

Appendix C

Glossary

Access Points: Designated areas and passageways that allow the public to reach a trail from adjacent streets or community facilities.

Access Trail: Any trail that generally connects the main trail to a road or another trail system.

Accessible: A term used to describe a site, building, facility, or trail that complies with the Americans with Disabilities Act (ADA) Accessibility Guidelines and can be approached, entered, and used by people with disabilities.

Acquisition: The act or process of acquiring fee title or interest of real property.

Adopt-A-Park: A program in which groups or businesses "adopt" parks or certain areas or amenities of parks, providing volunteer work parties at periodic intervals to help maintain the park. Though no special privileges are granted, the agency generally acknowledges that a park has been "adopted" by erecting signs saying the park is part of an Adopt-A-Park program and including the name of the adopter.

Alignment: The layout of the trail in horizontal and vertical planes. This is to say, the bends, curves, and ups and downs of the trail. The more the alignment varies, the more challenging the trail.

Amenities: Any element used to enhance the user's experience and comfort along a trail.

Americans with Disabilities Act of 1990: A federal law prohibiting discrimination against people with disabilities. Requires public entities and public accommodations to provide accessible accommodations for people with disabilities.

Archaeological Resources (Cultural, Heritage): Any material of past human life, activities, or habitation that are of historic or prehistoric significance. Such materials include, but are not limited to, pottery, basketry, bottles, weapon projectiles, tools, structures, pit houses, rock paintings, rock carvings, graves, skeletal remains, personal items and clothing, household or business refuse, or any piece of the foregoing.



Archaeological Site: A site with a concentration of material remains of past human life or activities that is of historic or prehistoric significance and that has been surveyed by a qualified archeologist.

Asphalt: Petroleum-based surface material, mixed with crushed stone or gravel that provides a smoothly paved surface suitable for wheeled transportation – bicycles, in-line skates, and strollers. Used primarily for bicycle paths and areas subject to erosion and flooding.

Bank (Embankment): The part of the soil next to a stream, lake, or body of water where the soil elevation adjacent to the water is higher than the water level.

Barricade: A portable or fixed barrier, used to close all or a portion of the trail right-of-way to traffic.

Base: The primary excavated bed of a trail upon which the tread, or finished surface lies.

Bench: A long seat (with or without a back) for two or more people

Berm: The ridge of material formed on the outer edge of the trail that projects higher than the center of the trail tread.

Boardwalk: A fixed planked structure, usually built on pilings in areas of wet soil or water to provide dry pathways.

Bikeways: Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Bollard: A barrier post, usually 30 to 42 inches in height, used to block vehicular traffic at trail access points. Should be installed in odd numbers (one or three).

Bridge: A structure, including supports, erected over a depression (stream, river, chasm, canyon, or road) and having a deck for carrying trail traffic. If the bridge is over two feet above the surface, it should have railings.

Brush: Vegetation or small flora.

Buffer (Buffer Zone): Any type of natural or constructed barrier (like trees, shrubs, or wooden fences) used between the trail and adjacent lands to minimize impacts (physical or visual).



Classification: The designation indicating intended use and maintenance specification for a particular trail.

Clear-cut: Removal of all trees and shrubs, not just mature growth.

Clearing: Removal of windfall trees, uproots, leaning trees, loose limbs, wood chunks, etc. from both the vertical and horizontal trail corridor.

Clearing height (Vertical Clearance): The vertical dimension that must be cleared of all tree branches and other obstructions that would otherwise obstruct movement along the trail.

Clearing Limit: The outer edges of clearing areas (cleared of trees, limbs, and other obstructions) as specified by trail use.

Compaction: The compression of aggregate, soil, or fill material into a more dense mass by tamping.

Concrete: A composition of coarse and fine aggregates, cement, and water, blended to give a hard, unyielding, nearly white pavement, which can be finished to any degree of smoothness. Concrete is most often used in urban areas with anticipated heavy trail use, or in areas susceptible to flooding.

Connectivity: The ability to create functionally contiguous blocks of land or water through linkage of similar native landscapes; the linking of trails, greenways, and communities.

Conservation: Controlled use and protection of natural resources.

Construct (Construction): Building a trail where no trail previously existed.

Creek: Those areas where surface waters flow sufficiently to produce a defined channel or bed.

Crosswalk: Any portion of a roadway distinctly indicated for pedestrian crossing by lines or other markings on the surface.

Culvert, Cross Drainage: Pipe or box-like construction of wood, metal, plastic, or concrete that passes under a trail to catch surface water from side ditches and direct it away from a trail.



Curb Cut: A cut in the curb where a trail crosses a street. The curb cut should be the same width as the trail or wider.

Cut and Fill: The process of removing soil from one area and placing it elsewhere to form a base for any given activity.

Daylighting: Clearing a ditch or drain so that water can run freely, or to “daylight.”

Deadfall: A tangled mass of fallen trees or branches.

Debris: Any undesirable material that encroaches on a trail and hinders the intended use.

Designated Trail: A trail that is approved and maintained by an agency.

Disturbed Area: Area where vegetation or topsoil has been removed, or where topsoil, spoil, or waste has been placed.

Ditch: A long, narrow trench used to improve drainage.

Down Tree: Fallen tree that blocks the trail.

Downslope: The downhill side of a trail.

Drainage, Cross: Running water in swamps, springs, creeks, drainage, or draws that the trail must cross.

Drainage, Sheet: Desirable condition in which water flows in smooth sheets rather than rivulets; slower flow and less concentration result in less erosion.

Drainage Ditch (Ditching): Open ditches running parallel to the trail tread that collect water and carry it away from the site. A drainage ditch is also an element of water-bar, providing an escape route for water diverted from trail by the bar.

Drawings: Documents showing details for construction of a trail or trail-related facility, including but not limited to straight-line diagrams, trail logs, standard drawings, construction logs, plan and profile sheets, cross-sections, diagrams, layouts, schematics, descriptive literature, and similar materials.



Drop-off: Slope that falls away steeply.

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 land ownership and is generally binding upon future owners until it expires on its own terms.

Easement- Conservation: Places permanent restrictions on property in order to protect natural resources.

Easement- Construction: An additional temporary area or corridor needed to construct a trail or facility.

Easement- Maintenance: An additional permanent area or corridor (not open to the public) needed to maintain trail drainage, foliage, and recurring maintenance needs.

Ecosystem: A system formed by the interaction of living organisms, including people, with their environment. An ecosystem can be of any size, such as a log, pond, field, forest, or the earth's biosphere.

Elevation: The height of a place above sea level

Embankment: Structure made from soil used to raise the trail, rail-bed, or roadway above the existing grade.

Eminent Domain: The authority of a government to take (usually by purchase) private property for public use.

Endangered Species: A species of animal or plant is considered to be endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes.

Erosion: Natural process by which soil particles are detached from the ground surface and moved downslope, principally by the actions of running water (gully, rill, or sheet erosion). The combination of water falling on the trail, running down the trail, and freezing and thawing, and the wear and tear from traffic create significant erosion problems on trails.

Erosion Control: Techniques intended to reduce and mitigate soil movement from water, wind, and trail user traffic.



Exotic Species (alien): A plant introduced from another county or geographic region outside its natural range.

Fairweather Crossing: A stream crossing consisting of a concrete bottom and side ramps into the stream, with concrete pillars above the normal water flow. The crossing is inundated during floods, but usable by pedestrians during normal stream flow.

Fauna: The animal populations and species of a specified region.

Feeder Trail: A trail designed to connect local facilities, neighborhoods, campgrounds, etc. to a main trail.

Flagging: Thin ribbon used for marking during the location, design, construction, or maintenance of a trail project.

Floodplain: The flat, occasionally flooded area, bordering streams, rivers, or other bodies of water, susceptible to changes in the surface level of the water.

Flora: The plant populations and species of a specified region.

Footpath: A path over which the public has a right-of-way on foot only. Wheelchairs are also permitted, although this may not be practical due to surface or slope.

Ford: A natural water level stream crossing; which can be improved (aggregate mix or concrete) to provide a level, low velocity surface for trail traffic.

Gabion Baskets: Rectangular containers (usually made of heavy galvanized wire) that can be wired together, and then filled with stones to make quick retaining walls for erosion control.

Geographic Information System (GIS): A spatial database mapping system (computer and software) that contains location data for trails and other important features.

Geo-textile: A semi-impervious non-woven petrochemical fabric cloth that provides a stable base for the application of soil or gravel. Most common use is in the construction of turnpikes.

Global Positioning System (GPS): A system used to map trail locations using satellites and portable receivers. Data gathered can be downloaded directly into GIS database systems.



Grade: Slope expressed as a percentage (feet change in elevation for every 100 horizontal feet, commonly known as "rise over run"). A trail that rises 8 vertical feet in 100 horizontal feet has an 8% grade. Grade is different than angle; angle is measured with a straight vertical as 90° and a straight horizontal as 0°. A grade of 100% would have an angle of 45°.

Graffiti: Any writing, printing, marks, signs, symbols, figures, designs, inscriptions, or other drawings that are scratched, scrawled, painted, drawn, or otherwise placed on any surface of a building, wall, fence, trail tread, or other structure on trails or greenways and which have the effect of defacing the property.

Grate: A framework of latticed or parallel bars that prevents large objects from falling through a drainage inlet, but permits water and some sediment to fall through the slots.

Gravel: Soil particles ranging from 1/5 to 3 inches in diameter.

Green Infrastructure: The sum of the public and private conservation lands including native landscapes and ecosystems, greenspaces, and waters.

Greenway: A linear open space established along a natural corridor, such as a river, stream, ridgeline, rail-trail, canal, or other route for conservation, recreation, or alternative transportation purposes. Greenways can connect parks, nature preserves, cultural facilities, and historic sites with business and residential areas.

Habitat: A place that supports a plant or animal population because it supplies that organism's basic requirements of food, water, shelter, living space, and security.

Hazard Tree (Widow Maker): Tree or limb that is either dead, or has some structural fault, that is hanging over, or leaning towards the trail or sites where people congregate.

Hydrology: The properties, distribution and circulation of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere

Impacts: Encompasses all physical, ecological, and aesthetic effects resulting from the construction and use of trails (both negative and positive). Many studies have been concerned with environmental and social impacts of different users, such as tread wear, littering, conflicts between users, or vandalism.



Impervious Surface: Hard surfaces that do not allow absorption of water into the soil and that increase runoff. Examples of such surfaces include concrete or asphalt paved trails and parking areas.

Infrastructure: The facilities, utilities, and transportation systems (road or trail) needed to meet public and administrative needs.

Interpretation: Communicating information about the natural and/or cultural resources and their associated stories and values found at a specific site or along a trail. Tours, signs, brochures, and other means can be used to interpret a particular resource.

Interpretive Sign or Display: An educational sign or display that describes and explains a natural or cultural point of interest on or along the trail.

Interpretive Trail: Short to moderate length trail (1/2 to 1 mile) with concentrated informational stops to explain associated views, natural flora and fauna, and other features.

Invasive Exotic: Non-native plant or animal species that invades an area and alters the natural mix of species.

Kiosk (Sign): A freestanding bulletin board housing informational or interpretive displays.

Loam: An easily crumbled soil consisting of mixture of clay, silt, and sand.

Loop Trail: Trail systems designed so that the routes form loops, giving users the option of not traveling the same section of trail more than once on a trip.

Lyme Disease: An infection caused by a spiral-shaped bacterium called a spirochete carried by deer ticks. Symptoms associated with the early stages--fever, headache, stiffness, lethargy, and myriad other mild complaints--are often dismissed as the flu.

Marsh: An area of wet or periodically submerged land, generally treeless and usually characterized by grasses and other low vegetation.



Master Plan: A comprehensive long-range plan intended to guide development (including trails) of a park. Includes analysis, recommendation, and proposals of action.

Meadow: Tract of grassland.

Multi-Use Trail: A trail that permits more than one user group at a time (equestrian, hiker, mountain bicyclist, etc.).

Native Species: An indigenous species (a basic unit of taxonomy) that is normally found as part of a particular ecosystem; a species that was present in a particular area at the time of the Public Land Survey (1847-1907)

Natural Surface (Trail): A tread made from clearing and grading the native soil with no added surfacing materials.

Nature Trail: Moderate length trail (less than or equal to 2 miles) with primary function of providing an opportunity to walk and study interesting or unusual plants or natural features at user's pleasure. The ideal nature trail has a story to tell. It unifies the various features or elements along the trail into a related whole.

Non-motorized: Trail recreation by modes such as bicycle, pedestrian, equestrian, skates, ski, etc.

Noxious Plant: Plant that poses a hazard to humans or animals, such as poison oak or ivy, cacti, stinging nettles, etc.

Obstacles: Physical objects large enough to significantly impede or slow travel on a trail. Logs, large rocks, and rock ledges are common obstacles.

Organic soil: Soil that is made up of leaves, needles, plants, roots, bark, and other organic material in various stages of decay, and has a large water/mass absorption ratio.

Outcrop: A rock formation that protrudes through the level of the surrounding soil.

Path (Pathway): This is a temporary or permanent area that is normally dirt or gravel, although some paths are asphalt or concrete. A path typically indicates the common route taken by pedestrians between two locations.



Pavement: That part of a trail having a constructed hard paved surface for the facilitation of wheeled trail traffic.

Pedestrian: Any person traveling by foot, or any mobility-impaired person using a wheelchair, whether manually operated or motorized.

Plan and Profile Sheets: Drawings (usually prepared for trail construction) used to record horizontal and vertical geometry of a trail alignment as well as other required improvements to the trail corridor.

Pond: Still body of water smaller than a lake.

Prescribed Burn: Formally called "controlled burns," these are periodic, intentional fires conducted to clear underbrush in an effort to control "wildfire," open areas to wildfire, and promote germination of some species of flora.

Preservation: Maintaining an area or structure intact or unchanged.

Ravine: Deep, narrow gouge in the earth's surface, usually eroded by the flow of water.

Re-bar: Steel-reinforcing rod that comes in a variety of diameters, useful for manufacturing pins or other trail anchors.

Rehabilitation: All work to bring an existing trail up to its classification standard, including necessary relocation of minor portions of the trail.

Relocation (Realignment, Reroute): To alter the path of an existing trail to better follow land contours, avoid drainage sites, bypass environmentally sensitive areas, improve views, or for other landowner or management reasons.

Revegetation: Process of restoring a denuded and/or eroded area close to its original condition.

Right of Way: A strip of land held in fee simple title, or an easement over another's land, for use as a public utility for a public purpose. Usually includes a designated amount of land on either side of a trail that serves as a buffer for adjacent land uses.

Rip-rap: A layer of stones placed randomly on a bank to provide support and prevent erosion; also the stone so used.

Runoff: Water not absorbed by the soil that flows over the land surface.



Sidewalk: A paved strip (typically concrete four to six feet in width) which runs parallel to vehicular traffic and is separated from the road surface by at least a curb and gutter. Sidewalks are common in urban areas and in suburban residential areas.

Silt Fence: Temporary sediment barrier consisting of filter fabric, sometimes backed with wire mesh, attached to supporting posts and partially buried.

Slope: Rising or falling ground.

Social Trail (Footpath, Informal): Unplanned/unauthorized trails that develop informally from use and are not designated or maintained by an agency; often found cutting switchbacks, between adjacent trails, or from nearby neighborhoods.

Soil Stabilization: Measures that protect soil from the erosive forces of raindrop impact and flowing water. They include, but are not limited to, vegetative establishment, mulching, and the application of soil stabilizers to the trail tread.

Specifications: Written standards of work and type of materials to which trails (tread, clearing, grade) and trail structures (bridge, culvert, puncheon) are built and maintained according to type of use.

Stream: Small body of running water moving in a natural channel or bed.

Stream Crossing: A structure designed to provide a dry crossing of a body of running water, such as a bridge, fairweather crossing, or open-bottomed culvert crossing.

Structure: Anything constructed or erected that requires location on the ground such a bridge, wall steps, etc. on or near a trail.

Sub-base: On paved trails the sub-base lies between the sub-grade and the trail surface, and serves as a secondary, built foundation for the trail surface (concrete or asphalt). The purpose of the sub-base is to transfer and distribute the weight from the trail surface to the sub-grade. The sub-base consists of four-to six-inch graded aggregate, which provides bearing strength and improves drainage.

Sub-grade: Is the native soil mass that makes up the primary foundation of the trail that supports the tread surface. Topography, soils, and drainage are the key factors comprising the sub-grade.

Surfacing: Material placed on top of the trail-bed or base course that provides the desired tread. It lessens compaction of soil, provides a dry surface for users, and prevents potential erosion and abrasion.



Survey: A physical field assessment of the trail or proposed trail, to determine alignment, maintenance tasks, hazards, impact, etc., prior to work, or as part of ongoing trail maintenance.

Swale: A linear low-lying natural topographic drainage feature running downhill and crossing the trail alignment in which sheet runoff would collect and form a temporary watercourse. A low-lying ground drainage structure (resembling a swale) can be constructed to enhance drainage across the trail.

Swamp: A piece of wet, spongy land; bog, marsh.

Switchback: A sharp turn in a trail (usually constructed on a slope of more than 15%) to reverse the direction of travel and to gain elevation. The landing is the turning portion of the switchback. The approaches are the trail sections upgrade and downgrade from landing.

System: Set of interconnected components that function as a whole and thereby achieves a behavior or performance that is different than the sum of each of the components taken separately.

Terminus: Either the beginning or end of a trail.

Toe: The break in slope at the foot of a bank where the bank meets the bed.

Topography (Topo): The elevation and slope of the land as it exists or is proposed. It is represented on drawings by lines connecting points at the same elevation. Typically illustrated by dashed lines for existing topography and solid lines for proposed.

Trail: Linear route on land or water with protected status and public access for recreation or transportation purposes such as walking, jogging, hiking, bicycling, horseback riding, mountain biking, canoeing, kayaking, and backpacking.

Trailhead: An access point to a trail often accompanied by various public facilities, such as parking areas, restrooms, water, kiosk, and directional and informational signs.

Tread Width: The width of the portion of the trail used for travel.

Trespasser: Person who uses property without the owner's implied or stated permission and not for the benefit of the property owner. Due the least duty of care and therefore pose the lowest level of liability risk.



True North: The direction toward the geographic North Pole. Most maps are oriented to True North.

Understory: All forest vegetation growing under the canopy or upper layers of forest vegetation.

Volunteer: Person who works on a trail or for an organization without pay.

Waterbar: A drainage structure (for turning water) composed of an outsloped segment of tread leading to a barrier placed at 45° angle to the trail; usually made of logs, stones or other aggregate material. Water flowing down the trail will be diverted by the outslope or, as a last resort, by the barrier. Grade dips are preferred on multi-use trails instead of waterbars.

Watershed: A region or area bounded peripherally by a water parting formation (i.e. ridge, hill, mountain range) and draining ultimately to a particular watercourse or body of water.

Wetland(s): A lowland area, such as a marsh or swamp, which is saturated with water, creating a unique, naturally occurring habitat for plants and wildlife.

Weir: A natural dam.

Wildlife: Any non-domesticated animal species living in its natural habitat.

Wing: Angled barriers at a bridge approach used to channel traffic and prevent trail users from inadvertently plunging over embankment.

Wood Chips: Chipped wood, often available from tree trimming operations; produces a soft, spongy trail surface, and is used on many nature trails.

Zero-Mile Mark: The point at which a measured trail starts.

Zoning: Specifying use or restrictions on land. Zoning can effectively protect trail corridors from development adjacent to the trail that might block views, destroy sensitive habitat, create traffic problems, and generally diminish a trail experience.

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