Attachment C

TRAIL MAINTENANCE GUIDELINES

All facilities, including recreation trails require regular maintenance to reduce the damage caused over time by the effects of weather and use. Proper maintenance is essential to promote user safety, to ensure ease of access and to encourage the use of a designated route.

Trail Types:

Trails are classified into four different types:

Bituminous
Concrete
Natural/Grass
Unofficial

Bituminous – Bituminous trails are the most prevalent type of trail in the parks and trail system. They provide the largest number of use opportunities for walkers, runners, bikers and skaters. These trails are at least 6 feet wide and frequently 8 feet or more.

Concrete – Concrete trails generally are found in front of business districts or in parks adjacent to buildings. The City does not design or construct concrete sidewalks unless the location is in a very high traffic area near a building or serving as a sidewalk to a building.

Natural – Natural trails may be comprised of dirt, grass or wood chips. They are appropriate for most uses and vary in width.

Unofficial – The Public Works Department discourages the forging of new trails within the parks and trails system. These trails are generally created by foot or bicycle traffic through areas of a park not designated for that type of use. The forging of these types of trails can have environmental impacts, causing soil compaction, contributing to erosion and sedimentary runoff and other negative impacts on natural resources. The Public Works Department does not recognize these types of trails as official and DOES not maintain them.

Motorized vehicles are not permitted on any City trails with the exception of maintenance vehicles.

Routine Trail Tasks

The Public Works Department performs a wide variety of routine maintenance tasks within the parks and trail system. These tasks are directed to extending the life expectancy of trails,

providing the highest product to the residents and ensuring the safety of trail users. Routine maintenance and inspection of the trail system minimizes repair and renovation costs.

- ***Mowing*** – Mowing is done on a periodic basis to prevent trails from becoming overgrown. Keeping the trail surface clean is one of the most important aspects of trail maintenance. Mud and other sediment should be removed when possible to ensure the safety of the users and to increase the life expectancy of the trail itself. Grass along trails will be mowed at least 2 feet from the trail. When possible, grass clippings should be directed away from the trail.
- ***Tree and Brush Management*** – Trees and shrubs along the trails will be managed to keep them from interfering with trail use, eliminate hazards, prevent trail damage and ensure a healthy plant structure. Removal of woody vegetation at least 2 feet from the trail should minimize the need for frequent mechanical or hand pruning to maintain horizontal and vertical clearances. Selective removal or trimming of trees should help maintain or create desirable views from the trail. These types of activities will be performed on a scheduled basis annually, but may also be completed as needed.
- ***Snow and Ice Removal*** – Arden Hills trail snow plowing begins as soon as possible after a significant snowfall. Sidewalks and trails that are maintained by the City during the winter months will be cleared of accumulated snow but will not be maintained to a "clean pavement" condition. The City of Arden Hills does not have a dry pavement policy so those using City maintained trails are expected to exercise careful judgment and caution during winter months. The following sidewalk and trail areas will not be maintained by the City's Public Works Department in the winter months due to steep grades or dangerous sidewalk conditions:

    - Arden View Drive to Colleen Avenue Trail
    - Cummings Park-Lexington Avenue to Cummings Ball Field
    - Cummings Park-North Water Tower to Hamline Avenue.

    The City of Arden Hills posts the aforementioned trail locations as "Minimal Maintenance Trails" during the winter months.

<u>Non- Routine Trail Tasks</u>

The Public Works Department performs a wide variety of non-routine maintenance tasks within the parks and trail system. The extent and frequency of maintenance schedules will vary greatly depending on the location and amount of use. These tasks are performed less frequently then the routine tasks but are important in extending the life expectancy of trails, providing the highest quality product to the residents and ensuring the safety of trail users.

- ***Trail Inspection*** – Trails will be inspected as time permits. Inspections will include the trail surface, culverts and water crossings, all amenities, signs and surrounding vegetation. Potential safety problems will always take priority when scheduling maintenance. Vandalism left unattended encourages more of the same and will be a high priority for maintenance. Gang graffiti and "tagging art" should be documented with

incident reports and police should be notified, then the graffiti removed or covered as soon as possible.

- ***Cleaning of Culverts*** – Culverts often become clogged with trash and debris that must be removed to prevent flooding and undercutting of trail surfaces. The cleaning of culverts will be accomplished on an "as needed" basis.
- ***Trail Amenity and Signage Repair/Replacement*** – Amenities such as benches and swings will be inspected at least annually to make sure they are in good repair and safe for use. Trail signage should be replaced when they become unreadable due to age or damage. Signs related to safety are most important and should be considered a high priority.
- ***Trailhead/Trail Crossings*** – Trailheads near intersections should be kept clear of trees and brush in order to keep a clear vision for both the trail user and oncoming traffic. Clear zones should be at least 15 feet from the street. Crosswalks should be provided for all trails that cross a street. Painted crosswalks will be repainted as needed.

Maintenance Tools

The City has tools to help coordinate trail maintenance.

- ***Trail Inventory*** – A trail inventory is maintained for all maintained trails within the City. The inventory contains the location, surface type, overall length of trail and width of trail.
- ***Trail Map***- A current parks and trail map is maintained, indicating location of trail and surface type.
- ***Trail Evaluation*** – The City has the trail surface conditions evaluated approximately every three years. These ratings are utilized to prioritize maintenance needs such as crack sealing, patching, resurface and reconstruction.

Pavement Treatment Options

Bituminous Recreation Trails are constructed for multipurpose use by pedestrians, bicyclists and in line skating. Expectations for the surface will vary from user to user. The City will utilize the following treatments that will allow for the most satisfaction by all user groups.

- ***Crack Treatments*** – There are several types of crack treatments used in Minnesota. These treatments are designed to prevent moisture infiltration into the base and sub grade, which can cause pavement deterioration. These treatments may significantly improve the ride quality, especially for in-line skaters and bicyclists.
- ***Asphalt Emulsions*** – Used in many preventative surface treatment applications, including slurry seals and micro surfacing. Asphalt emulsions can be defined as a mixture of asphalt binder, a surfactant and water.
    - ***Slurry Seal –*** Mixture of fine aggregate, asphalt emulsion and mineral filler. Slurry seals are used to retard surface raveling, seal minor cracks and improve surface friction. Seals the pavement surface from moisture infiltration and the

resulting moisture related damage. Slurry seal treatments can be expected to last approximately three to five years.

- ***Micro surface –*** Similar to slurry seals except they use a chemically controlled curing process. Seals the pavement surface from moisture infiltration and the resulting moisture related damage. The additional mix stability allows it to be applied in thick layers, making it ideal for filling ruts, and correcting other deformations. Micro surface treatments typically last more than seven years.

- ***Bituminous Overlay/Reclaiming*** – Once a bituminous trail has reached a point where crack treatments and asphalt emulsions no longer provide a satisfactory surface for the user, bituminous overlay or reclaiming and repaving will be utilized to renew the trail surface.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF ARDEN HILLS THIS 25TH DAY OF JUNE, 2012.