M-119

Tunnel of Trees
Scenic Heritage Route

Guidebook



www.m119TunnelofTrees.org



M-119 Tunnel of Trees Scenic Heritage Route Mission Statement

Recognizing the unique value of M-119 and the area surrounding the roadway, the M-119 Tunnel of Trees Scenic Heritage Route Management Plan will strive to **protect**, **preserve**, **and enhance the natural**, **scenic**, **and cultural character** of the M-119 Heritage Route.

The Purpose of this GUIDEBOOK

To provide **best practices** to residents, businesses, local governments, builders, and developers to protect the "Tunnel of Trees" and to maintain its pastoral character.

M-119 Committee

The M-119 Tunnel of Trees Committee is made up of appointed members from the following entities:

West Traverse Township
Friendship Township
Readmond Township
Cross Village Township
Emmet County Lakeshore Association (ECLA)

Committee Partners

Little Traverse Bay Bands of Odawa Indians Emmet County Planning and Zoning Little Traverse Conservancy Michigan Department of Transportation Networks Northwest



For more information, please visit the website at www.m119TunnelofTrees.org

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M-119 Tunnel of Trees Scenic Heritage Route

The initiative to protect and preserve the M-119 corridor originated in 1936. Mrs. C.F. (Alice) Irwin, an early preservationist and naturalist living in Harbor Springs was able, via her statewide newspaper column, to initiate a grassroots effort to protect and preserve the corridor. At that time, several hundred people met to consider protecting the corridor as opposed to other plans being entertained that would have modified the route to accommodate growing usage. Mrs. Irwin successfully petitioned the Michigan legislature to protect and preserve the road in its natural state.

The protection and designation as a Michigan Scenic Heritage Route was championed by the Emmet County Lakeshore Association (ECLA) with the full support of Emmet County Planning, Emmet County Commissioners, Little Traverse Conservancy, Little Traverse Bay Bands of Odawa Indians, and the community at large. That movement continues to this present day.

The M-119 Tunnel of Trees Scenic Heritage Route was officially designated by the State of Michigan in 2003.

Goals and objectives:

- Promote Preservation and Conservation of the Tunnel of Trees for Balanced Growth and Development
- 2. Promote Wise Land Use Development
- 3. Prevent Intrusions to the Scenic Character
- 4. Balance Roadside Safety with Aesthetics
- Promote Appropriate Use of the Corridor and Alternative Routes
- 6. Education

Corridor Features

The M-119 Tunnel of Trees Scenic Heritage Route begins at the north city limits of Harbor Springs and ends at County Road 77 (State Rd), Cross Village. The Route is on the Lake Michigan bluff, goes inland over some rolling hills, then curves back to the bluff, crossing creeks and springs along the way. The road is narrow and winding with no center line. Historically, this section of M-119 started out as the primary north/south trail for Native Americans, then trappers, traders, new settlers and loggers. Today, it serves the local residents and visitors.

Unique Features

- Lake Michigan
- Scenic Views
- Horseshoe Bend
- Nature Preserves
- Five Mile Creek and Schoolhouse
- Land of the Crooked Tree
- Devil's Elbow
- Middle Village
- Area of the Old Council Tree
- L'Arbre Croche





No Shoulders
No Centerline
Many Curves

Protecting the Corridor

The M-119 State Highway is a right-of-way easement mostly over privately owned property and is a narrow pavement width with embankments, road alignments which conform closely to the natural topography, hedgerows, mature trees and forest along the edges of the highway, and other features reflecting the surrounding landscape. Both the Michigan Department of Transportation and Emmet County have regulations to protect and preserve the character of the scenic heritage route. The illustration below shows the M-119 highway and the two strips of land areas on each side with the regulations - Not To Scale.

Example of Intent of	SR Zone Secti Lake Sho			nditions as related to	N.
SR Zone "Greenbelt"	MDOT Road Right-of- way	M-119 MDOT ROW	MDOT Road Right-of- way	SR Zone "Greenbelt	
← 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree A 40 feet SR Zoning District - A 40 foot SR Zoning Distr	MDOT Right-of-Way = 66 Feet Measured from the road right-of-way line or measured from a line that is 33 feet from the center line of the road, whichever is greater. (There are some ROW exceptions.)		SR Zoning District - A 40 foot yard or strip to be maintained in its natural tree		
and shrub condition.			and shrub condition.		

Michigan Department of Transportation (MDOT) Doing Something in the Right-of-Way?

The safety of both the motoring public and work crews within the right-of-way is a top priority for MDOT. Permit applicants are given MDOT guidelines to be followed for signing and barricading for construction, utility, or other work zones in the right-of-way. If a driveway will be accessing M-119, a driveway permit will be required which includes any upgrades to existing driveways. Tree trimming and removal, drainage, landscaping, grading, utilities and other similar activities may require a permit. One exception to the permit rule is the installation of a mailbox which does not require a permit. However, the mailbox must meet the United States Postmaster General's criteria.

Please contact the MDOT Gaylord Transportation Service Center at 989-731-5090 prior to starting any work in the ROW to obtain any necessary permits.

MDOT permits website:

https://www.michigan.gov/mdot/0,1607,7-151-9625_72410---,00.html

Emmet County Scenic Resources (SR) Section 7.03 Required Conditions

Every use in the SR District shall establish and maintain a forty (40) foot yard strip on the water side (or roadside if a scenic highway). Said yard or strip to be maintained in its natural tree and shrub condition. Trees and shrubs may be trimmed and/or pruned through the native strip for a view of the fronting waters and for access to a boat dock and/or a driveway entrance. For the purpose of the SR District, the front setback (roadside) and required greenbelt shall be measured from the road right of-way line, or measured from a line that is thirty-three (33) feet from the road centerline, whichever is greater. Web link: http://emmetcounty.org/officials-departments/planning-zoning-and-construction-resources/planning-and-zoning-resources/#Zoning Ordinance and Amendments.

For detailed information, please contact Emmet County Planning, Zoning, and Construction Resources at 231-348-1735.

Transportation safety and mobility need to be balanced with the scenic, aesthetic, historic, environmental and community values. Each highway or development project should take into account the natural and constructed environment.

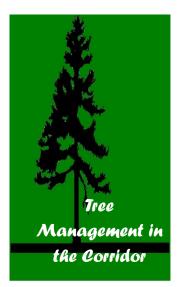
Landscape Management

For the protection of the "Tunnel of Trees", please keep trees and the landscape natural and diverse as much as possible to maintain this fragile and scenic area. Recommended actions:

- Retain mature trees that have value as majestic trees
- Native species diversity is important for tree and plant health
- Wood debris should be retained on site to help control erosion and to re-enter the food chain.
- Protect or plant native vegetation to create a buffer or screen that can be used for a variety of purposes such as windbreaks; to screen parking lots and incompatible land uses; and along drainage areas and surface water bodies for protection.
- ♦ During construction, put up temporary fencing about 20 feet in diameter around any trees so the root system is not damaged.
- Do not plow snow across M-119! It is illegal to plow across
 State and County roads or dump snow in the right-of-ways.

Steep Slope Protection

The steep slopes along the Tunnel of Trees are a noteworthy feature. These slopes contribute to the dramatic views of Lake Michigan and are unique and vulnerable geologic characteristics that need protection. Some of the properties along the corridor may be impacted by the Emmet County Steep Slopes Ordinance, a land use regulation that protects people and property from damage by defining appropriate and safe building and construction activities along the Lake Michigan shoreline bluff. Before any changes are made to a parcel, please contact Emmet County Planning, Zoning, and Construction Resources at 231-348-1735.



Most people who live or travel along M-119 do so because they want to enjoy the unmatched, scenic beauty of the corridor. The bluff along Lake Michigan was formed by glacial deposits and is characterized by layers of sand and clay. The sand layers can become unstable when saturated with water and slump or slide down the bluff. There are some basic steps that community members can take to ensure that the character of the corridor is protected.

WHY TREES ARE ESSENTIAL

Trees play a vital role along the corridor. They affect the quality of the water and air, the cost of heating and cooling, and enhanced property values. They also provide attractive greenbelts to shield traffic and noise.

PREVENT EROSION AND REDUCE RUNOFF

Tree roots hold soil in place, especially along the ridgelines/bluff areas. The canopy reduces the force of falling raindrops on bare surfaces and can catch and hold rainfall that can delay stormwater runoff and helps to reduce flooding. Root growth enables the ground to absorb more water to reduce flooding and replenish the groundwater aquifer.

CLEAN THE AIR

Trees remove pollutants such as sulfur dioxide, nitrogen oxide, and intercept particulate matter from the air which are major components of ozone pollution and acid rain. They also absorb and store carbon dioxide and release oxygen into the air through their photosynthesis process.

Maintaining Tree Health

OAK WILT

- Do not injure or prune oak trees between mid-April and mid-July. In an infected tree, the fungus will spread to nearby oak trees through the interconnected root system (grafts) and can occur between trees more than 50 feet apart.
- Controlling the spread of the fungus is to stop the movement
 of the fungus by severing root grafts between healthy and
 infected trees, and is expensive. Removing infected trees
 without severing root grafts first is not effective because the
 fungus can still move into healthy trees. Removing an infected
 tree BEFORE the root grafts have been severed can actually
 speed the movement of the fungus.
- Vibratory plows (also called cable plows) or trenchers with five-foot blades or booms are the most effective way to break interconnected root systems. Barriers must be placed far enough out from infected trees to ensure that the disease has been isolated within the barrier circle. Trees inside the barrier circle should be removed, cut and covered with a tarp for one year to prevent beetles from reaching the spore pads.
- Fungicides containing the active ingredient propiconazole may be effective, but are expensive, and must be applied by a licensed applicator using special equipment, and used before or shortly after infection takes place.

EMERALD ASH BORER

An infested tree should be cut down in fall or winter and disposed of properly before the young beetles emerge in spring. The wood can be safely used for mulch if it is chipped down to 1-inch nuggets, or it can be burned.

HEMLOCK WOOLY ADELGID

To target overwintering females, apply a registered insecticide late September through October. A mid to late June spray may help reduce the number of developing nymphs.

BEECH BARK DISEASE

Beech Bark Disease is the interaction between the introduced beech bark scale and several species of Nectria fungi, at least two of which were introduced into North America. Extensive bark colonization by high populations of beech bark scale has caused the wounding of the trees. The injured areas serve as entry points for the Nectria fungi to invade. Infection and colonization of wood tissue by Nectria fungi ultimately results in catastrophic tree failure known as "beech snap" - structural failure of trees. These trees are typically removed before they become liabilities. Theoretically, the elimination of or minimization of beech bark scale colonization should prevent Nectria infections and subsequent "beech snap" and tree death. Because of the relatively slow progression of beech bark disease, there are some possible treatment tools to further impede and perhaps even effectively manage beech bark disease and the potential to maintain beech trees in their native habitat.

Guidance for disease and pest management MDNR Guidance for disease and pest management

https://www.michigan.gov/dnr/0,4570,7-350-79136_79237_81077---,00.html

Michigan State University Extension

https://www.canr.msu.edu/forestry/

Managing Tree Health

When cutting, planting trees, or landscaping to replace others lost to damage or disease, it is important to choose a variety of native species that will fit with the soils and hydrology at that location. In general, hardwood trees such as beech and ash can be replaced with maple, basswood, birch, and cherry. Conifers such as hemlock can be replaced with white pine, red pine, northern cedar, and balsam fir. Oak may be replanted to replace trees taken out by individual events such as a lightning strike or vehicle damage.

Tree Maintenance Guidelines

PLANTING YOUR TREE

First, identify the limitations of the site where you will be planting such as confined root zone, type of soil, etc. When selecting trees to plant underneath or near utility pole lines, select smaller trees to minimize conflicts and the need for line clearance pruning is minimized or eliminated altogether. Proper landscape planning:

- 1. Height
- 2. Canopy spread: how wide will the tree grow?
- 3. Deciduous or evergreen
- 4. Form or shape
- 5. Growth rate
- 6. Soil, sun, and moisture requirements
- 7. Fruit bearing and clean up

PROPER CARE

1st Year:

- Water. Check soil moisture a few inches below the surface of the root ball.
- Mulch. Layer 3 to 4 inches of mulch but not touching the tree trunk. Do not use treated or dyed mulch.
- Stake. Only if necessary.
- **Check**. For mower/weed whip damage, vandal damage, or animal damage, and for any visible insect or disease problems on the tree or in the surrounding area.
- **Do not fertilize**. It can excessively dry the roots.
- Remove. All tags and twine.

2nd Year:

- Water. Trees should be checked and watered from spring to fall.
- Mulch. Re-mulch every spring.
- Check for any visible insect or disease problems on the tree or in the surrounding area.

3rd Year:

 Water. Soil moisture needs to be checked on a regular basis from early spring to fall.

Maintaining Views

Along the corridor, the maintenance of **filtered views** is recommended. Removal of trees and vegetation on the bluff is strongly discouraged, and the topping of a tree can create serious damage. A carefully established filtered view has distinct advantages that include helping the home look in harmony with its surroundings; preservation of the corridor's unified "Tunnel of Trees" feeling; the protection and preservation of habitat for wildlife; and maintaining the shoreline and bluff.



Recommendations for Responsible Filtered View Trimming

- Do not remove more than one-third of the limbs on any one tree.
- Do not remove more than one-third of the trees in any area.
- Do not remove the tops of trees.
- Try not to remove any trees on the bluff due to creating major erosion events.

Tree Species and Health

The Tree Health Assessment for 2022 is specific to the trees located within the M-119 State Highway right-of-way (ROW) and not inclusive of trees outside of the right-of-way (ROW). The overall health of the trees is average for the area. The trees range in age from seedling (less than one year) to over mature, long-lived species such as hemlock and white pine that are over 200 years old.

Native Tree Species: Sugar Maple, Red Maple, American Beech, Eastern Hemlock, Ironwood, Red Oak, White Oak, Northern White Cedar, Red Pine, White Pine, Black Cherry, Basswood, Paper Birch, White Ash. American Elm, Balsam Fir, Quaking Aspen

Non-Native Tree Species: Scotch Pine and Autumn Olive

Disease Concerns

The impacts of these diseases are causing the canopy to become thinner, allowing more light to the surface and an increase in small diameter trees.

Beech Bark Disease - American Beech

Beech Bark disease is having an impact on the canopy in portions of the highway especially between Cross Village and Good Hart. The scale infestation is a precursor to the fungus that causes beech bark disease and eventual death of the tree. There are a number of dead standing, fallen and broken trees.

Oak Wilt

Oak trees are a major tree species along the entire corridor. Oak wilt is an exotic disease causing increased levels of mortality in Michigan. Oak wilt is a fungus that can quickly kill the trees. is perhaps the biggest threat to the health of the trees in the Tunnel of Trees corridor. The fungus can spread via root grafts, as well as by beetles that feed on the sap of wounded oak trees.

Emerald Ash Borer

This disease has had a moderate impact on the canopy but a major impact on the ash tree component. It has decimated the Ash tree component along the corridor. Ash trees are a small component of the overall tree composition, but large individual trees that have died should be removed.

Hemlock Wooly Adelgid

This small insect stresses the hemlock and if left unchecked over time can kill the trees. No known Hemlock Wooly Adelgid has been identified in the corridor, however, the insect moves North as our climate moderates. Annual monitoring for this pest is important.



Replanting

When planting trees to replace others lost to damage or disease, it is best to choose a native species that will fit with the soils and hydrology at that specific location. Hardwood trees such as beech and ash can be replaced with maple, birch, or cherry. Conifers such as hemlock can be replaced with red pine, white pine, northern white cedar, or balsam fir.

2022 Tree Health Assessment is provided in the Corridor Management Plan and M-119 Website at https://www.m119tunneloftrees.org/learn.asp

Shoreline Protection

To protect Lake Michigan and Little Traverse Bay, it is recommended that a 50 foot wide vegetation strip of native trees, shrubs, and/or plants should be preserved or planted to control stormwater runoff and filter the sediment erosion and pollutants from the highway and driveways.

Green Infrastructure Best Practices

Green infrastructure is an adaptable term used to describe an array of practices, technologies, and products that use natural systems or engineered systems that mimic natural processes to enhance overall environmental quality and provide utility services.

Green Infrastructure consists of a variety of natural and restored ecosystems and landscape features such as wetlands, woodlands, waterways, groundwater recharge areas, and wildlife habitat. This also includes public and private conservation lands such as national, state, and local parks; nature preserves; non-motorized transportation facilities, wildlife corridors, and working lands of conservation value like forests and farms.

The clearing of woodlands and natural land can destroy the regional rural landscape character and wildlife habitat. The natural, scenic, and historic features can be preserved - viewsheds, shorelines, forests, wetlands, cultural and historical features, and the rural character of the villages and townships. Communities can work to establish a balance between development and trees/vegetation protection for the property owner and the corridor.

Site Design:/Site Plan Review: Carefully design building placement, site access, parking, stormwater control, landscaping, signs, and lighting to protect the natural resources. Plant native species of trees and plants following construction.

Low Impact Development

When development occurs in the community, hard surfaces such as pavement and roofs cause stormwater to flow more quickly to Lake Michigan and creeks, carrying sediments and pollutants with it. Low Impact Development is an approach to site design that helps protect the water resources by using techniques that absorb and filter stormwater.

Benefits:

- Decreases flooding and property damage.
- Decreases heating, cooling and watering costs.
- Increases property values due to scenic open space and natural areas.
- · Enhances aesthetics of the community.



Rain Gardens of West MI

Examples:

- 1. Rain gardens
- 2. Rain barrels
- 3. Vegetated roofs
- 4. Plants native to Michigan
- 5. Pavement that absorbs water (pervious surface)
- 6. Preserving natural resources and systems



Access Management: Driveways/Entrances

Access management is a proven set of techniques that can help reduce deaths, injuries, crashes, and property damage; and reduce the frequency and severity of crashes while maintaining reasonable access to land uses. This can be accomplished through careful placement (or relocation) of access points to reduce conflicts.

Tools include:

- Placing driveways a sufficient distance from intersections to minimize impact to intersection operations
- Proper spacing of access points along the same side of the street
- Alignment or spacing from access points on the opposite side of the road
- Shared driveways

Signage Practices

Reducing the size and number of signs along a corridor helps retain scenic character.

- ⇒ Small, simple, readable signs that use primarily subdued colors and materials.
- ⇒ No external or internal illumination are recommended.
- ⇒ Sign materials should reflect the regional landscape, architectural character, cultural, the historical perspective and styles.
- ⇒ Do not nail signs to trees because it increases the potential for disease introduction.
- ⇒ No additional non-regulatory signs the Adopt-a-Highway sections that the Heritage Route Committee has adopted does not have signs.

Lighting

In northern Michigan, the starry and moonlit nights can be breathtaking. A dark sky allows viewing and enjoyment of the Aurora Borealis (northern lights), meteor showers, shooting stars, planets, constellations, and the Milky Way. When planning and installing outdoor lighting, please use these guidelines:

- Light the ground, not the sky, use a uniform lighting pattern and avoid sharp contrasts
- Choose a fixture that has a full-cutoff design
- Apply proper shielding to existing fixtures to direct light downward
- Place fixtures only where light is needed
- Use bulbs with appropriate wattage
- Use time controls to automatically turn off lights when not needed.
- Mount downward facing lights on the side of a building illuminating behind the landscaping.

Emmet County - Think Dark Skies Brochure

https://www.emmetcounty.org/wp-content/uploads/2015/07/OLFbrochure2011final.pdf





Safety and Etiquette

M-119 is enjoyed by many people. There are full time and seasonal residents, visitors, and vacationers who all travel the corridor in automobiles, campers, motorcycles, bicycles, or on foot to observe the natural beauty. Some of the most treasured characteristics are also the ones that create the most concern for safety among the travelers. The curving and rolling nature of the roadway creates visual barriers and the narrow width requires an acute awareness on the part of all users. With proper caution and consideration, safety hazards can be avoided. If you travel M-119, please be considerate of those who live along the corridor by practicing safe, courteous travel behavior. "Sharing the Road" will lead to a safer, more pleasant experience for everyone.

Protect the Beauty

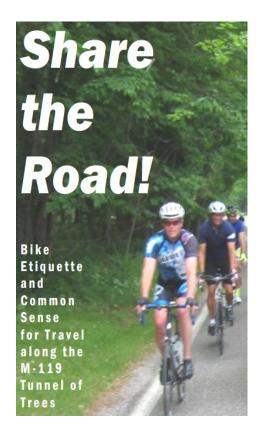
All users are asked to keep the area clean because trash destroys the beauty of the corridor and pollutes the environment. Take care to stow cans, bottles, paper, plastic, and any other waste until it can be disposed of properly - *Please Carry In, Carry Out*.

Noise

Most of this corridor is a quiet residential area and noise from motor vehicles such as motorcycles and trucks disturbs the serene quality. Those traveling along M-119 are asked to respect the nature of the place by minimizing loud vehicle noise.

Event Planning

For large group bicycle or running events, please contact the MDOT Gaylord Transportation Service Center at 989-731-5090 to inquire about using M-119, and also alert the local community. It is recommended that the event coordinator provide any necessary signage and facilities along the route if needed.



Tips for Bicyclists

Please Do

- Enjoy the Tunnel of Trees.
- Please ride single file
- Ride as far to the right
- Be predictable
- Watch for traffic
- Allow motorists to pass
- Obey traffic laws and signs

Please Don't

- Trespass on private lands
- Bike against traffic
- Litter
- Obstruct traffic flow

Tips for Motorists

Please do:

- Be patient and courteous bicyclists have a legal right to share the road
- Treat bicycle riders the same as drivers of motor vehicles
- Encourage other motorized travelers to respect the rights of bicyclists

PLANNING AND ZONING

Emmet County Planning, Zoning, and Construction Resources

3434 M-119 Suite E Harbor Springs MI 49740 231-348-1735 www.emmetcounty.org

West Traverse Township

8001 M-119; PO Box 353 Harbor Springs MI 49740 231-526-7361 westtraversetownship.com

Friendship Township

3018 S. Beacon Hill Lane Harbor Springs MI 49740 231-526-8955 Friendshiptownship.org

Readmond Township

6034 Wormwood Lane Harbor Springs MI 49740 231-526-9601 On Facebook

Cross Village Township

5954 Wadsworth Avenue Cross Village MI 49723 231-242-0182 Crossvillagetownship.org

PERMITS

MI Department of Transportation Right-of-Way Permits

1088 M-32 East Gaylord MI 49735 989-731-5090 www.michigan.gov/mdot

U.S. Army Corps of Engineers Great Lakes Permits

www.usace.army.mil 989-684-5969

MI Department of Environment Great Lakes & Energy

Great Lakes and Wetland Permits

Gaylord: 989-619-8519 www.michigan.gov/egle

ADDITIONAL RESOURCES

Emmet County Road Commission

MDOT Maintenance Contractor 2265 East Hathaway Road Harbor Springs MI 49740 231-347-8142

MDOT Pure Michigan Byways

www.michigan.gov/documents/mdot/ MI_BYWAYS_BOOK_558227_7.pdf

Little Traverse Conservancy

3264 Powell Road Harbor Springs MI 49740 231-347-0991 www.landtrust.org

Tip of the Mitt Watershed Council

426 Bay Street Petoskey MI 49770 231-341-1181 www.watershedcouncil.org

Emmet County Lakeshore Association

www.emmetcountylakeshore.org

Little Traverse Bay Bands of Odawa Indians

7500 Odawa Circle Harbor Springs, MI 49740 231-242-1400 Itbbodawa-nsn.gov