

VII. Maintenance

Adoption of guidelines for maintenance of the City of Canandaigua Action Transportation Network will be vital to establishing the City of Canandaigua as a “bicycle friendly” and “walkable” community and a destination for outdoor enthusiasts. Guidelines will ensure that the network will be managed and maintained safely and efficiently over the long term. Sustaining a maintenance program for the network will depend on the cooperation and efforts from the City of Canandaigua, Ontario County, and the New York State Department of Transportation, interested organizations and volunteers. Ownership and maintenance responsibilities for specific roadways will determine maintenance responsibilities.

Maintenance Issues

The CWC identified the following specific maintenance issues to be addressed in the City of Canandaigua:

- Debris or loose gravel on roadways
- Uneven pavement and sidewalk surfaces
- Snow and ice conditions
- Visibility of pavement markings over time
- Bicycle friendly drain inlet covers

Current Policies

The City of Canandaigua has updated its maintenance practices recently and overall does an admirable job concerning keeping the City maintained efficiently with safety as the priority. The following are a few examples:

- Public education to keep fall leaves off street pavement.
- Snow removal policy concerning sidewalks and reporting of problem areas.
- Winter salting program that is economically and environmentally sensitive yet effective.
- Sweeping curb lanes to remove debris.
- Re-stripping centerlines every year and restriping road edge lines every 2 years.



Not Bike friendly

The CWC has identified the Vermont Pedestrian and Bicycle Friendly Facility Planning and Design Manual as a model program to be revered when implementing or updating current City of Canandaigua maintenance policies. The manual was prepared for the Vermont Agency of Transportation by the National Center for Bicycling and Walking in December 2002. [Appendix 7a](#) presents the full manual. Pertinent excerpts from the manual are exhibited verbatim in this section.

Maintenance Goals

Like all transportation infrastructure, pedestrian and bicycle facilities are subject to debris accumulation, surface deterioration, and other maintenance issues that can limit their functionality if not addressed. Maintenance protects the investment of public funds in pedestrian and bicycle facilities, so they can continue to be used safely. Poorly maintained facilities become unusable and a potential legal liability, as bicyclists and pedestrians who continue to use them may risk personal injury and equipment damage. Others will choose not to use the facilities at all.

Every agency, municipality or organization that is responsible for maintaining a facility should establish maintenance standards, identify how users should report maintenance needs, and prioritize special activities such as snow clearing and debris removal. Maintenance inspections should be routinely performed in combination with a spot improvement program (discussed in more detail below).

Consider costs and responsibility for maintenance when projects are planned and budgets are developed. A good rule of thumb is that 3-5 percent of infrastructure replacement costs should be spent on annual maintenance. Preventive maintenance reduces hazards and future repairs costs. Life cycle cost analysis can be used to evaluate expenditures, such as the net value of using a higher quality, longer-lasting material initially.

It is essential that maintenance considerations be considered during the planning and design stages of a project to ensure that a capable maintenance entity is identified and the full cost of maintenance activities are considered before embarking on preferred types of improvements.

The primary goal of a maintenance program should be to ensure that a facility serves its original purpose. The following actions will help ensure that adequate maintenance takes place:

- *Develop written maintenance procedures and follow them.*
- *Develop an inspection and maintenance checklist.* Periodic inspections that identify problem areas are an essential feature of any maintenance program.
- *Regularly monitor/inspect facilities.*
- *Keep a report of maintenance activities and inspections.* Such records may become significant in liability actions that may take place at a later date.

Responsibility

Although the state may assist with funding and development of sidewalks and shared –use paths, maintenance of these facilities often remains a municipal responsibility.

Because on-road bicycle facilities (bicycle lanes, wide curb lanes and paved shoulders) are an extension of the road surface, they should receive the same level of maintenance as the rest of the road and will require less specialized maintenance.

In communities where the Department of Corrections has work crews available, it may be possible to have some maintenance done by this agency.

A plan for maintenance and funding sources should be included in the planning process for rail-trail and shared-use path development. In most cases, funding may be derived from a consortium of trail users, host communities, and the state.

Design with an Eye Toward Maintenance

Designers should take into account what effects their design will have on long-term maintenance and management of the project. Designers should also consider the perspectives of all potential facility users, visit other projects, seek innovative solutions to address specific design issues, strive for simplicity, and monitor the successes and failures of similar projects as they develop.

General principles to consider when designing with eye toward maintenance include:

- Working with adjacent property owners in advance will result in fewer problems and better solutions.
- Expect vandalism.
- Consider the range of potential users and user groups.
- Optimize use of existing infrastructure including park-and-ride lots, trail friendly businesses and neighbors.
- Use common sense. Keep the design simple.

Management Plans

Especially for shared-use paths and rails trails, a management plan is a useful tool to identify maintenance needs and responsible parties. It is recommended that development of a management plan with a maintenance component occur before the trail is constructed. Path managers should recognize the adjustments to the plan might be needed when the facility becomes operational. While maintenance issues are a key component of a management plan, other items, such as resolving user conflicts, can be addressed. Items to address in a management plan include:

- Basic operational and staffing questions such as: Who opens and closes the gates? Fills potholes? Removes debris? Responds to vandalism? Removes litter? Acts as main contact? Pays the bills? Who does what work?
- What services will and will not be available on the trail?
- Addressing how funding generated by leases, fees and sale of goods can and will be used for trail maintenance.
- For maintenance items, include:
 - The frequency of maintenance tasks.
 - The types of materials to be used.
 - The standards for successful accomplishment of tasks.
 - The total resources needed including man-hours.
 - An estimate of cost for each activity.

Additionally, some communities have initiated adopt-a-path or trail programs where civic groups or other organizations can “adopt” a segment of path, trail or bicycle route and take responsibility for routine maintenance. If instituting an adopt-a-path program, the responsibilities of the organization adopting the facility should be clearly spelled out.

General Maintenance Considerations

There are a number of maintenance activities that are common to all pedestrian and bicycle facilities and need to be thoroughly reviewed and detailed during the planning process:

- Snow removal
- Sweeping
- Surface Repairs
- Resurfacing
- Signs and Pavement Markings
- Utility Cuts
- Vegetation
- Drainage
- Amenities

Special Considerations for Sidewalks

In addition to the maintenance activities expected for all bicycle and pedestrian facilities, sidewalks may include the following needs:

- Newspaper stands, portable signs, and other devices creating barriers on a sidewalk.
- Worn and slippery steps or ramp surfaces that need to be overlaid, textured, or replaced.
- Snow and slush removal from curb ramps.
- Pavement overlays adjacent to curbed sidewalks

Special Considerations for Shared-Use Paths

In addition to the maintenance activities expected for all bicycle and pedestrian facilities, plan for the following on shared-use paths:

- Remove debris along the path and animal waste at agricultural crossings.
- Plan for installation and removal of seasonal signing and other items if different user groups are expected in the winter.
- Place and remove plank runners on bridge decks to accommodate seasonal snowmobile use.
- Where paths are plowed, completely clear snow from the path edge. Where the snow is not cleared from the path edges, additional moisture and frost problems can occur.
- Locate fences and barriers away from paths to facilitate snow removal.