequate area for appropriate screening techniques, and ensure safe trail use.

- C-4. With the exception of retrofitting a trail into existing neighborhoods, regional trail segments that are proposed to generally follow roadways should provide additional corridor width (100+ feet) to adequately separate the trail from the roadway. The trail corridor should be designed to provide a natural buffer of trees and native plantings between the trail and the roadway that helps establish a parkway setting.
- C-5. Temporary trail alignments on or alongside roadways may be provided to connect developed trail segments of the regional system. These temporary trail alignments should be considered as part of the regional trail master plan, and in no way should they prevent the final trail alignment from being developed.
- C-6. Utility and railroad corridors may be appropriate for the co-location of trails. The affected companies/easement holders should be a part of the trail planning process to determine its feasibility.

Natural Features:

- C-7. As much as possible, rural regional trail segments should be located within or along Natural Area Corridors and/or other high-quality natural resource communities to provide trail users a connection to the natural environment and accommodate environmental stewardship practices.
- C-8. Trail alignments and their associated facilities should be sited and designed to be in harmony with surrounding natural and cultural settings and to retain natural appearances and values.
- C-9. Existing native vegetation should be retained by removing only as much vegetation as necessary to accommodate the trail clearing width.
- C-10. To the maximum extent feasible, trail alignments should avoid impacts to known special status plant and animal habitats. Trail alignments should be evaluated on a case-by-case basis by a professional biologist to identify impact avoidance measures or mitigation measures for biotic impacts. Consideration shall be given to: rerouting the trail; periodic closures; revegetation prescriptions including replacement vegetation based on habitat acreage or plant quantity; buffer plantings; and other appropriate measures. Removal of mature native vegetation should be avoided as much as possible to protect the productivity of the landscape and the aesthetic quality of the trail.

Water Bodies:

- C-11. When parallel to a stream or riparian zone, trail setbacks should limit impacts to the water body. Factors to consider include type of water body, water quality, existing/proposed land use, topography, floodplain, and other physical constraints. In addition, trail setbacks should provide an adequate distance to allow natural shifts or movements of the water body. Where possible, consider opportunities to integrate trail development with planned shoreland restoration projects.

- C-12. Trail crossings of freshwater stream zones and drainages shall be designed to minimize disturbance, through the use of bridges or culverts, whichever is least environmentally damaging. Bridges and culverts shall be designed so that they visually and functionally blend with the environment.
- C-13. Trails should be designed to avoid wetlands, including seasonal wetlands, wherever possible. Trails adjacent to wetland areas will be constructed so that trail fills avoid wetland impacts. However, mitigation or alternative trail opportunities (such as a boardwalk) may be appropriate in certain situations.
- C-14. Trails should be located to recognize the resources and hazards of the areas they traverse, and to be protective of sensitive habitat areas such as wetlands and riparian corridors and other areas where sensitive species may be adversely affected.

Land Use Compatibility:

- C-15. The majority of trail miles should be off-road. However, in some instances it may be necessary for a trail segment to be located within an existing neighborhood or development. The following factors should be considered when determining the trail alignment through existing developments:
- safety of trail users;
 - privacy of existing residential properties;
 - fragmentation of properties;
 - trail interaction (on-road/off-road, intersections, etc.) with roadways; and
 - connection to natural features.
- C-16. In areas where trails would pass adjacent land uses such as mining, railroads, and industrial activities, trail structures such as fences, barriers and signing should be used to deter trail users from leaving the trail and encountering unsafe conditions.
- C-17. For urban and agricultural transition areas (as identified in the 2030 Comprehensive Plan), avoid trail alignments that may fragment farmland. Where necessary, consider trail alignments along existing breaks such as roadways, ditches, fence lines, and wooded/natural areas.
- C-18. When a regional trail alignment is located within a future development area, land owners and developers should be required to incorporate the trail right-of-way into their development project designs.
- C-19. During trail design, notify and coordinate with affected landowners to incorporate measures into trail design and related management policies to accommodate the privacy, security and liability concerns of the landowner. Such measures could include, but are not limited to: fencing or barrier planting that discourages trespassing; signage; scheduling of maintenance; patrol scheduling; and indemnity agreements to protect the landowner and affected landowners from liability for injuries to trail users.

Access:

- C-20. Trail alignments should be selected that minimize intersections with motorized vehicles. At-grade crossings must be designed to equally consider vehicular and trail user safety and should be located at intersections when crossing major roadways.
- C-21. During trail implementation, planners should locate final trail alignments and access points to allow the trails to also serve as emergency access routes (for patrol or emergency medical transport). For more remote trails, emergency access points should be located, where feasible, approximately every two miles along the trail and provide either access for ground vehicles or helicopter landing sites.
- C-22. Trails should be designed with adequate sight distances so users can see others that they are approaching and others can see them. Clearing widths should be developed to assure a 100-foot average sight distance where possible. If sight distances on curves, around hills or through densely vegetated areas are less than 100 feet, safety signs and reduced speed limits should be considered.

D. Acquisition

- D-1. The acquisition and development of the Scott County regional trail system will take many years to complete. Acquisition of land (via fee title or easement) will occur through a number of opportunities, including right-of-way dedication through land subdivision, land donations, and purchase from willing sellers. The County will avoid the use of eminent domain to acquire land for regional trail corridors, with the exception to complete critical gaps in the trail system.
- D-2. There are a variety of acquisition and access methods that may be used to fulfill trail development. Methods to consider are as follows:
 - a) Subdivision Process: As part of a proposed development, the dedication of land that has been identified to serve a public purpose in local and county planning documents.
 - b) Fee Simple Acquisition: A complete transfer of land ownership from one landowner to another party, usually by purchase.
 - c) Easement: Grants the right to use a specific portion of land for a specific purpose or purposes. Easements may be limited to a specific period of time or may be granted in perpetuity; or the termination of the easement may be predicated upon the occurrence of a specific event. An easement agreement survives transfer of landownership and is generally binding upon future owners until it expires on its own terms.
 - d) License/Lease Agreement: The temporary grant of an interest in land upon payment of a determined fee. The fee does not have to be monetary, but some consideration must be given for the right to use the land, or the lease will not be legally binding.
 - e) Joint Powers Agreement: A contract between a township, city, county, and/or a special district in which the organization agrees to perform services, cooperate with, or lend its powers to, the other party.
 - f) Eminent Domain: The power of a governmental body to acquire private property that has been identified for a public purpose. The property

owner must be compensated fair market value for the acquired land. Eminent domain is only used when all other opportunities to purchase the land have been rejected.

- D-3. Scott County prefers to either acquire the land or right-of-way through fee simple or obtain an easement in perpetuity throughout the trail corridor.
- D-4. Scott County will attempt to protect trail corridors for future trail alignments through acquisition or other appropriate actions, such as easement acquisition through dedication or purchase during the subdivision and development review process.
- D-5. As part of the development process, Scott County will encourage use of the Public Values Incentive Program to dedicate additional trail right-of-way and corridor width above and beyond the standard requirement in return for bonus densities and flexibility in zoning and subdivision regulations.
- D-6. Where it may be appropriate to co-locate a trail within a utility or railroad corridor, work with the affected companies and private landowners (if necessary) to acquire the necessary trail easement agreements.

E. Trail Design and Construction

Recommended Design Standards:

- E-1. Regional trail recommended design standards:

Trail surface:	Bituminous (asphalt)
Trail width:	Ten (10) feet
Trail shoulder:	Three (3) feet graded (6:1 max)
Clearance (height):	Ten (10) feet
Type:	Shared-use/two-way directional
Typical uses:	Walking, biking, in-line skating
- E-2. Trail design should be consistent with all applicable MN/DOT, AASHTO, and ADA standards for safety and accessibility.
- E-3. Trail design should utilize best practice standards to ensure that all trail experiences are enjoyable, safe, sustainable, and minimize impacts to the natural environment.
- E-4. The recommended trail shoulder is a minimum of three feet. The shoulder should consist of mowed grasses or aggregate surface and be free of brush and other woody materials.
- E-5. Native vegetation should be planted in the clearing zone (areas within the trail right-of-way or easement beyond the trail shoulder) to reduce long-term maintenance costs.
- E-6. The recommended minimum vertical distance from overhanging branches is ten feet.

- E-7. Alternative trail surfaces, such as aggregate, mulch or mowed grasses may be appropriate for temporary trail alignments or initial/fragmented trail segments where the timing (due to surrounding developments or trail construction), costs or limited use of the trail do not justify installation of the recommended trail surface. However, the use of these surfaces should not prevent the future installation of the recommended trail surface. Alternative trail surfaces should be defined as part of a regional master trail plan.
- E-8. Trail design should include barriers to control trail use and prevent environmental damage; barriers may include fences, vegetation, stiles, and/or fallen trees or branches as appropriate.

Trail Access/Connections:

- E-9. Connections between the regional trail and local/neighborhood trails are encouraged. The most appropriate locations for these connections should be considered during the trail master planning process.
- E-10. In the detail design of any trail alignment parallel to a freshwater stream or water body, access points may be identified for environmental education and interpretive programs. Such access points should be sited in coordination with the Minnesota Department of Natural Resources, the U.S. Army Corps of Engineers, and other jurisdictional agencies as appropriate.
- E-11. Trail access points should be designed to ensure that off-road motorized vehicles do not use trails except for maintenance and emergency purposes or wheelchair access.
- E-12. All trails should be marked with adequate signage. Signed information should provide direction, identify prohibited uses, encourage responsible trail use, and provide trail users with information regarding property rights in order to minimize public/private use conflicts and trespassing.

Facilities/Structures:

- E-13. Regional trail facilities, such as trail heads, parking areas and rest areas, should be provided and defined in the regional master trail plan. Trail heads and rest areas should be located at accessible places with aesthetic qualities, viewpoints, and in areas that do not negatively impact surrounding properties. Examples of appropriate locations for a trail head are regional trail starting/end points, regional trail intersections between other regional trails or major roadways, or a regional park.
- E-14. Trail facilities, structures, and amenities should be designed with energy-efficient, environmentally friendly materials, in a common architectural theme and color scheme.
- E-15. All trail structures should be designed to be as vandal-proof as possible. Rounded framing members and recessed bolt heads and other hardware should be used for safety.

- E-16. Bollards, boulders, logs, stiles, and/or other structures should be used to prevent motorized vehicles from entering trail routes at any crossing of a public road right-of-way or at any trail staging area.
- E-17. Bridges designed exclusively for a regional trail should be a minimum of 12 feet wide and structurally capable of carrying maintenance vehicles. All bridges must have minimum 42 inch high railings when necessary. Fill over culverts should match the trail width. Bridge footings should be constructed outside of the stream's top of bank.

F. Costs/Funding *Source: 2030 Parks & Trails Policies*

- F-1. Scott County should develop a stable long-term funding program for acquisition, development, natural resource management, and operations and maintenance of the regional trail system.
- F-2. Leverage county capital contributions by supporting increases in and new sources of state capital funding.
- F-3. Create new and sustain existing partnerships based on cost-sharing and resource sharing, working with partners to identify overlapping needs and goals.
- F-4. Allocate appropriate funding for natural resources stewardship within the regional trail corridors.
- F-5. Annually update and incorporate the ten-year parks capital improvement plan (including trail improvements) into the County capital program.
- F-6. Consider and research the feasibility of the following options for funding the development and operation of the parks and trails system:
 - Cost off-sets through sharing of resources or facilities;
 - Aggressively pursue regional, state, and federal funding;
 - Increase in the general levy (one time or gradual increase over time);
 - Bond referendum;
 - Increase park dedication fees (funds park and trail development only);
 - Create revenue generating programs (e.g., water park, golf course); and
 - Charge user fees for specific uses or programs.
- F-7. Evaluate and plan for the financial impact on the operation and maintenance budget before undertaking trail development projects.
- F-8. Study the issue of creating revenue generating programs that could help to offset parks, trails and open space acquisition, development, operations and maintenance costs.
- F-9. Aggressively pursue regional, state, and federal funding for the acquisition, development, operations, and maintenance of regional trails and supportive facilities.

G. Operation and Maintenance

- G-1. As the regional park implementing agency, Scott County will be responsible for maintaining and operating regional trails. However, certain situations may require the need for joint-powers agreements with affected local governments to determine such issues as seasonal uses, winter maintenance, or short-term maintenance for temporary trail alignments or fragmented sections.
- G-2. Design and institute maintenance programs that facilitate as much as feasible, the recycling, re-use and reduction of materials generated through the development and operation of the regional trail system.
- G-3. Utilize sustainable management practices to protect the public investment and ensure the safety, quality and sustainable operations of trails and facilities through long-term management.
- G-4. Trail maintenance and operation shall safeguard the physical condition of infrastructure and natural systems from deterioration or damage due to weather, vandalism, or other natural or human causes.
- G-5. Ensure proactive maintenance by performing routine repairs and periodic renovations and upgrades.