

# **Building Connections to the Minute Man National Historic Park: Greenway Planning and Cultural Landscape Design**

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## **Abstract**

The Minute Man National Historic Park (NHP) in Massachusetts commemorates the Battle of Lexington and Concord (1775) that began the American Revolution. The National Park created in 1959 seeks to interpret the battle and restore the agricultural landscapes of the revolutionary period. The Park is situated within the larger Freedom's Way National Heritage Area (FWNHA) that was designated in 2009 to preserve the extensive historic cultural resources of the region, including such gems as Thoreau's Walden Pond.

Unfortunately, the Minute Man NHP is divided into four units and bisected by a busy state highway that makes wayfinding challenging for visitors. Moreover, the National Trust for Historic Preservation listed the Minute Man NHP "as one of America's most endangered Places" (NTHP, 2003) due to the impacts of surrounding traffic, noise, and incompatible developments. There are several existing and proposed projects including the Battle Road Trail, Minute Man Bike Trail and Scenic Byway that have the potential to link the Park's resources, but key connections are missing to create a coherent network.

To address these challenges, this project, a partnership between the US National Park Service, FWNHA, and the University of Massachusetts, Amherst uses greenways as an organizing element to improve pedestrian and bike connections from the Park to the many nearby historic, cultural, and recreation resources, while providing visitors an alternative to touring the park by car. An undergraduate landscape architecture studio under the direction of the authors developed a greenway plan for the surrounding area with regional connections, as well as designed key sites and corridors along this greenway network that act as gateways and nodes for cultural and historical interpretation.

This project exemplifies the challenges of historic and cultural planning within a developed suburban setting where local and regional recreation demands put pressure on historic landscapes. In addition, the fact that several key sites are outside the jurisdiction of the National Park in municipal, non-profit, or private ownership exemplifies the need for collaborative planning efforts. Finally, the project shows the management issues that continue after designation of historic corridors.

Keywords: Cultural landscape planning and management, national parks, greenways, historic landscapes

## **Introduction**

This paper describes a landscape planning project that engaged the senior undergraduate landscape architecture studio at the University of Massachusetts, Amherst in designing and planning a greenway network for the Minute Man National Historic Park (NHP) and surrounding region of the Freedom's Way

National Heritage Area (FWNHA). The project strives to improve pedestrian and bike networks that connect the Park to the many nearby historic, cultural, and recreation resources, while providing visitors an alternative to touring the park by car. The project team developed a greenway plan for the surrounding area with regional connections, as well as designed key sites and corridors along this greenway network that act as gateways and nodes for cultural and historical interpretation. Specifically, the proposed greenway network links the sites of cultural and historic significance in the towns that surround the National Park units in Concord, Lexington, Lincoln, and Bedford, Massachusetts (USA).

## **Background**

The Minute Man National Historic Park commemorates the Battles of Lexington and Concord, which began the American Revolution. The Park is named after the American colonial militia men who were trained to respond within a “minute” when called to battle. The armed conflict began with the British Army marching 14 miles west from occupied Boston to seize the armaments of the local colonial militias. The first shots were fired at a small skirmish on Lexington Green in the morning of April 19, 1775 when the British met resistance from local colonial militia men who then retreated, allowing the main British Army to continue marching to Concord’s Old North Bridge. Here, they were met by a larger contingent of Minute Men summoned from the surrounding towns. Encountering significant resistance, the British Army retreated back to Boston and a running battle raged especially along the 7-mile-long road between Concord and Lexington (NPS, 2015).

In 1959, the Minute Man National Historic Park was designated to commemorate the Battle and to preserve and rehabilitate the historic landscapes in the study area. The park management included removing many structures built since 1775 and preserving and recreating the agrarian landscape of the period that was impacted by suburban development. Today, the Battle Road as it is known has many different characteristics. Within the main unit of the National Park, the Battle Road Trail is a soft-surface trail through a “reconstructed” landscape with historic stone walls, forests, and fields. In low-lying areas, the Trail is a boardwalk. In other sections, the Battle Road historically ran along Route 2A, which is a commuter highway. Outside of the Park itself the historic battle route is lost amongst modern roads and development and lacks interpretation, except in key spots, such as Lexington Green.

The National Historic Park is 970 acres (392.5 ha) in size and consists of the main Battle Road unit in Lincoln and Lexington with a seasonal Visitor’s Center on the eastern end. The North Bridge Visitor’s Center is open year-round in the Concord unit of the Park. However, the Park suffers from the lack of clear gateways and a sense of identity that distinguishes it from the surrounding suburban towns. West of Concord Center is a recently acquired site, the historic Colonel Barrett’s House and Farm, an important site in the battle story where the colonists had originally hidden militia armaments and the destination of the British army. The park also includes the “Wayside,” the Concord home of famous 19<sup>th</sup> century authors, Louisa May Alcott (*Little Women*) and Nathaniel Hawthorne (*The Scarlet Letter*) (NPS, 2015).

In addition to the National Historic Park, the area includes such historically significant places as Walden’s Pond and other sites associated with environmentalist, Henry David Thoreau. The proposed Thoreau Trail will trace Thoreau’s historic walk from Walden Pond to Mt. Wachusett and is a recent example of a collaborative plan supported by the National Park Service and the Freedom’s Way National Heritage Area (FWNHA, 2015; <http://freedomsway.org/?s=thoreau+trail>).

The Minute Man National Historic Park is situated within the larger Freedom's Way National Heritage Area (FWNHA), which is 994 square miles (2,574 sq. km) (636,160 acres/ 257,444 ha) in size and covers 46 towns in eastern Massachusetts and southern New Hampshire. The Heritage Area was designated in 2009 to preserve the extensive historic cultural resources of the region and is a collaboration between local, state, and federal governments along with non-government organizations. Unlike a US National Park where the federal government owns and manages the land, National Heritage areas provide a coordinating organization to foster collaboration and conservation of an area's historic, cultural, and natural assets while also promoting regional economic development and tourism (FWNHA, 2015).

Other regional efforts include the Minute Man Bike Trail, which is a hard-surface, multi-use trail that connects the communities from Cambridge to Concord and runs parallel to the Battle Road in sections. Other trail connections that are near completion will allow people to bike from Boston to the study area, but there is a need to plan spur trails to connect it to the National Historic Park Battle Road unit and potentially southward to Walden's Pond. The Bay Circuit Trail that passes by near the North Bridge in Concord is another regional trail that provides connections to the larger FWHA region.

Additionally, in 2011 the Battle Road Scenic Byway was planned in the communities of Arlington, Lexington, Lincoln and Concord to provide management along the wider corridor and designates a scenic driving route through the study area. However, implementation of this Byway is still in the initial stages.

At the town scale, Concord, Lexington, and Lincoln have active trail groups who are developing a network of local trails. However, additional work is needed to connect these often-hidden gems within a greenway network that is legible for visitors and residents alike.

In summary, the Minute Man National Historic Park area has many different planning initiatives in this historically significant landscape, the very birthplace of the nation and beginning of the American Revolution and the United States. However, this "sacred" American landscape is threatened by the challenges of suburbanization, which led the National Trust for Historic Preservation to list the Minute Man NHP "as one of America's most endangered Places" (NTHP, 2003) due to the impacts of surrounding traffic, noise, and incompatible developments. Thus, there is a need to work towards implementing a holistic planning effort such as a coordinated greenway network to address the park's challenges.

## **Literature Review**

Greenway planners have focused on the multiple-objectives for greenway planning with Julius Gy. Fábos (1995) calling for three main functions: natural protection, recreation development, and historic and cultural preservation. Jack Ahern (1995) in his work describes different strategies for planning greenways including defensive, offensive, and opportunistic depending upon the assessment of the regional conditions. Fábos and Ahern both call for going beyond single-purpose greenways to multi-functional landscapes as exemplified in their study of the Minute Man National Historic Park (Gavrin et al., 1993) that expanded the historic and cultural mission of the park to include natural and recreation resources as well. Ahern (1995) called the Minute Man National Historic Park a first-generation greenway since it began with the purpose of preserving and restoring the historic and cultural resources of the beginning of the American Revolution. The linear nature of this Running Battle made it ideal for creating a linear national park and subsequent greenway path along the Battle Road (Ahern, 1995). However, the park is unique in being the first national historic park to be located in a suburban landscape where the removal of

existing non-historic homes and structures were undertaken in an attempt to re-create the historic agricultural past of the study area. The park is also significantly more forested than in the late 1700s which means that extensive landscape management would need to be undertaken to recreate these landscapes. In the process, the Park Service and land managers have the opportunity to increase biodiversity in these new meadow landscapes that are now increasingly rare in forested New England. But this also raises interesting challenges in how to serve contemporary social and ecological needs while foregrounding the site's unique historic context. Ahern (1995) calls the Minute Man National Historic Park an example of an opportunistic greenway strategy as the park follows an existing highway corridor and has expanded its historical cultural mission to include recreational and natural resource objectives including biodiversity. The current study by Ryan and Eisenman builds on this rich legacy of greenway planning in the region.

## **Goals and Objectives**

The goals of the current study in the Minute Man National Historic Park area were to:

- 1) Develop a multi-objective greenway network that links the disconnected units of the Minute Man National Park to one another and the larger resources of the surrounding region.
- 2) Interpret the historical and cultural legacy of the study area, particularly its role in the American Revolution through improved signage, interpretation, and landscape design.
- 3) Develop professional skills of senior landscape architecture students as part of a collaborative partnership between the University of Massachusetts, Amherst and the National Park Service and other partners.

## **Methods**

The studio (LA 494LI) was a 14-week, semester-long studio that was taught in two parts, with the two instructors (Ryan and Eisenman) taking the primary teaching role in sequence. As the capstone planning and design studio for graduating seniors in the landscape architecture program, this course was designed to review, integrate, and advance ideas and techniques from their broader set of courses at the University, including liberal arts- history, culture, English/writing, natural sciences- landscape ecology, plants, and social sciences; as well as skills taught within the landscape architecture program and design sequence.

The first half of the studio led by Robert Ryan focused on large-scale greenway planning and the second-half led by Theo Eisenman focused on designing, planning, and interpreting the historic-cultural significance of key gateways and nodes at the site-scale.

The process began with regional and town-scale research and analysis and assessment. The study was divided into three teams of four students each to develop greenway plans for the larger study area. These teams then brought their plans together to develop a greenway master plan for the three-town region around Minute Man National Historic Park with regional greenway connections.

Greenway and planning project summaries were conducted of existing regional planning initiatives, including the New England Greenway Vision Plan (Ryan et al., 2002), Massachusetts Commonwealth

Connections Plan (1999), MetroFuture Plan (MAPC), Bay Circuit Trail, East Coast Greenway, MA Historic Landscape Atlas, and MA BioMap Report. This analysis showed that existing several key long-distance trails, such as the Bay Circuit Trail, pass through the study area.

The project then used the greenway planning process developed by Julius Gy. Fábos and others (1995). The first phase was assessment of the following features at the regional, town-scale and Park corridor:

1. Cultural/historic features map, including historic features in the corridor;
2. Natural features/ important ecological areas including topography, hydrology, endangered species habitats;
3. Recreation and open spaces including existing and proposed protected land, trails;
4. Land use (existing and proposed by zoning), demographics, and transportation;
5. Scenic resources

Next, a composite assessment was conducted that that identified gaps in the existing greenways or trail system, as well as gaps in protection of important natural, cultural, recreation, and scenic features. This assessment was used to develop greenway plans for the Minute Man National Historic Park area covering the towns of Concord, Lexington, Lincoln, and Bedford (MA) that identified key sites for further investigation. A regional greenway plan was also developed to show the planning context and connections to regional initiatives including those led by the Freedom's Way National Heritage Area. Preliminary plans were presented to stakeholders from the respective local, state, and federal agencies for feedback. The final greenway plan was then revised using ideas from each of the three teams and focus areas determined.

#### Cultural Landscape and Ecological Design

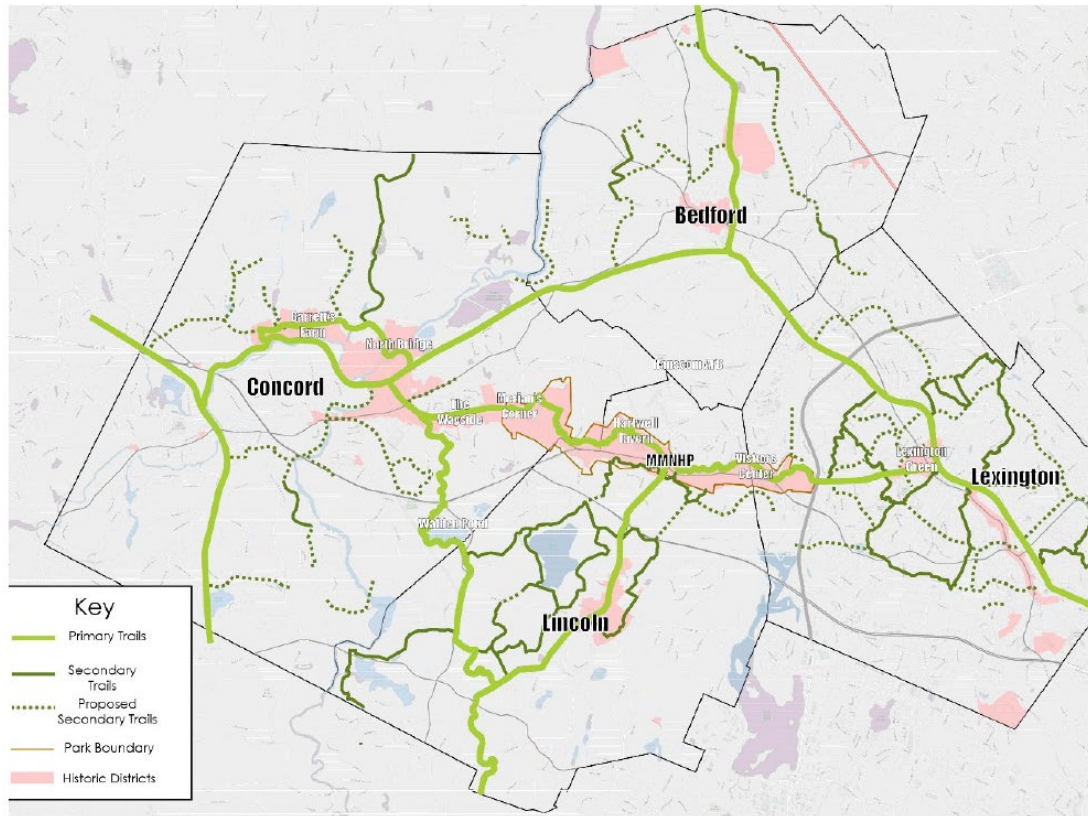
The second half of the studio project delved deeper into the cultural and natural history of critical cultural landscapes within the study area. Cultural landscapes were explored using the definition and process developed by National Park Service and Cultural Landscape Foundation (Birnbaum, 1994). The goal was to create landscape designs for the management, interpretation, and public experience of specific landscapes that are associated with the natural and cultural heritage of Minute Man National Historic Park area. These plans included detailed designs for public access, strategies for interpreting the cultural significance of the site, wayfinding, site-specific art installations, and landscape features that expand on the historical narratives and significance of the specific sites in the park area.

This phase of the project involved developing a written ecological and historical narrative of the site based on research from archival sources in map, written, and visual form from the Minute Man Historical Park and University-library systems, as well as other state and local historic data bases. Site visits along with interviews with historic experts and project partners helped inform this process. Site analysis and assessment was also conducted of important site features and relationships, such as circulation, vegetation, and hydrology.

#### **Results**

The proposed Minute Man Historical Park Area Greenway plan uses greenways as an organizing element to improve pedestrian and bike connections from the Park to the many nearby historic, cultural, and recreation resources, while providing visitors an alternative to touring the park by car. The plan links the

many disparate historic sites in the area with cultural themed trails relating to specific historic and cultural periods and interests, including the American Revolution, the Patriot's Day story, Literary Figures and the Transcendentalist movement, and a specific Henry David Thoreau walking tour. A main spine trail follows the historic Battle Road creating an organizing element for the trail system with branching loops to other key sites such as Walden's Pond (Figure 1).



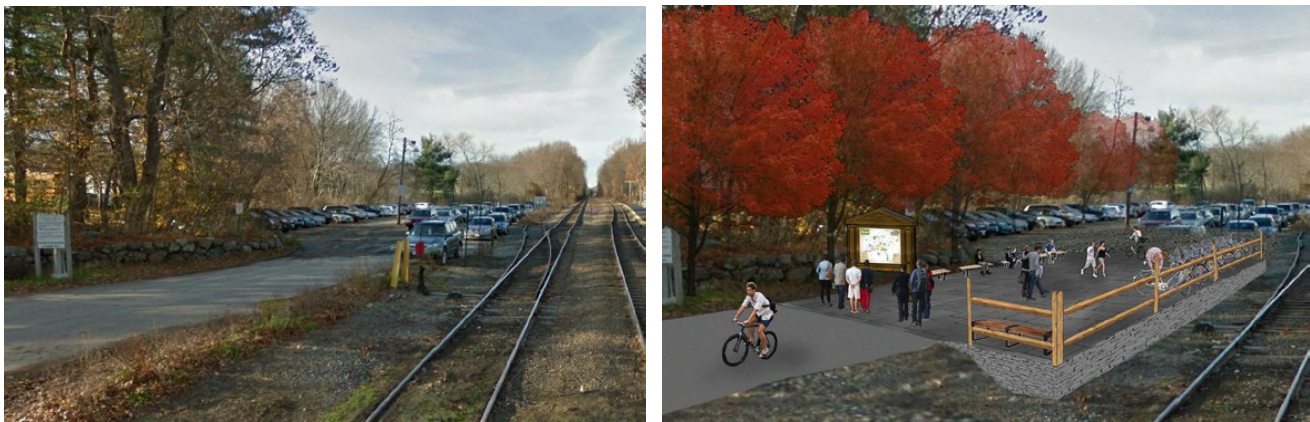
**Figure 1. Minute Man Historical Park Area Greenway Plan (Credit: Goode et al., 2017).**

Many visitors begin their journey at the east end of the study area at Lexington Green which marked the first battle between the British army and colonial militias in the early morning of April 19, 1775. Lexington Green is owned by the Town of Lexington with a visitor's center near the vibrant downtown. The Minute Man Bikeway is an existing rail-trail that runs north to Bedford and then connects southwest along the Reformatory Trail to Concord, creating a car free experience for bikers and walkers, but unfortunately bypasses the main section of the park. Thus, the project proposes redesigning existing streets in Lexington along the historic route to create better connections to the east end of the National Park across the busy Interstate 495 highway, where it connects to the historic Battle Road Trail and the main NPS visitor's center located in the central park unit. Circulation improvements are proposed along Route 2A including bike and pedestrian crossings along with new signage. Merriam's Corner at the western end of this area was an important site in the Running Battle and is the site for an improved gateway to the park and crossings. The greenway spine continues west along sections of the historic battle road with a connection to Revolutionary Ridge and Sleepy Hollow Cemetery. The existing route continues along busy Lexington Road that connect to the Wayside, home of famous American authors, Louisa May Alcott and Nathaniel Hawthorne among others and westward through downtown Concord to the historic

North Bridge over the Concord River, scene of the second critical battle and location of the second National Park Service visitor center. The trail crosses the North Bridge using sections of the existing Bay Circuit Trail then follows Barrett's Mill Road westward to the Barrett's Farm and Home site, which is the newest acquisition to the National Park and terminus of the historic trail. This route follows sections of the route used by the British army during the battle. Originally an unpaved country road, this route is now a narrow paved rural road that receives commuter traffic. Thus, the project proposed improving the pedestrian and biking experience by moving the trail away from the road where possible and using vegetated buffers and bike lanes.

The greenway plan was designed to serve visitors to the area, as well local residents. Thus, the plan integrates key natural areas, such as Walden's Pond and Woods and the Assabet, Sudbury and Concord River system. The quieter natural areas and trail network provides a respite for local residents and visitors from nearby Boston looking for an escape from urban life.

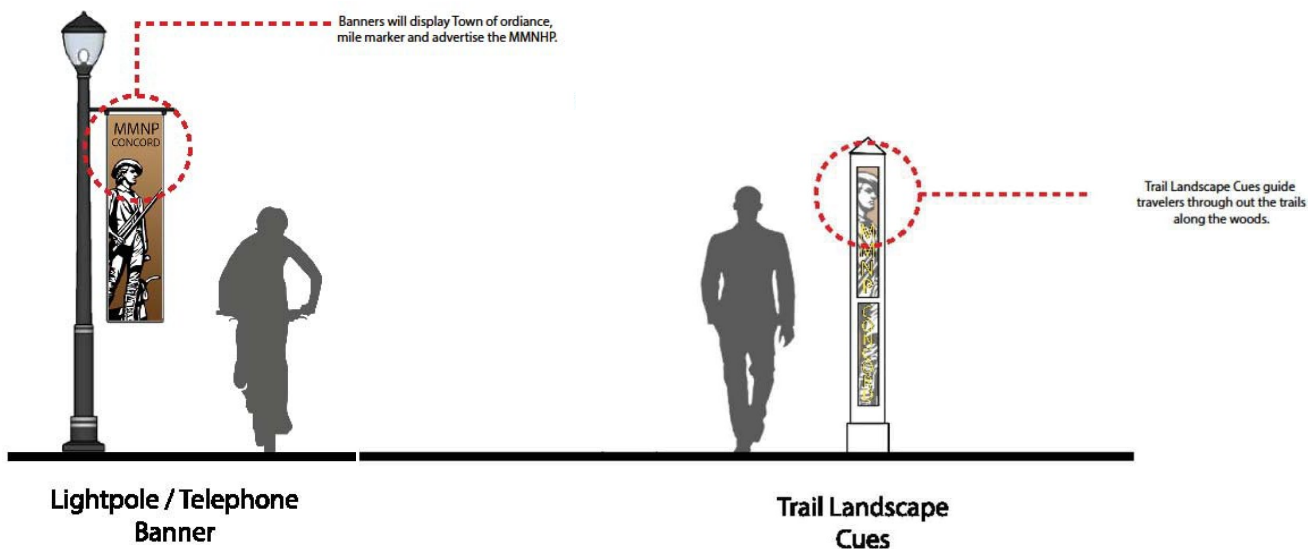
Each project team developed their own set of design proposals for key gateways to the park, interpretive nodes, and improved road crossings and pedestrian and bicycle trails. In order to provide more diverse modes of transportation and access for the over one million visitors to the National Park, improved connections were proposed for regional rail transit stops, such as the Lincoln Station at the southern end of the study area (Figure 2, Credit: Eric Kadziolka). Another key aspect was improving walkability and biking along existing road corridors, especially along the Route 2 and 2A highways (Figure 3, Credit: Keira Lee). Finally, improving wayfinding was addressed through a series of signage, banners, interpretive kiosks, and markers (Figure 4, Credit: Gaudreau et al., 2017).



**Figure 2. Lincoln Station. Existing (left) and proposed redesign (right) adds a biking hub with a wayfinding kiosk to orient visitors to greenway destinations (Credit: E. Kadziolka).**



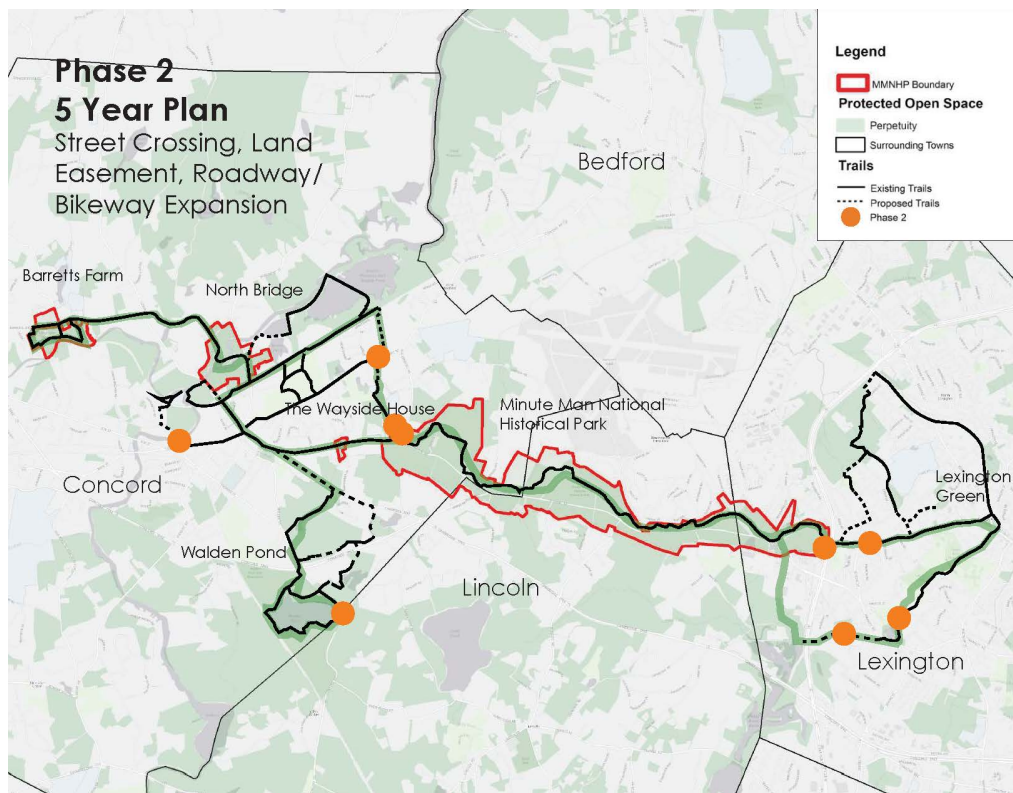
**Figure 3. Redesign of existing road corridors to add bikeways, sidewalks, and signage to create greenway connectors in Lexington, MA to the east entrance of the Minute Man National Historic Park (Credit: Keira Lee).**



**Figure 4. Proposed wayfinding elements include light pole banners along existing streets and trail guides (right) for wooded trails and other off-road conditions. (Credit: Gaudreau et al., 2017).**

A phased implementation for the greenway plan was proposed due to budget constraints and planning challenges across this multi-jurisdictional study area. The first phase (2-year plan) focused on wayfinding and signage, so that Park visitors could access the existing resources and trail segments. The second phase (5-year plan) focused on street crossings, trail easements, and roadway and bikeway improvement projects. The third phase (10-year plan) involved building new trails and structures such as visitor facilities (Figure 5, Credit: Jurczyk et al., 2017).





**Figure 5. Phasing Plan (5 Year Plan) for proposed street crossings, roadway and bikeway projects for Minuteman National Historic Park Greenway (Credit: Jurczyk et al., 2017).**

## Discussion and Conclusion

This project exemplifies the challenges of historic and cultural planning within a developed suburban setting where local and regional recreation demands put pressure on historic landscapes. In addition, the fact that several key sites are outside the jurisdiction of the National Park in municipal, non-profit, or private ownership exemplifies the need for collaborative planning efforts. Finally, the project shows the management issues that continue even after designation of historic corridors.

For greenway planners grappling with historic cultural planning in a landscape of private ownership and existing suburban development, this project shows the need to create gateways to key resources. Also, the project used identifiable iconography so that visitors can recognize important landmarks and find their way within a challenging environment of commuter traffic, incongruent land uses, and suburban development. The project approach included both restoring the landscape to reflect the more historic period with the use of traditional materials and forms, such as stone walls, wood fences, and maple trees, while adding interpretive features that also speak to the modern context of the park.

In many ways, one of the biggest challenges of this project was providing safe, recognizable walking and biking crossings and connections between such existing trails as the Battle Road Trail, as well as recognizable gateways at the main park entrances. Further study is needed at each of these locations as final designs are prepared, presented to the public and government officials, and implemented. The work of our colleague Professor Ethan Carr with his graduate studio has focused on several of these areas, most

recently at Barrett's Farm in fall 2018. These studio project designs help project partners envision creative solutions to the area's challenges and aid them in their fund-raising efforts to implement this greenway vision (Figure 6).



**Figure 6. Academic partnerships with local stakeholder groups in Concord (left) and Lincoln (right), (Credit: LA494LI Studio teams, 2017).**

For other similar academic partnerships with government agencies and greenway advocacy groups, this project in the Minute Man National Historic Park shows the need for a long-term commitment to evolving historic cultural landscapes and expanding their focus to provide multiple-objectives (Ahern, 1995; Gavrin et al., 1993). By building on the previous work of our colleagues in the Department of Landscape Architecture and Regional Planning at the University of Massachusetts, this project illustrates how this long-term commitment to place is critical for historic cultural landscape planning and greenway implementation in particular, especially in the face of the challenges that urbanization and climate change pose for the world's treasured places.

## References

- Ahern, Jack. 1995. Greenways as a planning strategy. *Landscape and Urban Planning*, 33:1-3, 131-155.
- Birnbaum, Charles A. 1994. *Preservation Briefs 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes*. Washington, DC: U.S. Department of the Interior. <http://www.nps.gov/hps/tps/briefs/brief36.htm>
- Fábos, J.G., 1995. Introduction and overview: The greenway movement, uses and potentials of greenways. *Landscape and Urban Planning*, 33: 1-13.
- Fábos, Julius Gy., and Ahern, Jack. (Eds.) 1995. *Greenways: The Beginning of an International Movement*. Amsterdam: Elsevier.
- FWNHA. 2015. The Freedom's Way National Heritage Area Management Plan. The Freedom's Way National Heritage Area, MA. <http://freedomsway.org/management-plan/>

- Gavrin, Beth; Rasmussen, Meg; Fabos, Julius Gy.; Ahern, Jack. 1993. *A Management Plan to Balance Cultural and Natural Resources: The Minute Man National Historic Park Case Study*. Research Bulletin Number 744, Massachusetts Agricultural Experiment Station, College of Food and Natural Resources, University of Massachusetts, Amherst. 258 pp.
- NPS. 2015. Minute Man National Historical Park, Long-Range Interpretive Plan. US National Park Service. Washington, DC: U.S. Department of the Interior.  
<https://www.nps.gov/mima/learn/management/upload/Minute-Man-LRIP-Digitalweb.pdf>
- MAPC. 2011. The Battle Road Scenic Byway: Road to Revolutions, Corridor Management Plan, 2011. Boston, MA: Metropolitan Area Planning Commission. <http://www.mapc.org/resources/battle-road-scenic-byway>
- Ryan, R.L., J. Fabos, and M.S. Lindhult. 2002. Continuing a planning tradition: The New England greenway vision plan. *Landscape Journal* 21 (1):164-172.

### **Project Credit**

The greenway plans described in this paper were developed by the senior undergraduate class in landscape architecture course (LA 494LI) in spring 2017 in the Department of Landscape Architecture and Regional Planning at the University of Massachusetts. Thanks to the entire class for their hard work, diligence, and professionalism in this studio experience. Studio team members and their respective plan names are:

James Goode, Keira Lee, Alec Mickiewicz, Preston Rowan. 2017. "Four Town Heritage Network." Unpublished report, LA 494LI. Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst.

William Jurczyk-Villota, Daniel Kossack, Devon Vendetti, Yifei Yan. 2017. "Volkswalk" Unpublished report, LA 494LI. Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst.

Tyler Gaudreau, John Haryasz, Eric Kadziolka, Chinda Samms. 2017. "The Minuteman Experience." Unpublished report, LA 494LI. Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst.

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