

Cunningham Community Forest Master Plan

January 2021

Prepared By:



In Association With:



Prepared For:



Cunningham Community Forest Master Plan

Prepared For:



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The Cunningham Community Forest Master Plan project was developed as a recommendation of the Chestertown Hamlet Plan and funded through a 2019 grant from NYSDEC's Adirondack Smart Growth Program with the goal of developing a plan to manage the site for forestry and recreation. The project has been developed in two parts – a Forest Management Plan and a Site Master Plan. The forestry focused Forest Management Plan was developed through the services of Paul Smith's College 2020 Forestry Capstone class. The Site Master Plan was developed by the LA Group, in association with Wilderness Property Management, Inc., and Morning Ag Clips, and focuses on implementation and recreation. By coordinating the recommended actions of the Forest Management Plan and the Site Master Plan, the Town will maximize implementation and cost efficiency.

Funded In Part By:



This project has been funded in part by a grant from the New York State Department of Environmental Conservation, Adirondack Park Community Smart Growth Program through appropriations from the New York State Environmental Protection Fund (EPF).

Prepared By:



The LA Group (LAG) has over 45 years of experience in providing landscape architecture, civil engineering, planning, permitting, and environmental science services. Through ingenuity, reliability, and an unparalleled work ethic, LAG has designed and developed projects that not only meet the criteria of our clients, but also surpass all of their expectations.

In Association With:



Wilderness Property Management Inc. (WPM) has 30 years of experience in protecting wild lands and the people who use those lands. WPM's mission is to enhance the wilderness character of private and public lands while creating outstanding recreational opportunities.



Morning Ag Clips' (MAC) philosophy is to support clients who seek to sustain local communities while conserving and promoting careful use of the natural environment. MAC's team provides national-level experience and creative solutions, but with hometown sensibility and client-centered focus.



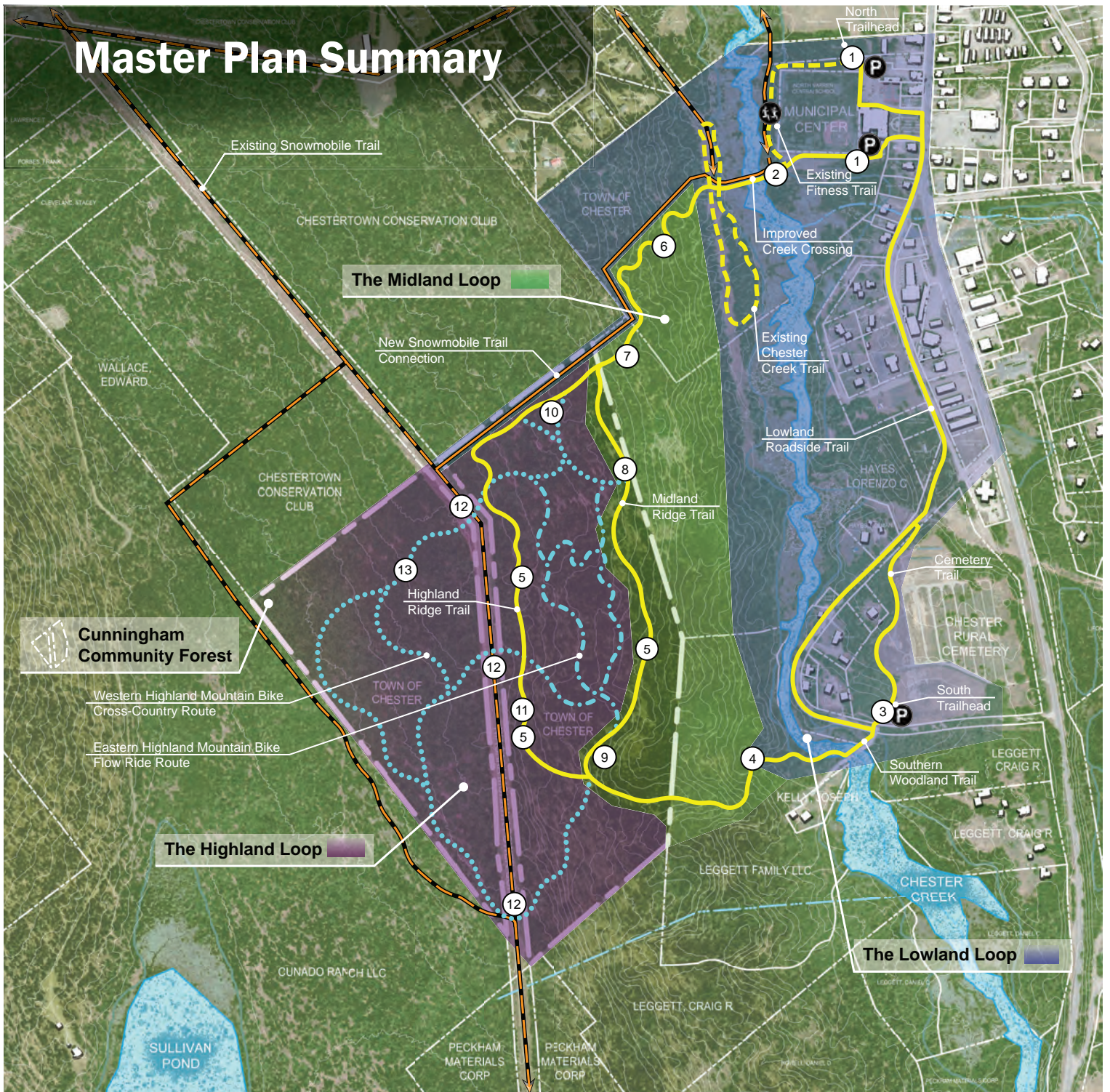
Built on a longstanding Adirondack tradition, forestry education at Paul Smith's College equips students with a foundation of technical, field-based and applied education that combines theory and practice.

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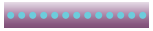


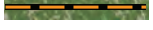
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Master Plan Summary

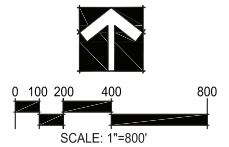


Legend

-  Proposed Hiking Trail
-  Existing Hiking Trail
-  Proposed Cross-Country Mountain Bike Route
-  Proposed Mountain Bike Flow Trail Route
-  Proposed Snowmobile Trail
-  Existing Snowmobile Trail

- ① North Trailhead: Improve Town Hall North Lot Gateway, Develop South Lot Gateway
- ② Chester Creek Crossing: Develop Viewing Platform and Improved Creek Crossing
- ③ South Trailhead: Develop Parking Lot and Gateway Plaza
- ④ Prominent Woodland View: Selectively Clear to Open Space, Develop Rest Node
- ⑤ Small Stream Crossing: Low Bridge Required
- ⑥ Manmade Reservoir Cultural Site: Develop Interpretive Node
- ⑦ Forest Clearing: Develop Rest Node

- ⑧ Prominent Ridgeline View: Selectively Clear to Open Viewshed, Develop Rest Node
- ⑨ Natural Reservoir Ecological Site: Develop Interpretive Node
- ⑩ Unique Ecological Site: Overstocked Trail Segment
- ⑪ Old Sawmill Cultural Site: Develop Interpretive Node
- ⑫ Powerline Corridor Trail Crossing
- ⑬ Unique Ecological Site: Highland Bog Trail Segment



The LA GROUP
Landscape Architecture & Engineering P.C.



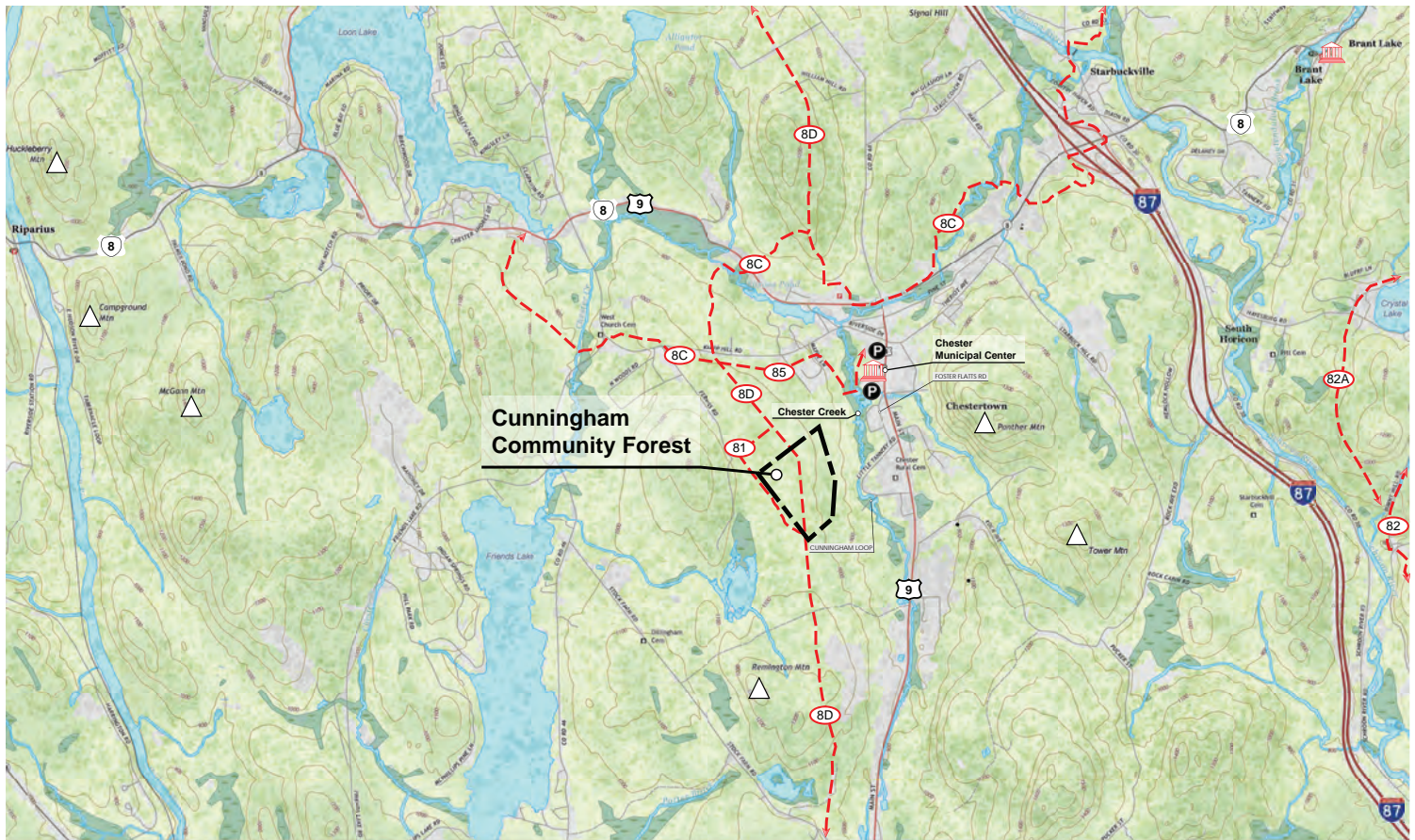
Chapter 1.

Introduction to the Cunningham Community Forest

One Project, Two Parts

In 2019, the Town of Chester launched an initiative to establish a community forest on local lands and to further expand its extensive trail network. As the Cunningham Community Forest, the property will protect the natural forest land while incorporating sustainable recreational and educational uses. The Cunningham Community Forest Master Plan project was funded through a

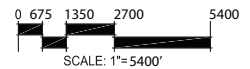
grant from NYSDEC's Adirondack Smart Growth Program. The grant was awarded to the Town in 2019, with the goal of developing a plan to sustainably manage the Cunningham Community Forest site for forestry and recreation. The Project has been developed in two parts: a Forest Management Plan led by Paul Smith's College and a Site Master Plan led by The LA Group.



Legend

Regional Context Map

- Existing Snowmobile Route as Noted
- Cunningham Community Forest Parcel
- Public Parking
- Municipal Center / Town Hall
- Mountain Peak as Noted



Project Description

The goal of the Cunningham Community Forest Master Plan Project is to manage the forest for recreation, environmental education, and forest products in a sustainable way for which the entire community can benefit. The 104-acre project site is owned by the Town and located in the hamlet of Chestertown, southwest of the Town of Chester Municipal Center. The land was purchased from the Cunningham family with a \$50,000 grant from the Peckham Family Foundation, plus a \$15,000 match from the Town of Chester. By engaging in sustainable forest management, the Cunningham Community Forest will provide the greater Chester community with a multitude of benefits:

Environmental Benefits

such as clean air, water, and wildlife habitat

Scholastic Benefits

from forest-based educational programs

Cultural Benefits

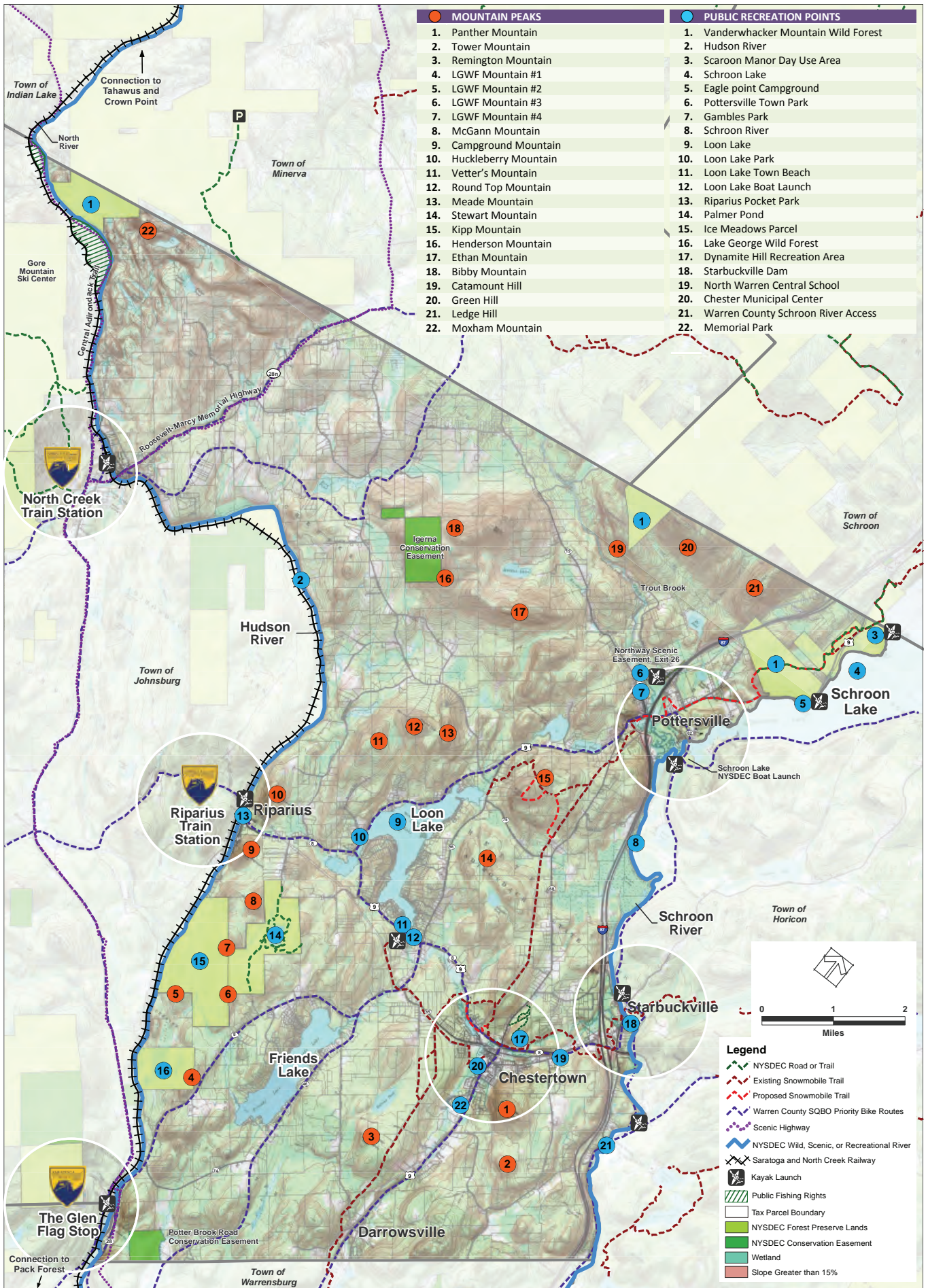
from serving as a model of effective forest stewardship

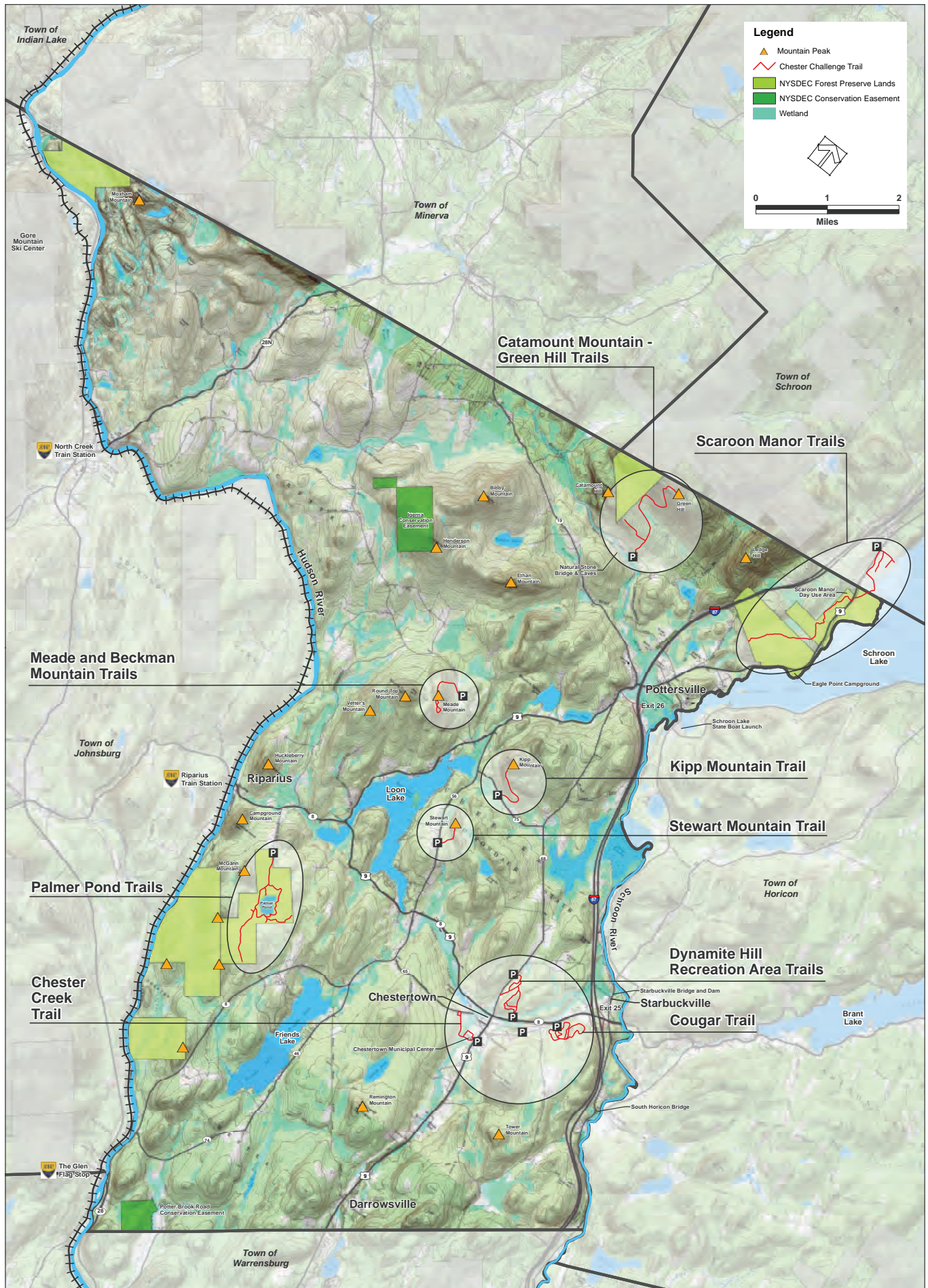
Recreational Benefits

secured with public access to hiking, mountain biking, and snowmobile trails

Above: A Regional Context Map showing the Cunningham Community Forest's land parcels in relation to the Chester Municipal Center, Hudson River, and Schroon River corridors.

Opposite Page: Chester Townwide Recreational Plan Map (2015, Created by The LA Group for the First Wilderness Corridor, funded through the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund).





The Forest Management Plan was developed through the services of Paul Smith's College (PSC). To capture stakeholder values and give specific direction to the management plan, the 2020 Forestry Capstone class first developed a forest survey that was distributed to the public via online survey software. A forest inventory was then conducted to gather forest data such as timber volumes, plant and animal species, wildlife habitat, and human artifacts such as wells and stone walls. With this Site Master Plan report, the Town of Chester completes the second half of the Cunningham Community Forest Master Plan Project. The Site Master Plan establishes hiking, mountain biking, and snowmobile trail routes. In addition, the report provides recommendations for wayfinding and interpretive signage, forest management projects, implementation, and identifies potential funding opportunities. The new trail system will be developed in collaboration with the implementation of the Forest Management Plan. All equipment access routes for forest management and tree clearing must be established in coordination with the trail network to prevent any damage to planned or implemented recreational uses, and should be incorporated into the formal trail system when possible.

This project will expand the current Chester Creek Nature Trail and Fitness Trail Network into a new highland forest experience. It will feature both natural surface and roadside trails looping through lowland valley, midland slopes, and highland ridgeline corridors. The new expanded Trail Network will offer both casual and moderate hiking experiences for all ages and multiple skill levels. When taking into consideration the broader Chester regional recreational experience and Chester Challenge Trail hiking opportunities, the expanded Cunningham Community Forest Trail Network will continue Chester's tradition of offering unique features and experiences, further becoming a destination for the local community and regional visitors.

Vision, Goals, and Objectives

The vision for the Cunningham Community Forest is to develop a sustainably-managed forest intended to benefit the entire community. These publicly-owned lands would produce forest products, provide recreational opportunities, and offer environmental education through signage and programming.

To accomplish this vision, clear development goals were established*:

- Engage in best management practices for forest management to protect the land from poor logging practices.
- Provide a multi-use trail system that includes opportunities for hiking, mountain biking, and snowmobiling.
- Make a portion of the trails accessible for all ages, capabilities, and skill levels.
- Adopt policies that protect the trail network and managed forest from overuse.
- Address waste management practices.
- Offer educational activities for different age groups on forest ecology and local history.
- Provide long-term trail maintenance practices and responsibilities.
- Involve the community throughout the process.

In order to achieve these goals, decisive objectives must first be established and then fulfilled. The Project's two parts (the Forest Management Plan and the Site Master Plan) lay out these objectives by stating the recommended development strategies. The Town's future implementation and management will complete the objectives, thereby accomplishing the goals and realizing the Project's vision.

*To aid in developing these goals, the PSC forestry team developed and distributed a two-page opinion survey to gauge the community's interests and concerns. For additional public outreach information, see [Chapter 2: Community Participation Plan](#).

Opposite Page: Chester Challenge Trail System Map (2016, Created by The LA Group for the First Wilderness Corridor).



Chapter 2.

Community Participation Plan

Engaging The Public Through Community Outreach

The Town of Chester assigned the Paul Smith's College (PSC) Forestry Capstone Program with the responsibility of guiding the Project's public outreach component. Public participation is vital in garnering interest in this project, as the community begins to take ownership of a project early on when they can provide meaningful input in the decision-making process.

PSC's Community Participation Plan included a two step process that resulted in:

1. Gaining insight into the community's expectations, desires, and needs via survey (completed).
2. Building community support by organizing Community Forest Day (delayed due to COVID-19 pandemic).

Public Outreach

Community participation played an important role in determining the types of forest and recreational uses for the Cunningham Community Forest. The students from Paul Smith's College Forestry Capstone Program developed a two-page survey with twelve questions from which they would gain valuable insight to inform on goals and objectives and to decide which specific activities to pursue. The questions collected information on where the community members lived, how old they were, what interested them about nature, what kind of development they would want to see, what recreational activities they participated in, and if they supported the forest to be sustainably managed for timber.

The survey was distributed to the public through multiple delivery methods. Surveys were first made available through the Town's website via SurveyMonkey, a leading online survey tool. This was effective outreach due to the email chain of community groups available in the Town of Chester. To further augment this public outreach effort, paper copies of the survey were distributed manually at the Panther Mountain Inn and Restaurant and at the Municipal Center during the Chester Public Library's Community Book Sale. The team was able to ascertain the community's interests and concerns from the survey results while gaining valuable insight into the relationship between the place and its value to people. The feedback generated from the distributed surveys was analyzed, distilled, and summarized in several unique ways, including charts, bar graphs, lists, and word clouds.

Several themes, desires, and expectations of the community emerged from the survey. These include:

- Develop and maintain trails for walking, biking, running, skiing, and snowshoeing.
- Prioritize trail development to include scenic vistas, natural points of interest, and wildlife / habitat viewing opportunities.
- Provide interactive educational activities for different age groups on all aspects of the forest.
- Provide access for the elderly and people of all abilities.
- Dedicate a connecting trail for snowmobiles that provides access from the powerline snowmobile trail into the downtown.
- Ensure proper forest management practices and proper use of the area by hikers and other recreationalists.
- Utilize resident loggers to participate in the marking of products and oversee the harvest and site clean-up in the community forest.



Above Top: A Word Cloud depicting survey participants' top forest values.

Above Lower: A Word Cloud depicting survey participants' favorite features to see while hiking.

(Both graphics generated by SurveyMonkey for PSC's Forest Management Plan).

Community Forest Day

The second component of the public participation plan is the organization of the Town of Chester Community Forest Day. Planned by the 2020 Paul Smith's College Forestry Capstone Class, it will feature educational events and activities designed to introduce the community to the concept and benefits of a community forest and sustainable forest management practices. The agenda includes a combined presentation of the Cunningham Community Forest Project's Forest Management Plan and Site Master Plan.



The presentation will be supplemented by the following activities:

- Discussion of silvicultural options for the forest.
- Axe throwing workshop.
- Safe directional felling demonstration.
- Low-impact skidding with PSC's Draft Horse Team.
- Logging techniques to fell a tree for bridge construction.
- Pre-commercial tree thinning process.
- Marking tree techniques.
- Milling of logs into boards.
- Safe use of Wood-Mizer portable sawmill.
- Chester Creek Bridge construction using boards harvested from the forest.

Paul Smith's College gave a formal PowerPoint presentation about the Forest Management Plan to the Chester Town Board in April 2020. As for the Community Forest Day, its original May 2020 date had to be cancelled due to the worldwide COVID-19 pandemic, and the anticipated fall rescheduling has been further delayed until Spring 2021.

The public will be invited to a presentation of the final Master Plan Report at a future Town Board Meeting scheduled for Fall 2020.



Chapter 3.

Inventory and Analysis

Achieving Optimal Site Solutions Through Detailed Investigation

The Cunningham Community Forest Master Plan provides a calculated approach to the development of an extensive trail network over the course of several years and phases. Negotiating the feasibility, design, funding, and construction logistics of the project requires an informed approach. The inventory and analysis performed during the site investigation provides the foundation for making site engineering and design

development decisions, and allows the consultant to advance through the master planning process with confidence.

Chapter 3 summarizes the Cunningham Community Forest's existing conditions; ecology; natural, cultural, and manmade resources; and points of interest.

Existing Conditions and Ecology

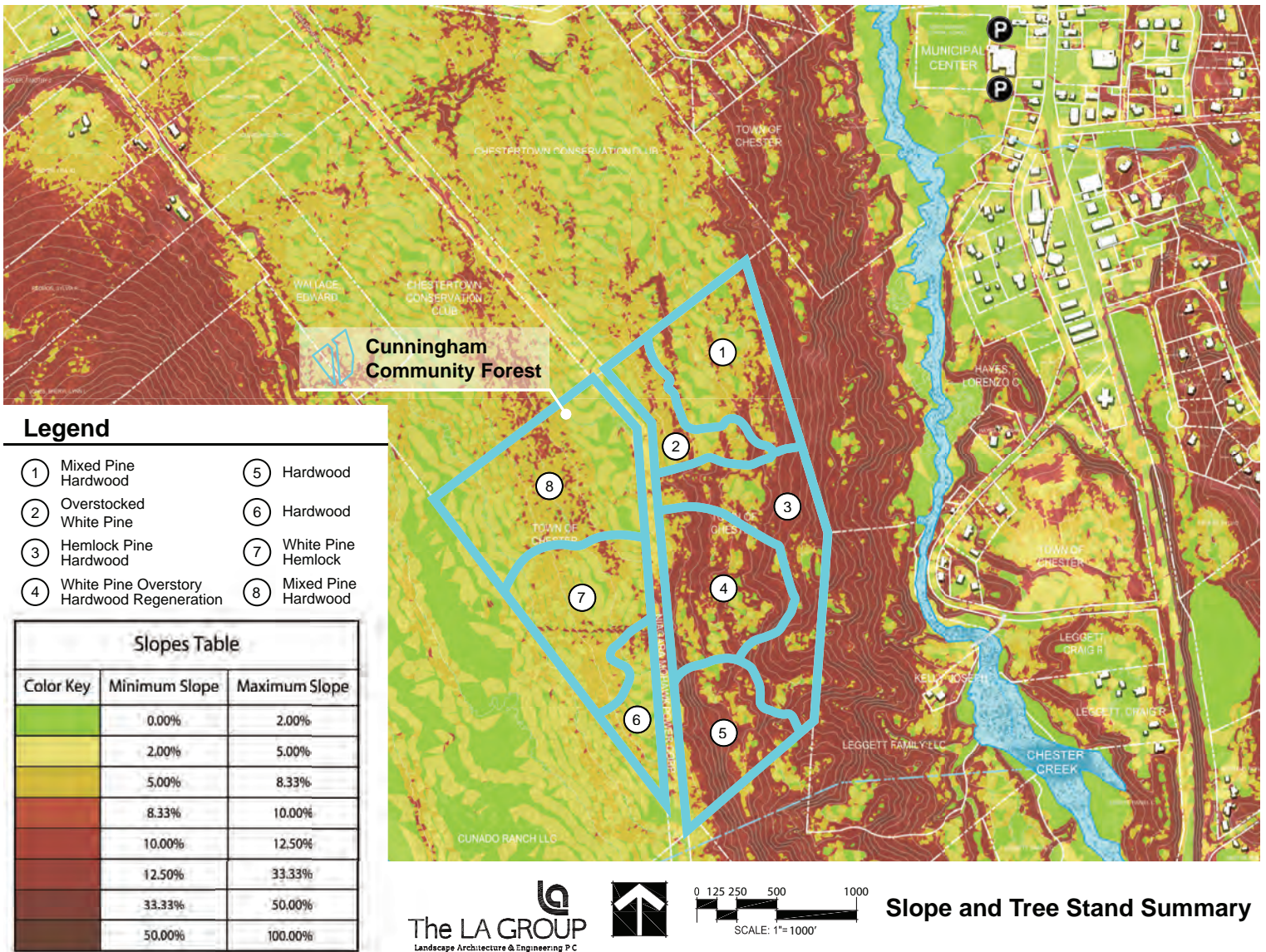
The Cunningham Community Forest (CCF) property is owned by the Town of Chester. It spreads over one hundred acres wide across a high ridgeline (approx. 900'-1100' elevation) to the southwest of the Chester Municipal Center. It is surrounded by lands belonging to the Town, private owners, businesses, and the Chestertown Conservation Club. The property is bisected by a large powerline corridor. This easement is held in the name of the Niagara Mohawk Power Corp, and is utilized extensively in the winter months as a major snowmobile route by the Northern Warren Trailblazers Snowmobile Club.

Peaking in its westernmost corner, the west parcel of the CCF stretches across a highland bench, it's slope gently descending towards the east. Several small ephemeral streams wind through the forest floor amidst pockets of fern groves and various tree stands. The first and higher of two ridgelines runs along the western border of the east parcel of the CCF. After tipping over the edge of the higher ridge, the landscape quickly rolls through a east-bound descent before leveling along the second, lower ridgeline that runs along the eastern parcel's east border.

Resting along the same ridgeline as the CCF, Remington Mountain fills the southern skyline. Panther and Tower Mountains, sitting across the valley from the property, shore up the eastern horizon. The Chester Municipal Center sits in a central valley below the CCF (approx. 800'-900' elevation), with Route 9 extending along the lowland in a north-south direction. At the base of the ridge, Chester Creek makes its undulating journey through the valley floor. The creek footprint is oftentimes quite narrow, but occasionally widens out into larger basins.

Wetlands are typically found along the Chester Creek corridor as well as its major tributaries. Sullivan Pond to the southwest of the CCF also has a larger wetland expanding beyond its waterline. While trail development within the wetland areas should be minimized whenever possible, necessary crossings and transversals can be created with minimal disturbance to the lands. Proper erosion control measures will also alleviate the need for any required mitigation.





Above: Map depicting existing slope conditions (gentle slopes within the valley and creek corridor, steep ascent to the eastern Forest parcel, relatively level western Forest Parcel).

Opposite Page: Southern View of Chester Creek from Cunningham Loop.

Prior to the master planning efforts, an extensive inventory and analysis of the Cunningham Community Forest parcel was performed by Paul Smith’s College forestry team. The inventory was completed within the boundary of the 105-acre Forest parcel, leading to the identification and delineation of eight distinctive tree stands (featuring six forest types). Stands 1 and 8 feature mixed pine and hardwoods (maple, birch, ash, cherry, and basswood). Stand 2 is a smaller, unique stand of overstocked white pines. Stand 3 spans across the parcel’s eastern ridgeline, and is a mixture of hemlock, pine, and hardwoods. The centralized stand 4 features white pine overstory and hardwood regeneration. Stands 5 and 6 are dominated by hardwood, and stand 7 has a mix of white pine and hemlock. Observed fauna include white-tailed deer, squirrels, chipmunks, woodpeckers, sapsuckers, mallards, and various song birds.

With the goal of utilizing the science of forestry to gather and analyze pertinent data, the College’s forestry team was able to create tailored prescriptions and recommendations for the Town. These recommendations form the foundation of the Forest Management Plan. For additional summary, see **Chapter 4: The Master Plan.**



Existing Resources, Connections, and Points of Interest

The planned Cunningham Community Forest Trail Network will extend across several Town and privately owned properties, strengthening the connection between existing municipal and community locations and creating new recreational destinations. The northern limits of the Trail Network terminate at the Chester Municipal Center, which houses the town government offices and library, as well as the YMCA Adirondack Regional Wellness Center. In addition, the municipal property features two large parking lots, a veteran’s memorial plaza featuring flags and monuments, soccer and baseball fields, and basketball and tennis courts. A storage shed is tucked away in the southeastern corner of the south lot, and a solar panel field and gravel access drive to the Chester Creek line the southern boundary of the property. With multiple site features to offer visitors, the Municipal Center site can easily function as both a trailhead to begin a journey or as a final destination unto itself.



Municipal Center Property:

Top: A view of the outdoor entry plaza at the front of the Municipal Center.

Bottom: A multi-sided kiosk adjacent to the tennis courts provides information on Chester’s history as well as orientation to the First Wilderness Heritage Corridor.

The northernmost parking lot at the Municipal Center also functions as the ‘trailhead’ for the existing Chester Fitness Trail. The one-fifth mile trail runs along the northern edge of the municipal property, entering into the woodland edges adjacent to the ball fields. The shaded thicket provides a sense of seclusion and serenity from the action of the nearby soccer field. Fitness joggers enjoy the natural trail surfacing and multiple fitness nodes. The nodes provide opportunities to pull off the path corridor and perform various exercises to build strength, train balance, and generally improve the aerobic health of multiple user groups. To support its function as a trailhead, a pair of orientation and regulatory sign panels are placed near the north lot. Along the woodline at the northwest corner of the basketball court, a singular post littered with small sign panels quietly marks the Fitness Trail’s entry. Future site improvements could bolster the northern lot’s functionality as a gateway into the larger Trail Network.



Chester Fitness Trail:

Top: Trail orientation map and regulatory signage marks the start of the trail from the Town Hall’s northern parking lot.

Middle: A long, uncelebrated asphalt shoulder provides a buffer from the court games and trail users, but also disconnects the Fitness Trail from the Parking Area.

Bottom: The Fitness Trail’s natural trail surface winds through the woodland, while pockets of fitness nodes pop up periodically.

Connecting to the southern terminus of the Fitness Trail as well as the Municipal Center's south lot via gravel drive, the Chester Creek Trail forms a short loop on the western banks of the Creek. To gain access to this loop, the trail user must first cross the Creek's enlarged basin along a thin dike. The southern views of the Chester Creek corridor along this entire segment are spectacular, and the potential for bird and wildlife viewing is high. However, depending on the season and recent rain events, the land bridge is often flooded, rendering the Chester Creek Trail inaccessible to most user groups.

Once across Chester Creek, the trail features a half-mile natural surface trail through the forest. A low voltage power line corridor runs through a portion of the loop's area. Despite the powerlines, the abundance of flora is able to still dominate the setting, creating a serene woodland atmosphere.



Chester Creek Trail:

Top: A solar panel field abutts the gravel access drive linking Chester Creek crossing with the Town Hall's southern parking lot.

Middle: Seasonal high water renders the narrow land bridge crossing Chester Creek inaccessible.

Bottom: The southwest corner of the Town Hall parcel offers unparalleled views across the widened basin of this portion of Chester Creek. An old boardwalk extends partially across the creek, but falls far short of providing full access to the western banks of the Creek.

The wider vision of the Cunningham Community Forest Trail Network incorporates the two smaller Chester Creek Loop and Fitness Trail segments. It then looks to extend south and westward. Southward through the lowland valley, the trail would meander through the residential neighborhood and adjacent to the Chester Rural Cemetery. Foster Flats and Little Tannery Roads are quiet, low-volume residential streets with sporadic commercial properties. Wide right-of-ways and long, relatively level sight distances should make for a safe and accessible on-road or road-adjacent (shoulder) trail segment.

The Chester Rural Cemetery sprawls across a large swath of rolling land at the southern end of the proposed Trail Network. A wide corridor of lawn stretches between its westernmost lane and the adjacent woodland edge, making for an inviting trail corridor. By hugging the treeline, any new trail alignment will benefit from the woodland's shade while maintaining a respectful separation from the cemetery. Additional split-rail fencing would provide appropriate separation between the trail and cemetery.

The broad, open field south of the cemetery provides an opportunity for additional recreational development. At the southwestern corner of this field, across from Little Tannery Road's intersection with Cunningham Loop, the land is level, lightly wooded, and ideal for a trailhead.



Lowland Valley / On-Road Residential Trail:

Column Top: Little Tannery Road is a quiet, shaded neighborhood street with potential to develop a trail along the shoulder.

Column Middle: The land west along Chester Rural Cemetery's border offers potential for trail building along the woodland edge.

Column Lower: A view southward from the Cemetery towards the recommended southern trailhead site.

Bottom: The corresponding panoramic view from the anticipated southern trailhead site back towards the Cemetery.



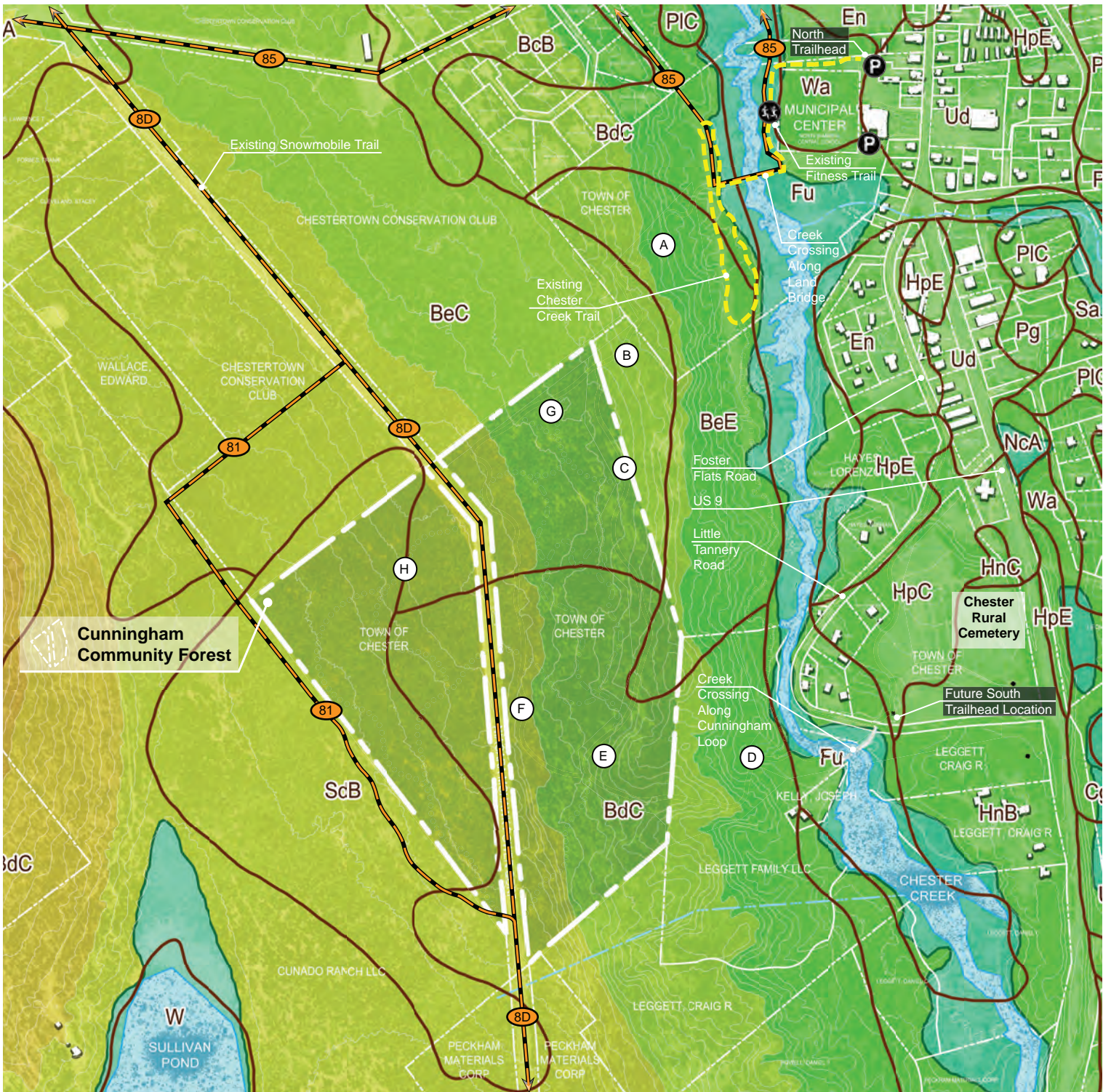
An overplanted forest area provides a unique trail experience.

The primary goal of the Trail Network is to expand westward across Chester Creek and up the more rugged terrain to reach the ridgeline of the Cunningham Community Forest. The Cunningham Community Forest property and the portions of neighboring parcels proposed to be utilized for the Trail Network's development contain several potential natural, recreational, and cultural destinations. Uphill from the existing Chester Creek Trail, an old reservoir provides an opportunity for future cultural interpretation. Further into the Cunningham Community Forest parcel, an old sawmill site, overstocked forest areas, highland bog areas, and a natural reservoir site provide additional opportunities for cultural and natural interpretive destinations. Selective clearing at key locations along the ridgeline will open up significant vistas across the valley and down the Chester Creek Corridor. These opportunities will be further explored in [Chapter 4: The Master Plan](#).

Existing Uses

The Chester Creek Trail Loop and the Fitness Trail present light hiking and fitness opportunities. Additional winter use can be achieved with the inclusion of snowshoeing and cross-country skiing along the same trail corridors. Beyond the two hiking trails, the winter activity of snowmobiling has proved a very popular pasttime. The Northern Warren Trailblazers Snowmobile Club operates locally, with several snowmobile routes running near the project site. Trail Route 8D runs alongside the larger transmission powerline corridor that bisects the Cunningham Community Forest land. A secondary loop (Trail Route 81) breaks away and circumnavigates the western parcel via an old logging road. Trail Route 85 runs east-west, crossing through the Chestertown Conservation Club land before turning to run down the distribution line corridor. Leading to the Chester Creek Trail Loop, the snowmobile route then traverses the very same land bridge across the creek before again turning northward. Lastly, it runs past the Fitness Trail before terminating at the US 9 / Knapp Hill Road intersection.

The Town of Chester has one of the most expansive local trail networks in the Adirondacks. With the development of the Cunningham Community Forest Trail Network, which includes a new snowmobile connector trail, hiking, and mountain biking trail routes, Chester's overall townwide trail network will be poised to further engage the community and draw in new visitors. Currently, the small scale and level slopes of the Chester Creek Trail Loop and the Fitness Trail do not make for viable mountain biking opportunities. The higher elevations and more varied slopes up and along the Cunningham Community Forest ridgeline will create better opportunities to attract mountain biking enthusiasts. In addition to including snowmobile connector and mountain bike routes, there is an opportunity to further engage users by providing interpretative signage for the natural setting and local cultural history.



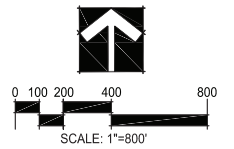
Legend

- Existing Hiking Trail
- Existing Snowmobile Trail
- (A) Reservoir Cultural Site
- (B) Cleared Forest
- (C) Prominent View: (Cleared Forest)
- (D) Prominent View (Forest Bluff)
- (E) Natural Reservoir Site
- (F) Old Sawmill Site
- (G) Overstocked Forest Area
- (H) Highland Bog Area

- Delineated Wetlands
- Bice very boldery fine sandy loam, sloping
- Bice-Woodstock very bouldery fine sandy loams, sloping
- Bice-Woodstock very boldery fine sandy loams, steep
- Schroon very boldery fine sandy loam, gently sloping
- Fluvaquents-Udfluvents complex, frequently flooded
- Wareham loamy sand

Existing Conditions, Elevations, and Soils Plan

Elevations Table		
Color Key	Minimum Elevation	Maximum Elevation
	814'	900'
	900'	1000'
	1000'	1100'
	1100'	1200'
	1200'	1300'





Chapter 4.

The Master Plan

Continuing Chester's Trailblazing Momentum

Chester is celebrated for its wealth of public recreation assets, including lakes, campgrounds, parks, ponds and beaches, as well as the Chester Challenge trail program's growing network of hiking routes throughout the Town. The development of new trail loops at Cunningham Community Forest advances Chester's goal to provide the community and visitors destinations

for active, year-round recreation. It also presents an opportunity to create a protected, productive, and ecologically-sustainable community forest.

Chapter 4 takes an in-depth look at the forest management, trail building, and recreational, interpretive, and educational opportunities of the Cunningham Community Forest.

Sustainable Forest Management Overview

Attaining the condition of sustainability of the community forest requires successful implementation of two steps. The first step requires defining and identifying timber volumes, plant and animal species, wildlife habitat and other forest data. The second involves instituting the means in which to manage that forest for future public use and enjoyment. The Town of Chester is seeking to establish the condition of sustainability through careful consideration of data from the forest and programming compatible uses of the land to yield substantial benefits for the community.

Identifying Threats to Forest Health

While conducting the forest inventory, the Paul Smith's College (PSC) forestry team recorded some of the environmental conditions and threats that could impact the forest:

- White pine blister rust exists throughout the entire site. This is a highly destructive disease to five needle (white) pines in North America. Trees can live for several years but are in a weakened state resulting in possible attack from other pests.
- There are three other conditions that have the potential to seriously impact the forest and should be monitored at the site. Beech Bark Disease is the result of an insect-fungus complex, which occurs when a non-native beech scale insect (*Cryptococcus fagisuga*) feeds on beech bark, creating cracks through which native canker fungi (*Nectria canker*) can enter the tree.
- Hemlock wooly adelgid (HWA) is an aphid-like insect that attacks North American hemlocks. This insect, native to Asia, is very small and hard to see but can be identified by the white woolly masses that form on the underside of branches at the base of the needles. The insect feeds on the tree's stored starches which severely damages the tree's canopy. This causes a change in the flow of nutrients creating a decline in health and death occurs 4 to 10 years later. HWA was found in Warren County on Prospect Mountain in 2019 and along the eastern shoreline of Lake George in 2020.
- The emerald ash borer, an invasive beetle already found in Saratoga County, poses a significant threat to the white ash specimens that are abundant in the Cunningham Community Forest.

Commercial and Public Value of the Forest

The project is designed to generate income for the Town of Chester and recreation benefits for the public. Potential market products include maple sugaring (maple sugar production), as well as the volume of timber and pulp taken from the initial tree harvesting that will take place during trail development and from subsequent harvests, as defined by the forest management and harvest plan to be approved by the Town. The recommended harvest will be substantially based on treatments designed to change the current structure and composition of an individual stand to one that meets the site's management goals. The volume of the initial harvest is estimated at \$31,000. According to estimates provided by the Department of Environmental Conservation, after a period of ten years, assuming all stands are re-harvested, it is estimated that harvesting will yield an additional \$24,000.

Best Management Practices

In order to sustain the aesthetic value of the property in perpetuity, every forest management entity should be required to follow the guidelines outlined below. In addition, to determine possible maintenance intervals as well as a budget for such activities, the creation of a use and feedback logbook at a designated trailhead would allow the town of Chester to determine the extent and interval of maintenance. Current trail condition surveys may be dispersed to users periodically in order to quickly determine conditions throughout the site.

- Keep road building to the minimum width that will permit trucks and equipment access without residual damage to standing trees and keep a continuous forest landscape.
- Meet industry specifications to reduce negative impacts on the environment.
- Avoid any timber harvesting or heavy equipment use during the wet season to protect the natural landscape and avoid tearing up the land.
- Cut stumps as low as mechanically possible. with processed slash not to exceed 18 inches off the forest floor.
- Prohibit logging contractors from leaving tops in ditches or in wet areas.
- Use careful skidding techniques to make sure adjacent vegetation is not damaged.
- Include the following maintenance activities:
 - Mow trails that are prone to fast growing vegetation.
 - Prune (as per ANSI A300 standards) any dead /broken limbs above or beside the trail that pose a risk and any branches that grow into a trail corridor.
 - Remove dead trees alongside trails that are still standing as well as those that fall across the trail.
 - Provide signage monitoring to determine condition and update as necessary.
 - Provide litter removal and trail resurfacing when drainage gullies or erosion obscures the trail.
 - Inspect water management systems and any bridges/water crossings regularly.
- Viewsheds and vistas should be maintained for optimal viewing. Removing this impeding vegetation should be part of routine trail maintenance.



Above and Opposite Page: Views of the diverse woodland habitats and plant species found within the Cunningham Community Forest.

Stewardship

“Leave no trace” is a simple courteous concept that has the goal of minimizing trail impacts for long-term sustainable trails. In simple terms, any waste that is brought into an area that is being recreated needs to be taken back out. The features listed below are seven principles that were created by a group called Leave No Trace covering all aspects of recreation:

- When preparing for an activity that is going to be done, always plan ahead. Carry an emergency bag with a first aid kit, food, water, flares, and flashlight.
- While traveling throughout the forest, stay on one path.
- Establish a “carry it in, carry it out, waste management policy.
- What is found in the forest should stay in the forest.
- Limit the use of a campfire as much as possible, keep it contained within the designated fire pit/ring, and maintain it properly.
- Keep a respectful distance from wildlife.
- Be mindful of other people, other age groups, and other types of recreation.



Introduction to Trail Building

In order to provide clear direction on the development of a true trail experience, the difference between the development of trails and roads must be delineated. Wilderness Property Management, Inc. (WPM) defines this difference as *“Trails generally go around most forest obstacles such as large trees and rocks, while roads generally remove and go through them”*. Trails also generally follow the topography and attempt to keep site disturbance to the minimum while taking advantage of viewsheds, intermittent destinations, and recreational experiences for the enjoyment of the hiker.

It is recommended that all trails constructed for the Cunningham Community Forest Trail Network be environmentally, fiscally, and socially sustainable. To do so, the trail’s design and construction strategy includes that the created trail be in harmony with the local environment, meet sustainable trail standards, meet the needs of the designated recreational uses, and be accomplished with the least amount of environmental impact.

Design and Construction Strategy

Successful trails require all of the following traits:

- Be environmentally sound and sustainable
- Be socially accepted (receive regular daily use)
- Be recreationally viable and appropriate
- Meet land use and administrative requirements



Natural surface trails, whether hiking or mountain biking (MTB), need to be environmentally sound in order to be sustainable and successful. Trail design (construction standards, typical trail corridor clearing limits and pavement section requirements) and layout (alignment, profile, and installed features) are the most critical elements in trail development. In order to achieve long-term sustainability, new trails must take into consideration the existing conditions, ecology, slope, and drainage of the project area. Sustainable trails require continual fluctuations in their slopes (controlled via grade reversals and rolling contour orientation) while maintaining an appropriate trail-to-slope alignment angle which is comparable to the IMBA Half Rule (the International Mountain Bicycling Association's rule which states that trail grade should not exceed half the slope of the hillside). Existing trails should be analyzed to determine if additional improvements are needed, such as grade dips, bench cutting, trail hardening, realignment, or water bars.

Trail sustainability is greatly impacted by the soil type, the amount of rock in the trail tread, the size and frequency of grade fluctuations or grade dips, the presence of appropriate trail grades and the adherence to trail/cross slope alignment rules. Preserving positive factors and mitigating limiting factors can be achieved to the greatest extent by utilizing mechanized equipment when possible. Mechanized equipment allows more soil and rock to be moved into the trail tread and has the ability to build bigger drainage features, which increases the long-term sustainability of a trail.

A trail's recreational viability, environmental soundness, and social acceptance are relatively co-dependent upon each other. Allowable and intended uses, or recreational viability, need to be established during the planning phase to ensure the trail is designed to remain environmentally sound against the demands of its daily operation. The social acceptance aspect of trail development requires that a trail be recreationally sound so that the trail is practical and fun for the user. To achieve social acceptance, a trail must provide an equal or better experience than other available options. A trail can be sustainable, but it won't be successful until it is socially accepted: becoming a popular destination for regular daily use.



Above: Installation of an stone dust surfaced shared use trail through an erratic boulder field at Fern Park, Inlet, NY.

Opposite Page: Installation of a natural surface Mountain Bike Flow Trail's bench cut and banked turn at the Gurney Lane MTB Park, Town of Queensbury, NY (both photos provided by Wilderness Property Management, Inc. [WPM]).

A trail's success also depends upon its ability to meet the requirements of the landowners, managers, and local municipality. All affected parties should meet and collaborate to establish the necessary requirements and agreements as early as possible during the trail's planning phase. User guidelines, wayfinding and regulatory signage, and trail maintenance guidelines should also be established during this phase. The trail's final design, construction documents, and installation should adhere to all established design standards, land uses, and administrative requirements (permits and approvals).

General Recommendations for the Cunningham Community Forest Trail Network

The majority of trails in the Trail Network are recommended to be single track*, shared use (hike and bike) with a general tread width of 3 to 5 feet. Trail difficulty ratings will follow the International Mountain Biking Association (IMBA) guidelines. The trail should be developed to easy (Green) standards with stone dust or on-road trails, low obstacle heights, and gentle grades in all lowland valley areas. As trails move uphill from the midlands to the highland ridgeline, it will become necessary to increase the difficulty to a low level intermediate (Blue) difficulty: the trail tread changes to a natural surface, obstacles become taller and more frequent, and grades become more challenging.

Occasional installation of low-deck bridge crossings and boardwalks will be required in order to navigate stream and creek crossings throughout the Trail Network. Additional trail construction details can be found in [Appendix A: Trail, Bridge, and Boardwalk Construction Information](#).

Mountain bike (MTB) trails - both Cross Country (XC) and Optimized Flow trails - should be natural surface, single track* trails with Blue difficulty. The Cunningham Community Forest's secluded highland area is a natural fit for dedicated MTB trail segments. XC MTB trails can encircle the flatter areas of the Forest. These trails will utilize the natural terrain to provide a unique riding experience while blending into the environment in a nonobtrusive manner. The variable terrain of the southern core of the Forest's east parcel lends itself to MTB Flow trails. These purpose-built and optimized trails feature berms, banks, rollers and other man-made features for sport biking. Additional XC and Flow MTB Trail details can be found in [Appendix C: MTB Trail Construction Information](#).

* Single Track refers to a narrow trail that could contain roots, rocks, logs, or other obstacles. Double track trails are wider, typically clearer, but require substantially more disturbance to the existing terrain.

Bottom Left: Installation of an stone dust surfaced shared use trail with a trail bridge, North Creek Station Trail, North Creek.

Bottom Right: Natural surface single track trail through a boulder field, Harris Land Preserve, Town of Luzerne.

Both photos provided by Wilderness Property Management, Inc. [WPM].



Overall Trail Development

Through thoughtful application of the proceeding recommended trail development, the Cunningham Community Forest can be transformed into a network of interpretive and environmental educational trails for multiple user groups. The full development of the Trail Network includes three major hiking trail loops, an highland system of mountain bike (MTB) cross country (XC) and optimized flow trails, multiple interpretive and viewshed destinations, and trailheads at the Network’s northern and southern ends. The Network capitalizes on existing trail and parking lot infrastructure, and it also engages with the local adjacent snowmobile trails. Coupling the development recommendations with the directives laid out within the Paul Smith’s College’s (PSC) 2020 Forest Management Plan, the Cunningham Community Forest’s natural beauty can be managed and sustained to serve the Chester community with active and passive recreation, education, and interpretation for generations to come.

The Trail Network will be comprised of three overall trail loops, each with its unique features, destinations, and developmental challenges. The Lowland Loop connects Chester’s existing Fitness Trail, Chester Creek Trail, and North Trail Head Parking Lots with the proposed South Trailhead via accessible trail segments. The Midland Loop pulls trail users into the forested lands and ascends the steeper terrain to the eastern ridgeline of the Cunningham Community Forest land parcels. The Highland Loop takes full advantage of the Forest’s eastern parcel’s varied terrain and woodland microcultures with additional hiking trails and dedicated MTB flow trails. In addition, it traverses the plateau slopes of the Forest’s western parcel with MTB XC trails.

With nearly seven miles of hiking/walking and biking trail segments, the area covered by the Trail Network is extensive and its terrain varied. In order to facilitate the greatest level of inclusivity, the trail is intended to meet the easy (Green) trail difficulty wherever possible, and the light intermediate (Blue) difficulty where necessary. Mainly comprised of on-road and shoulder based trails through the local Chester neighborhoods, the majority of the easy difficulty trails occurs in the Lowland Loop’s trail segments. The existing Fitness Trail is also located on relatively flat lands.

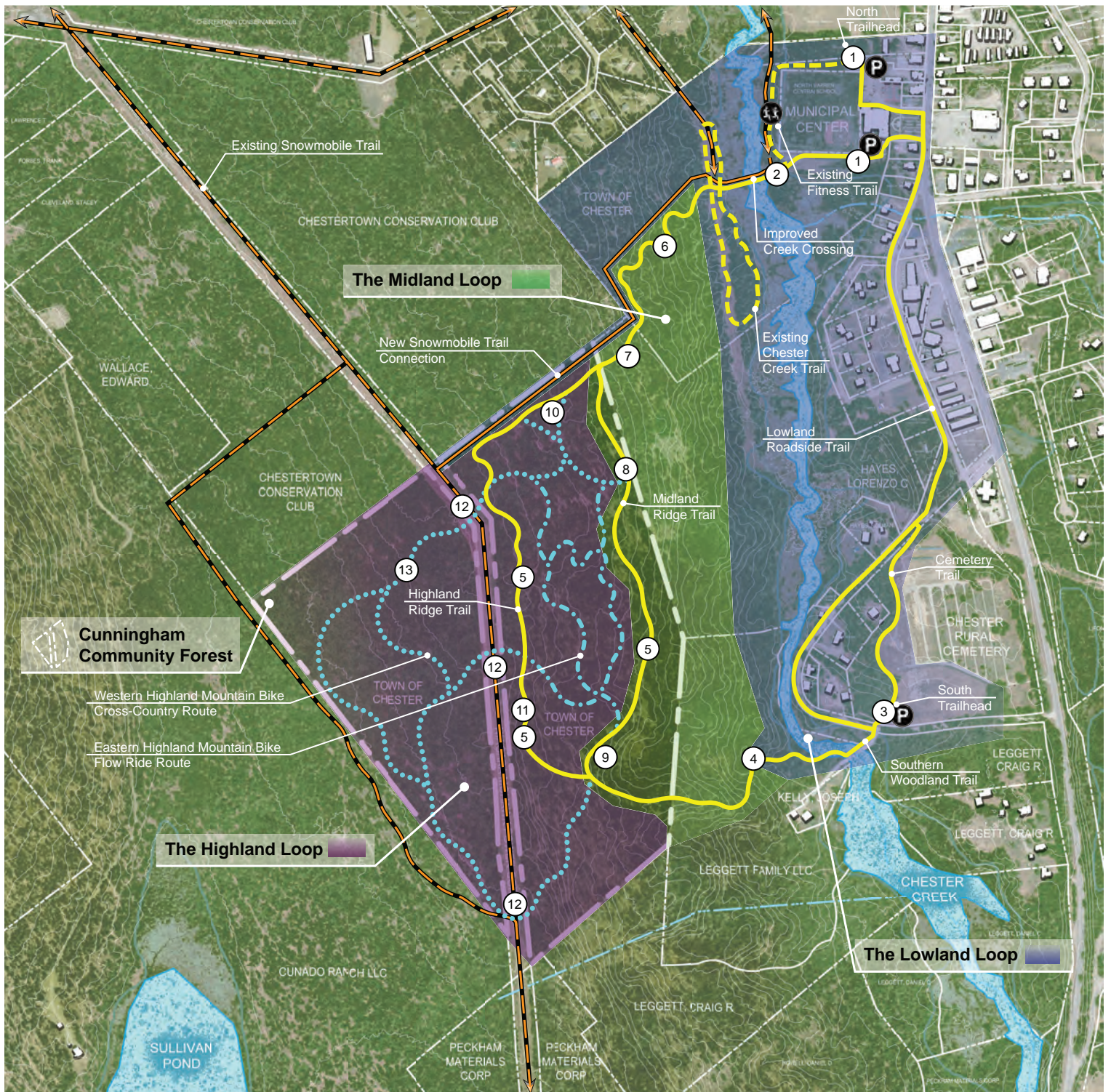
Overall Trail Network Summary

Trail Segment	Linear Feet	Miles
Total Trail (Hiking + Biking)	35,930	6.80
New Hiking* Trails	19,875	3.76
Existing Hiking* Trails	3,630	0.69
New MTB Trails	12,425	2.35
Green (Easy) Trails	9,460	1.79
Blue (Intermediate) Trails	26,470	5.01
Dedicated MTB XC Trails	8,370	1.58
Dedicated MTB Flow Trails	4,055	0.77
Natural Surface Trails	23,580	4.46
Stone Dust Trails	6,540	1.24
On-Road Trails	5,810	1.10

Trail Network Improvements	No.
Total Trailheads	2
Prominent View and Clearing Rest Nodes	3
Natural / Cultural Interpretive Nodes	3
Additional Forest Microculture Experiences	2
Footbridges for Minor Stream Crossings**	3
Improved Creek Crossing (Boardwalk)	1
Creek Viewing Platform Structure	1
Connection to Existing Snowmobile Trail	Y

*Hiking Trails are Multi-use in nature, and will allow mountain biking; MTB Trails are dedicated mountain biking cross country and optimized flow trails.

**Additional footbridges may be required based on final alignments determined during trail construction.

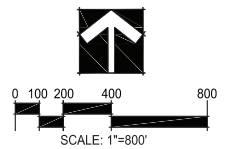


Legend

- Proposed Hiking Trail
- Existing Hiking Trail
- Proposed Cross-Country Mountain Bike Route
- Proposed Mountain Bike Flow Trail Route
- Proposed Snowmobile Trail
- Existing Snowmobile Trail

- ① North Trailhead: Improve Town Hall North Lot Gateway, Develop South Lot Gateway
- ② Chester Creek Crossing: Develop Viewing Platform and Improved Creek Crossing
- ③ South Trailhead: Develop Parking Lot and Gateway Plaza
- ④ Prominent Woodland View: Selectively Clear to Open Space, Develop Rest Node
- ⑤ Small Stream Crossing: Low Bridge Required
- ⑥ Manmade Reservoir Cultural Site: Develop Interpretive Node
- ⑦ Forest Clearing: Develop Rest Node

- ⑧ Prominent Ridgeline View: Selectively Clear to Open Viewshed, Develop Rest Node
- ⑨ Natural Reservoir Ecological Site: Develop Interpretive Node
- ⑩ Unique Ecological Site: Overstocked Trail Segment
- ⑪ Old Sawmill Cultural Site: Develop Interpretive Node
- ⑫ Powerline Corridor Trail Crossing
- ⑬ Unique Ecological Site: Highland Bog Trail Segment



The LA GROUP
Landscape Architecture & Engineering P C

Overall Trail Network Development Plan

The Midland and Highland Loops will be predominantly rated as light to intermediate difficulty. Balance between attaining the desired difficulty rating and minimizing disturbance to the woodlands must be resolved during the installation of the trail sections. Achieving this balance will require extensive field determination of the final trail alignment. Refer to **Appendix A: Trail, Bridge, and Boardwalk Construction Information** for additional trail construction techniques and recommendations.

The Network will be comprised of a combination of natural surface and stone dust surface treatments, in addition to the on-road and shoulder trail segments. All new woodland trails within the Network are anticipated to be single track trails with variable tread widths. Machine built natural surface trails for hiking and MTB trails are recommended to be three feet or less in width for intermediate difficulty, while those at an easy difficulty are recommended to be three to five feet in width. Stone dust trails are anticipated to be installed along the easy trail segments on the east side of Chester Creek in the Lowland Loop, as well as those segments leading up the steeper slopes of the Midland Loop. All trails installed will support mountain bike shared use, and dedicated cross country and flow ride trails can be found at the summit, along the Highland Loop. Connections to the existing snowmobile trail may be established (offset and separate from the multi-use trail's northern alignment). The potential for coordinated funding and construction efforts in conjunction with local interest groups and clubs should also be explored.

The Network will take advantage of existing infrastructure by incorporating the existing Fitness Trail and Chester Creek Trails into the Lowland Loop, as well as incorporating (and improving upon) the Chester Municipal Center parking lots and trailhead. Existing sidewalks and low-traffic roadways will also be utilized as on-road or shoulder/roadside trail segments for portions of the Lowland Loop. An additional South Trailhead is planned for development at the opposite end of the Lowland Loop to provide an alternative start/finish for trail user groups.

As noted during the public outreach process, there is a high priority amongst the community to be provided the opportunity to gain access to scenic vistas, natural points of interest, and wildlife and habitat viewing areas for interpretive / educational outreach. The woodlands of the Cunningham Community Forest and its surrounding landscape provide multiple natural and cultural points of interest to satisfy the community's needs. During the design of the Master Plan's proposed trail alignment, the destinations created by these points of interest often carried as great an influence as the site's topographic opportunities and constraints.

The majority of natural and cultural destinations for interpretive and resting nodes occur throughout the Midland and Highland Loops. These destinations each have features worthy of commemoration or interpretation. Expansive views may be opened up with selective clearing at key locations along the mid and high ridgelines, while occasional depressions along the sloped plateau and ascent give way to ferngrove pockets, ephemeral streams, natural reservoirs, and other woodland microclimates. Since the Cunningham Community Forest and its surrounding lands have been occupied for generations, remnants of its development remain as artifacts. A manmade reservoir, logged areas, an overstocked planting coppice, and an old sawmill can all be discovered and interpreted along the trail.

The Lowland Loop

Loop Overview

The first area of development, the Lowland Loop, includes two and three-quarter’s miles of trail stretching across the Chester Creek’s valley, from the Municipal Center, through local neighborhoods, past the rural cemetery, and into the southern woodland at the base of the ascent to the Cunningham Community Forest. The Loop includes on-road and stone dust trail segments on its eastern half, and would utilize natural trail surfaces along the southern ascent through the forest. Full development of the Lowland Loop would include improvements to the existing trails and North Trailhead, a new viewing platform and crossing at the Loop’s northern Chester Creek crossing, accessible trails through local neighborhoods and adjacent to the rural cemetery, development of a new South Trailhead, development of a woodland rest node with a prominent habit view, and potential for future trail connections. Coordination for connections to the local snowmobile trails should also be initiated during the Lowland Loop development.

The Lowland Loop contains the entirety of the Trail Network’s Green (Easy) Trails, and should be developed with the goal of maximizing accessibility. Average slopes along the eastern trail segments are within the two-to-five percent range, with only twenty-four feet of elevation change between the North and South Trailheads. Slopes along the forested areas of the south are more varied, with averages ranging upwards of 10%, earning a Blue difficulty rating.

Incorporating Existing Infrastructure

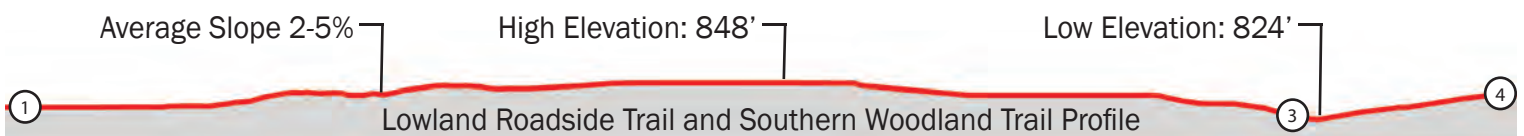
The Loop incorporate’s the existing Chester trail and municipal parking infrastructure into the Trail Network. Beginning with the North Trailhead (map item #1), the existing Fitness Trail wraps around the Town’s municipal property, extending down towards Chester Creek. Across the creek, the existing Chester Creek Trail forms a woodland mini-loop. Both existing trails should be inventoried for any deficiencies (damaged site furnishings, drainage issues, over-worn trail surface) and improved and restored as necessary during the development of the Lowland Loop. Likewise, the Municipal Center’s two parking lots should receive gateway improvements (wayfinding, orientation signage and trail markings) to help distinguish the parking lots’ secondary functions as Trailheads.

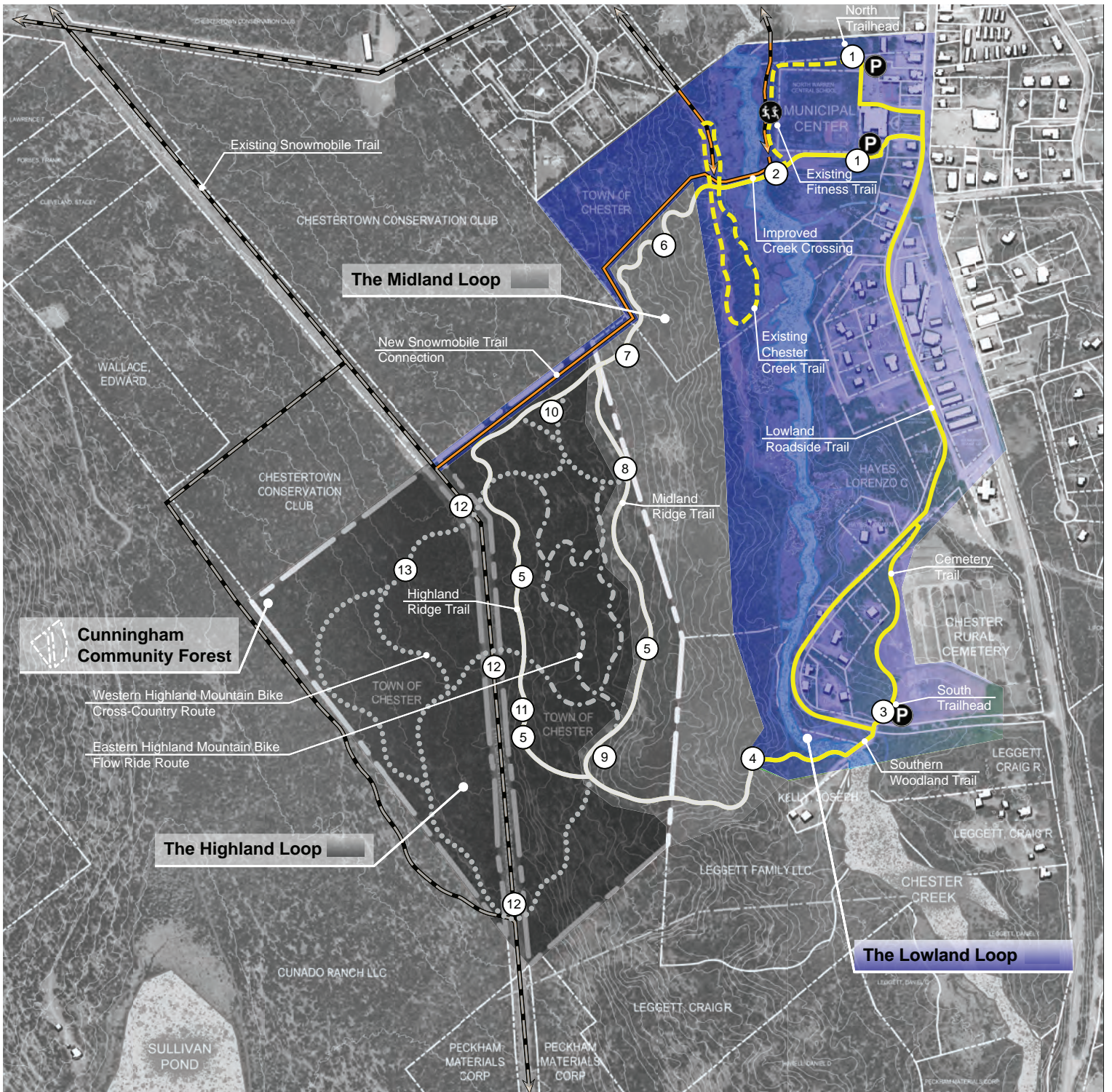
Lowland Loop Summary

Lowland Trail Summary	Linear Feet	Miles
Total Multi-Use Trails	14,855	2.81
New Multi-Use Trails	11,225	2.12
Existing Multi-Use Trails	3,630	0.69
Green (Easy) Trails	9,460	1.79
Blue (Intermediate) Trails	5,395	1.02
Natural Surface Trails	6,500	1.23
Stone Dust Trails	2,545	0.48
On-Road Trails	5,810	1.10

Lowland Loop Key Features

Incorporation of Existing Trails
Improved North Trailhead
Improved Creek Crossing and Viewing Platform
New South Trailhead
Woodland Rest Node at Prominent Habitat View
Accessible Neighborhood and Cemetery Trails
Potential for Future Trail Expansion
Connection to Existing Snowmobile Trail



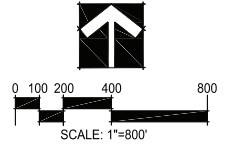


Legend

-  Proposed Hiking Trail
-  Existing Hiking Trail
-  Proposed Cross-Country Mountain Bike Route
-  Proposed Mountain Bike Flow Trail Route
-  Proposed Snowmobile Trail
-  Existing Snowmobile Trail

- ① North Trailhead: Improve Town Hall North Lot Gateway, Develop South Lot Gateway
- ② Chester Creek Crossing: Develop Viewing Platform and Improved Creek Crossing
- ③ South Trailhead: Develop Parking Lot and Gateway Plaza
- ④ Prominent Woodland View: Selectively Clear to Open Space, Develop Rest Node
- ⑤ Small Stream Crossing: Low Bridge Required
- ⑥ Manmade Reservoir Cultural Site: Develop Interpretive Node
- ⑦ Forest Clearing: Develop Rest Node

- ⑧ Prominent Ridgeline View: Selectively Clear to Open Viewshed, Develop Rest Node
- ⑨ Natural Reservoir Ecological Site: Develop Interpretive Node
- ⑩ Unique Ecological Site: Overstocked Trail Segment
- ⑪ Old Sawmill Cultural Site: Develop Interpretive Node
- ⑫ Powerline Corridor Trail Crossing
- ⑬ Unique Ecological Site: Highland Bog Trail Segment



The Lowland Loop Development Plan

While the Fitness Trail connects the northern municipal parking lot to Chester Creek, an existing gravel driveway connects the southern municipal parking lot to the same creek crossing. The existing creek crossing exhibits frequent flooding, rendering the connection to the Chester Creek Trail across the waters impassible. Installation of a boardwalk across the Creek’s existing land bridge would allow greater convenience to year-round accessibility. Depending on funding availability, the boardwalk can be as simple as a narrow track floated atop pressure-treated sills (pictured below), or as intensive as a widened multi-use platform on driven helical piles. Accessibility, user group inclusion, and cost differentiation should be considered. The narrower boardwalk will present issues for wheel-chair accessibility, but would allow for select hiking and biking crossing. The widened helical pile boardwalk could be engineered to meet any use requirements. Snowmobile use of the improved creek crossing may also be considered, dependant on secured funding and partnership with local clubs and interest groups.



The southern views across the waters of Chester Creek are stunning enough to warrant the development of a Viewing Platform along the Creek’s eastern shore (map item #2). A modest wooden structure could be installed along the shoreline, directly adjacent to the trail. The Viewing Platform could be utilized as a fishing platform, and nature-oriented interpretive panels could be mounted to the railing.

The proposed eastern half of the Loop runs south from the North Trailhead and into the local neighborhoods. Mostly comprised of on-road or shoulder-based trail segments, the “Lowland Roadside Trail” winds south down Foster Flats Road, turning down Little Tannery Road, and curves to the intersection at Cunningham Loop. Installation of signage, trail markers, and safety paint/stripping should be considered along the on-road trail sections.





South Trailhead Conceptual Plan Legend

- | | |
|---|--|
| A Hardscape Plaza Space | F Picnic Area with Tables (3) |
| B Information and Orientation Kiosk | G Vehicle Deterrence Accent Boulders |
| C Seating (Benches, Stone Walls) | H Trail Towards Cemetery |
| D Bike Racks and Bike Repair Station | I On-Road Trail Towards Town Hall |
| E Parking (2 Accessible, 6 Standard) | J Cross-Walk and Trail Towards Forest |

Development at the Southern End

The new South Trailhead would include parking for eight vehicles (six standard, two accessible) and a small gateway plaza with orientation and wayfinding signage, seating benches, and light landscaping. Bike racks and a full service repair station will be provided. Natural stone boulders help define the plaza space and can also be utilized for informal seating and safety separation from the parking. Picnicking can be encouraged with picnic table furnishings and shade tree plantings. In addition to providing a bucolic backdrop for the Trailhead, the meadowlands between the South Trailhead and existing cemetery has potential for the future development of recreational fields and playgrounds.

A secondary off-road segment breaks away to run alongside the woodline adjacent to the local rural cemetery. This stone dust surfaced trail segment would provide an alternate route to reach the gateway into the woodland trail network off of the Cunningham Loop. The intersection of the cemetery and on-road segments occurs at the T-intersection of Little Tannery Road and Cunningham Loop. This location's open meadow will be developed into the South Trailhead (map item #3).

Opposite Top: A two-foot wide boardwalk, Hudson Pointe Nature Preserve, Queensbury, NY. Photo provided by Wilderness Property Management, Inc. [WPM].

Opposite Bottom: View from eastern shore of Chester Creek at proposed Viewing Platform location (map item #2).

From the new South Trailhead, the southbound Trail continues across Little Tannery Road. While the road has a low traffic volume, it is recommended that a crosswalk and associated warning signage be installed to improve safety for trail users embarking on the trek towards the woodlands and up to the Community Forest. The trail alignment continues for a short on-road stretch along the shoulder of Cunningham Loop as it crosses Chester Creek. The Creek flows southward below the roadbed via culverts, and trail users are again treated to an impressive view across the widened basin on the south side of the road. Shortly after passing the Creek, the trail diverts off Cunningham Loop and enters into the woodlands. This segment of the trail is dubbed the Southern Woodland Trail.

It is recommended that stone dust surface treatment be utilized for the Southern Woodland Trail, as it is anticipated to be one of the more popular segments of the Trail Network. The path of the trail segment follows along a rounded ridgeline on the upland edge of a long, sweeping forest valley.



The trail rides the ridge a short distance up the base of the Community Forest's slope towards the Trail Network's first prominent woodland view and rest node (map item #4). A rest area for the Trail Network would typically feature an enlarged gathering space with stone dust or natural trail surface materials. Natural stone boulders or felled tree segments can help to define the space and provide rustic seating opportunities. Low-profile signage can interpret the site's natural and historic assets.

In the case of the Lowland Loop's southern rest node (map item #4), the destination sits atop a gentle woodland bluff. This rolling high point offers a nearly three hundred and sixty degree view of this corner of the woodland's duff-covered ridgelines and lush drainage valley. The diversity of the flora and microclimates near this node could serve as a topic for interpretation. This rest area acts as the southern terminus of the Lowland Loop, and will later serve as the point of connection for the next phase of development: the Midland Loop.





Collaborating to Close the Loop and Incorporate Winter Recreation

The Lowland Loop’s on-road trail segments and the cemetery-adjacent stone dust trail segment occur on public lands or within the road right-of-way. However, some portion of the Southern Woodland Trail segment will require an easement through privately held lands. It is understood that use of the private land for this segment has been secured by the Town.

However, the current iteration of the Lowland Loop does not include a western return to close the loop. It is recommended that the Town seek partnership with local private land owners to secure access for future routing along the western banks of Chester Creek at the foot of the Cunningham Community Forest slope. Utilizing this route would close the loop by connecting to the existing Chester Creek Trail.

Opposite Top: View of the southern woodland bluff and the lush drainage valley beyond at the rest node (map item #4).

Opposite Bottom: View across Chester Creek’s widened basin at Cunningham Loop.

In addition to the multi-use trail segments of the Lowland Loop, this phase of development should include the initial coordination for a new snowmobile connection from the existing snowmobile trail along the power corridor to Chester Creek. It is recommended that the Town, local conservation club, and local snowmobile club meet and collaborate on a joint agreement to share or cover the costs of creating the dedicated snowmobile route in exchange for the use of the Town’s land and easement corridors.

Above: An example of a rest area along a stone dust surface trail. Felled tree segments can provide seating while defining the space, and low profile signage can highlight or interpret the site’s features or history.

The Midland Loop

Loop Overview

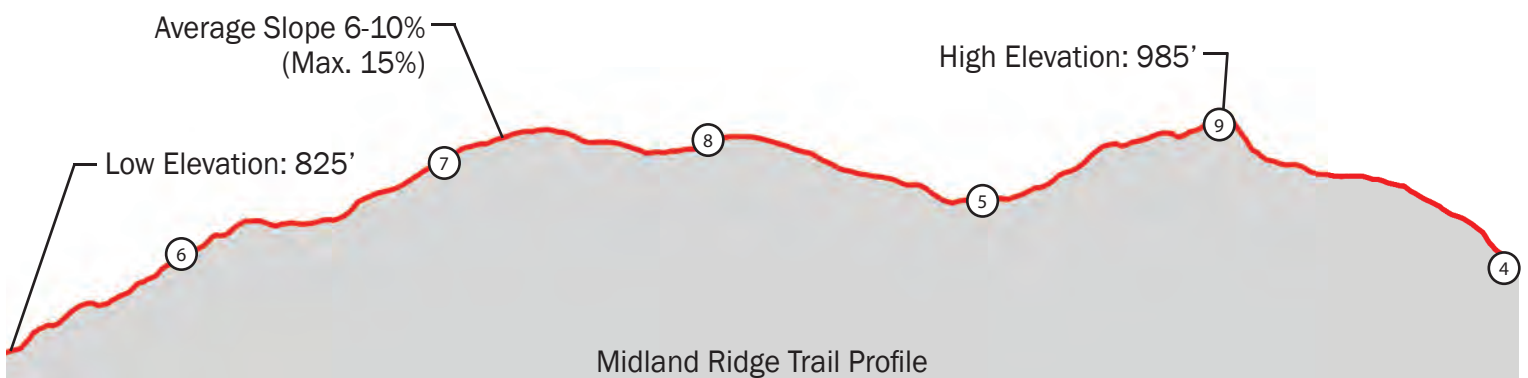
The second area of development, the Midland Loop, includes an additional one-mile trail ascending uphill towards and subsequently along the eastern ridgeline of the Cunningham Community Forest. The Midland Loop's trail segment will feature a fully forested nature trail through the woodlands on the west side of Chester Creek, and it will connect to the Lowland Loop in two locations to form a complete loop. The northern end of the trail segment will connect to the existing Chester Creek Trail system before quickly beginning the ascent uphill to the west. Should the proposed snowmobile connection trail be established during the installation of the Lowland Loop, the Midland Loop's northern trail segment should maintain a safe offset distance from that corridor to ensure separation, safety, and seclusion of the hiking trail's pedestrians from the snowmobile vehicular activity. The southern end of the Midland Loop's trail segment will connect to the Lowland Loop's Rest Area (map item #4). Portions of both northern and southern ascending segments will cross privately owned lands. The Town will be required to secure the use of the trail corridors by established easements and agreements with the private owners.

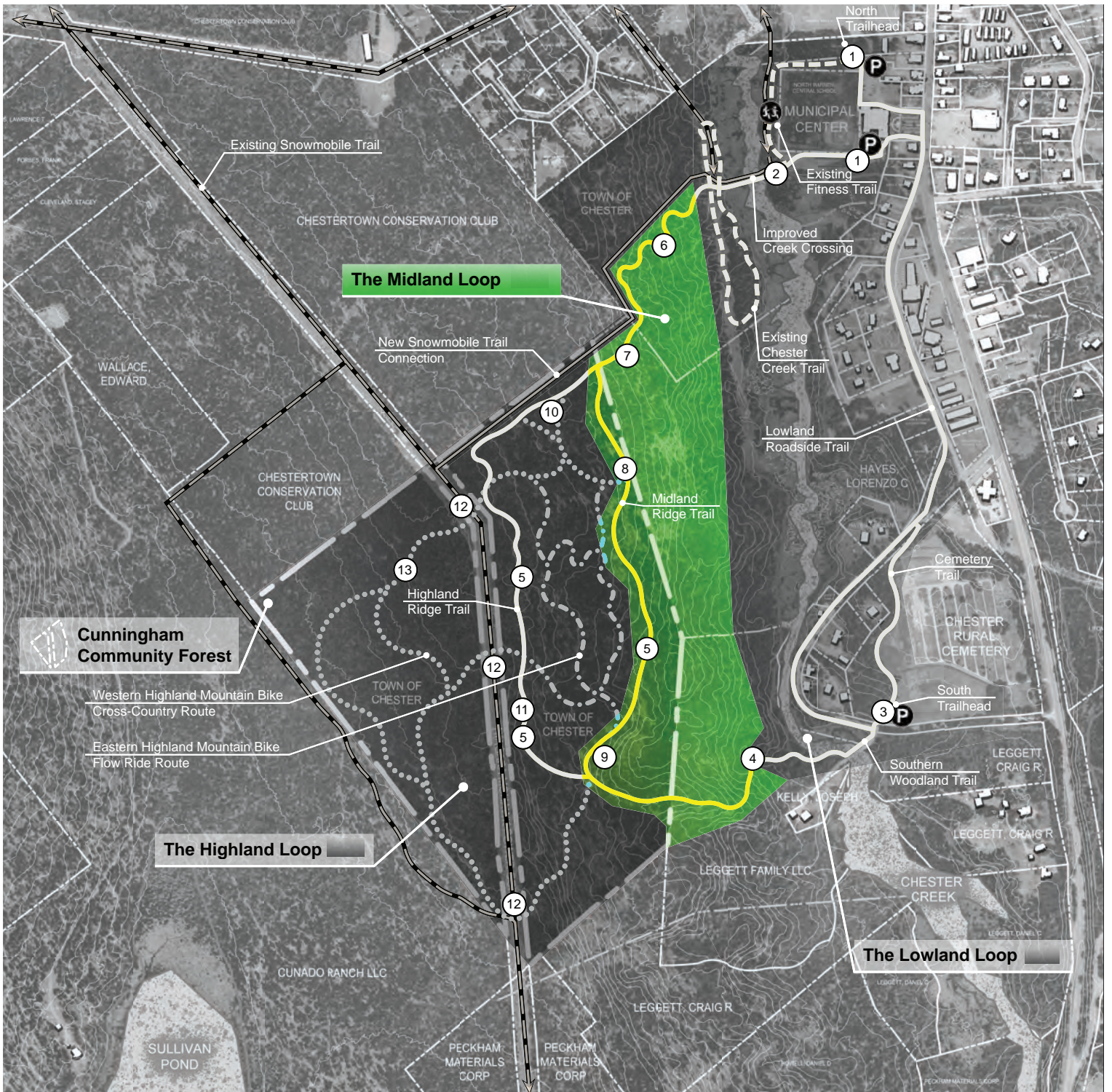
The Midland Loop achieves an elevation change of 160 vertical feet over the course of its route. Chiefly due to the northern and southern segments' ascent up the slope, the Midland Loop will be classified as a Blue (Intermediate) Trail. This difficulty class allows for an average slope of up to 10%, with sustained maximum slopes of up to 15%. Along the alignment's ascent there are several instances of slopes reaching 20%+. In order to soften these more severe grades, it is anticipated that a more sinuous, bench-cut and switchbacked route will need to be laid out in the field during trail construction. In these instances, the alignment represented on the Development Plan should be considered a 50 to 100-ft. wide corridor within which the actual trail alignment would be installed.

Midland Loop Summary

Midland Trail Summary	Linear Feet	Miles
Total Multi-Use Trails	5,455	1.03
Blue (Intermediate) Trails	5,455	1.03
Natural Surface Trails	3,120	0.59
Stone Dust Trails	2,335	0.44

Midland Loop Key Features
Connects to Existing Chester Creek Trail
Connects to Lowland Loop Rest Area (#4)
Traverses Steepest Slopes to Reach Cunningham Community Forest's Eastern Ridgeline
Manmade Reservoir Cultural Interpretive Node
Woodland Rest Node at Forest Clearing
Woodland Rest Node at Prominent Ridgeline View
Natural Reservoir Ecological Interpretive Node



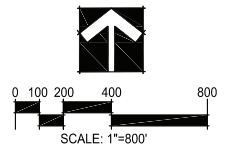


Legend

- Proposed Hiking Trail
- Existing Hiking Trail
- Proposed Cross-Country Mountain Bike Route
- Proposed Mountain Bike Flow Trail Route
- Proposed Snowmobile Trail
- Existing Snowmobile Trail

- ① North Trailhead: Improve Town Hall North Lot Gateway, Develop South Lot Gateway
- ② Chester Creek Crossing: Develop Viewing Platform and Improved Creek Crossing
- ③ South Trailhead: Develop Parking Lot and Gateway Plaza
- ④ Prominent Woodland View: Selectively Clear to Open Space, Develop Rest Node
- ⑤ Small Stream Crossing: Low Bridge Required
- ⑥ Manmade Reservoir Cultural Site: Develop Interpretive Node
- ⑦ Forest Clearing: Develop Rest Node

- ⑧ Prominent Ridgeline View: Selectively Clear to Open Viewshed, Develop Rest Node
- ⑨ Natural Reservoir Ecological Site: Develop Interpretive Node
- ⑩ Unique Ecological Site: Overstocked Trail Segment
- ⑪ Old Sawmill Cultural Site: Develop Interpretive Node
- ⑫ Powerline Corridor Trail Crossing
- ⑬ Unique Ecological Site: Highland Bog Trail Segment



The Midland Loop Development Plan



Top: The manmade reservoir cultural site (map item #6).

Middle: The rest node location at the forest clearing site (map item #7).

Bottom: The rest node location at the prominent ridgeline view site (map item #8). Selective clearing required to open up and maximize viewshed.

North Connection and Ascent

Beginning at the Midland Loop's northern connection to Chester Creek Trail, the trail ascends eastward to the Loop's first destination: the interpretive node at the manmade reservoir cultural site (map item #6). Similar to the rest area developed at map item #4 in the Lowland Loop, the interpretive node would provide widened trail surfacing for users to pull off from the main trail to take a break. The remains of an old concrete cistern provide an interesting backdrop for the node, which should also include seating opportunities via natural stone boulders or felled tree segments. Low profile interpretive signage can provide further insight into the former uses of the cistern and the water systems present.

Continuing from the reservoir, the trail continues its steep ascent until leveling off near the next rest node opportunity at the forest clearing site (map item #7). The broad clearing will offer a much needed respite after completing the climb, and presents one of the only sunny sights within the internal woodland trails of the Midland and Highland Loops. Similar boulder and felled tree furnishings can provide rustic seating, and interpretive signage can provide information regarding sustainable forest management, logging, and clearing operations.

The Midland Ridge Trail

From the forest clearing site, the trail turns southward to follow the lower, eastern ridgeline of the Cunningham Community Forest east parcel. The slopes along the ridgeline corridor are more relaxed, and the land has a naturally broad bench typical along the majority of the ridgeline to accommodate easy trail building. Glimpses of the ridgeline's impressive views just beyond the treeline are hinted at along the ridgeline's segment. Upon reaching the ridgeline's rest area (map item #8), that panorama is fully revealed after selective clearing opens up the viewshed up and down the Chester Creek valley corridor and across to Panther Mountain. The views are anticipated to be impressive, and will make this rest area a popular destination node along the Trail Network. Future MTB routes will connect to this location as well, so the scale of the rest area and its furnishings should reflect that anticipated additional user group.

Closing the Loop

Further south of the rest area at map item #8, the Midland Ridge Trail continues to follow the lower ridgeline. Pockets of fern groves provide smatterings of bright green amid the browns and earth tones of the forest duff and natural surfaces. At the bottom of the corridor, a small ephemeral stream will require the installation of another small foot bridge in order to ensure easy traversal.

The trail segment then rises again to reach another promontory that overlooks a natural reservoir ecological site (map item #9). This site will provide another opportunity for a rest area and interpretive node. The large basin at the foot of the small bluff provides another opportunity for interpretation. Selective clearing of the nearby shrubs may open up better views of the basin, but may also encourage trail users to occupy and damage the delicate feature. Interpretation of the ecological balance required of the site may better serve the sustainability of the woodland and local watershed.

Following the natural reservoir site, the trail turns back eastbound as it begins its steep descent down and away from the Cunningham Community Forest land. A natural berm running down the slope provides an ideal corridor to install the trail alignment. The descent of the Midland Loop ends at the trail's connection to the rest area of the Lowland Loop (map item #4).

A logging access road follows alongside the same berm utilized by the trail. In order to encourage trail users to stay on the trail (to prevent the deterioration of the woodland slope), select screening plantings and trail grade dips can help obscure the road, discouraging off-trail wandering. Further, to strengthen the trail's resiliency in the steeper descent, it is recommended that this trail segment receive a stone dust surfacing. The aggregate surfacing will help prevent early wear and minimize potential for erosion issues. The ascent at the northern corridor it will also receive the stone dust surfacing treatment to help increase its long term resiliency. The Midland Ridge Trail segment can utilize the standard natural trail surfacing. See [Appendix A: Trail, Bridge, and Boardwalk Construction Information](#) for details.



Top: The natural reservoir ecological site (map item #8).

Middle: Pockets of fern groves pepper natural depressions along the forest's ridgeline.

Bottom: The ridgeline offers a generous corridor for the final trail alignment's construction.

The Highland Loop

Loop Overview

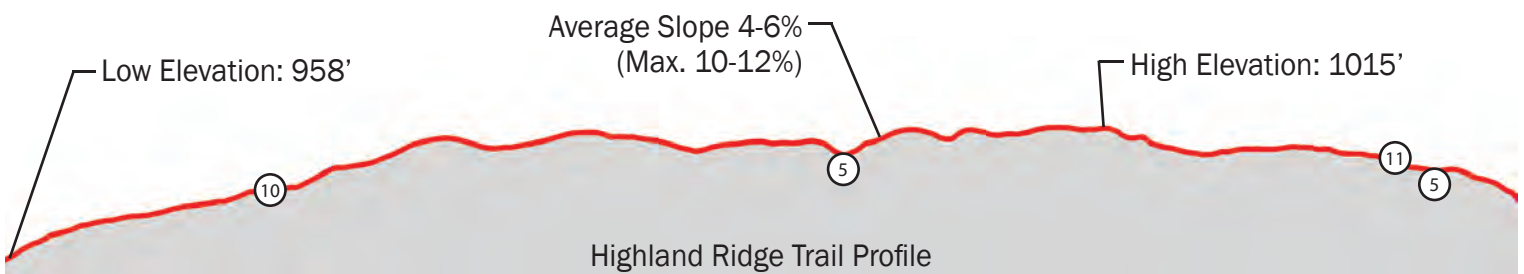
The third area of development, the Highland Loop, concludes the development of the Cunningham Community Forest Trail Network with an additional two third mile long mixed use trail deeper into the woodlands of the Community Forest’s lands, as well as two and a third miles of mountain bike (MTB) trails. The new multi-use hiking trail navigates the remainder of the Forest’s east parcel, linking the higher western ridgeline to the lower eastern ridgeline where the Midland Loop trail runs. Dedicated MTB Cross Country (XC) and Optimized Flow trails fill in the remaining core of the east parcel, maximizing its recreational capacity. The Forest’s more secluded west parcel will receive the greatest concentration of Sustainable Forest Management efforts, and is ideal for a looser network of MTB XC trails. It is anticipated that the MTB XC trails will have to cross the Niagara Mohawk Power Corp’s power corridor in three locations. While use of the corridor for hiking or biking is discouraged, there won’t be any physical barriers to prevent trail users from utilizing the open corridor for traversal.

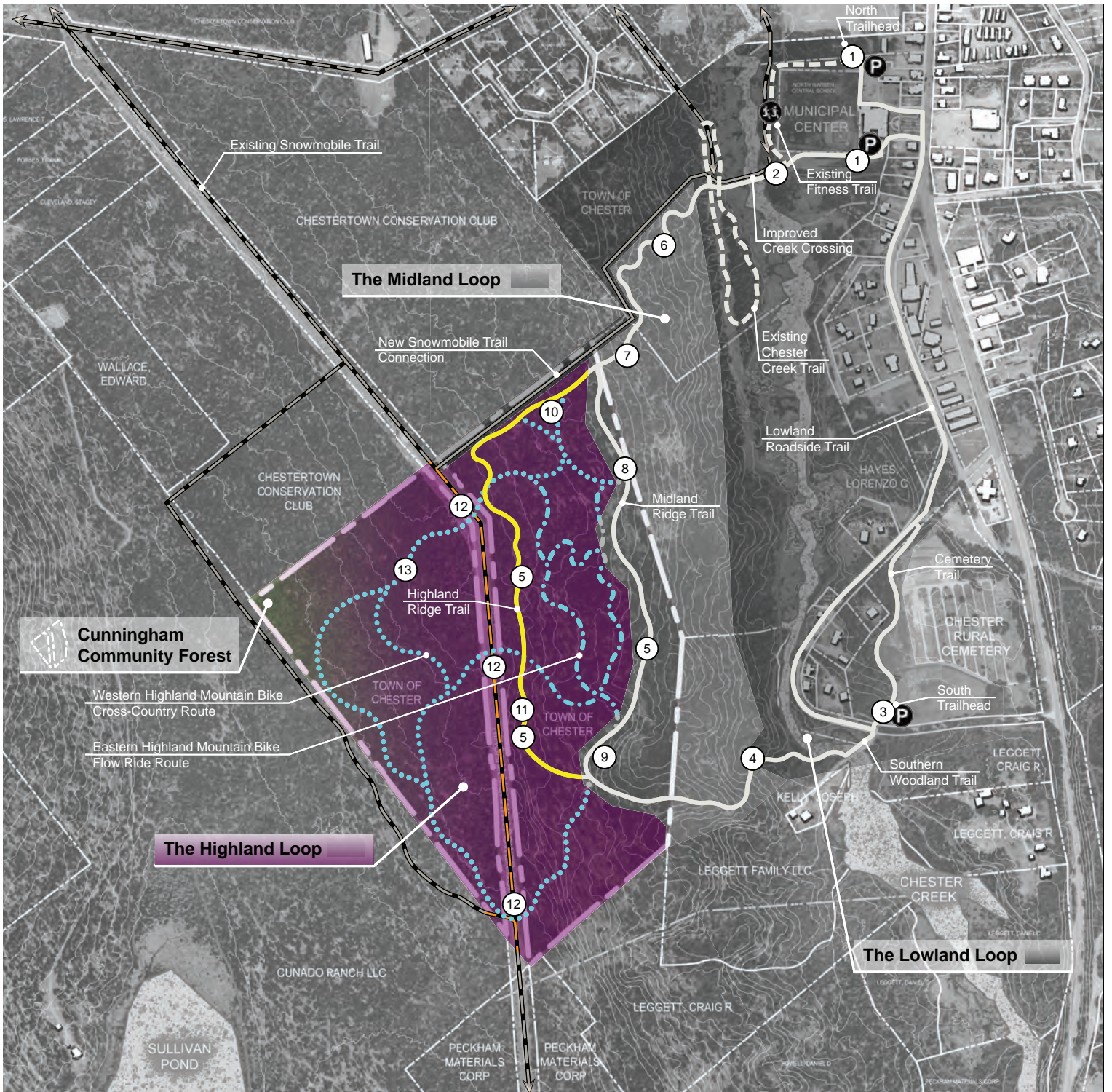
Similar to the Midland Loop’s trail difficulty, the Highland Loop will be classified as a Blue (Intermediate) Trail due to the northern and southern segments’ ascent from the lower ridge to the upper ridge. Compared to the lower ridge, upper ridge maintains a smaller variance in terrain, making for an average slope upwards of 6% with maximum sustained slopes in the 10-12% range. At 57 vertical feet, the total elevation change of the Highland Loop is also milder than the Midland Loop, making for a very pleasant woodland nature trail experience. Similar to the sinuous routing of the Midland Loops steeper segments, it is recommended that the final installation of the trail alignment try to achieve more gradual 8-10% slopes when possible via bench-cut and switchback techniques.

Highland Loop At A Glance

Trail Segment	Linear Feet	Miles
Total Trail (Hiking + Biking)	15,620	2.96
New Hiking* Trails	3,195	0.61
New MTB Trails	12,425	2.35
Blue (Intermediate) Trails	15,620	2.96
Dedicated MTB XC Trails	8,370	1.58
Dedicated MTB Flow Trails	4,055	0.77
Natural Surface Trails	13,960	2.65
Stone Dust Trails	1,660	0.31

Trail Network Improvements
Connects to Midland Loop in North (Near #7 Node) and South (Near #9 Node)
Overstocked Forest Trail Segment Creates a Unique Ecological Site Experience
Old Sawmill Cultural Interpretive Node
Highland Bog Trail Segment Creates a Unique Ecological Site Experience



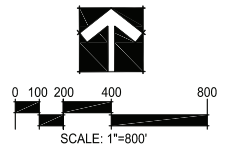


Legend

-  Proposed Hiking Trail
-  Existing Hiking Trail
-  Proposed Cross-Country Mountain Bike Route
-  Proposed Mountain Bike Flow Trail Route
-  Proposed Snowmobile Trail
-  Existing Snowmobile Trail

- ① North Trailhead: Improve Town Hall North Lot Gateway, Develop South Lot Gateway
- ② Chester Creek Crossing: Develop Viewing Platform and Improved Creek Crossing
- ③ South Trailhead: Develop Parking Lot and Gateway Plaza
- ④ Prominent Woodland View: Selectively Clear to Open Space, Develop Rest Node
- ⑤ Small Stream Crossing: Low Bridge Required
- ⑥ Manmade Reservoir Cultural Site: Develop Interpretive Node
- ⑦ Forest Clearing: Develop Rest Node

- ⑧ Prominent Ridgeline View: Selectively Clear to Open Viewshed, Develop Rest Node
- ⑨ Natural Reservoir Ecological Site: Develop Interpretive Node
- ⑩ Unique Ecological Site: Overstocked Trail Segment
- ⑪ Old Sawmill Cultural Site: Develop Interpretive Node
- ⑫ Powerline Corridor Trail Crossing
- ⑬ Unique Ecological Site: Highland Bog Trail Segment



The Highland Loop Development Plan



Above Top: View of the overstocked trail segment ecological site (map item #10).

Above Bottom: Several ephemeral and first-order streams wind through the Forest parcels and will require small footbridges for proper trail crossings (map item #5).

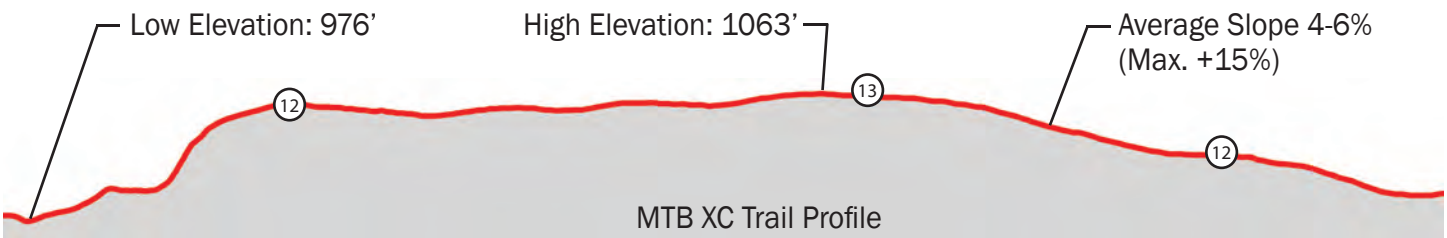
Opposite Page: The large sawdust pile at the Old Sawmill site remains undisturbed after many decades (map item #11).

The Highland Ridge Trail

Beginning at the Highland Loop’s northern connection to the northern limit of the Midland Ridge Trail, the trail ascends eastward through the overstocked forest area, where trees were so closely planted that they must compete for resources, never reaching their full growth potential. The density of the over-planted thicket makes for a unique hiking experience (map item #10). No widened rest area is recommended in this area, as the clearing required would defeat the purpose of the impenetrable grove. Moving through and beyond this area, the trail rounds the edge of the upper ridgeline and turns southward to follow along the high ridge, adjacent to the western edge of the Forest’s east parcel and safely buffered away from the power corridor.

Movement along the Highland Ridge Trail poses little difficulty as the slopes remain moderate. Similar to the lower ridgeline of the Midland Ridge Trail, pockets of ferns pepper the groundscape with bright flourishes of green amidst the other natural earth tones of the forest. Two small first-order streams must be crossed during the trail’s passage. Each will require the installation of a low-deck foot bridge for traversal (map item #5). The last cultural site is approached near the southern end of the ridge trail.

The old saw mill site (map item #11) once housed a large milling operation. While the milling device has been dismantled and removed from the site, a massive stockpile of sawdust remains intact, even after many decades. Aside from the occasional fallen leaf littering its dome, nothing decorates the top of the sawdust pile: no plant can grow on the site due to the sawdust’s elevated carbon levels, which absorb any nearby plant-feeding nitrogen. The site’s open quality makes for a logical rest area site, which can be upgraded to an interpretive node with the addition of the appropriate signage.





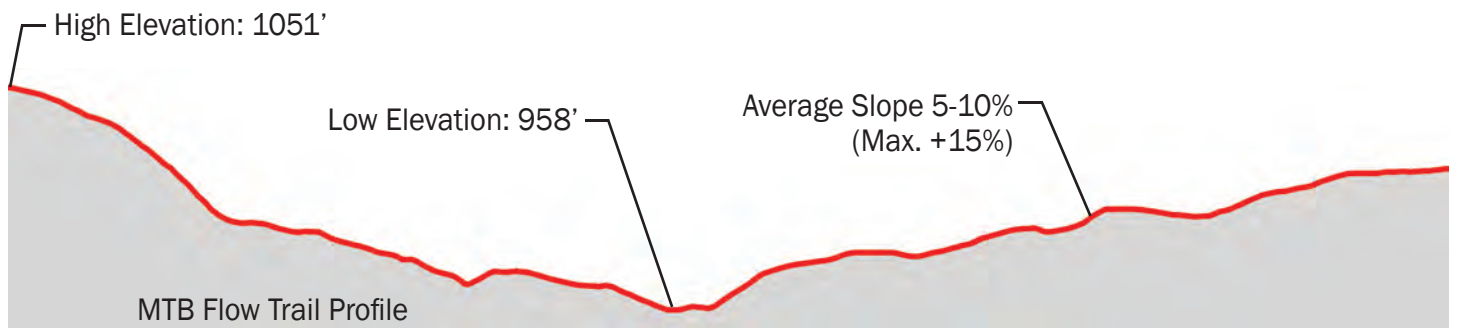
Shortly after the old mill cultural site, the Highland Ridge Trail turns eastward and back down the slope to reconnect to the Midland Loop’s southern extents, near the Natural Reservoir (map item #9).

Dedicated Mountain Bike Trails

In addition to the hiking trail, the development of the Highland Loop includes the Western Highland MBT XC Trail that curves its way throughout the Forest’s west parcel. From the southern intersection of the Midland and Highland Loops, the trail quickly climbs the ascent to the high ridge, before leveling off as it crosses the power corridor into the west parcel. The remaining segments of the XC Network roll along the gentle landscape of the upper plateau, weaving amidst the sustainably managed forest.

In the northwest corner of the XC route, the trail traverses another unique ecological site: the Highland Bog. Flagged by Paul Smith’s College as an area prone to ground water seeps, the woodland floor in this corner of the parcel has a perpetual saturation. In order to achieve a firm and stable trail surface, installation of stone dust surfacing over a compacted, free draining stone base is recommended.

Optimized MTB Flow trails are recommended to be constructed throughout the remaining core of the Forest’s east parcel. The Flow trail’s small berms, banks, rollers, and other sport biking features are ideally suited for the variable terrain in between the east parcel’s high and low ridgelines.



Informational, Wayfinding, and Interpretive Signage Framework

Trail Signage

Clearly marked signage systems are crucial to maintaining the intended, safe use of the trail by all occupants. Information conveyed often includes rules and regulations, trail conditions and routing, and ecological or cultural interpretation. The informational, wayfinding, and interpretive signage systems work together to establish the Trail Networks Signage Framework.

Informational Signage

The trail's rules and regulations are often displayed via the informational signage system. Information can include (but is not limited to) trail usage rules and regulations, allowable hours of operation and occupation, safety guidelines, and warnings, etc. These signage panels are often included within the information and orientation kiosk located at the trailhead.

Along with the Trail Network's rules and regulations, the information signage panel can provide the Trail Network's key features, including trail elevations, surfacing information, tread width, difficulty rating, typical running and cross slope information, and trail lengths. Key features, allowable uses of the trail, known trail hazards, and trail name and color of waymarks/blazes are also included.

Additionally, these panels oftentimes include a statement that warns information posted reflects the conditions of the trail when it was constructed and assessed (include and update assessment date as applicable). The warning states and that events beyond the control of the owners can make trails temporarily inaccessible or dangerous. These warning statements can help diminish the liabilities inherent to trail ownership.

Orientation maps are also typically located as part of the information panels present at the Trailhead kiosks. This information works in conjunction with the wayfinding signage system to help ensure safe use of the Trail Network. The Town should review typical information displayed at the trail networks

throughout the region to help determine the extent and scope of the information it wants to convey at trailheads and along the trail corridor.

In addition to kiosk informational panels, this signage system would include any standard MUTCD regulatory signs throughout the Trail Network. Vehicular parking signage at the Trailhead might include "No Parking and ADA parking signs. Trail, pedestrian, and crosswalk warning signage should be anticipated along the Lowland Roadside Trail. "No Motor Vehicle" warnings should be added to the entry points into the off-road trail segments throughout the Lowland Loop as well.

Internal Network regulatory signage may be considered, including warnings of fall danger or dedicated MTB routes. Determining the final quantities, frequency, and locations of all signage should be carefully considered during the final design stages, as excessive deployment of regulatory signage can quickly clutter the trail corridor. Apart from diminishing the natural ambience of the hiking trail, the clutter can also cause unsafe confusion.

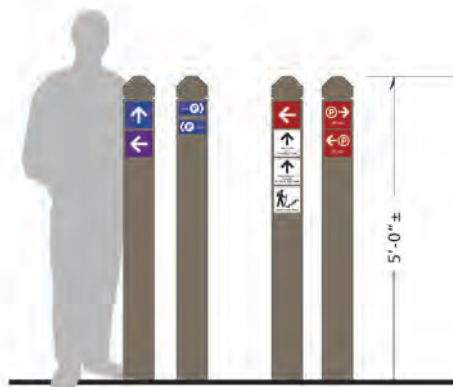
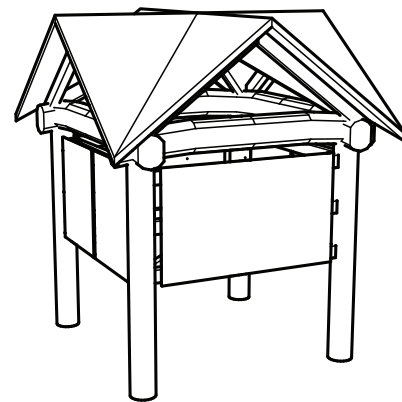
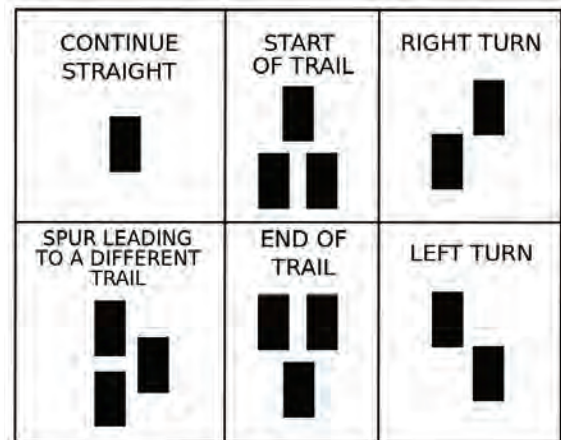
Lastly, the intended audience should be considered when determining the appropriate panel sizes. Sign styling, such as panel sizes, text height, and retroreflectivity will differ between vehicular and pedestrian-scaled panels.

Wayfinding Signage

The wayfinding signage system for a trail network typically includes a hierarchy of directional signage, mile markers, and trail waymarks (markers / blazes). This system is employed to provide navigational guidance along the trail corridor. It often plays a key role in a trail user's safe and successful journey.

Wayfinding directional signage throughout the Trail Network can include the name of the trail as well as any significant destinations, each with a distance and arrow direction. This sign type is typically posted at trailheads, nodes, and key trail junctions or intersections. Mile markers are typically simple posts with the mile carved and painted into the wood. They can also be manufactured from plastic or aluminum. They are typically placed 1/4 or 1/2-mile apart.

Trail waymarks or blazes are typically posted in routine intervals along a trail route to ensure users are able to maintain their bearings in the wilderness. Typical 4" permanent marks are made of plastic, wood, or metal, and are usually affixed to trees via nails, or embedded or mounted to posts. Alternately, many trails across the nation opt for utilizing colorful paints on trees instead, though these may require more frequent 'brush ups' to maintain legibility. Different patterns created with the symbols can even indicate directions to the trail users. Frequency of the blazes can vary depending on the ruggedness of the trail segment. Oftentimes a good rule to follow is to always be able to see the next or previous waymark from any point along the trail's path, be it 50-feet or a 1/10th of a mile. Likewise, any abrupt change in direction as the trail switchbacks up the terrain will receive switchback markers.



Right Top: Trail waymark patterns can signify various directions and part additional context to the trail user.

Right Middle: Example of a multi-sided rustic information and orientation kiosk (design by Tahawus, LLC).

Right Bottom: Examples of typical pedestrian trail signage (post mounted panels with directional arrows or destination, mileage, and directional information).

Interpretive Signage

Interpretive signage located at key moments throughout the Trail Network will help to connect the trail user to the Forest, its natural resources, and its history and cultural relevance to the Town of Chester. Typical interpretive signage consists of low-profile panels that can either be free-standing post mounted or wall/railing mounted. Additional interpretive information can be incorporated into any of the information and orientation kiosks. The Master Plan report will provide general guidance and recommendations for interpretive signage locations and topics. Establishing the final panel and post material selection, narrative story development, graphic creation and acquisition, panel layout, and sign locating/orientation should occur during the final development of construction drawings, or even after the installation of the trail is completed.

The Trail Network's relation to the First Wilderness Heritage Corridor may also be considered when determining the final look and feel of the new interpretive signage. In addition to passive interpretation, the Town may also consider incorporating a nature journaling approach, which would further engage youth by adding an active design element and visual cue to certain signs. This element would imitate pages of a nature journal from a youth nature program, inviting children to locate these journal entries along the trail corridor and begin their own nature journals based on the ideas presented on the panels.

Establishing an Interpretive Theme

The Hemlock-White Pine-Northern Hardwood Forest ecosystem found at the Cunningham Community Forest is typical of much of the Southern Adirondack region. What makes this Forest unique is the way it is managed by the Town of Chester to benefit people by providing a ready source of clean water for the community, a place for residents and visitors alike to hike and bike, and a demonstration area for other forest landowners to learn how adopting similar management practices could improve their woodlands. In addition, the Forest benefits nature by providing a habitat for bird and wildlife to flourish. Located within the Adirondack Forest, the land is designated as a NY Priority Forest Area by Audubon New York. If managed properly, the Forest site can provide an improved habitat for the breeding and nesting of forest birds, including species of warblers (which are listed as NYS Species of Greatest Conservation Need).

Collectively, these resources and their management create the proposed interpretive theme of the Cunningham Community Forest:

Woods. Water. Warblers.



Above: Examples of low-profile interpretive signage installed at the Round Lake Preserve, Malta, NY. Panels can be either free-standing on posts (upper) or mounted to walls or railings (lower).

Thematic Hierarchy

The Town of Chester is a First Wilderness Heritage Corridor community. There are four high level interpretative sub-themes for The First Wilderness, referred to as the *Four Lives*:

- *Corridor of Commerce* explores the trade in furs, timber, stone, minerals, farm products and technology that flows through these valleys.
- *Conflict and Settlement* traces the exploration, warfare and peacekeeping activities of nation-building along the waterway.
- *Natural Forces and Native Peoples* shaped the landscape and culture of the inland waterway rich with resources.
- *Magnet for Tourism* reveals the evolution of tourism and stewardship of the environment.

A strong correlation exists between the First Wilderness’ interpretive sub-themes and the themes developed for the Cunningham Community Forest:

First Wilderness Corridor’s Four Lives	Cunningham Community Forest’s Interpretive Themes
Corridor of Commerce	Woods: Forest Management
Settlement	Water: Resources to Support a Community
Natural Forces	Warblers: Habitats
Magnet for Tourism	Multi-Use Trail Network with Unique Experiences

On Managing the Forest for Bird Habitation

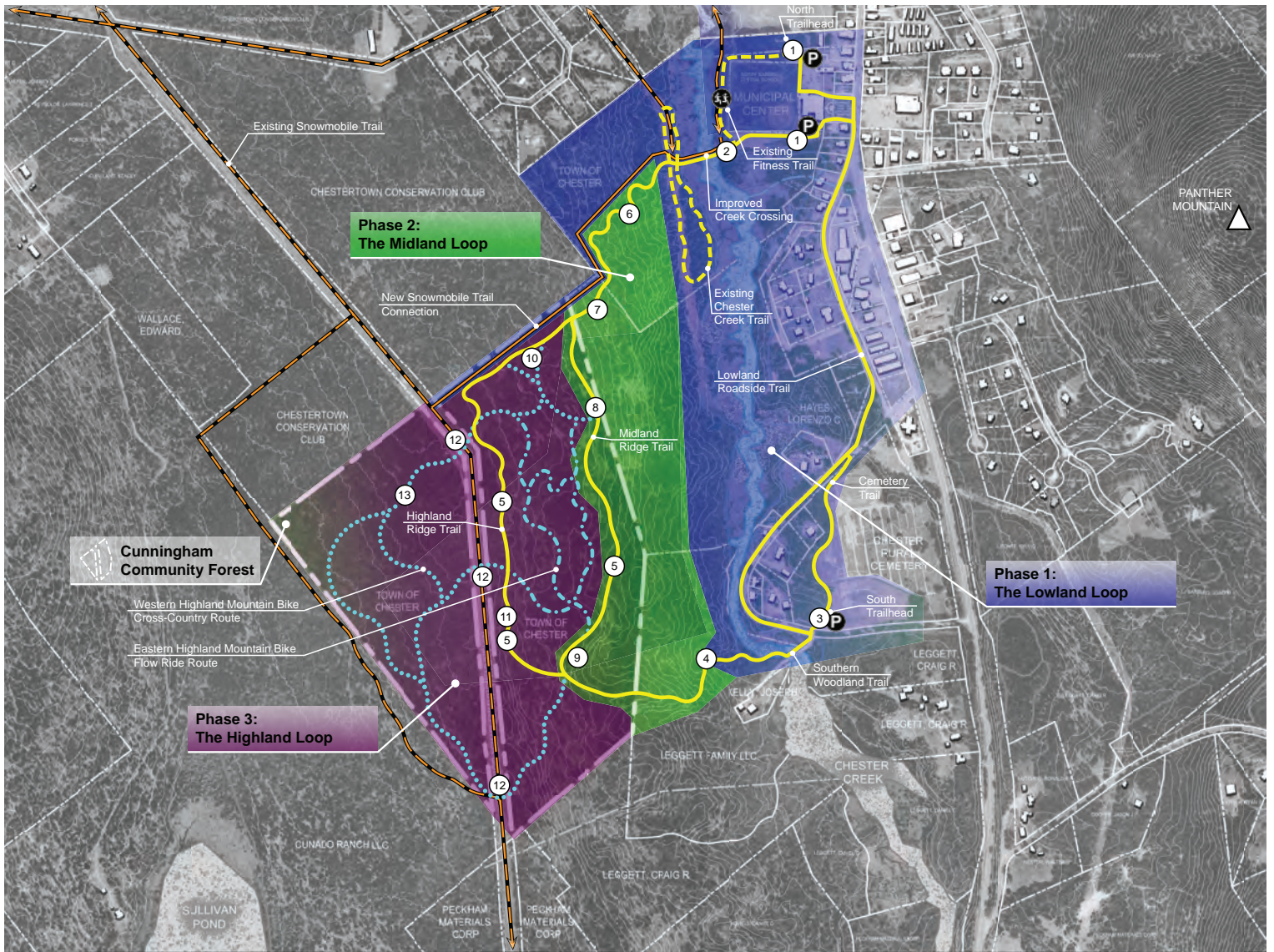
When the Black-throated Blue Warblers, Wood Thrush, and Scarlet Tanagers make their annual return to the southern Adirondacks from Central and South America they search for new habitats for nesting and breeding. With the implementation of the Sustainable Forest Management Plan, these vital birds will find success. Potential additional partnership with Paul Smith’s College and NY Audubon can further advance conservation efforts. Forests such as this in the Upper Hudson region are a critical part of the global bird conservation effort. The birds make an incredible journey year after year, returning to the same area to raise the next generation.

Forests are one of the most important summer nesting habitats for migratory birds. Although forests cover more than two-thirds of New York State today, that was not the case 100 years ago; and past land clearing practices continue to impact wildlife habitat. In the late 1800s, more than 70 percent of land in this region had been cleared, primarily for agriculture. Over time,

Mother Nature has returned the fields to forests, but a majority of trees in the Cunningham Forest today, as elsewhere in the region, are in the same 60-100 year age group - not ideal for songbirds looking to nest and breed. A healthy forest is structurally complex, with a diverse mix of tree species and ages. Downed trees, saplings, legacy trees with large canopies, and new growth are all equally important to wildlife habitat.

According to the American Forest Foundation, wildlife is the number one reason landowners manage their forests. One of the goals of the Community Forest in Chestertown is to demonstrate to private landowners the benefits to working with foresters and biologists to include bird habitat enhancement work in their forest management plans.

Refer to [Appendix D: Interpretive Signage Construction Information](#) for interpretive signage locations, quantities, and narrative topics.



Chapter 5. Implementation Strategy

Estimating Budget Needs and Outlining Funding Opportunities

There are many costs to consider when undertaking a trail construction project. Beyond the installation of a single track trail, construction will also include improvements to existing trails and parking infrastructure, a new trailhead, rest and interpretive node installations, bridgework, signage, and other furnishings. Site preparation, demolition, erosion and sediment control, restoration, and stormwater mitigation must also be accounted for.

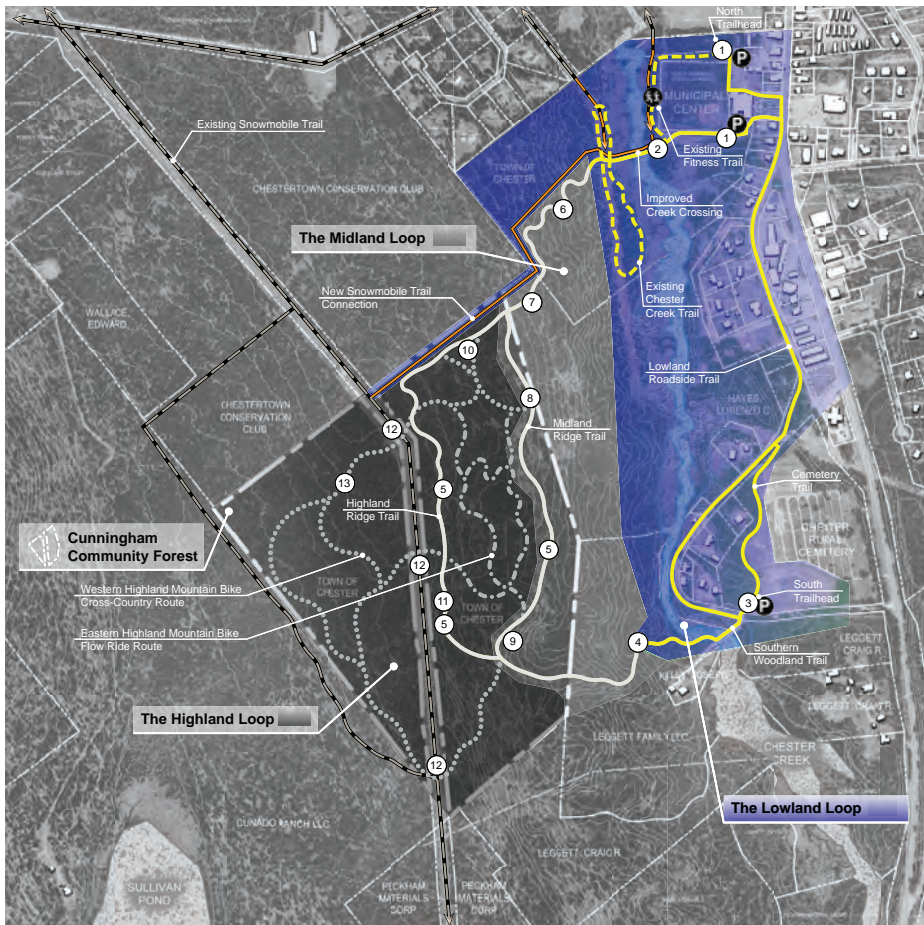
Chapter 5 provides a rough order of magnitude to consider the general construction costs, helping to determine the feasibility and budget for each phase. Additionally, it presents an implementation plan to move the improvements forward. Lastly, the chapter will also summarize opportunities for funding and in-kind services.

Cost and Phasing Analysis

The development of the Cunningham Community Forest Trail Network can be partitioned into three distinct phases - each corresponding to the previously described trail loops. Each phase's anticipated construction was then analyzed, its proposed features quantified and tallied. The rough order of magnitude provides a general ballpark estimate of the construction costs of the project, including the materials and labor associated with the trail, trailhead, and rest/interpretive node construction, site clearing (tree and brush removal, stripping and stockpiling topsoil), preparation and demolition (installation of protection fence and temporary chain link construction fence), erosion and sediment control (silt fence and filter socks), restoration (seeding disturbed areas, landscape improvements), and stormwater mitigation (utilities and stormwater management). Design contingencies, mark-ups, escalation, general conditions and requirements (mobilization, survey and stake out) are also accounted for. Soft costs (fees for design and engineering, regulatory permitting, archaeology and geotechnical analysis, additional survey, and construction administration) are not included. Costs for establishing the new snowmobile trail connection are also not included, as it is recommended the Town pursue a partnership with the local conservation club and snowmobile club for a collaborative effort. Additional sub-phasing or sequencing can be considered during the next stage of trail design development.

Rough Order of Magnitude Summary: Phases 1 through 3

Phase 1: The Lowland Loop	
Includes: North Trailhead Improvements (Map Item #1) Improved Creek Crossing and Creek Viewing Platform (Map Item #2) Upgrades to Existing Fitness Trail and Chester Creek Trail (As Necessary) Lowland Roadside Trail and Cemetery Trail Installation South Trailhead Installation (Map Item #3) Southern Woodland Trail Development of Rest Node at Prominent Woodland View Site (Map Item #4) Lowland Forest Trail with Bridge at Small Stream Crossing (Map Item #5)	
Phase 1: Total Construction Cost	\$386,477
Phase 2: The Midland Loop	
Includes: Northern Sloped Trail Connection to Lower Loop Development of Interpretive Node at Manmade Reservoir Cultural Site (Map Item #6) Development of Rest Node at Forest Clearing Site (Map Item #7) Midland Ridge Trail Installation with Bridge at Small Stream Crossing (Map Item #5) Development of Rest Area at Prominent Ridgeline View (Map Item #8, Selective Clearing Included) Development of Interpretive Node at Natural Reservoir Ecological Site (Map Item #9) Southern Sloped Trail Connection to Lower Loop	
Phase 2: Total Construction Cost	\$142,184
Phase 3: The Highland Loop	
Includes: Highland Ridge Trail Installation with (2) Bridges at Small Stream Crossings (Map Item #5) Development of Interpretive Node at Old Saw Mill Cultural Site (Map Item #11) Installation of Western Highland Mountain Bike Cross-Country Route (MTB XC) Development of Eastern Highland Mountain Bike Flow Ride Route (MTB Flow)	
Phase 3: Total Construction Cost	\$246,154
Total Construction (Phases 1 thru 3) Cost	\$774,815
Rough Order of Magnitude	\$774,815

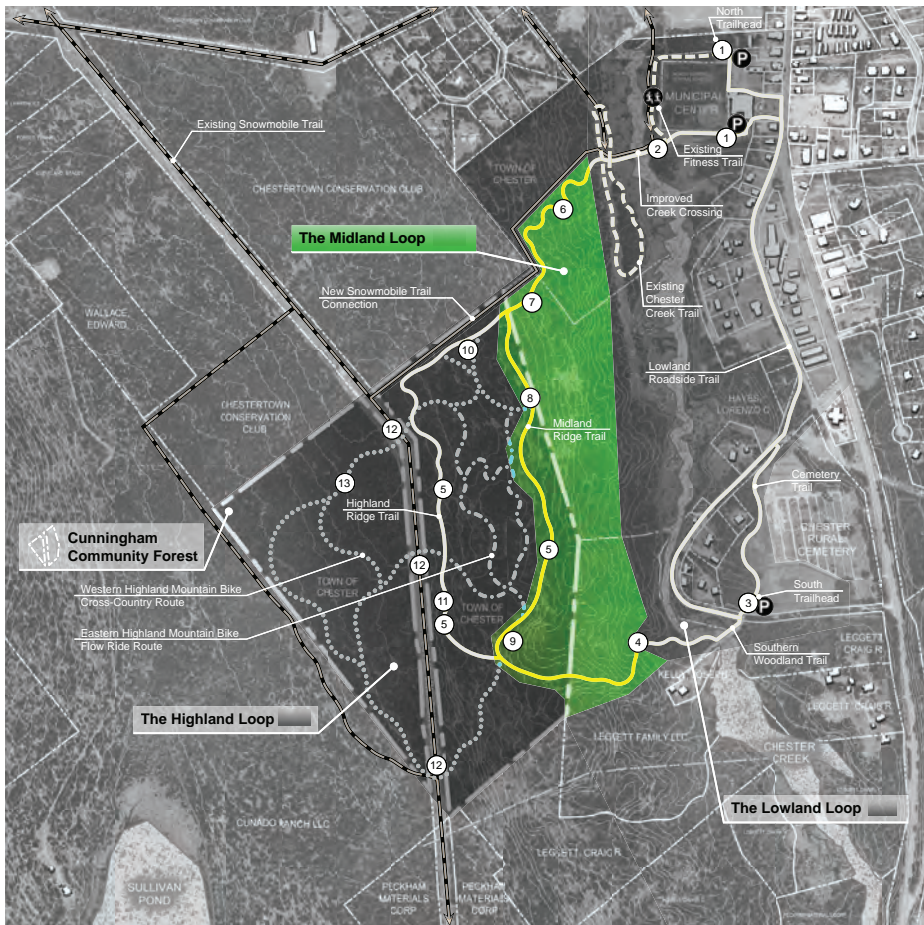


Phase 1

The development of the Lowland Loop includes the improvements to the North Trailhead (1); improved creek crossing and creek viewing platform (2); any improvements to the existing Fitness Trail and Chester Creek Trail; installation of the Lowland Roadside Trail, Cemetery Trail, Southern Woodland Trail, and Lowland Forest Trail; development of the South Trailhead (3) and Rest Node at the prominent woodland view site (4); and a bridge installation at the small stream crossing in the south (5).

Phase 1: The Lowland Loop

General Requirements (Mobilization, Temp. Fencing, Survey & Stakeout, Etc.)		\$7,500
Existing Conditions Site Preparation, Erosion Control, and Demolition		\$10,000
Signage - Wayfinding and Regulatory, Trail Marking		\$11,250
North Trailhead Improvements		\$20,250
Trail Creek Crossing Boardwalk and Viewing Platform		\$27,550
New South Trailhead		\$62,038
Trailbuilding (Multi-use Hike / Bike)		\$73,885
Woodland Rest Node Installation		\$3,850
Interpretive Signage (Interpretive Panels, Orientation Panels, and Mounts)		\$64,250
Bridgework		\$6,200
Misc. (Restoration, Mitigation)		\$10,000
Subtotal		\$296,773
Design Contingency (10%)	\$29,677	\$326,451
Subcontractor Mark-Up (5%)	\$16,323	\$342,773
Escalation (2.5%)	\$8,569	\$351,342
General Conditions (10%)	\$35,134	\$386,477
Phase 1: The Lowland Loop		
Rough Order of Magnitude		\$386,477

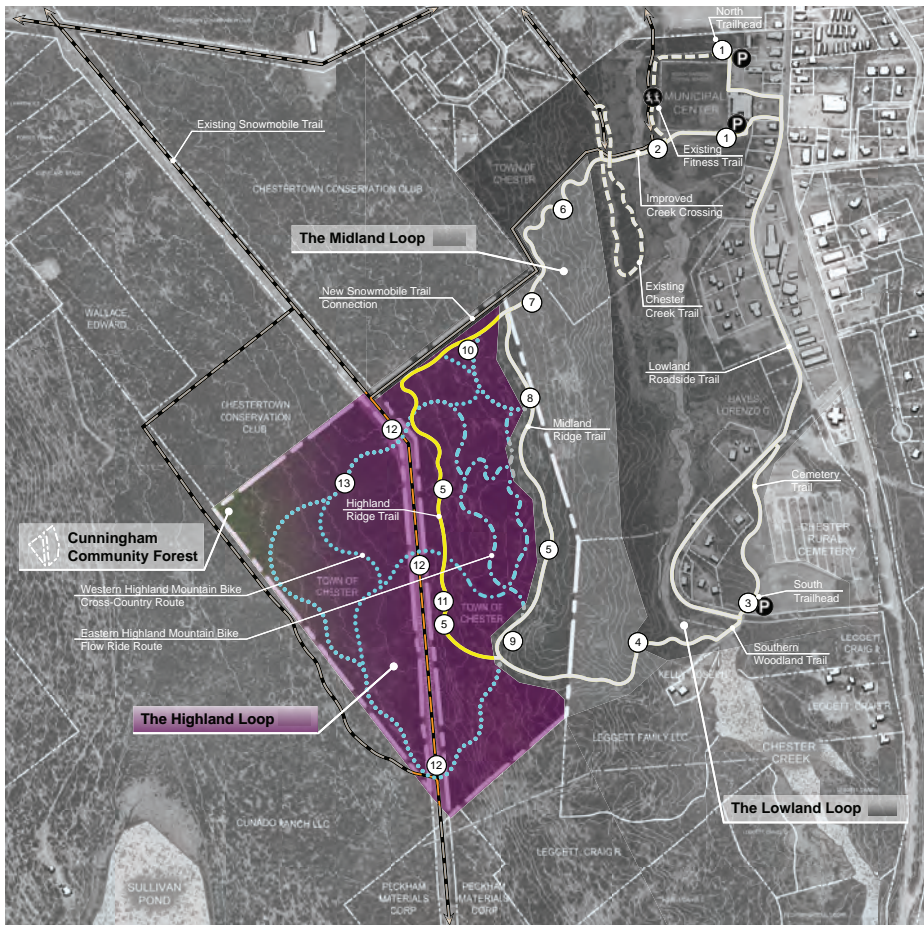


Phase 2

The development of the Midland Loop includes the installation of the northern and southern sloped trail connections to the Lowland Loop; the installation of the Midland Ridge Trail; a bridge installation at the small stream crossing (5); and the development of Rest / Interpretive Nodes at the manmade reservoir cultural site (6), the forest clearing site (7), the prominent ridgeline view (8), and the natural reservoir ecological site (9), including selective clearing to open viewsheds.

Phase 2: The Midland Loop

General Requirements (Mobilization, Temp. Fencing, Survey & Stakeout, Etc.)		\$7,500
Existing Conditions Site Preparation, Erosion Control, and Demolition		\$2,500
Signage - Wayfinding and Regulatory, Trail Marking		\$6,250
Trailbuilding (Multi-use Hike / Bike)		\$45,583
Rest, Cultural Site, and Ecological Site Node Installation		\$15,400
Interpretive Signage (Interpretive Panels and Mounts)		\$23,250
Bridgework		\$6,200
Misc. (Restoration, Mitigation)		\$2,500
Subtotal		\$109,183
Design Contingency (10%)	\$10,918	\$120,101
Subcontractor Mark-Up (5%)	\$6,005	\$126,106
Escalation (2.5%)	\$3,153	\$129,258
General Conditions (10%)	\$12,926	\$142,184
Phase 2: The Midland Loop		
Rough Order of Magnitude		\$142,184



Phase 3

The development of the Highland Loop includes the installation of the Highland Ridge Trail; two bridge installations at small stream crossings (5); the development of the Interpretive Node at the old saw mill cultural site (11), the installation of the Western Highland Mountain Bike Cross-Country Route (MTB XC); and the development of the Eastern Highland Mountain Bike Flow Ride Route (MTB Flow).

Phase 3: The Highland Loop

General Requirements (Mobilization, Temp. Fencing, Survey & Stakeout, Etc.)		\$7,500
Existing Conditions Site Preparation, Erosion Control, and Demolition		\$2,500
Signage - Wayfinding and Regulatory, Trail Marking		\$6,250
Trailbuilding (Multi-use Hike / Bike)		\$23,963
Trailbuilding (Dedicated MTB Only)		\$96,508
Rest, Cultural Site, and Ecological Site Node Installation		\$3,850
Interpretive Signage (Interpretive Panels, Orientation Panels, and Mounts)		\$39,750
Bridgework		\$6,200
Misc. (Restoration, Mitigation)		\$2,500
Subtotal		\$189,020
Design Contingency (10%)	\$18,902	\$207,922
Subcontractor Mark-Up (5%)	\$10,396	\$218,318
Escalation (2.5%)	\$5,458	\$223,776
General Conditions (10%)	\$22,378	\$246,154
Phase 3: The Highland Loop Rough Order of Magnitude		\$246,154

Implementation of the Forest Management Plan

In order to maximize construction implementation and cost efficiency, the Town must coordinate the recommended actions of both the Site Master Plan and the Forest Management Plan. However, implementation of the Forest Management Plan will require a separate action plan that has yet to be developed. It is envisioned that this action plan would be developed as a continuation of Paul Smith's College forestry program student capstone project. The students would pick up where the previous project left off and develop a step by step set of actions that would coordinate with the implementation phases of the Site Master Plan.

Funding for this part of the project is already in place. As the Covid pandemic resolves, the potential to resume an relationship with Paul Smith's College will improve. In the meantime, it is recommended that a committee of local residents be established to assist in moving forward with the implementation of the Plans.



Above: Existing sapling-lined trail near the highland loop's overstocked site.

Next Steps:

Immediate actions could include development of the trailheads, on-road / shoulder trail segments, restoration of the pedestrian and snowmobile bridge / Chester Creek crossing, and detailed signage development. A logical set of next steps includes:

- Appoint a local Master Plan Implementation Committee.
- Re-establish contact with Paul Smith's Cottage to ascertain the interest in a second project with the Town of Chester.
- Continue to educate the public about the Master Plan.
- Establish a new date for the Community Forest Day.
- Apply for engineering and construction funding for the trailhead, signage, and trail development.

Funding, In-Kind Services, Grants, and Support Opportunities

The Cunningham Community Forest Site Master Plan has been organized into three distinctive phases. Depending on funding availability, any phase may be further subdivided into smaller sequences in order to begin development of the Trail Network as soon as possible. As the Town successfully completes Phase One or its initial sub-sequences, momentum will build, generating additional excitement from residents and fostering support from potential partners. Securing financing for the improvements will prove a key factor in implementing the Overall Master Plan. Sources of funding are available on an annual basis through a variety of federal, state, regional and local opportunities.

There are a few grant resources with funding significant enough to support the larger costs for overall phased implementation. Most grants must be applied for through the Consolidated Funding Application (CFA), typically due annually the last Friday in July. In addition to larger grants to support the building of a new Trailhead and installation of the trail loops and destination nodes, there are many grant opportunities that will provide supplemental funds for smaller projects, including interpretive signage. Most of the grant opportunities require a local match, which can be provided as cash and or in kind in the form of donated materials or volunteer time.

A key recommendation to the Town Board is to prepare for the cash match component that will be required by developing a special line item in the budget and making regular contributions. A second general recommendation is to assign a project manager. This manager's role would be to organize a dedicated group of volunteers to steer the project's implementation, request material contributions, manage the grants, and keep the Town Board informed.



Above: Typical highland forest condition.

Overall Grant Strategy

A recommended approach for funding this project is to apply for funding in annual phases from the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) Recreational Trails Grant Program. The amount the Town applies for would be based on the funds available and the cash match allowance designated by the Town Board. A commitment from the Town Board for the match amount would be required but it could be allocated over several budget cycles. There is an opportunity for the Town Board to seek and accept in-kind donations from contributors for materials, equipment, and labor which could minimize the cash match portion. This grant would be due through the Consolidated Funding Application (CFA). Applications have been delayed for 2020 due to the Covid-19 pandemic, but are expected to resume in 2021.

Order of Magnitude Summary

Phase 1:	
The Lowland Loop	
Total Construction Cost:	\$386,477
Phase 2:	
The Midland Loop	
Total Construction Cost:	\$142,184
Phase 3:	
The Highland Loop	
Total Construction Cost:	\$246,154
Total Construction (Phases 1 thru 3)	\$774,815

At the time of grant application, the project's scope should be reevaluated. In addition to the construction costs, a detailed scope of services and fee estimate would be prepared for soft costs. This includes design, architectural and engineering fees; regulatory permitting fees; archaeology and geotechnical analysis; any additional survey; and construction administration and inspection.

Funding Opportunities Summary

<p>Climate Smart Communities Grant Program - NYS Dept. of Environmental Conservation (DEC)</p> <p>The Climate Smart Communities Grant Program is a competitive 50/50 matching grant program through the CFA for municipalities to implement projects focused on climate change adaptation and greenhouse gas (GHG) mitigation. Project types also include certain planning and assessment projects that are part of a strategy to achieve Climate Smart Communities Certification. The Town of Chester is a Certified Climate Smart Community and would score additional points on a grant application.</p> <p>Funding available: up to \$11.7 million.</p>
<p>Recreational Trails Grant Program - NYS Department of Parks, Recreation and Historic Preservation (OPRHP)</p> <p>Grants for the maintenance and restoration of existing recreational trails, development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails, purchase and lease of recreational trail construction and maintenance equipment, construction of new recreational trails, acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors, and assessment of trail conditions for accessibility and maintenance. Applications must be made through the CFA.</p> <p>The grant range is \$25,000-\$250,000 and the match requirement is 20%.</p>
<p>Community Forest and Open Space Conservation Program - U.S. Forest Service (USDA)</p> <p>The Community Forest and Open Space Conservation Program of the Forest Service offers a unique opportunity for communities to acquire and conserve forests that provide public access and recreational opportunities, protect vital water supplies and wildlife habitat, serve as demonstration sites for private forest landowners, and provide economic benefits from timber and non-timber products. Applications are typically due annually in January. .</p> <p>The grant maximum is \$600,000.</p>
<p>Urban and Community Forest Grants - NYS Dept. of Environmental Conservation (DEC)</p> <p>The purpose of this grant is to improve the health of urban and community forests and to increase the sustainability of forestry programs. Eligible project categories include tree inventories, management plans, tree planting, maintenance, and education programming for those who care for community trees. Grant funds are available from the NYS Environmental Protection Fund and are managed and allocated by DEC. Grant proposals are evaluated for cost effectiveness, projected benefits, use of recommended standards in implementation, community outreach and education, local support, and regional impact. Appropriate consideration is given to under-served neighborhoods, as well as environmental issues that could be addressed with green solutions. DEC foresters can provide technical assistance to applicants and assist with tree lists for planting grants. Applications are typically due annually in December.</p> <p>Some categories require a 25% match.</p>
<p>Adirondack Park Community Smart Growth Program</p> <p>Smart growth can provide the right balance between development and preservation for Adirondack communities. The Adirondack Park Community Smart Growth Program is an annual grant program that supports the planning and implementation of key priority projects, fostering sustainable development, environmental protection and community livability. Annually, the program offers grant funding for counties, towns, and villages that need financial or technical assistance to plan and grow successfully in the Adirondack Park.</p> <p>No match requirement.</p>
<p>Local Waterfront Revitalization Program (LWRP) - NYS Department of State (DOS)</p> <p>Trails can qualify as an element of an LWRP through the First Wilderness Heritage Corridor Initiative. Applications must be made through the Warren County Planning Department.</p> <p>There is no minimum or maximum for this grant and the match requirement is 25%.</p>

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Appendices

Existing Soils of the Cunningham Community Forest

The pedology of the landscape will play a roll in the design and installation of the future trails, potentially influencing both the trail route as well as the pavement section required to ensure a firm and stable surface capable of meeting the rigorous demands of its daily use. The soils of the CCF and its associated trail network lands are predominantly Bice (BdC), Bice-Woodstock (BeC and BeE), Schroon (SdB), and Fluvaquents-Udifluvents complex (Fu). The Municipal Center and Fitness Trail property also includes Wareham (Wa).

BdC: Bice very bouldery fine sandy loam, sloping, is a deep, well drained, woodland soil typically found on hillsides and crests on uplands. Boulders and stones are often scattered across the surface slope, with typically ranges from 3 to 15% (5 to 12% dominance). Bedrock and water table are typically deep (60-inches or more), permeability is moderate to moderately rapid, and surface runoff is medium to rapid. This soil is well suited for forested recreation areas, with its main limitation being the frequent, large surface boulders and the slope.

SdB: Schroon very bouldery fine sandy loam, gently sloping, is a deep, well drained, woodland soil in undulating areas on upland ridges. It shares many characteristics with Bice soils, save for a slow runoff and high water table. This soil is well suited for forested recreation areas, with its main limitation being the frequent, large surface boulders and potential for frost heave.

BeC: Bice-Woodstock very bouldery fine sandy loam, sloping, and **BeE: Bice-Woodstock very bouldery fine sandy loams, steep**, consists of both deep, well drained, Bice soils (see BdC) and shallow, excessively drained Woodstock soil. The two soils typically form an intricate and difficult to map pattern on the forested landscape. Slopes of BeC typically ranges from 3 to 15% (8 to 15% dominance), and BeE ranging from 15 to 45% (20 to 30% dominance). The ratio of soil types are approximately 50% Bice and 30% Woodstock soils, with the remaining 20% being made of Schroon and Lyme soil types. Depth to bedrock is quite shallow for Woodstock soil (10 to 20 inches), which can present a significant limitation for development and excavation, as well as plant growth limitations due to the droughtiness of the soil. Surface boulders and steep slopes also limit development. Selective forested recreation, such as trail building, remains a viable utilization of this soil type.

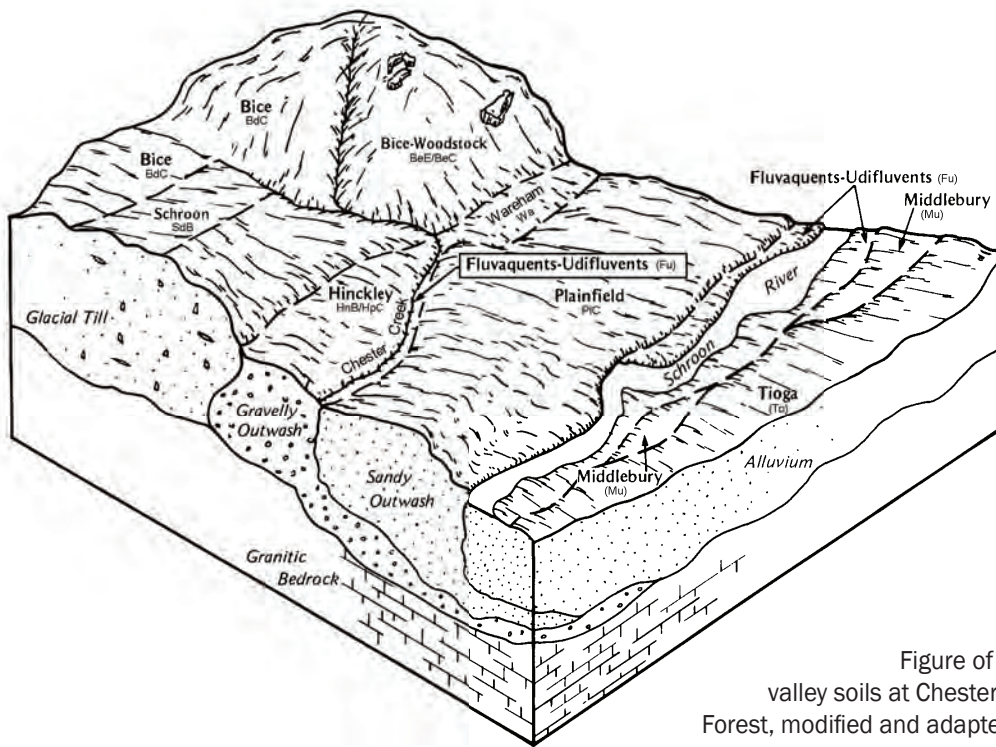


Figure of typical relationship of upland and valley soils at Chester and the Cunningham Community Forest, modified and adapted from the USDA/SCS Soil Survey of Warren County New York.

Fu: Fluvaquents-Udifluvents complex, frequently flooded, is a level to gently sloping soil type found along streams. In this case, the Chester Creek acts as the primary driver of this soil type, subjecting the soil to frequent flooding, scouring, lateral erosion, and soil deposit shifting. While Fluvaquents and Udifluvents are actually distinct soil types, each with its own set of characteristics, the two are intermingled in such a way that mapping them separately would prove impractical. The key features of this soil class is that it has little or no profile development or suitable use. Due to its frequency of flooding and variability, trail development along or across the Fu class should be minimized or avoided when possible.

Wa: Wareham loamy sand, is a level (0 to 3% slope), poorly draining soil on sandy plains or low benches within valleys. While a typical high water table can present development issues, but bedrock is thankfully deep. The Municipal Center, Fitness Trail, and northern parking lots have already been developed on this land. Additional improvements to this existing infrastructure may be recommended to further enhance the user experience.

For additional information regarding soil ecologies summarized within this Master Plan, refer to the latest edition of the Soil Survey of Warren County New York, by the US Dept. of Agriculture and Soil Conservation Service.

Trail, Bridge, and Boardwalk Construction Information

Trail Construction and Installation

Generally, the trail should be installed so that surfacing of the trail tread could be done without additional excavation in the future. The Trail Network would be adequately served as single track trails. Trail surfacing treatments include stone dust in the accessible lowland areas and natural surface further up the slope through the midlands and into the highland ridgeline. It is anticipated there will be on-road trail segments through local neighborhoods as well.

The multi-use trail segments should *not* be optimized for bike use. By opting to not optimize these segments for bike use, it will help to reduce speeds and hinder sport-type riding. This will generally increase multi-use trail safety.

Trail sustainability and environmental soundness directly reflects the size and frequency of grade fluctuations and the amount of rock or mineral soil in the trail tread. The use of machinery in addition to trail labor dramatically increases the size and frequency of these most important trail elements and the long-term success of a trail. Excavators allow soil and rock to be discreetly mined adjacent to the trail for placement in the trail tread and generally distribute overburden farther from the trail than hand labor. The Adirondack environment is generally best suited to the use of rubber tracked excavators for trail construction due to the large amount of rock and the variability of the geography.

IMBA Trail Difficulty Ratings

The trail difficulty ratings presented in the Cunningham Community Forest Master Plan follow the International Mountain Biking Association (IMBA) guidelines. These standards are objective in nature and measurable, but do not attempt to classify the skills of the trail user. Trail characteristics such as grade, obstacle height, tread surface, tread width and bridge width/height are designated for each difficulty level. A subjective local value can also be added to complete the difficulty rating process. Average trail grades and pitch grades are also defined for each level of difficulty.



	 Easy Green Circle	 Low Intermediate Blue Square
Trail Width	36" or more	24" or more
Tread Surface	Firm and Stable	Mostly Stable with Some Variability
Avg. Trail Grade	5% or Less	10% or less
Max. Trail Grade	Max. 15%	Max. 15% or greater
Natural Trail Obstacles and Technical Trail Features (TTF, i.e. bridge crossings and boardwalks)	Unavoidable obstacles 2" tall or less Avoidable obstacles may be present Unavoidable bridges 36"+	Unavoidable obstacles 8" tall or less Avoidable obstacles may be present Unavoidable bridges 24"+ TTF's 2' high or less, width of deck is greater than 1/2 the height

Table adapted from IMBA

General Single Track Construction Specification Summary

Trail Material / Surface Material

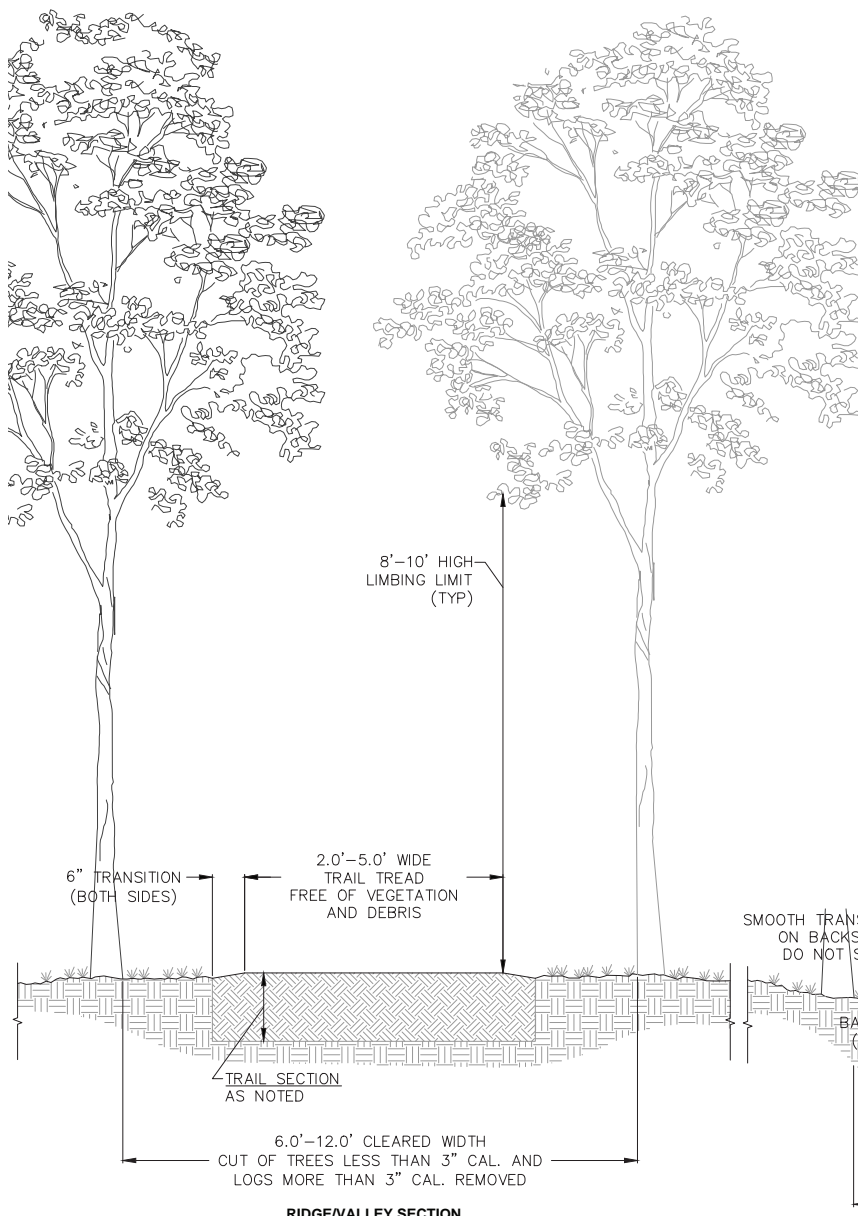
- The main trail in the community forest will be a shared use, natural surface trail that is generally 3 to 5 feet in width and without surface litter (leaves, branches, organic debris, soil and smaller roots).
- Stone dust trail exceptions should receive a treatment of a 3 to 6-inch pavement surface of stone dust and #1 stone and have a tread width of 4 to 5 feet.
- Additional exceptions include:
 - On-road segments utilizing existing pavement or gravel shoulders (relying on on-road painting or trail markers to identify trail routing), and
 - Sections of trail that have too little soil or exceedingly dense boulder surface (may require additional material and surface treatments to reduce site impact from excessive excavation).
- XC MTB Trails to be natural surface, 12 to 24-inch width.
- MTB Flow Trails to be natural surface, 24 to 36-inch width.

Trail Corridor Construction

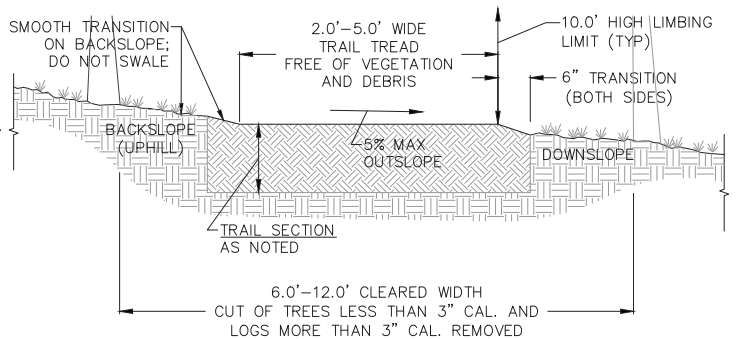
- Average trail tread outslope should be less than 5% and be comfortable on the ankles when walking.
- Obstacle height in the trail tread generally less than 4 inches except for rock steps or large roots perpendicular to the trail tread.
- 6 to 8-foot wide trail corridor cleared of brush and logs.
- Trees greater than 3 inches DBH (diameter at breast height) will be left in the cleared corridor outside of the trail tread when possible. Trees left must be a minimum of 2 feet from the centerline of the trail.
- Trees and brush less than 3 inches DBH will be removed within 2 to 4 feet of the center line of the trail tread.
- Overhead clearance of 8-10 feet.
- Minimal backslope cutting will be done to reduce soil and root disturbance and the volume of overburden.
- In severe benchcut areas on steep side slopes the backslope will be done in a fashion that prevents the trail tread from being encroached upon by sluffing from the uphill side of the trail.
- Overburden placed discreetly along trail corridor.
- Undermined duff root layer on backslope without removing vegetation and exposing soil.
- Brush should be removed and placed discreetly with butt ends facing away from trail.
- Log ends cut at an angle and at least back to the edge of trail corridor.
- Exposed roots will be cut at surface level on the backslope and edges of the trail.
- Where the natural soil surface of the trail is saturated by moisture and unable to support the weight of users for a large portion of the year hardening/armoring with a stone material, turnpikes, bog bridging, etc. should be considered.



Above: Natural surface trail (bench cut with grade reversal alignment, College of Environmental Science and Forestry, Newcomb, NY. Photo provided by Wilderness Property Management, Inc. [WPM].



RIDGE/VALLEY SECTION



SLOPED SECTION

NOTES:

1. TRAIL TREAD WIDTH CAN BE REDUCED TO 1.0' MIN. WIDTH IN AREAS WHERE TREE SAVE OR REDUCED GRADING IMPACTS CAN BE ACHIEVED WITH A NARROWER SECTION (TYP)
2. SEE TRAIL DESIGN AND CONSTRUCTION STANDARD NOTES FOR ADDITIONAL DETAIL

Typical Trail Cross Section

Detail provided by Wilderness Property Management, Inc. [WPM].

The trail tread construction process includes the following steps:

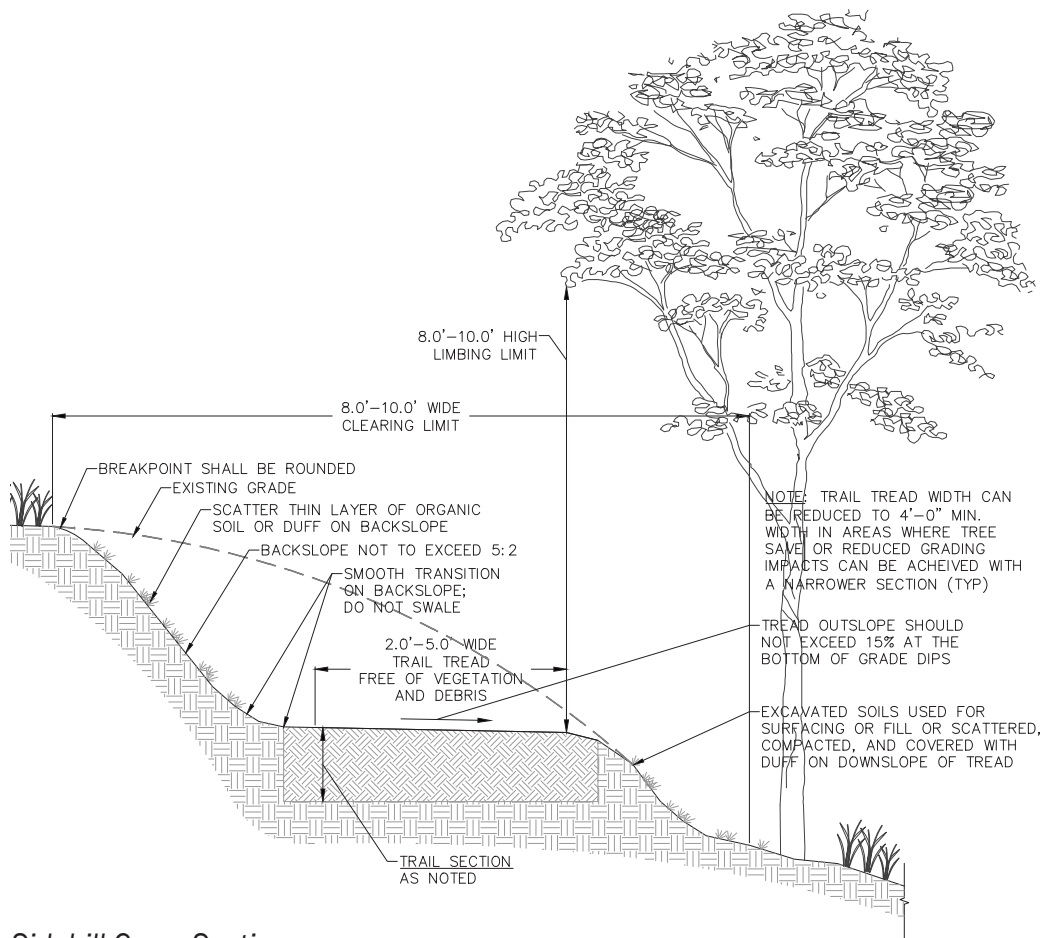
- 1) Remove the duff, roots and organic soil and rock that is greater than the allowed obstacle height.
- 2) Next excavate the mineral soil and rock into the shape of the trail and trail tread with the appropriate drainage configuration.
- 3) Extra mineral soil is mined by undermining

Sample Trail Construction Details

Please note: All details are shown for example only, new construction details tailored to the site requirements of the Cunningham Community Forest Trail Network project area should be designed by a qualified landscape architecture, engineering, and/or trail building professional.

All natural surface trails should have the duff and organic layers removed and discreetly spread along the trail corridor or on disturbed soil. The trail tread should be mineral soil and rock. The "Typical Trail Cross Section" details the standard condition of the natural surface trail over ridges, valleys, and moderate slopes. For more severe slopes, a bench should be cut into the slope (see "Full Bench Sidehill Cross Section", opposite page).

- 4) Rake and compact the trail tread into its final shape.
- the back slope duff and root layer and by digging mineral soil out of the drainage outflow areas. This mined mineral soil is placed onto the trail tread creating a deep and long lasting trail tread.

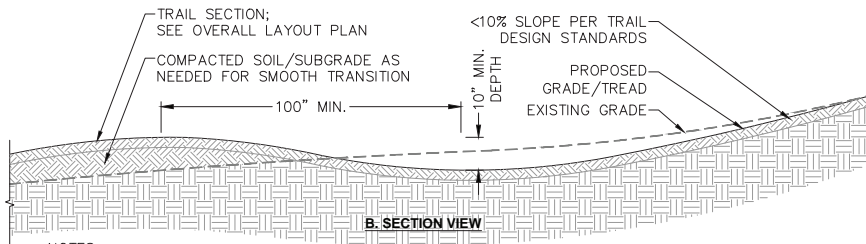
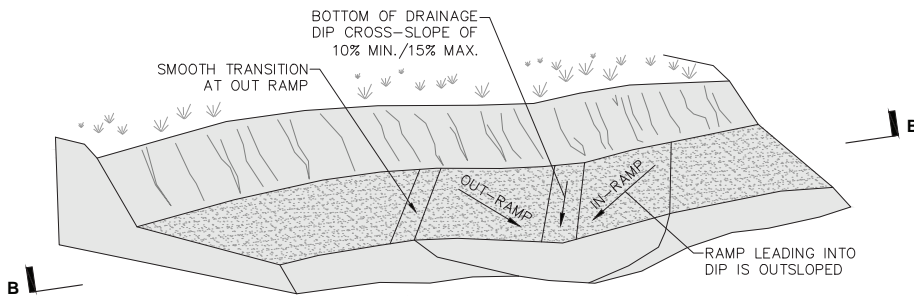


Full Bench Sidehill Cross Section

Detail provided by Wilderness Property Management, Inc. [WPM].

In drainage areas or where a short portion of trail has inadequate soil to support trail use, native rock is added into the trail tread. This rock is acquired from trail side excavations and natural surface deposits. This technique is known as armoring the trail tread. The rock armor may be covered with soil and or left uncovered, giving the appearance of rock pavers.

It is more natural and less intrusive to use stone on site to armor trails through wet areas whenever possible. If necessary, a crushed stone (#2 or #3) subbase may be imported. When necessary, a geotextile fabric may be utilized along the bottom of the trail section.



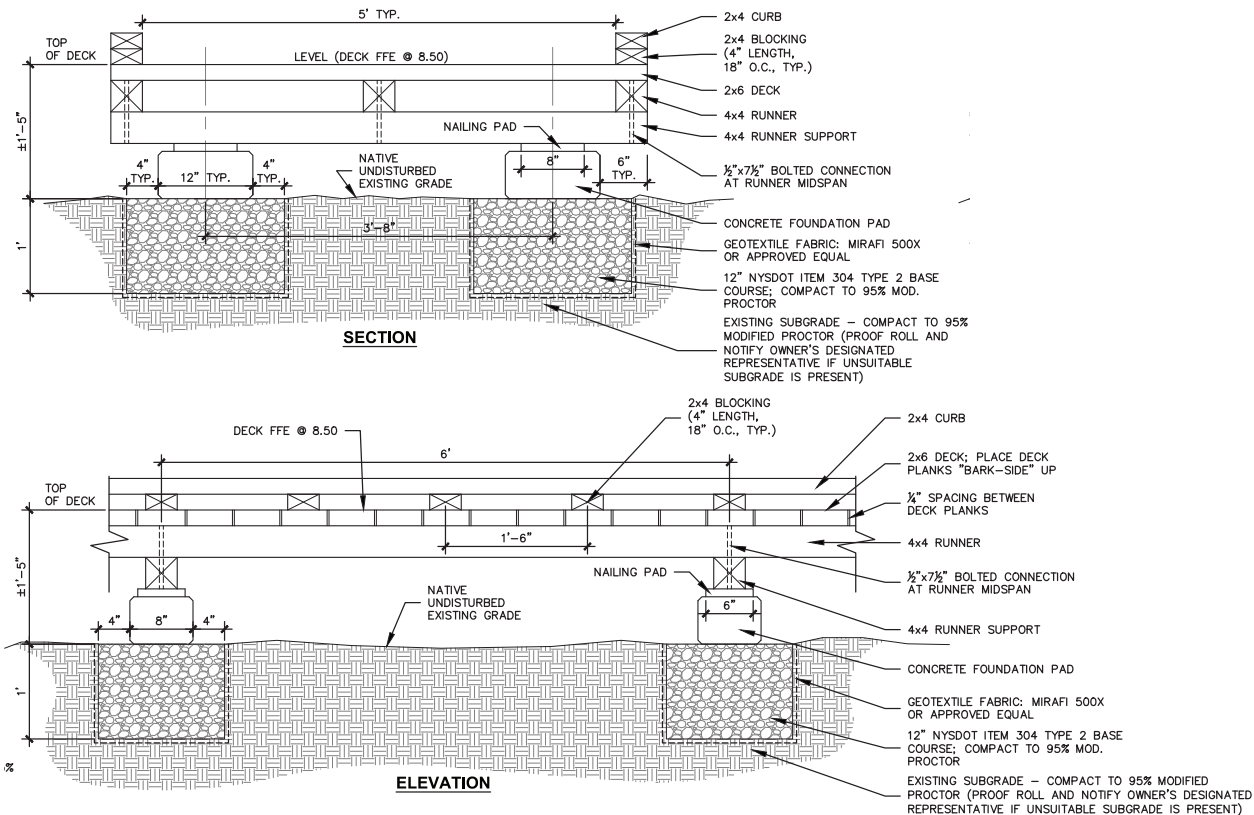
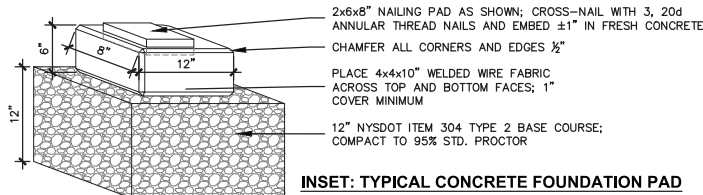
NOTES:

1. BROAD BASED GRADE DIPS WITH OUTSLOPE SHOULD BE USED AT THE BOTTOM OF ALL GRADE CHANGES PER TRAIL DESIGN STANDARDS
2. MINIMUM DISTANCE VARIES ACCORDING TO TRAIL GRADE – ENSURE SMOOTH TRANSITIONS
3. GRADE REVERSALS WILL BE LOCATED AT LESS THAN 100 FT. INTERVALS AND SHOULD HAVE BROAD DRAINS (6–10 FT.) WITH CROSS SLOPES OF 10–15%

In areas where the existing slope is too shallow, drainage issues can be avoided by introducing grade dips with outslopes to move water off the trail (see “Broad Based Grade Dips with Outslope” detail, opposite page).

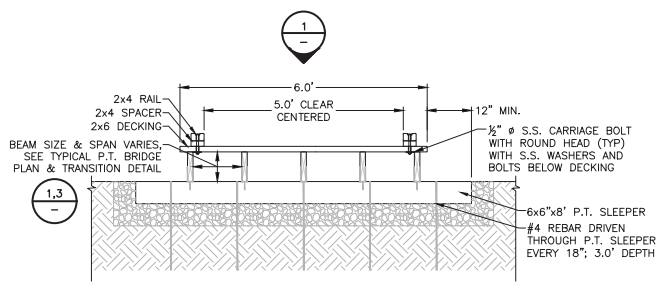
Broad Based Grade Dips with Outslope

Detail provided by Wilderness Property Management, Inc. [WPM].

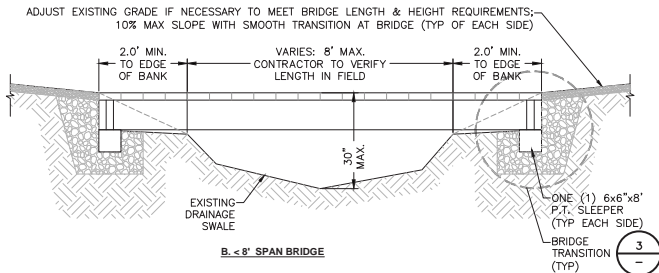


Light Duty Floating Boardwalk (Bog Area)

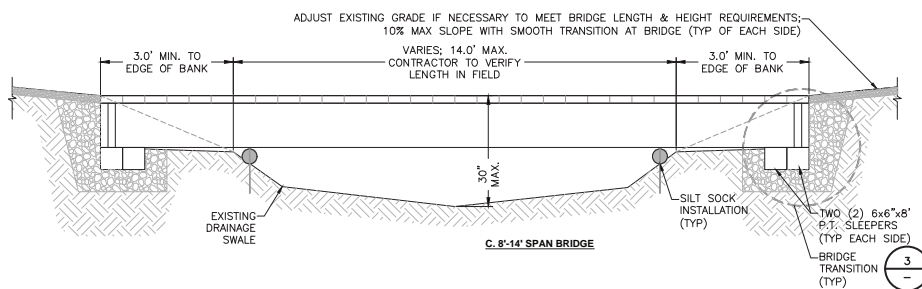
Detail provided by The LA Group, P.C.



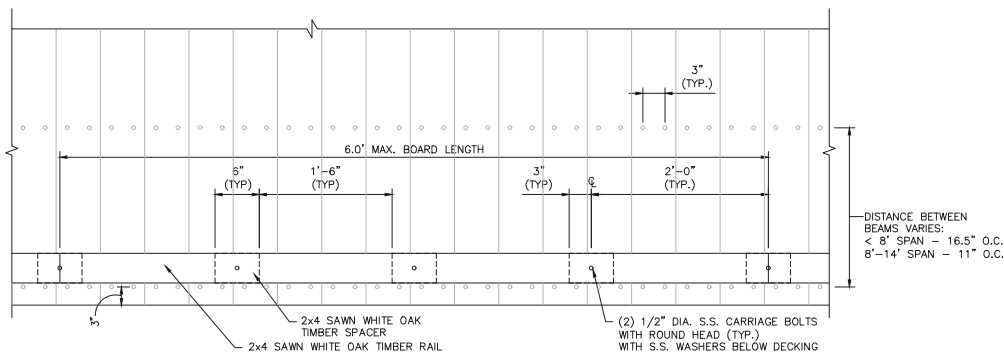
A. TYPICAL CROSS SECTION



B. < 8' SPAN BRIDGE



C. 8'-14' SPAN BRIDGE



Typical Pressure Treated Wood Bridge Plan and Sections

Detail provided by Wilderness Property Management, Inc. [WPM].



Above: 16-ft. pedestrian bridge with railing, Harris Land Preserve, Town of Luzerne, NY. Photo provided by Wilderness Property Management, Inc. [WPM].

Several options exist for the proposed boardwalk across the Chester Creek Crossing between the existing Fitness Trail and Chester Creek Trails. Final selection of a design will likely rely on funding availability. The “Light Duty Floating Boardwalk” depicted on the opposite page is a midrange-priced boardwalk solution that would allow for accessible pedestrian access across the creek. Heavier duty solutions would need to be engineered if the crossing needed to include emergency vehicle and snowmobile traffic tolerances.

Several small stream crossings will occur throughout the Trail Network. The “Typical Pressure Treated Wood Bridge” detailed above would allow for up to 16-ft wide crossings at a relatively low cost. Barrier railings will be required if the fall height of the bridge is greater than 30 inches.

MTB Trail

Construction Information

Mountain Bike Cross Country Trail (MTB XC)

Cross Country MTB Trail is the least environmentally intrusive level of bike trail. This type of trail follows the natural ground surface of the site as closely as possible (very similar to a hiking trail). The focus of the trail experience is on the environment, distance/time on bike, fitness and possibly a destination similar to hiking.

The minimum trail tread can be 12-24 inches wide and utilize low percent inslopes on turns. The trail tread isn't optimized with constructed riding features other than those naturally present such as rocks or down logs. The trail alignment should contain a flow line without optimization to increase speed.

All type of mountain bikes (hardtail and full suspension) can be used to navigate this trail. Skill level is generally intermediate due to the narrow trail tread and lack of trail optimization.

Purpose Built Flow Trail (MTB Flow)

Flow trails optimize the recreational experience of the MTB sport in addition to physically challenging the rider while recreating in a beautiful outdoor environment. This type of trail uses the natural topography, tree and rock spacing and seamless linked turn trail alignment and moderate level of speed to create a unique recreational experience sought after by outdoor sport enthusiasts. The flow sensation is the bodies reaction to physical exertion, speed and the weightlessness created in turn transitions in mtb, skiing, surfing, and other similar sports. This experience drives the demand for mtb, skiing, surfing and other sport based outdoor recreation opportunities.

The minimum trail tread can be 24-36 inches wide and utilize higher percentage inslopes on the turns commonly known as banks and berms. The banks and berms aren't obtrusive and are generally less than 2 feet in height. Slightly bigger than would be present on a hiking or MTB XC trail, grade reversals for drainage in sustainable MTB Flow trail design and construction are optimized into features known as rollers. The flow line trail alignment and optimization of turns increases riding speed just enough to allow turn transitions, transforming the physical experience to create the flow experience. This trail is sensitive on the land while also offering a high level mountain biking experience.

All type of mountain bikes (hardtail and full suspension) can be used to navigate this trail. Due to the smooth trail tread and trail tread optimization, associated skill level is generally low-intermediate. The greatest cross section of riders can utilize and enjoy this type of mountain bike trail.

Interpretive Signage Construction Information

Developing Successful Interpretive Signage

A successful interpretive sign panel thoughtfully engages with the intended audience, enhancing their trail experience and strengthening their connection to the landscape or cultural history of a site. The process of developing a single panel can be complex. In the case of the Cunningham Community Forest, having a thematically linked family of interpretive signs spread across a trail network will present an additional challenge.

Prior to the design and development of the panels, further planning and analysis may be needed to confirm the scope, interpretive themes, budget, and site selection for each panel. Once established, each panel's composition will require a combination of narrative text (which may require additional research) and graphics (which may require original artwork). The Town should actively participate throughout the design and development stages to ensure the panels express the story the Town of Chester wants to tell. After the final drafts of the panels and mounting systems are reviewed and approved, the signs can be fabricated, the site prepared, and the interpretive signage system installed.

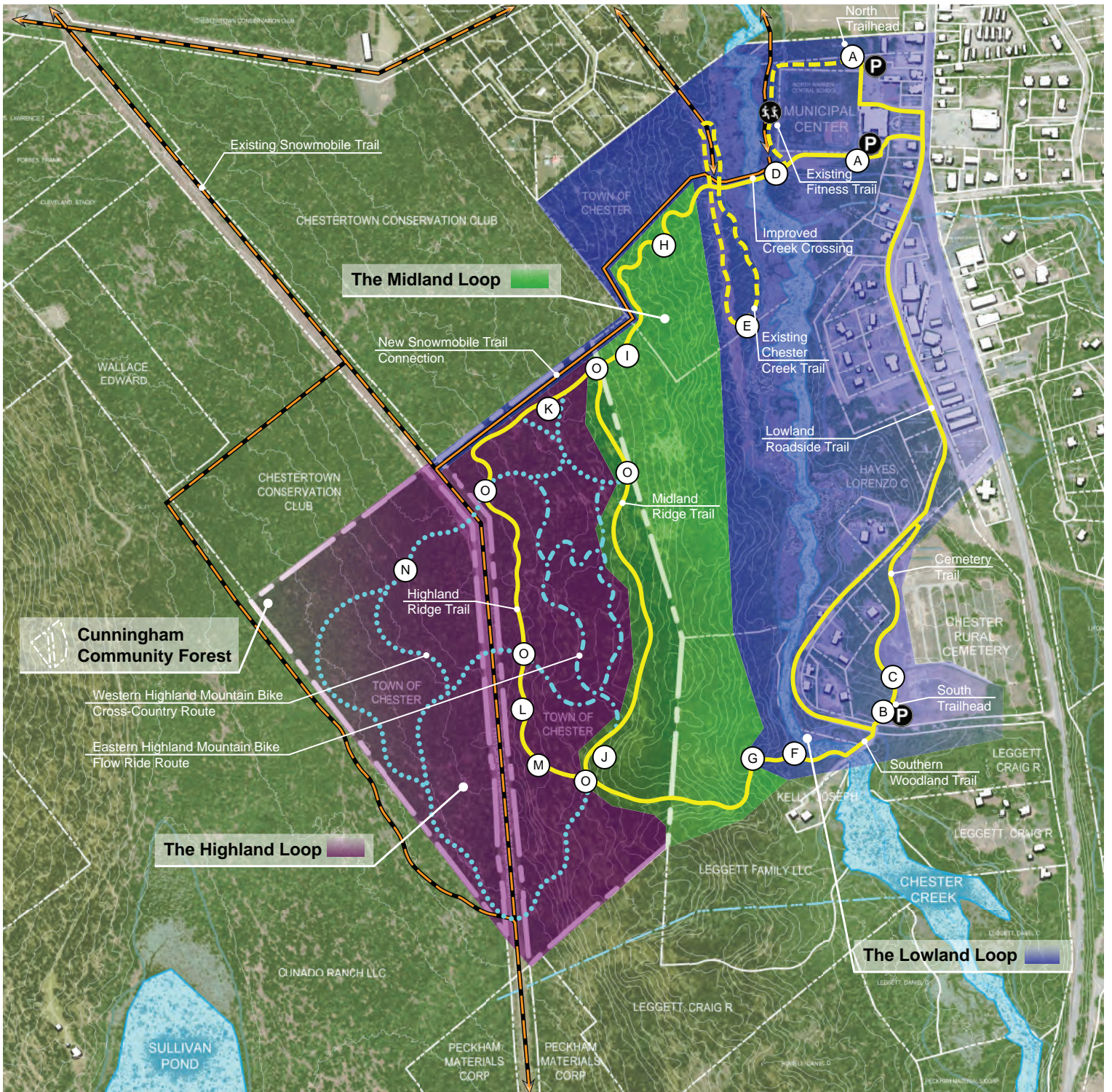


Example of typical low profile mounting systems for interpretive signage (graphic originally prepared by The LA Group for the NYS OPRHP's Statewide Interpretive Signage Program)

Recommended Signage Schedule

Key	Location	Theme	Interpretive Panel Content	Mounting / Notes
A	North Trailhead	Woods Water Warblers	Overview of the "Woods. Water. Warblers." Interpretive Theme, Introduce Youth Nature Journaling (YNJ) Feature	Three-Sided Kiosk: One Interpretive Panel, One Orientation Map, One Bulletin
B	South Trailhead	Woods Water Warblers	Overview of the "Woods. Water. Warblers." Interpretive Theme, Introduce Youth Nature Journaling (YNJ) Feature	Three-Sided Kiosk: One Interpretive Panel, One Orientation Map, One Bulletin
C	Cemetery Trail	Warblers	"Living on the Edge: Young Forest Bird Habitat", Include YNJ Entry	Pedestal Mounted, One Panel
D	Chester Creek Viewing Platform	Water Warblers	Panel One: "Function of Wetlands", Include Sidebar of Plants and Animals of the Wetlands; Panel Two: "Identifying Birds of the Wetlands", Include YNJ Entry	Railing Mounted to Barrier Rail, Two Panels Side by Side
E	Chester Creek Trail	Woods	"Trees of the Lowland Adirondack Forest", Include YNJ Entry	Pedestal Mounted, One Panel
F	Lowland Forest Trail	Woods Water	"History of Local Tannery", Focus on Trees' and Water's Function to Tanning Hides, Research for Historic Photos	Pedestal Mounted, One Panel, Field Verify Location with Town
G	Prominent Woodland View Rest Node	Woods Warblers	Panel One: "Cunningham Community Forest Sustainable Forest Management Plan" Panel Two: "Identifying Birds of the Forest", Include YNJ Entry	Pedestal Mounted, Two Panels Side by Side
H	Manmade Reservoir Cultural Site	Water	"Village Water Systems", Include Watershed Diagram (Rain, Aquifer, Run Off, Storage), Research for Historic Photos	Railing Mounted to Barrier Rail, One Panel
I	Forest Clearing Rest Node	Woods Warblers	"Managing for Stand Diversity", Include Tree Species, Age/Heights, Understory Density, Habitat Provision, Songbird Nesting and Foraging, Include YNJ Entry	Pedestal Mounted, One Panel
J	Natural Reservoir Ecological Site	Water	"Forest Water Systems", Include Watershed Diagram (Rain, Aquifer, Run Off, Storage), Include YNJ Entry	Railing Mounted to Barrier Rail, One Panel
K	Overstocked Forest Area	Woods Warblers	"It's Getting Crowded in Here!", Include Information on Why (are the trees overplanted at this location), What (is the prescription for managing this area to improve stand condition), Where (have all the birds gone), Include YNJ Entry	Pedestal Mounted, One Panel
L	Old Sawmill Cultural Site	Woods Water	"The Importance of Early Logging in the Adirondacks", Include Information on the Role of Water in Milling and Moving Wood, Research for Historic Photos of Mill in Operation	Pedestal Mounted, One Panel
M	Maple Sugaring Forest Area	Woods Warblers	"What is a Sugarbush? Sugaring Then and Now"; Include Information on Bird Friendly Maple Management, Include YNJ Entry	Pedestal Mounted, One Panel
N	Highland Bog Forest Area	Water Warblers	"What Happens when Groundwater Surges to the Surface?", Identify Plants and Birds, Include YNJ Entry	Pedestal Mounted, One Panel
O	Major Hiking/MTB Trail Intersections	Orientation	Orientation Map	Pedestal Mounted, One Panel

- Notes: 1. All Kiosk Interpretive Panels a 36" x 48.
2. All Other Interpretive Panels are Low Profile, 24" x 36" Panels, Mounted Either by Pedestal or Railing.
3. Orientation Maps should include "You Are Here" Marking.
4. Interpretive Panels should include reference to any applicable partnerships between the Town and other agencies (Audobon, conservation clubs, after school youth programs, scholastic groups, etc.)
5. Bulletin Case can contain regulatory information, trail use and path sharing rules, local news notices, etc.



Legend

-  Proposed Hiking Trail
-  Existing Hiking Trail
-  Proposed Cross-Country Mountain Bike Route
-  Proposed Mountain Bike Flow Trail Route
-  Proposed Snowmobile Trail
-  Existing Snowmobile Trail

Recommended Signage Location Plan

Refer to the table on the opposite page for detailed information regarding the keyed locations depicted on this map. Panel content should be finalized during the installation of the trail network, and the interpretive signage installation may occur in a phased sequence mirroring the trail construction. All final locations of interpretive signage panels should be field-verified prior to installation.

