



Martin Van Buren National Historic Site

Alternative Transportation Feasibility Study



PMIS No. 73134
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Report Notes

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Introduction

Martin Van Buren National Historic Site (MVBNHS) includes the home of Martin Van Buren, the country's eighth president, where he lived from 1841-1862. Van Buren, born in Kinderhook, New York, purchased the mansion and property during his presidency and came to live there after losing his presidential re-election to become a gentlemen farmer. His land, together with his home, is also known as Lindenwald. The original MVBNHS, designated in 1974, includes the mansion and surrounding 39 acres. The Public Lands Management Act of 2009 expanded the park to 300 acres, securing much of the surrounding agriculture land and open space of the original Van Buren property. Temporary buildings house park offices and a small visitor center. The visitor center offers an introductory film, books, and park information. Outdoors, visitors can park in the lot, tour the Lindenwald mansion, walk the Wayside Trail, and attend special events throughout the year.

Project overview

The alternative transportation feasibility study is a supplement to the *Transportation Analysis Report* that supported the General Management Plan.

Currently, MVBNHS attracts between 20,000 and 25,000 visitors per year.¹ The National Park Service (NPS) predicts an increase in visitation to the site over the next five to ten years. The expectation of an increase in visitation is based on the park's recent boundary expansion, plans for a new visitor center, and the park's goal to integrate the site into a network of traveler destinations in the Hudson River valley. MVBNHS believes that visitation may be further increased by the availability of transportation options to the park in addition to driving.

This report investigates the feasibility of an alternative transportation system (ATS) to MVBNHS. Specifically, the report addresses the feasibility of a shuttle service that could connect visitors to several travel destinations in the region and provide car-free visitors with a connection from the Amtrak station in Hudson to MVBNHS in Kinderhook. A shuttle service may also offer opportunities for special event transportation and on-board interpretive programs.

Based on the opportunities and challenges presented in this report, the Volpe Center project team suggests five potential scenarios for pilot testing a shuttle service, in an attempt to minimize investment while gaining a better understanding of the demand for this type of transportation service. Each scenario is in keeping with a greater vision for improved alternative transportation throughout the Hudson Valley region.

¹ National Park Service Public Use Statistics Office. <http://www.nature.nps.gov/stats/>

Existing Conditions

The following section is largely duplicated from the General Management Plan Alternative Transportation Study, completed in 2010, with a focus on information applicable to shuttle feasibility. The section has been updated to include new numbers for visitation and population, as well as changes to ATS transportation service in Columbia County.

Park location

MVBNHS is two and a half miles south of the village of Kinderhook, New York (Figure 1). MVBNHS, the village of Kinderhook (pop. 1,295[†]), and the village of Valatie (pop. 1,874[‡]) are within the town of Kinderhook (pop. 8,600[§]). The town is located in Columbia County (pop. 62,006[§]), on the eastern bank of the Hudson River, about 25 miles south of the city of Albany and ten miles north of the city of Hudson. MVBNHS is 130 miles north of New York City and 160 miles west of Boston, Massachusetts. The land surrounding MVBNHS is a mix of farmland, low density commercial development, and housing (Figure 2). The Hudson River Valley, which includes the surrounding landscape north and south of the park, is also primarily low density housing, farm land, and open space. The communities surrounding the park are in favor of an increase in tourism to the region and are supportive of the park's effort to attract more visitors.

The historic Lindenwald mansion is the primary attraction at MVBNHS. The mansion is open daily for hourly tours from 9:00 AM to 4:00 PM, mid-May through October, and the visitor center is open similar hours, 9:00 AM to 4:30 PM. While the mansion and visitor center are not open in the winter, the Wayside Trail and grounds are open year round from 7:00 AM to sunset. House tours are five dollars per adult and include a 45-minute ranger-led talk on the life of Martin Van Buren as well as an explanation of the artifacts within the house. Accessibility and the number of visitors inside the house are limited due to the number of stairs and narrow hallways. Outdoors, visitors can tour the property along the Wayside Trail to learn about the park's agriculture history, past Lindenwald residents, and other changes within the park. On weekends during the visitor season, the park has begun offering farm tours that seek to interpret the importance of agriculture both during the antebellum period as well as today.

Thirty-eight parking spaces serve employees and visitors at the site. All park facilities are on the west side of New York State Route (SR) 9H, and the park has easements on the east side of SR 9H. Old Post Road is the historic connection between New York and Albany and currently exists as a pedestrian gravel walkway within the MVBNHS boundary. The historic Lindenwald carriage path provides a link between SR 9H and the mansion. MVBNHS holds several special events throughout the year, and the park allows parking on gravel or lawn areas during these events.

[†] U.S. Census Bureau. The village of Kinderhook had a population of 1,293 in 1990, 1,275 in 2000, and 1,295 in 2008.

[‡] Ibid. The village of Valatie had a population of 1,487 in 1990, 1,712 in 2000, and 1,874 in 2008.

[§] Ibid. The population of the town of Kinderhook was 8,112 in 1990, 8,296 in 2000, and 8,570 in 2008.

[§] Ibid. The population of Columbia County was 62,982 in 1990 and 63,094 in 2000.

Figure 1
MVBNHS context map
 Source: Volpe Center and NPS

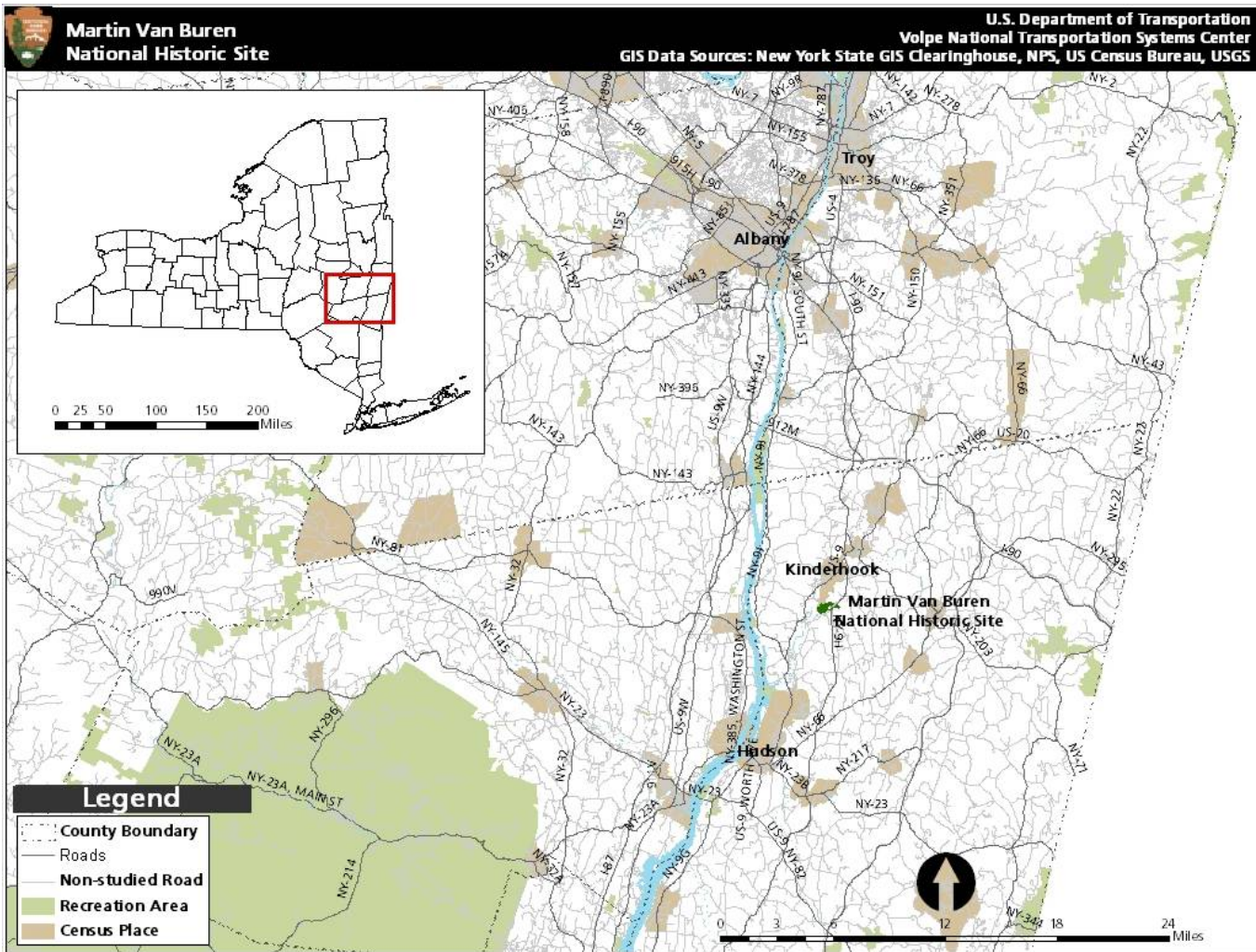
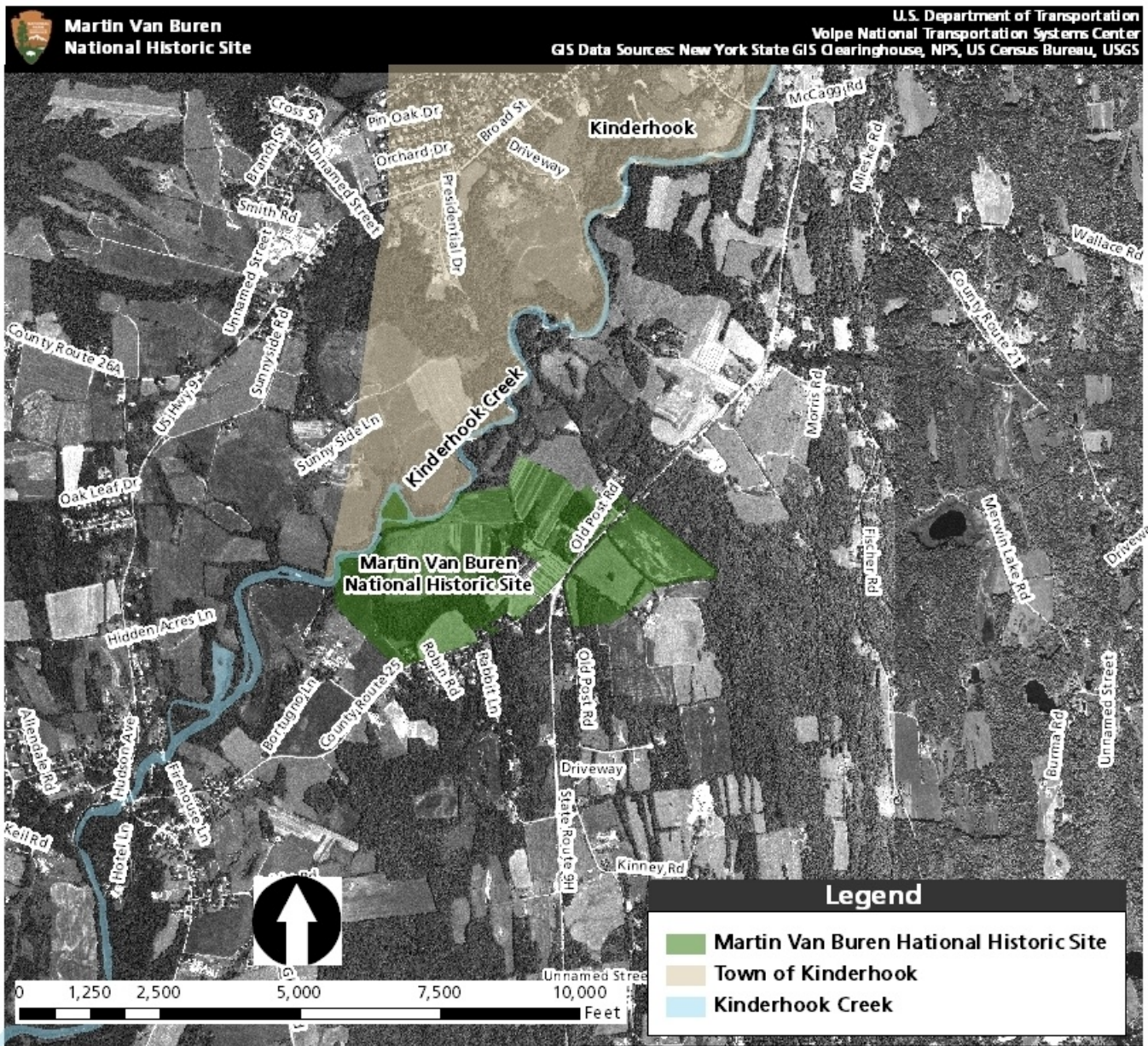


Figure 2
MVBNHS and Vicinity
 Source: NPS and Volpe Center

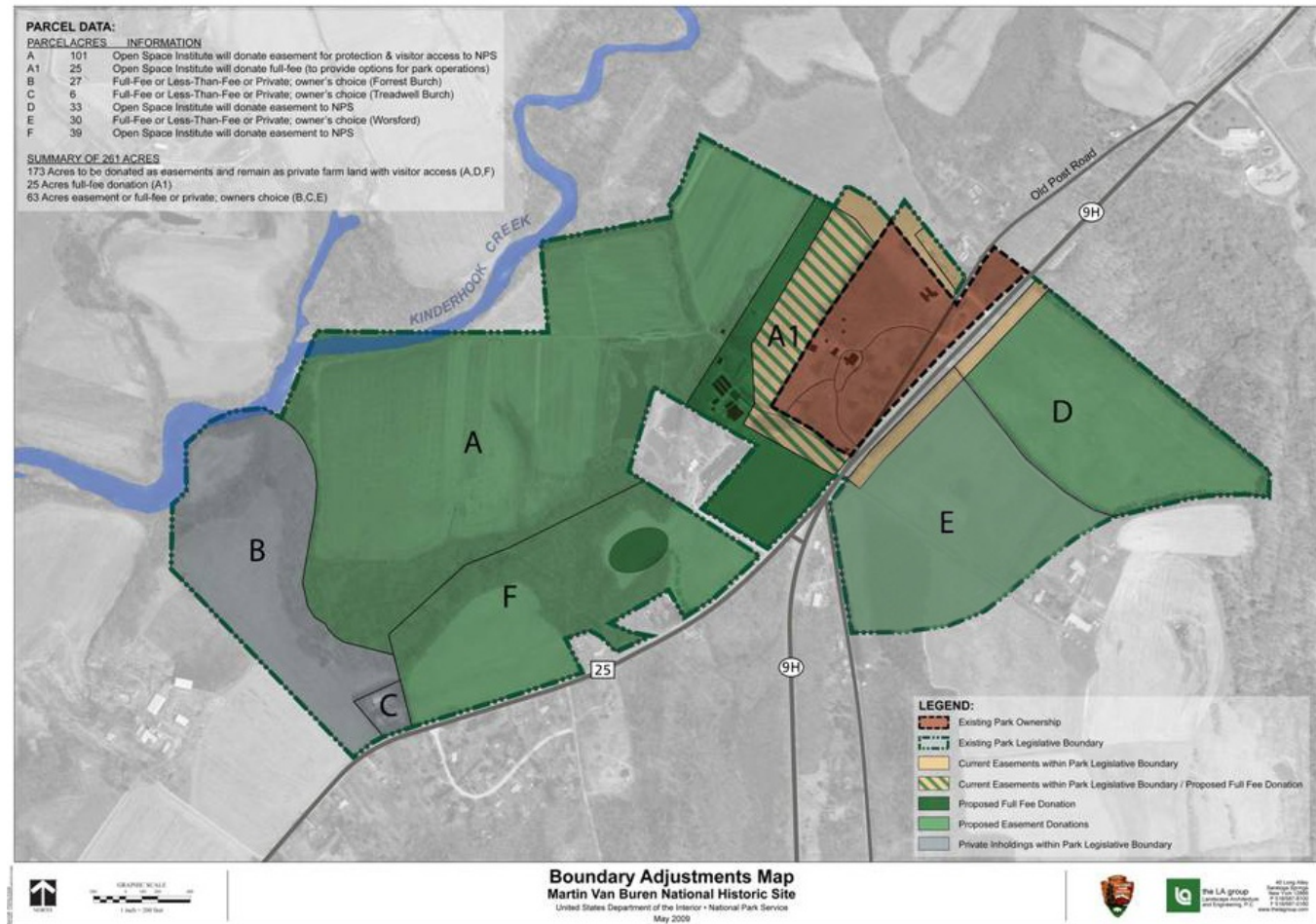


The Omnibus Public Land Management Act of 2009 significantly expanded the park boundary (Figure 3) from the original 39 acres surrounding the mansion (shown in brown) to 300 acres (shown within dashed outline). The farmland within the new park boundary includes much of Martin Van Buren’s original farm and views. The Open Space Institute (OSI), a land conservation and agricultural preservation group in New York, and the local community helped the park obtain additional land through easements in order to preserve the surrounding agricultural land. Section A is owned by Roxbury Farm, and Section A1 was donated to NPS by OSI. Sections D and F are still owned by OSI, but they have not yet determined the fate of those parcels. Sections B, C, and E are in-holdings, or privately owned parcels, within the park boundary and are primarily agricultural.

Landowners will continue to live on and farm these parcels. Visitors will not have access to these lands, and NPS can purchase these properties only from willing sellers.

Figure 3
MVBNHS site map and 2009 boundary adjustment

Source: NPS



In December of 2009, OSI acquired 62 acres adjacent to MVBNHS (not shown). The parcel is north of the park and adjacent to Kinderhook Creek.[†] Through a combination of owned land and easements, OSI now controls approximately 800 acres along Kinderhook Creek and additional land within the MVBNHS boundary. The most recent acquisition prohibits development on this land and preserves the agricultural character that was present during Martin Van Buren’s life.

A portion of Roxbury Farm is within the MVBNHS park boundary. Roxbury Farm is a community supported agriculture (CSA) farm, practicing organic and biodynamic farming and producing vegetables for their more than 1,200 members.[†] The farm is one of the largest CSAs in the country and was the first CSA to have members in New York City. Roxbury Farm also has members in the

[†] Lachman, Robert. “OSI acquires 62-parcel adjacent to Lindenwald.” Register-Star.
<http://www.registerstar.com/articles/2009/12/09/news/doc4b1f2cbf79180014439351.txt>

[†] Roxbury Farm <http://roxburyfarm.com/>

Albany region, Westchester County, and Columbia County. The farm holds two main events during the year and monthly work parties for members.

To the northeast of MVBNS, across SR 9H, is the Martin Van Buren Park, with approximately 1.5 miles of trails. This area is owned by Columbia County and managed by the Friends of Lindenwald.

Nearby attractions

Several sites of historic significance are situated near MVBNS. The village of Kinderhook promotes a walking tour that explores some of the historic structures in the historic district of town. Many of the houses within Kinderhook are from the 18th or 19th century.⁷ Several sites in town are on the National Register of Historic Places or are popular visitor destinations. These include:

- Columbia County Museum is three miles north of the park on Albany Avenue (County Road 21) near the intersection with Broad Street (Chatham Street or SR 9). The museum is in a building originally built in 1916 as a Masonic Temple. The building includes the Columbia County Historical Society's offices, storage, and exhibits. Exhibits typically include items from the Society's Columbia County collection. The museum is open weekends and Monday, Thursday, and Friday. The museum is free to the public. The Columbia County Museum, along with the Luykas Van Alen House, the recently opened James Vanderpoel House, and the Ichabod Crane Schoolhouse, has an annual visitation of approximately 10,000 visitors.
- A statue of Martin Van Buren is three miles north of the park at the corner of Albany Avenue and Broad Street. The statue exists in downtown Kinderhook because of efforts in 2007 by the Friends of Lindenwald.
- Martin Van Buren's gravesite is three and a half miles north of the park on Albany Avenue, near downtown Kinderhook.
- Luykas Van Alen House is one and a half miles north of the park on SR 9H. The house is a historic Dutch farmhouse and is operated by the Columbia County Historical Society. The house was built by Luykas Van Alen in 1737 and remains an example of Dutch farm life. The house is a National Historic Landmark and is open to the public on weekends from Memorial Day to Columbus Day. The cost of admission is five dollars.
- The Ichabod Crane Schoolhouse is on the same property as the Van Alen house. The schoolhouse was moved to the property in 1974 and restored to its 1920 condition. The schoolhouse takes its name from the teacher in Washington Irving's *The Legend of Sleepy Hollow*. The teacher in the book is believed to have been modeled after Jesse Merwin, a local schoolmaster in the mid-19th century. The hours of the schoolhouse are the same as the Luykas Van Alen house and admission is included in the Van Alen entrance fee.
- Stuyvesant Falls, two miles southwest of MVBNS, is the location of a hydro-electric plant and is a popular kayaking and hiking destination.

There are several regional attractions in the Hudson River Valley that are accessible by car from the park, including:

- The Millay Poetry Trail at Steepletop, 16 miles east of the park, is near the home of famous poet Edna St. Vincent Millay. The home, a National Historic Landmark, is in Austerlitz, New York. The trail is open to the public year round and guided tours occur occasionally during the summer.
- Shaker Museum, in the New Lebanon Shaker Village, is approximately 23 miles by road from MVBNS. The museum typically includes artifacts of Shaker life and is open to the public year round. Public programs take place in Shaker Village and include guided tours and interpretive talks.
- The city of Hudson, 12 miles south of the park, is a popular tourist town with several artist studios, furniture stores, and restaurants. Hudson has the closest Amtrak station to MVBNS, which includes service south to New York City and north to Albany and Montreal. Within

⁷ Horn, Martha J. "Walking tour." *The Kinderhook Connection*. <http://www.kinderhookconnection.com/history2.htm#Tour>

Hudson, the Fireman's Association of the State of New York Museum of Firefighting contains rare firefighting trucks, equipment, and gear. The museum is open every day except holidays. There is a five dollar charge for admission.

- Olana State Historic Site is approximately 17 miles south of MVBNS (4 miles south of Hudson). Olana includes the historic home of Frederic Edwin Church, and the house remains true to its late 19th century design. Church, a well-known figure in the Hudson River School of Landscape Painting movement, lived in the house until his death in the beginning of the 20th century. House tours occur Friday and Saturday from November to March, and Tuesday through Sunday from April to October. The house is open only to guided tours but the grounds are open year round. House tours are nine dollars. Based on the New York State Parks visitation measure of 3.5 visitors per vehicle, Olana welcomes more than 200,000 visitors annually.
- The Thomas Cole Historic Site, an affiliated site of the NPS, 16 miles south of the park, is in the Town of Catskill within Greene County. Annual visitation is approximately 10,000, and visits typically include a tour of the house and Thomas Cole's studio. In addition, there are several recognizable views near the historic site that can be found in the artist's paintings. The house and studio are open by guided tour from Thursday through Sunday, May through October. Group tours are offered by appointment in the winter. Tours are eight dollars.
- Clermont State Historic Site, 26 miles south of the park, has been home to seven generations of the Livingston family. Robert Livingston, Jr. helped draft the Declaration of Independence. The site became a National Historic Landmark in 1973. The house and visitor center are open Tuesday through Sunday, April through October. House tours are five dollars. The grounds are open year round.
- Rip Van Winkle Bridge, 15 miles south of the park, is named after Washington Irving's short story. The bridge connects Hudson and Catskill across the Hudson River and includes a pedestrian walkway. The vehicle toll is one dollar.
- Taghkanic State Park, 20 miles south of MVBNS, is a popular beach, recreation, and camping location. The park is open year round with camping, swimming, and facilities open during the summer.

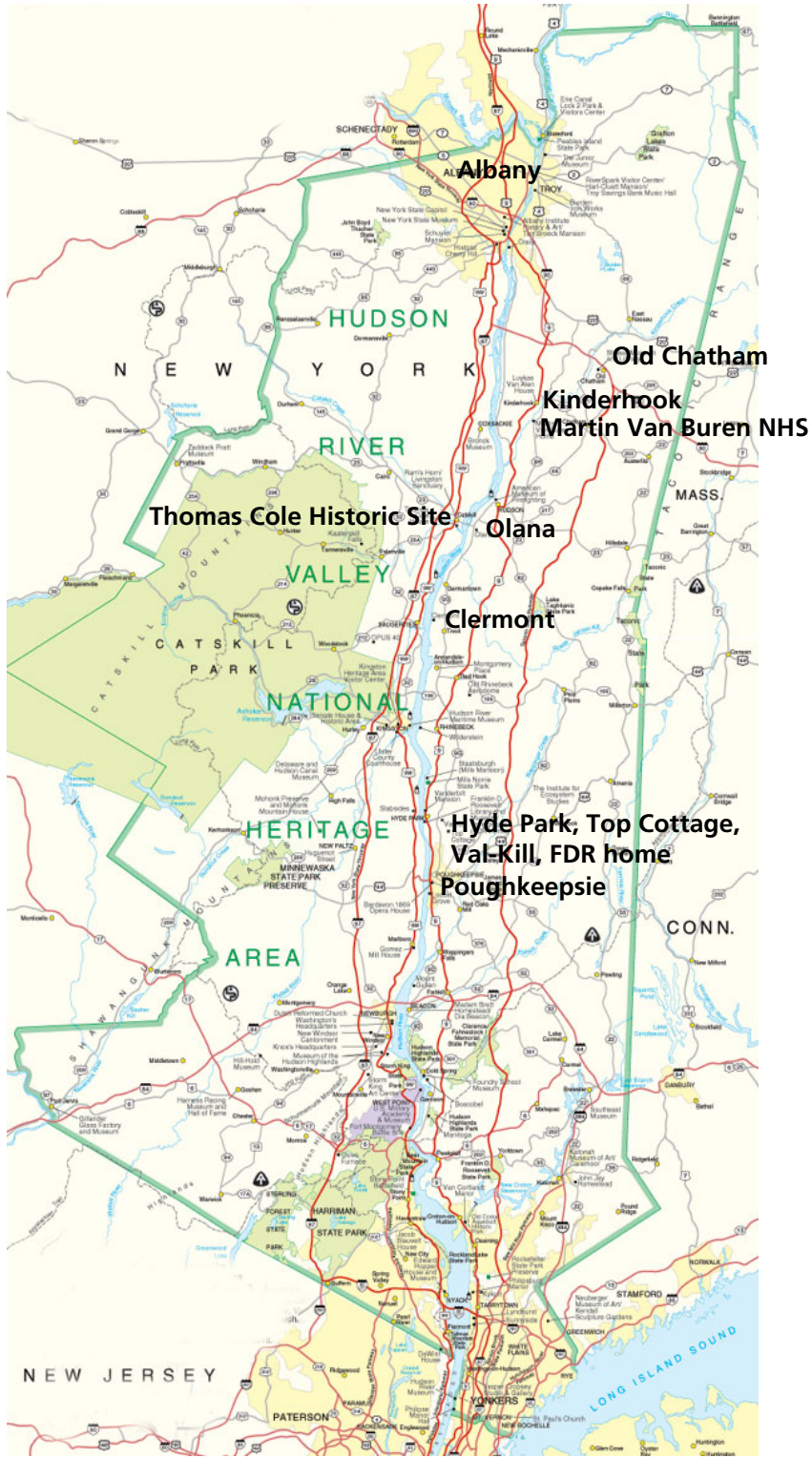
Hudson River Valley Greenway

The Hudson River Valley Greenway, established in 1991, creates a framework for regional collaboration for counties along the Hudson River. The Greenway program established two organizations to coordinate this collaboration, the Hudson River Valley Greenway Communities Council and the Greenway Conservancy for the Hudson River Valley, Inc.⁷ Together these organizations provide assistance to local governments for the promotion of tourism within the valley, preservation of land use, and funding programs.

MVBNS is within the Hudson River Valley National Heritage Area (NHA), home to 90 heritage sites in the Hudson River Valley (Figure 4). Designated in 1996, the Hudson River Valley NHA is managed by the Greenway Conservancy, includes approximately four million acres, is one of 47 Heritage Areas in the country, and has a mission to preserve and protect significant cultural resources of the Hudson River Valley. The NHA stretches approximately 150 miles, from Yonkers in Westchester County to Waterford in Saratoga County. Sites within the NHA include historic mansions, museums, libraries, historic village settlements, and cultural landscapes that represent the history of the region. Some of the events that attract larger numbers of visitors within the NHA include the Hudson River Ramble, which features outdoor recreation, Revolutionary War enactments, and bicycle and boat activities along the Hudson River. Harvest Day occurs during the Ramble and is promoted as one of the events to attend.

⁷ Hudson River Greenway. <http://www.hudsongreenway.state.ny.us/home.aspx>

Figure 4
Hudson River Valley NHA
 Source: Hudson River Valley Institute



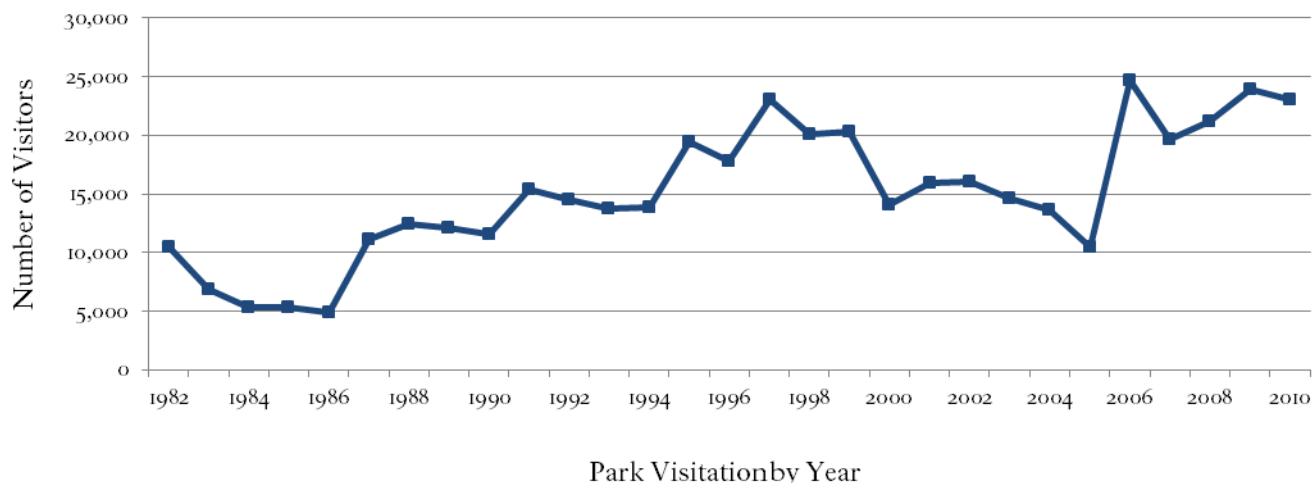
The state tourism office for New York recommends Interstate 90 and Interstate 87 as two scenic routes that pass near popular traveler destinations, including Vanderbilt Mansion NHS and Eleanor Roosevelt NHS.[†] The maps do not refer to MVB NHS.

Visitation

The NPS reports 2009 visitation of 23,936 people to the park.[†] Figure 5 shows the increase, with some fluctuations, in visitation to the park from 1982 to 2009. Lower visitation in 2002-2005 was the result of the mansion's closure for renovation. Monthly visitation patterns for 2006 through 2009 are very similar (Figure 6). For the past three years, visitation peaks in September; other popular months include August, October, and July. Peak visitation is in September due to Harvest Day, which attracts thousands of visitors in a single day. The NPS predicts no change in visitation for MVB NHS for 2010.[‡]

Figure 5
Park visitation by year

Source: NPS data (<http://www.nature.nps.gov/stats/park.cfm>) and Volpe Center



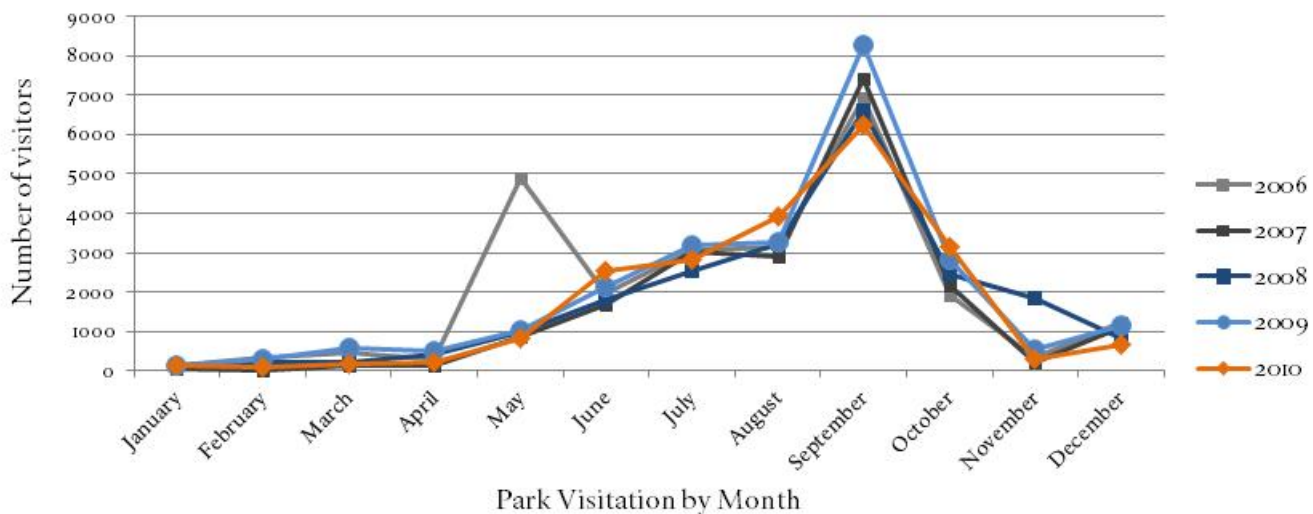
[†] New York State Department of Economic Development 2008. <http://iloveny.com/home.aspx>

[†] National Park Service Public Use Statistics Office. Annual park visitation. <http://www.nature.nps.gov/stats/viewReport.cfm>

[‡] Ibid. 2009 and 2010 Forecast of Recreation Visits. (<http://www.nature.nps.gov/stats/forecasts/forecast0910.pdf>)

Figure 6
Park visitation 2006-2010 by month

Source: NPS Data (<http://www.nature.nps.gov/stats/park.cfm>) and Volpe Center



Most visitors arrive to MVBNS by private vehicle. Transportation opportunities are limited because there is no shuttle service or public transit near the park. Few people arrive by bicycle. School groups typically take a bus to the park and the park coordinates their arrival to ensure minimal overlap of multiple school groups.

Several events are held throughout the year at MVBNS or in coordination with the park. The following events were scheduled for 2009:

- In May the park opens for tours.
- During the summer months of some years, members of the Friends of Lindenwald participate in Saturday afternoon house tours dressed in historically accurate costumes.
- In July, the park hosts an outdoor picnic with music and games. The event is sponsored by the Friends of Lindenwald and is subject to change based on weather or other circumstances.
- In August of some years, the park encourages youth to participate in conservation and park history. During this event, children are able to earn a Junior Ranger badge.
- In September, the park hosts Harvest Day, significant to the park because of Martin Van Buren's history of farming and the surrounding agriculture. Harvest Day, the park's busiest day, attracts two to three thousand visitors throughout the day and the parking lot quickly fills. On this day there are demonstrations on farming, gardening, and crafts.
- In October, the park hosts a campfire and program in the evening. The event is subject to change based on weather or other circumstances.
- In December, the park hosts a winter celebration outdoors under a tent. This event includes tours inside the electrically candlelit mansion with seasonal decorations by the Kinderhook Garden Club and actors in historic clothes. Kinderhook's Candlelight Walk, which is a tour of historic houses through the Village of Kinderhook, is on the same night. Similar to Harvest Day, the winter celebration attracts a high number of visitors.
- Also in December, the town of Kinderhook hosts an event for Martin Van Buren's birthday on December 5th.

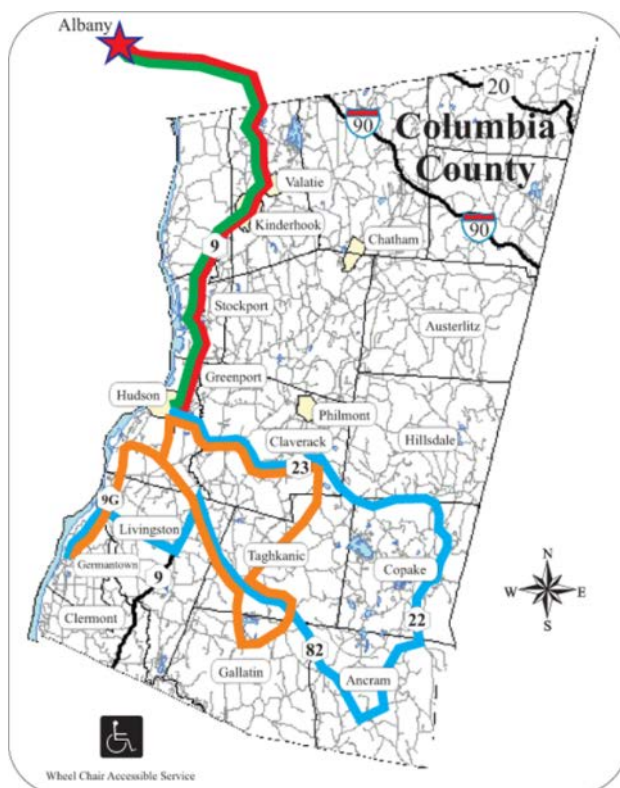
¹ National Park Service Public Use Statistics Office. Monthly Public Use Report. <http://www.nature.nps.gov/stats/viewReport.cfm>

A visitor study published by the University of Idaho in 2011 provides a detailed look at visitor demographics, travel characteristics, level of satisfaction, preferred programs, and overall values for the park. With a pool of 267 respondents, the visitor study indicates potential trends in visitor behavior but does not provide the depth necessary to inform park management decisions based solely on the study's results.

Bus/shuttle service

Columbia County has public transportation that operates under contract with Coxsackie Transport. Service includes four bus runs that connect Hudson and Albany (Figure 7). The route between the two cities follows SR 9 and passes through Kinderhook (shown in red and green in Figure 7). The shuttles leave Hudson at 6:15 AM, 7:00 AM, 2:30 PM and 4:00PM. The shuttles leave Albany (Empire State Plaza or Swan and Washington) at 7:35AM, 8:05 AM, 4:32 PM, and 5:10 PM. The cost of the full ride from Hudson to Albany is \$5.50. The bus makes eight stops along the route including Greenport, Columbiaville, Kinderhook, Vallatie, Broadway, and the State Office. Shuttle routes three and four (shown in blue and orange in Figure 7) circulate throughout the region. Coxsackie Transport also runs a shopping shuttle within Hudson and school buses throughout Greene, Albany, Columbia, Dutchess, Putnam, Saratoga, Rensselear, Schoharie, and Delaware counties.

Figure 7
Columbia County shuttle routes to Albany
Source: <http://coxsackietransport.com/Content/BPrice.htm>



The City of Hudson used to operate a year-round trolley bus system within Hudson. The trolley bus operated Monday through Friday from 6:20 AM to 4:45 PM, with stops at the Amtrak train station, downtown Hudson, the high school, and the hospital. The service was discontinued in early 2011 due to poor ridership.

There are several transportation services for the elderly, disabled people, and individuals in need of medical care in the area. The Department of Social Services and Office for the Aging provide transportation within Columbia County. Mental Health and Veteran Services drive their own set of vehicles within the County. The Columbia Healthcare Consortium provides transportation to medical services. RSVP is a volunteer group in Hudson that provides transportation for individuals who need help going to and from medical appointments. COARC, a nonprofit that supports individuals with disabilities and their families, owns several vehicles and transports disabled residents. Community Action of Greene County, Inc., an anti-poverty agency, operates small buses and services for individuals with a disability.

The Rip Van Winkle Express operates in Greene County and takes passengers from Catskill into outlying areas.⁷ There are three routes during the day including a morning route into Catskill, a midday route through the village, and an afternoon route out of Catskill. The bus travels a fixed route that varies by day and predominantly serves senior citizens but the bus is open to the public. Passengers are able to flag down the bus if there is a safe place to stop. Passengers can also contact the operator, First Student, Inc., to schedule a pick-up.

Bus tours

Currently, few private bus tours stop at MVBNHS. However, with several companies traveling throughout the Hudson River Valley, the park is hopeful that more buses traveling through the region will stop at the park in the future. For example, the New York Trailways tour bus company travels through the Hudson Valley along I-87 from New York City to Albany. Another company, the Short Line Bus, operates several bus tours within the Hudson Valley. The Hyde Park Overnight Package takes passengers from New York City to a hotel near Hyde Park. Fare includes hotel, bus fare, rental car, and restaurant discounts. Other tour destinations from New York include Bear Mountain State Park, Finger Lakes, and West Point.

Traffic and circulation

MVBNHS is on SR 9H, which connects the park to the town of Kinderhook. SR 9H is a two lane road with a narrow shoulder and a speed limit of 55 miles per hour (Figure 8). South of the park, SR 9H veers south and County Road 25 (Albany Road) splits off to the west. At this junction, Old Post Road crosses SR 9H and runs through the park boundary, within which is a pedestrian trail and the main parking area. Due to the park's vicinity to SR 9H, traffic noise exists and can affect interpretive activities, but most site amenities, excluding the parking lot, are set back from the roadway.

⁷ Greene County Planning and Economic Development. <http://greeneeconomicdevelopment.com/planning/transportation>

Figure 8
Looking north at SR 9H and County Road 21 junction (left), looking north from the park entrance (right)
Source: Volpe Center



Connections to nearby cities

Albany is about 25 miles or a 35-minute drive from MVBNHS. SR 9H north from the park intersects with SR 9, which connects with I-90 to the north. I-90 westbound connects to I-787 South to downtown Albany.

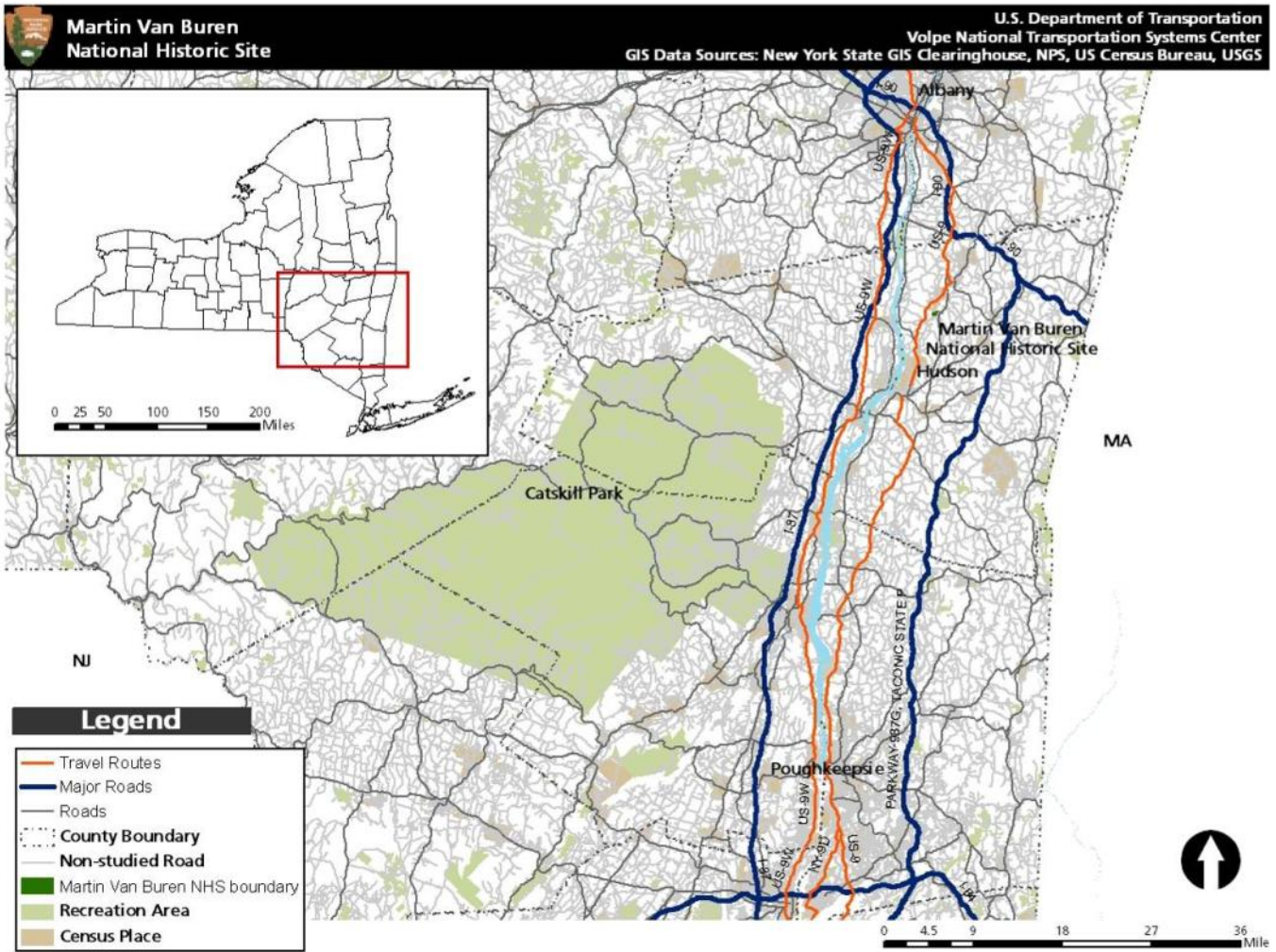
The other main connection from MVBNHS and Kinderhook is to Hudson. Hudson is 12 miles south or a 20-minute drive south from the park. It is located on Union Turnpike 66, which intersects with SR 9H. Hudson offers the closest Amtrak station to the park along with several visitor attractions and amenities.

Thematic driving trails

Visitors to the Hudson River Valley NHA commonly drive through the valley and visit sites of interest. The NHA recommends driving along major highways to access the region including I-90, I-87, I-84, and the Taconic State Parkway, or travel routes including SR 9, SR 9D, or SR 9W to see the sites within the region (Figure 9). In addition to driving, there are boat and bus tours with private guides. There are several self-guided driving tours of the NHA with tour themes that focus on culinary attractions, wineries, architecture, history, and arts of the region.

Figure 9
Hudson River Valley driving routes

Source: Hudson River Valley Institute, NYSDOT, and Volpe Center



The NHA identifies three tour themes within the valley that they promote on their website (<http://www.hudsonrivervalley.com/>). The tours include Freedom and Dignity, Nature and Culture, and Corridor of Commerce, each of which include several trip itinerary options. If a visitor chooses to visit sites in the upper Hudson River Valley region associated with the colonial period (one of the tours within “Freedom and Dignity”) then MVBNS is listed as a recommended stop. While sites are recommended as stops, there is no suggested route to visit the sites. Other sites within the colonial period tour include Bronck Museum, James Vanderpoel House, Shaker Museum, Luykas Van Alen House, Albany City Hall, and several other sites within the region.

The Taconic State Parkway is a popular driving route because of the views and restrictions on vehicular traffic. New York parkways were designed in the early 20th century to connect cities with parks and open space. Parkway follow scenic areas throughout New York and generally do not allow bicycles, buses, trailers, and trucks.

¹ Hudson River Valley National Heritage Area. <http://www.hudsonrivervalley.com/>

Rail

The nearest Amtrak station is in Hudson, 12 miles south of MVBNS. The train station is at the northwestern edge of downtown near the Hudson River. Travel time between New York City and Hudson is two hours on Amtrak's Empire Service route, which connects New York City to Niagara Falls. The fare from Hudson to New York City varies from \$31 to \$60 and the fare from Hudson to Albany varies from \$15 to \$21. The train makes 18 daily stops in Hudson. From the train station in Hudson, visitors can take taxis or private vehicles to MVBNS. Alternatively, there is an Enterprise car rental facility near Hudson, 1.5 miles from the Amtrak Station.

The Hudson train station includes a train depot, waiting area, and Amtrak schedules (Figure 10). There are two large parking lots near the Hudson train station. One parking lot, with approximately 50 parking spaces, is adjacent to the train station and allows daily parking but prohibits overnight parking. The second parking lot, with approximately 200 spaces, is across the street from the train station and permits long-term parking.

Figure 10
Amtrak Station in Hudson, New York: loading area (left), train station (center), and schedule (right)
Source: Volpe Center



The Hudson River Valley NHA, in partnership with I Love New York, the official New York State tourism site, produces the “Windows on History” publication.⁷ This guide describes the train ride on Amtrak through the Hudson River Valley NHA. The trip is from Pennsylvania Station (Penn Station) in Manhattan to Albany and tourists are encouraged to visit historic sites, explore the natural setting, and learn about the towns along the route. While Amtrak passes through the Hudson Valley region, there are few public transportation links from train stations directly to sites of interest mentioned in the guide.

The Town of Poughkeepsie is the last stop on the Metro-North Railroad Hudson Line and is 50 miles south of MVBNS. The town is accessible along SR 9H, SR 9, and SR 9G from the park and is an hour and a half drive. The trip on Metro-North between Grand Central Station in New York City and Poughkeepsie is less than two hours and fares vary from \$13.78 to \$26.00 one-way or \$26.56 to \$39.00 roundtrip for adults. The Amtrak station in Poughkeepsie connects to Hudson and Penn Station in New York City. The trip is about an hour and a half from Poughkeepsie to Penn Station and 30 minutes from Poughkeepsie to Hudson. Round-trip Amtrak fare from Poughkeepsie to Penn Station is approximately \$70 and one way travel is about \$40.

⁷ New York By Rail and I Love New York. “Windows on History: Exploring the Hudson River Valley National Heritage Area” <http://www.hudsonrivervalley.com/ExploreHeritageArea/Windows.aspx>

Alternative Transportation Workshop

As part of this study, the Volpe Center conducted an alternative transportation workshop, hosted by MVBNHS. The three-hour event took place in downtown Hudson, New York on May 12, 2011. The purpose of the workshop was to convene potential alternative transportation stakeholders in and around Columbia County, allow participants to register thoughts and opinions related to transportation in the region, discuss feasibility considerations, and present potential shuttle scenarios that may offer solutions to some of the problems discussed.

As part of the Volpe Center's presentation, the project team emphasized the importance of transportation partnerships, particularly in a small-town or rural region that is generally car-friendly. One of MVBNHS' objectives was to engage potential stakeholders in the transportation conversation. Workshop participants included representatives from MVBNHS, Columbia County Historical Society, Olana State Historic Site, Olana Partnership, Shaker Museum and Library, Columbia County Department of Tourism, Kinderhook Village, Columbia Land Conservancy, and Hudson Mohawk Resource Conservation and Development Council.⁷ Additional invitees included representatives from the Hudson Valley Greenway (Hudson Valley National Heritage Corridor), Greene County Department of Economic Development and Planning, Clermont State Historic Site, Edna St. Vincent Millay Society, Roxbury Farm, Friends of Lindenwald, FASNY Museum of Firefighting, Amtrak, and Valatie Village. In addition to the presentation by the Volpe Center, the workshop included an interactive brainstorming session about transportation opportunities and challenges in the area, as well as a presentation by neighboring Dutchess County's Tourism Department on their successful Farm Fresh Link shuttle program.

The workshop accomplished its goals of engaging potential stakeholders, collecting general sentiments about alternative transportation in the region, and offering suggestions for future consideration. This document elaborates on the three major discussions that took place at the workshop: alternative transportation feasibility, regional transportation in the Hudson Valley, and potential local shuttle scenarios for MVBNHS.

⁷ In addition to insight gained from workshop participants, the project team spoke in person with a representative from Thomas Cole National Historic Site, and over the phone with Amtrak, MetroNorth, and Hudson Greenways.

Alternative Transportation Feasibility Considerations

Every successful transportation system consists of several factors that contribute to its feasibility and long-term sustainability. Each factor must be considered when initiating an alternative transportation project, and none can be ignored. Once each factor is thoroughly evaluated, decisions must be made in order to capitalize the strengths of the system while minimizing the deficiencies. The following section presents each of these factors, along with the associated challenges and opportunities.

Ridership

Every successful transportation service requires consistent ridership. In order to have riders, there must be a demand for the type of service that is being offered.

Only a small amount of data exists to demonstrate the need for a shuttle to MVBNS, Kinderhook, or other nearby locations. Based on inquiries received at MVBNS and other cultural destinations, at least a portion of those visitors are interested in traveling to sites outside of Hudson without a vehicle. A small number will take a taxi from the Hudson train station, and the majority of these visitors are presumably traveling from New York City.

We do know that a significant number of people travel to Hudson via Amtrak. In 2010, the station recorded 150,197 boarding and alighting passengers, making Hudson the fourth busiest Amtrak station in New York, behind New York City, Albany, and Rhinecliff.^{*} More details are needed, however, to understand how many of those passengers are commuters versus weekend travelers. It would also be good to know the passengers' origin of travel and whether or not they have access to a vehicle in Hudson County.

Because of the lack of data, it is difficult to project demand for a shuttle service to MVBNS. While this could be a challenge for stakeholder buy-in, opportunities do exist to gain more understanding of the demand for ATS with a reservation-based shuttle service, discussed later as one of the shuttle scenarios.

Convenience

In areas where multiple types of transportation are available, the public will frequently choose the more convenient option. Convenience implies that a transportation service is easily accessible, that departure/arrival times are aligned with a traveler's needs, and that travel time is comparable to other transportation options.

In rural areas, a shuttle service rarely matches the comfort, speed, or flexibility of a private car. Also, due to the current lack of alternative transportation, visitors expect to rely on a private vehicle to travel throughout the county. The county's tourism website even promotes driving as a popular activity, calling it a "driver's delight."[†] Finally, parking in villages and towns and at most destinations is readily available, and parking resources are strained only during major events and during peak visitation season.

Only 2.5 percent of workers in Columbia County do not have access to a vehicle, while more than 75 percent of workers have access to two or more cars.[‡] The implication is that a strong majority of Columbia County residents rely on private autos for transportation. Still, according to residents, traffic congestion is rarely problematic, and parking is almost always available.

All of this suggests that at the current time, a shuttle service to MVBNS would be most convenient for travelers who might visit from out-of-town, but do not have access to a car.

^{*} "Amtrak Fact Sheet, State of New York, Fiscal Year 2010." <http://www.amtrak.com/pdf/factsheets/NEWYORK10.pdf>

[†] <http://www.columbiacountytourism.org/index.php/seeing-doing/tours/>

[‡] U.S. Census. "2005-2009 American Community Survey 5-Year Estimates."

Quality of Experience

Positive rider experience is essential to a transportation system's success. If the experience is pleasant, a rider may overlook other problems such as a lack of convenience or fare cost.

One opportunity is to provide interpretation to visitors who are riding the shuttle, enhancing the overall experience. If the shuttle involves multiple sites, interpretation of relevant sites and historical stories will only help to improve the passenger's experience.

Occasionally, a transportation service emphasizes the quality of service so much that the transportation actually becomes an attraction in and of itself, drawing visitors who are interested in a more immersive experience.

Partnerships

A transportation system is much more viable over the long term if a range of partners invest in the service. In addition to providing access to multiple destinations, a transportation system with multiple partners will more easily adapt to fluctuations in funding and service needs.

MVBNHS has put a lot of effort into cultivating strong relationships with other organizations interested in tourism-based ATS for Columbia County, as well as with the counties, towns, and villages. Potential cultural partners include Olana State Historic Site (Columbia County, south of Hudson), Thomas Cole National Historic Site (Catskill, Greene County), the FASNY Museum of Firefighting (Hudson, Columbia County), the Columbia County Historical Society (Kinderhook, Columbia County), Clermont State Historic Site (Town of Clermont, Columbia County), the Edna St. Vincent Millay Society at Steepletop (Austerlitz, Columbia County), and the Shaker Museum and Library (New Lebanon, Columbia County). Several additional historic sites and attractions are located throughout the region and are all affiliated with the Hudson Valley Greenway. Other partners may include state and local governments, large institutions such as schools and hospitals, and regional planning organizations such as the Columbia County Land Conservancy and the Mohawk-Hudson Regional Council of Governments.

Marketing and Branding

As with most goods and services, a strong advertising program is essential to a transportation system's viability. Often one of the most overlooked areas of a transportation project, a targeted, long-term marketing campaign puts the word out that a service exists and informs travelers of transportation options that may have been previously overlooked. Part of a strong marketing campaign must include appropriate branding of the service, as well as a multi-faceted approach to disseminating traveler information such as maps, schedules, how-to-ride information, and trip planning.

Branding is an important part of establishing an identity for a shuttle system, not only for general exposure but also to bolster travel confidence among its riders. When a rider is within a transportation system, organization of information within that system is crucial to a rider's experience; typically, a rider wants to know where a shuttle goes, when it arrives and departs, and how long the trip will take. By developing memorable materials with regard to design and function, the rider becomes familiar with the signage and messaging, in turn making him more confident that the transportation service will deliver what it promises.

Marketing opportunities vary significantly depending on media and media outlets, but Martin Van Buren NHS has a strong network of partners in Columbia County who may be willing to assist with developing promotional materials and advertisements. Potential ideas include advertising in local and regional magazines and newspapers, group travel packages in conjunction with regional transportation providers and/or accommodation providers, as well as targeted promotion to the car-free population in New York City.

Economic development

Any ATS should be implemented in conjunction with a broader community commitment to activities and development guidelines that support alternative transportation. In the case of a small bus or shuttle service, ATS-oriented development does not require a grand plan; rather, it simply means strategically coordinating with local economic development organizations to encourage development that may help to support the shuttle program.

An example in Columbia County could be the construction of a new hotel. Currently, Columbia County only has accommodations for out-of-town visitors in small inns or bed and breakfasts. While these types of establishments contribute to the character of the area and restrict the number of visitors, they are not all family-friendly and are not easily served by a bus or shuttle. If a hotel were to be sited in downtown Hudson near the train station, a shuttle could serve both the hotel and the train station and significantly increase ridership potential. This type of development also supports multimodality; pedestrians, cyclists, buses, and autos all play a role in the design and location of new development.

Currently, the county's first large hotel is under construction in the Greenport community, an area on the outskirts of Hudson that is highly dependent on automobile access. The area is not conducive to ATS activity, and based on the built environment, the project teams expects that very few hotel visitors will travel to this hotel without a vehicle.

Safety

Very simply, the public will generally not patronize a transportation service whose safety record is in question, especially if car travel is available. In order to succeed, any bus or shuttle must be a safe alternative to driving.

Regional Transportation in the Hudson Valley

The Hudson Valley region lacks an integrated ATS. While several independent ATS services exist, the systems rarely connect either physically or temporally. This is often due to the fact that ATS services within the region operate as county entities, only crossing county boundaries in special circumstances. As a result, a traveler has difficulty moving freely throughout the Hudson Valley using alternative transportation alone. For the purposes of this project, the Hudson Valley region includes six counties from the Capital Region of Albany south to Poughkeepsie: Albany, Rensselaer, Columbia, Greene, Dutchess, and Ulster. All counties border the Hudson River, a natural artery traveling the length of the region.

Any investment in a new ATS should only be made if the system works with partnerships across jurisdictions and supports the future development of an integrated, regional alternative transportation program.

The following section presents a long-term vision for alternative transportation within the Hudson Valley region. This vision forms a foundation for the local shuttle scenarios developed for MVBNS, presented later in the report.

The Case for a Regional ATS

All local transportation systems exist as part of a larger pattern of movement within a region. In the case of MVBNS, this is immediately evident when looking at the lodging location of visitors on the nights prior to and after visiting the park. Less than 20 percent of visitors stayed in Columbia County the night before their visit, and even fewer stayed in Columbia County the night following their visit. Prominent lodging locations outside Columbia County include Albany (Albany County), Hyde Park (Dutchess County), Catskill (Greene County), Schenectady (Schenectady County), Troy (Rensselaer County), Poughkeepsie (Dutchess County), and Rhinebeck (Dutchess County).

Regional transportation is not just important to the out-of-town visitor. Several important destinations in the Hudson Valley serve the populations of more than one county, but ATS access is only feasible for those residents who live within that county. Examples that stand out include Columbia-Greene Community College, the Columbia Memorial Hospital, and the Hudson Amtrak station. Each is located in Columbia County but is frequented by residents of Greene County. However, there is no alternative transportation service across the Rip Van Winkle Bridge, the only highway connection between the two counties.

Despite the lack of an integrated regional ATS, the Hudson Valley region does possess numerous major and minor ATS systems, including:

Rail:

Amtrak, with stations in Poughkeepsie, Rhinecliff, Hudson, and Albany
MTA Metro-North Hudson Line, with station in Poughkeepsie

Boat/ferry:

Hudson River Cruises
Rhinecliff Water Taxi

Bus/shuttle:

Albany County

Capital District Transportation Authority
University at Albany Mass Transit Services

Rensselaer County

* Martin Van Buren National Historic Site Visitor Study, pp. 23-31.

- Red Hawk Shuttle (Rensselaer Polytechnic Institute)
- Columbia County**
 - Albany Commuter Bus
 - Hudson-Greenport Shopping Shuttle
- Greene County**
 - Greene County Transit (Rip Van Winkle Express)
- Dutchess County**
 - City of Poughkeepsie Transit System
 - LOOP
 - Bard College Shuttle
- Ulster County**
 - Kingston Citibus
 - Ulster County Area Transit

Since so many distinct systems are already in place, it is not unreasonable to adjust route schedules and alignments to accommodate transfers between systems. The result would provide more non-auto transportation options for visitors, as well as provide important travel connections for residents of the region. Even more ambitious is a formal consolidation of the many different systems in a way that allows multiple jurisdictions to collaborate on transportation needs in an effort to streamline service and eliminate under-utilized routes.

Regional Trunk-Feeder Model

The Hudson River is the backbone of the Hudson Valley region, and some of the most important regional non-auto transportation systems in the region are travel on the river itself (Hudson River boat travel) or just along its banks (MetroNorth and Amtrak rail). Furthermore, all significant population centers between Albany and Poughkeepsie are situated on the river, and all major river crossings occur very near the population centers. Finally, well-traveled roads continuously run along both sides of the river, which could offer additional connections to local destinations and population centers via intra-city bus service.

Due to its geographic prominence, cultural significance, and ability to support several modes of transportation, the Hudson River Valley is well positioned to act as the trunk route of a regional “trunk-feeder” transportation model (Figure 11). Along the trunk are important nodes at Albany, Catskill/Hudson, Kingston/Rhinecliff/Rhinebeck, and Poughkeepsie. Not coincidentally, these nodes are also the location of Hudson River bridge crossings, major docking facilities, train stations, and highway junctions.

In order for the trunk-feeder model to work, transportation routes along the trunk must be varied and service must be regular and frequent. Actual frequency depends on the mode of transportation, but the model relies on the concept that travel on the trunk is reliable and regular, providing transportation connections between the region’s important transportation hubs.

To accompany the trunk, feeder routes depart from the nodes, away from the trunk, providing access to destinations that are not along the river (Figure 12). Different than the trunk routes, feeder routes do not rely on frequency; rather, feeder routes are designed around strategic scheduling, such that route schedules coordinate with trunk route schedules to ease transfers between systems and modes. The regional trunk-feeder transit model illustrates a long-term vision for alternative transportation in the Hudson Valley region. It would require coordination between county governments and, ideally, the complete integration of all local and county transportation systems. The result would be a variety of transportation options for visitors and residents, with potential funding support from six different counties, numerous municipalities, public and private institutions, local destinations, and regional attractions. Most importantly, routes would be dictated by actual travel patterns in the region, unimpeded by jurisdictional boundaries.

Figure 11
Map of potential trunk routes (L) and diagram of trunk concept (R) for Hudson Valley
Source: Volpe Center

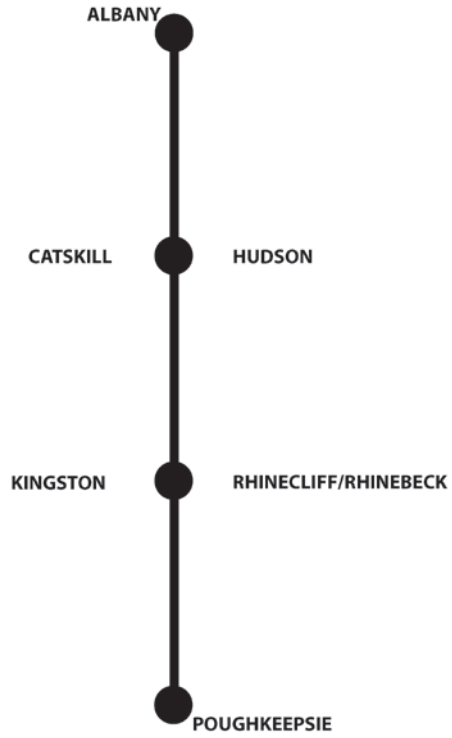
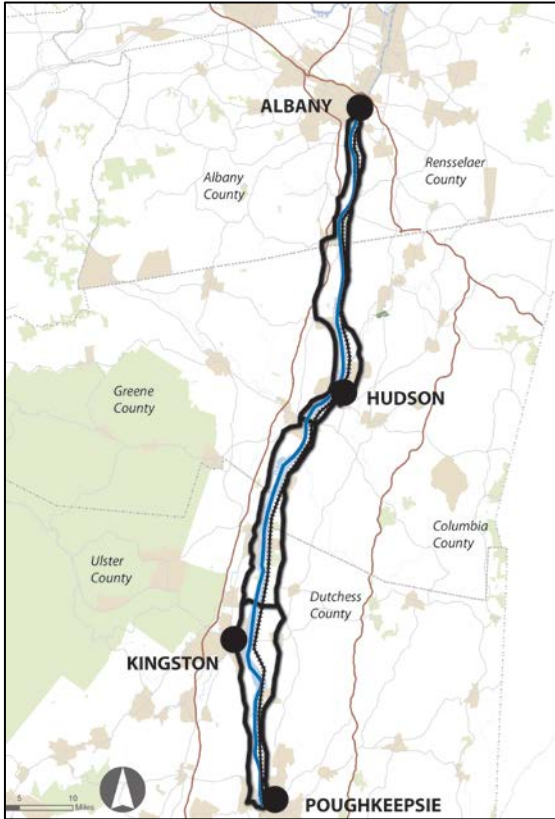
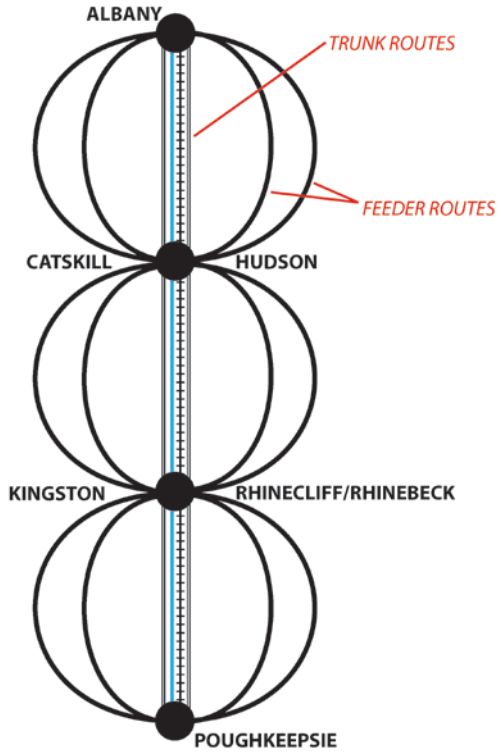
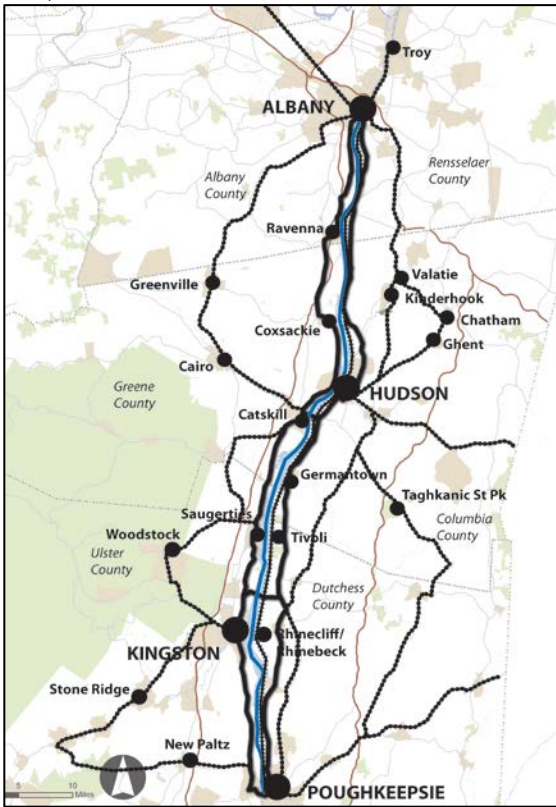


Figure 12
Map of trunk-feeder model applied to the Hudson Valley (L) and diagram of the trunk-feeder concept (R)

Source: Volpe Center



Martin Van Buren NHS shuttle scenarios

The vision for regional transportation is a foundation on which the project team developed local shuttle scenarios tailored to the needs of MVB NHS. Regardless of the decisions made by NPS staff and their partners throughout Columbia County and the region, the project team recommends that any ATS project is part of a greater transportation vision. Any local routes should be developed as the first piece of system with the hope that improved coordination between ATS programs will result in more transportation opportunities for residents and visitors throughout the region.

Major Operating Considerations

Arguably the most important consideration when initiating a new shuttle service is operating responsibility. Who will be responsible for choosing the vehicle(s), acquiring the vehicle(s), driving the vehicle(s), maintaining the vehicle(s), and housing the vehicle(s)? The most common arrangements are that the shuttle is operated by the park or by a private concessionaire.

Each operating arrangement features benefits and drawbacks. Park-operated services require the shuttle vehicle to be driven by a park volunteer or employee, which may interfere with their regular job responsibilities (unless a shuttle driver is hired). Training will be required, and depending on the vehicle type, the driver may need to obtain a commercial driver's license (CDL). Furthermore, the park would be responsible for purchasing and maintaining a vehicle, as well as securing space to store the vehicle when it is not in operation.

Benefits of operating the shuttle in-house include the option of leasing a shuttle vehicle, as opposed to purchasing one. While ultimately it might save the park money to own a shuttle vehicle outright, a short-term lease is more appropriate for pilot testing a shuttle program. Shuttle vehicles are often available for lease through the U.S. General Services Administration (GSA), although the exact vehicle of choice is not guaranteed. GSA also is unable to guarantee that the same vehicle can be leased from year to year. Additional benefits of in-house operation include the opportunity to provide on-board interpretation to passengers and the ability to be more flexible with operating schedule to meet changing customer expectations or accommodate special events at the site.

When a concessionaire is hired to operate a shuttle, procurement and management of vehicle and driver are the responsibility of the concessionaire. This generally means that, the park does not have to worry about driver training, vehicle maintenance, and vehicle housing.

Depending on the type of contract, one drawback may be that the park will have less flexibility with the operating schedule. More than likely the concessionaire will provide service on a daily basis at daily rates, as opposed to hourly rates. This means that at any part of the day when the park is not able to fill the bus, the park is, essentially, losing money. Most organizations recognize that it is impossible to maintain a full shuttle bus at all times, and it is an ongoing challenge to ensure that as many seats are filled throughout the operating day. It should also be noted that someone from the park would be responsible for managing the contract.

It will also be important to decide whether MVB NHS (or other shuttle providers) will charge a fare for the transportation service. Comparable National Park Service shuttles are often free¹, primarily because a small fare does very little to cover the expense of operating a shuttle. Since providers do not want a fixed fare to deter potential riders, operations expenses are fully paid by the park and its partners. In addition to being able to offer a free service, this model also eliminates the need for managing receivables, such as tickets, fare collection, and cash management.

¹ Background research for this project included brief reviews of several NPS shuttle programs, including the Roosevelt Ride (Franklin D. Roosevelt NHS in Hyde Park, NY), the Full Circle Trolley (Marsh-Billings-Rockefeller NHP in Woodstock, VT), and the Journey Around Lake Conemaugh Van Tour (Johnstown Flood NM in Johnstown, PA). All services are offered free-of-charge.

Regardless of the fare decision made for a fully operating shuttle system, pilot tests are best conducted with as few externalities as possible. This allows the shuttle operator to understand base demand for the service, free of other forces – such as cost – that may influence a rider’s decision to take the shuttle or not. If implemented and successful as a free service, the operator may introduce and pilot test a fare system in an effort to understand the public’s willingness to pay. If income from a fare is ultimately desired, on

MVBNHS shuttle scenarios

The project team evaluated several different shuttle options, ranging from a very simple round-trip service between Hudson and MVBHNS, to a more complicated service that serves multiple destinations in two counties. All options support future incorporation into the regional trunk-feeder model described earlier. While variations in route alignment are endless, the report focuses on the four most viable scenarios. All four scenarios are worthy of pilot test consideration, depending on the level of support by MVBNHS partners.

- Scenario 1: Red Route, from Hudson Train Station to MVBNHS
 - Recommended partnership: City of Hudson; MVBNHS; Columbia County Dept. of Tourism
- Scenario 2: Red Route Ext, from Hudson Train Station to Kinderhook
 - Recommended partnership: City of Hudson; MVBNHS; Columbia County Historical Society; Village of Kinderhook; Friends of Lindenwald; Columbia County Dept. of Tourism
- Scenario 3: Blue Route, from Hudson Train Station to Catskill
 - Recommended partnership: City of Hudson; Olana State Historic Site; The Olana Partnership; Thomas Cole National Historic Site; Village of Catskill; Columbia County Department of Tourism; Greene County Department of Tourism
- Scenario 4: Hudson Area Shuttle (Red Route Ext and Blue Route together)
 - Recommended partnership: City of Hudson; MVBNHS; Columbia County Historical Society; Village of Kinderhook; Friends of Lindenwald; Columbia County Dept. of Tourism; Olana State Historic Site; Olana State Historic Site; Thomas Cole National Historic Site; Village of Catskill; Columbia County Department of Tourism; Greene County Department of Tourism
 - Note: partners will vary depending on effort. For more, see Scenario 4 description below.
- Scenario 5: All-inclusive County Tour
 - Recommended partnership: Columbia County Department of Tourism; any potential traveler destination, including historical, agricultural, and cultural destinations

Routes and schedules have been developed for the first four scenarios to provide a better idea of how service characteristics would affect the visitor experience. In formulating schedules, the team made several assumptions. All routes are designed to begin at the Hudson Amtrak station, ideally leaving and arriving at least 15 minutes before trains arrive/depart to/from New York City, according to a Saturday schedule. Visitor flow at sites is streamlined during operating hours, with visitors spending anywhere between one to three hours at each site. In general, travel times are padded with extra minutes to reflect vehicle dwell times at pick-up/drop-off points along the routes.

Scenario 5 is also discussed in more depth below, but routes and schedules are not especially useful at this point in time for this type of service.

Scenario 1: Red Route, from Hudson Train Station to MVBNHS

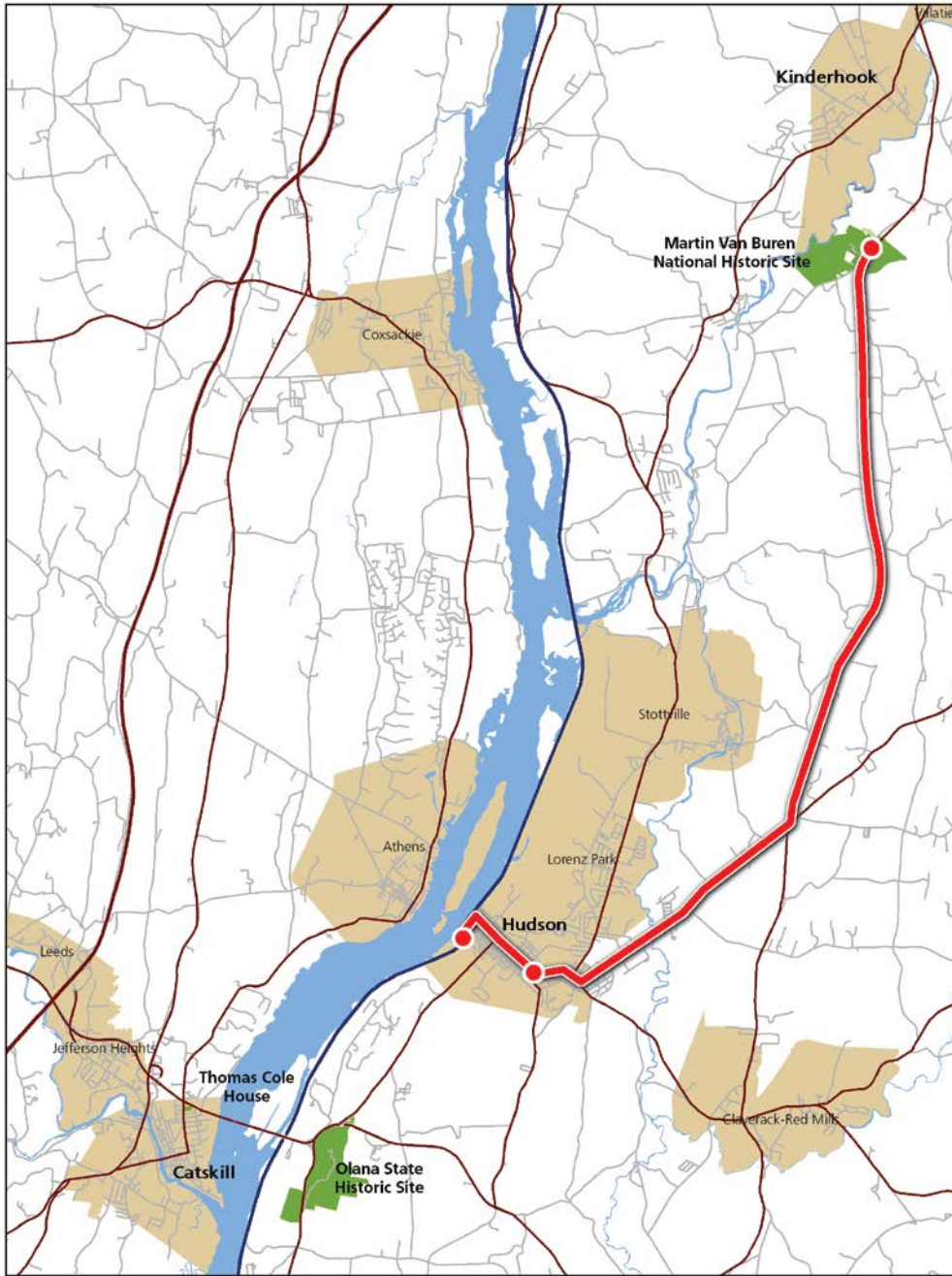
The “Red Route” represents a feeder route, or a route that travels to outlying destinations at relatively low frequencies. The Red Route relies on heavy coordination with a trunk route, which for our purpose is the Amtrak train with its scheduled stops at the Hudson train station.

In this scenario, a shuttle vehicle would pick up passengers at the train station and at 7th Street Park in Hudson, before carrying them to MVBNHS (Figure 13). Passengers could visit the house and grounds for two to three hours before returning to Hudson. Depending on the structure of the service, MVBNHS may wish to offer on-site concessions or drop visitors in Hudson to pursue their own dining options in advance of a train departure.

If operated by park staff, the shuttle would likely only offer one round-trip per day, minimizing the amount of time spent in a vehicle and including interpretive information while the passengers are en route. If operated by a concessionaire, the shuttle could run as many as five round-trips, meeting several trains throughout the day. Each Saturday schedule option is presented in Table 1.

Figure 13
Map of Scenario 1: Red Route, from Hudson Train Station to MVBNHS

Source: Volpe Center



11.9 miles—23 minutes

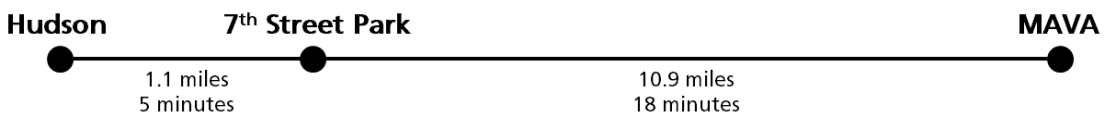


Table 1
Hypothetical Saturday schedules for Red Route

Source: Volpe Center

OPERATED BY PARK STAFF

| Train Arrives | Bus Departs Hudson Train Station | Bus Arrives MVBNHS | Bus Departs MVBNHS | Bus Arrives Hudson Train Station | Train Departs |
|---------------|----------------------------------|--------------------|--------------------|----------------------------------|---------------------------|
| 10:15 AM | 10:30 AM | 11:00 AM | 1:45 PM | 2:15 PM | 2:30 PM (alt. 4:40 PM) |

OPERATED BY CONCESSIONAIRE

| Train Arrives | Bus Departs Hudson Train Station | Bus Arrives MVBNHS | Bus Departs MVBNHS | Bus Arrives Hudson Train Station | Train Departs |
|---------------|----------------------------------|--------------------|--------------------|----------------------------------|---------------|
| 9:15 AM | 9:30 AM | 10:00 AM | 10:00AM | 10:30 AM | |
| 10:15 AM | 10:30 AM | 11:00 AM | 11:45 AM | 12:15 PM | 12:30 PM |
| 12:17 PM | 12:30 PM | 1:00 PM | 1:15 PM | 1:45 PM | 2:30 PM |
| 1:42 PM | 2:00 PM | 2:30 PM | 2:55 PM | 3:25 PM | |
| | 3:25 PM | 3:55 PM | 3:55 PM | 4:25 PM | 4:40 PM |

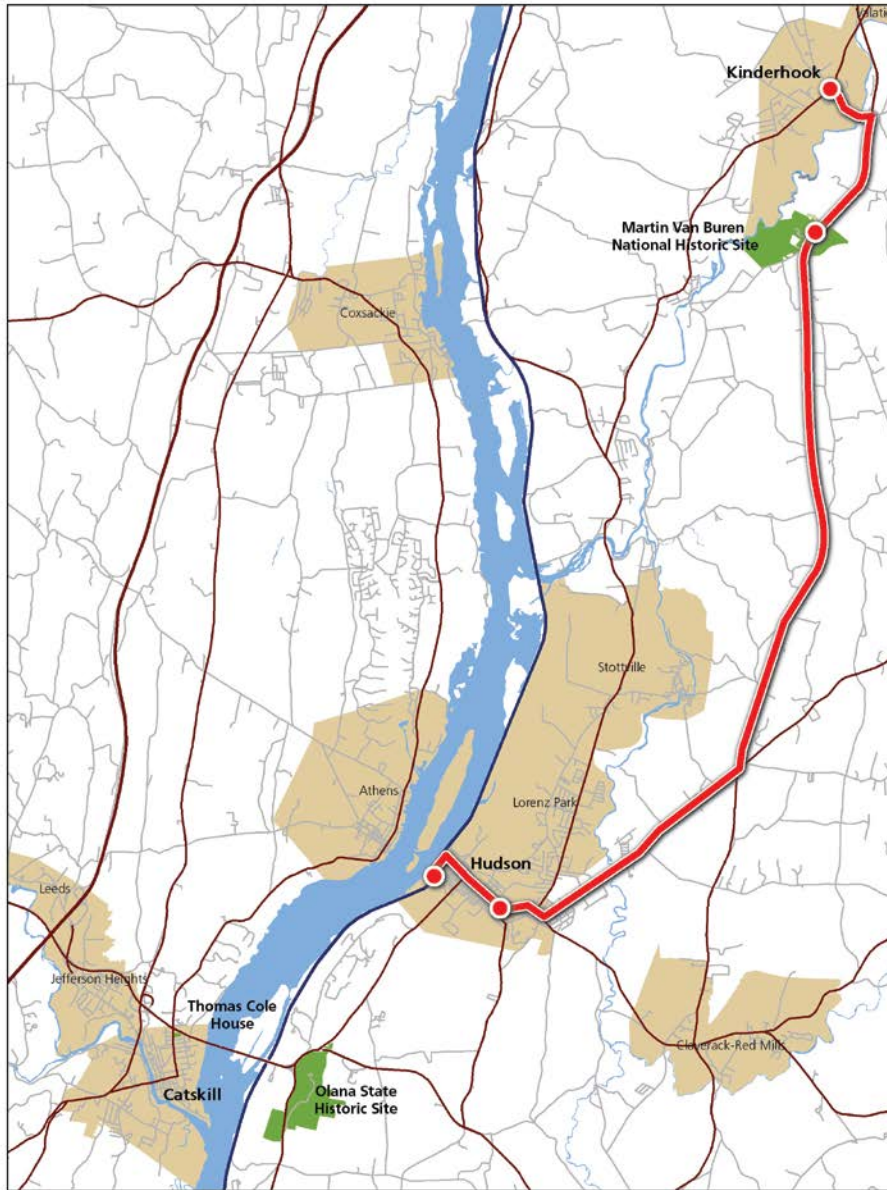
Note: All train arrival and departure times are based on current 2011 schedules.

Scenario 2: Red Route Ext, from Hudson Train Station to Kinderhook

Similar to Scenario 1, this option considers the Red Route extended to the Village of Kinderhook (Figure 14). Since it is only a six-minute drive from MVBNHS and offers several potential traveler destinations, adding a stop in the village makes sense if it attracts additional partners who are willing to support the program. Passengers could visit the town either before or after a two- to three-hour visit to MVBNHS. This option may be especially appealing if offered in conjunction with the Saturday Farmers Market in Kinderhook.

Like Scenario 1, if operated by park staff, the Red Route Ext would likely only make one round-trip per day to/from the train station. The shuttle could make several short trips between MVBNHS and the village of Kinderhook before returning to Hudson in the afternoon. If operated by a concessionaire, the shuttle could run up to four round-trips per day. Potential schedules are shown in Table 2.

Figure 14
Map of Scenario 2: Red Route, from Hudson Train Station to Kinderhook



14.6 miles—29 minutes

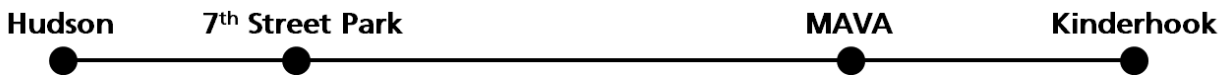


Table 2
Hypothetical Saturday schedules for Red Route Ext
 Source: Volpe Center

OPERATED BY PARK STAFF

| Train Arrives | Bus Departs Hudson Train Station | Bus Arrives/Departs MVBNHS | Bus Arrives/Departs Kinderhook | Bus Arrives/Departs MVBNHS | Bus Arrives Hudson Train Station | Train Departs |
|---------------|----------------------------------|----------------------------|--------------------------------|----------------------------|----------------------------------|---------------|
| 10:15 AM | 10:30 AM | 11:00 AM | 11:10 AM | 11:20 AM | 2:30 PM (alt. 4:40 PM) | |
| | | 1:00 PM | 1:10 PM | 1:20 PM | | |
| | | 3:35 PM | 3:45 PM | 3:55 PM | 4:25 PM | 4:40 PM |

OPERATED BY CONCESSIONAIRE

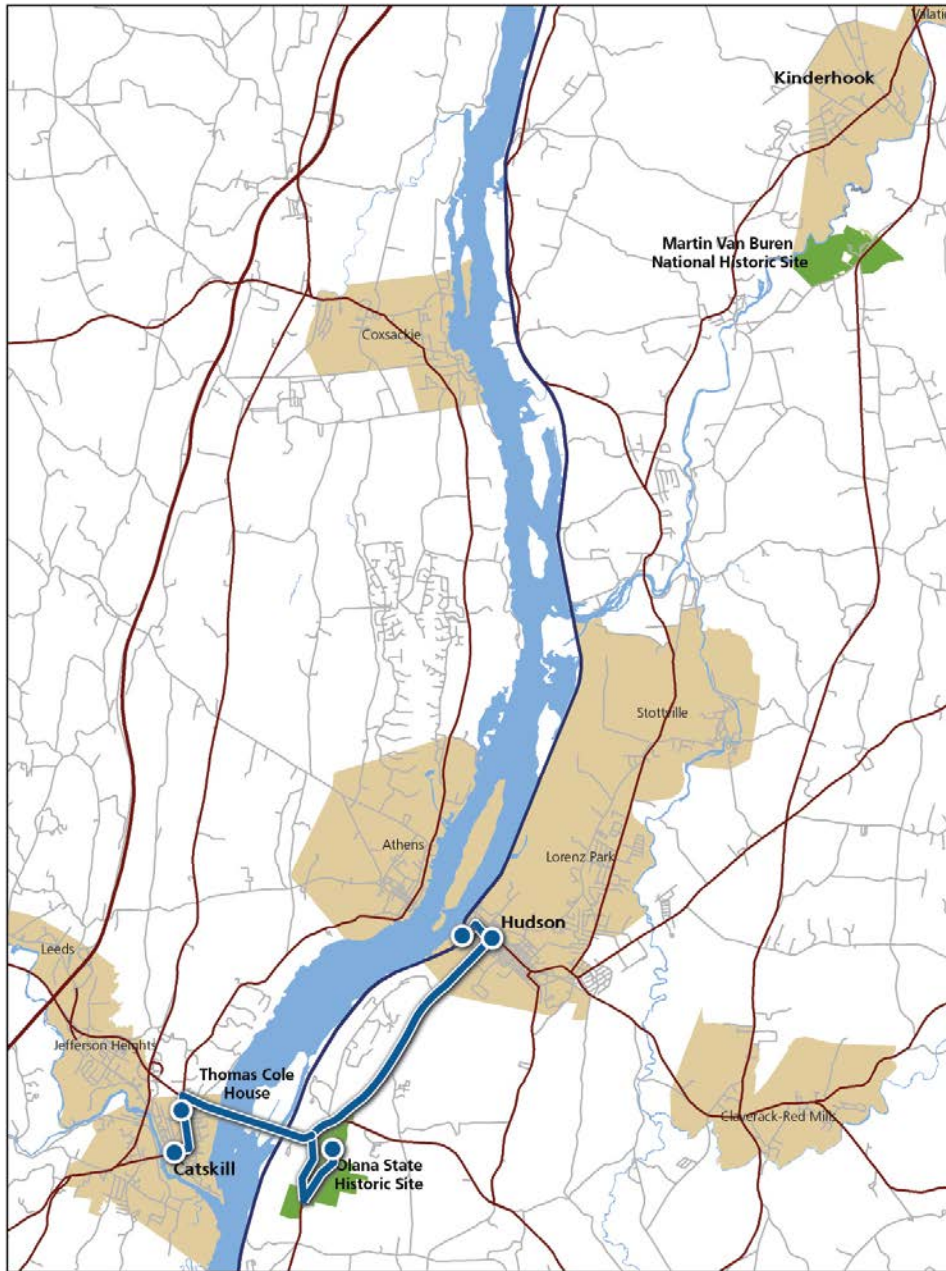
| Train Arrives | Bus Departs Hudson Train Station | Bus Arrives/Departs MVBNHS | Bus Arrives/Departs Kinderhook | Bus Arrives/Departs MVBNHS | Bus Arrives Hudson Train Station | Train Departs |
|---------------|----------------------------------|----------------------------|--------------------------------|----------------------------|----------------------------------|---------------|
| 9:15 AM | 9:30 AM | 10:00 AM | 10:10 AM | | 10:40 PM | |
| 10:15 AM | 10:40 AM | 11:10 AM | 11:35 AM | 11:45 AM | 12:15 PM | 12:30 PM |
| 12:17 PM | 12:30 PM | 1:00 PM | 1:20 PM | 1:30 PM | 2:00 PM | 2:30 PM |
| 1:42 PM | 2:00 PM | 2:30 PM | 2:40 PM | 3:55 PM | 4:25 PM | 4:40 PM |

Note: All train arrival and departure times are based on current 2011 schedules.

Scenario 3: Blue Route, from Hudson Train Station to Catskill

The Blue Route is a shuttle option for travel between Hudson and Catskill, with service to Olana State Historic Site and Thomas Cole National Historic Site (Figure 15). Unlike the Red Route, the Blue Route is viewed as a component of the trunk, based on the trunk-feeder model discussed earlier in this report. The route provides an important connection between Catskill and Hudson over the Rip Van Winkle Bridge.

Figure 15
Map of Scenario 3: Blue Route, from Hudson Train Station to Catskill



9.4 miles—24 minutes

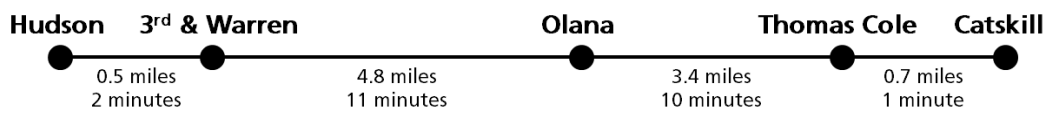


Table 3
Hypothetical Saturday schedules for Blue Route

Source: Volpe Center

| Bus Departs Hudson Train Station | Bus Arrives/Departs Olana | Bus Arrives/Departs Thomas Cole NHS | Bus Arrives Catskill | Bus Departs Catskill | Bus Arrives/Departs Thomas Cole NHS | Bus Arrives/Departs Olana | Bus Arrives Hudson Train Station |
|----------------------------------|---------------------------|-------------------------------------|----------------------|----------------------|-------------------------------------|---------------------------|----------------------------------|
| 9:00 AM | 9:13 AM | 9:23 AM | 9:24 AM | 9:30 AM | 9:31 AM | 9:41 AM | 9:54 AM |
| 10:00 AM | 10:13 AM | 10:23 AM | 10:24 AM | 10:30 AM | 10:31 AM | 10:41 AM | 10:54 AM |
| 11:00 AM | 11:13 AM | 11:23 AM | 11:24 AM | 11:30 AM | 11:31 AM | 11:41 AM | 11:54 AM |
| 12:00 PM | 12:13 AM | 12:23 PM | 12:24 PM | 12:30 PM | 12:31 PM | 12:41 PM | 12:54 PM |
| 1:00 PM | 1:13 PM | 1:23 PM | 1:24 PM | 1:30 PM | 1:31 PM | 1:41 PM | 1:54 PM |
| 2:00 PM | 2:13 PM | 2:23 PM | 2:24 PM | 2:30 PM | 2:31 PM | 2:41 PM | 2:54 PM |
| 3:00 PM | 3:13 PM | 3:23 PM | 3:24 PM | 3:30 PM | 3:31 PM | 3:41 PM | 3:54 PM |
| 4:00 PM | 4:13 PM | 4:23 PM | 4:24 PM | 4:30 PM | 4:31 PM | 4:41 PM | 4:54 PM |

When compared to the Red Route and Red Route Ext, the Blue Route has a higher ridership potential. This is due to the high level of visitation at Olana State Historic Site, the relatively high populations of Catskill and Hudson, the fact that the towns are only 20 minutes apart (24, if you include the jog to Olana), and the potential for transportation service to sites other than historic attractions (for example, the Columbia-Greene Community College or Columbia Memorial Hospital). This is important for understanding why the Blue Route is being considered as a distinct option that could exist independently, or in conjunction with the Red Route Ext in Scenario 4.

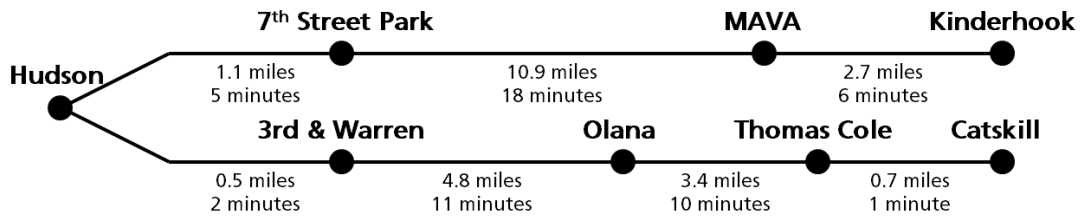
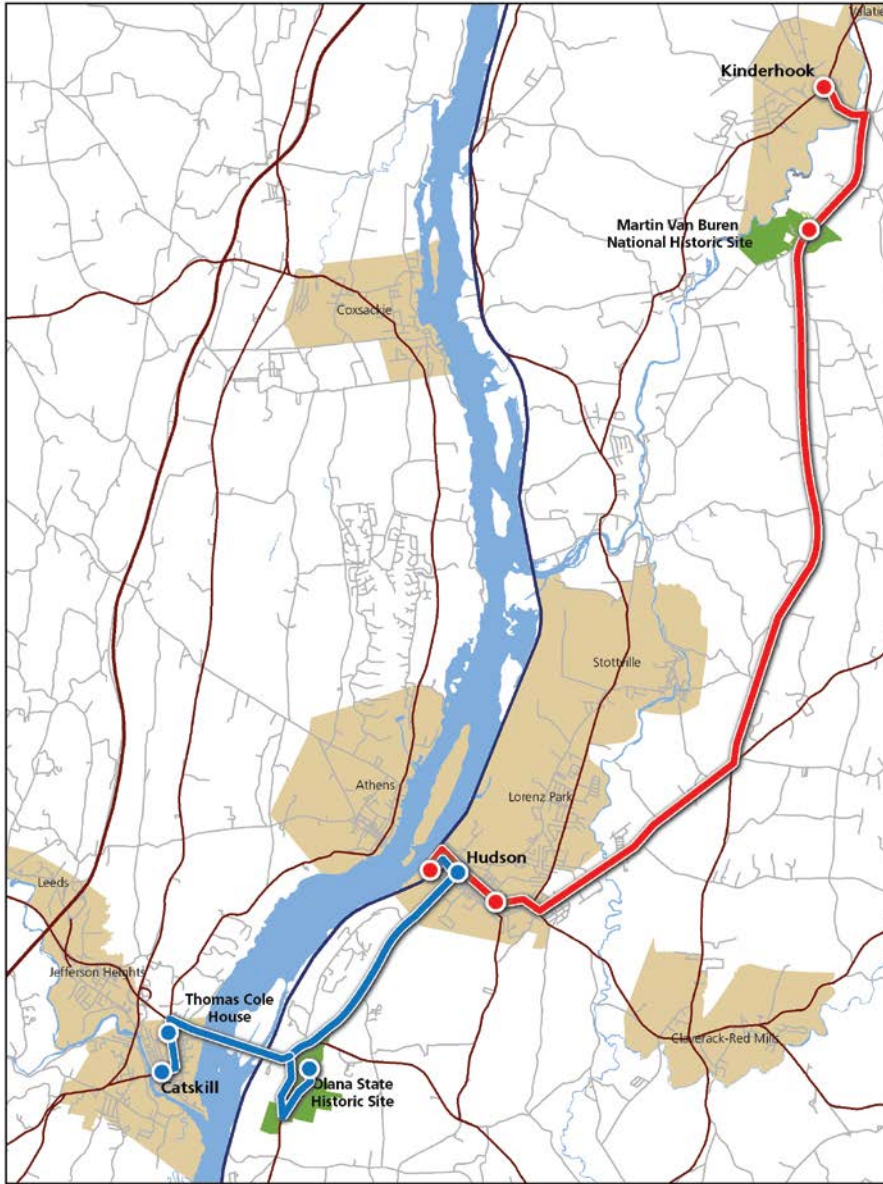
Because it may be thought of as a trunk route, the Blue Route will likely perform better with an emphasis on frequency (rather than scheduling, as with the Red Route). Given the travel time, a shuttle could operate one vehicle on one-hour intervals, departing Hudson once per hour on the hour, and departing Catskill once per hour at the thirty-minute mark (Table 3). If demand is such that the buses are regularly filled to capacity, an additional vehicle could be added, cutting the wait time in half. This type of schedule is easy for a visiting rider to understand.

Scenario 4: Hudson Area Shuttle (Red Route Ext and Blue Route together)

The Hudson Area Shuttle is an example of a name that could be used to capture one shuttle system that comprises two routes – the Red Route Ext from Hudson to Kinderhook, and the Blue Route from Hudson to Catskill (Figure 16). Based on the familiar concept that a whole is greater than the sum of its two parts, this scenario was developed for several reasons:

- The Blue Route is a trunk route, while the Red Route Ext is a feeder route. Service requirements will be different and can be adjusted for each route independently, yet both can work in conjunction with each other and other transportation modes.
- The Blue Route and the Red Route Ext travel in opposite directions from the Hudson train station, serving different municipalities and groups of destinations.
- Stakeholders will be able to concentrate operational efforts on the route that directly affects their organizations, while contributing to system-wide efforts in areas that are not route-specific. Stakeholder buy-in and decision-making can occur at the route level (pilot tests, vehicle types, operating details) or at the system level (branding, marketing, government coordination, community outreach, economic development).
- The success or failure of one route does not automatically mean that another route will succeed or fail.

Figure 16
Map of Scenario 4: Hudson Area Shuttle
 Source: Volpe Center



Scenario 5: All-inclusive County Tour

Scenario 5 is based on a model developed by the Dutchess County Tourism Department, for which they charter full-sized (50+ passenger) buses for day trips around the county. Each tour features three or four destinations, where passengers can get off the bus and participate in activities at the site. The most popular trips have an agricultural theme—called the Farm Fresh Link—where each destination is a working farm, and passengers are able to pick fruits, vegetables, or flowers throughout the day. The service uses an advance reservation system – sold as a package with train tickets through the Metro-North ticketing office – and picks passengers up from the Poughkeepsie train station on a Saturday or Sunday morning. At the end of the day, passengers are brought back to the train station, where the majority returns home to New York City.

The Dutchess County Department of Tourism's shuttle service is designed for those visitors who do not have access to a car. The program has grown in popularity, thanks in part to aggressive promotion of the service on the internet and in popular New York City -based publications, where the car-free population is quite large.

The advance reservation feature allows Dutchess County to dictate the size of the vehicle fleet on a day-to-day basis. Since the number of chartered buses depends on the number of reservations received, the County is able to rent the optimal number of buses and minimize empty seats. Another important advantage to the service is that it targets a large segment of the regional population (those who do not have access to a car) that previously was unable to access these types of sites. In fact, Dutchess County reports that at least one local farm attributes its survival during a difficult financial period to the Farm Fresh Link shuttle program.

As with every shuttle service, there are potential drawbacks to the operating model. For Dutchess County, a major drawback is bus downtime. Since the bus and driver are reserved for a full day, the county pays for a lot of time that the vehicle is parked and empty while passengers visit the various destinations. Also, the pre-determined route means that passengers have no hand in the design of their itinerary. Finally, this program is funded by a series of grants on a yearly basis, which means that each year new funding must be pursued. From year to year, Dutchess County may have to alter the transportation service and its activities in order to satisfy the mission of the grant that funds it.

Pilot test recommendations

Until there is clear, prolonged pressure on transportation resources at MVB NHS and nearby destinations, the Volpe Center recommends that MVB NHS focus on acquiring better data with regard to a shuttle service in and around Columbia County. A pilot program is an effective way to accomplish this, allowing the shuttle to be tested for a predetermined period of time while minimizing long-term stakeholder investment.

The report presents five recommended shuttle scenarios, all of which may be worthy of a pilot test. More than likely, the decision to implement one pilot test or another will depend on partnership interest from stakeholders and available funding for the desired pilot period. Based on seasonality, the team believes that a twelve-week pilot test would generate sufficient data, if operated during the region's high visitation period (mid-summer), but not during the peak period (October). Detailed planning and documentation of pilot efforts is essential to a project's success, and desired outcomes must be identified beforehand to ensure that the project meets its objectives. Each pilot test recommendation involves the following:

- **Operator:** The organization responsible for acquiring, driving, housing, and maintaining the shuttle vehicle.
- **Route description:** Starting/ending and ending points with major destination flights
- **Stakeholders:** Organizations potentially affected by the route and who may be interested forming a partnership to support the shuttle.
- **Vehicle acquisition:** Basic vehicle description and leasing method.
- **Operating expenses:** Basic estimate of expenses required to operate shuttle.
- **Estimated operating cost:** Total cost of operations for a twelve week period, based on 3- and 7-day weeks, where applicable.
- **Other potential costs:** Description (no dollar amounts) on additional costs that should be anticipated.
- **Fare:** Because the pilot test process intends to shed light on the maximum potential ridership for each shuttle scenario, the project team recommends that no fare be charged and that full funding for operations is secured prior to pilot test deployment. For reference purposes, the approximate cost per rider is identified for each shuttle scenario, assuming fifteen passengers per roundtrip. The cost per rider would increase if the number of passengers is less than fifteen.

Pilot test recommendation for Scenario 1: Red Route

Operator

- MVB NHS, driven by ranger with option for interpretation

Route Description

- One round trip per day from the Hudson train station, with service to MVB NHS

Stakeholders

- MVB NHS
- City of Hudson

Vehicle acquisition

- 12-24 passenger cutaway shuttle
- Leasing options include:
 - a) U.S. General Services Administration (GSA) on a month-to-month basis, or
 - b) Local commercial provider on a day-to-day basis.

Operating expenses

- Assumed lease rate
 - \$560.00 per month plus \$0.525 per mile (GSA)^{*}
 - \$700.00 per weekend or \$1000.00 per week (commercial provider)[†]
- Estimated fuel: \$4.00/gallon
- Estimated vehicle fuel economy: 12 miles/gallon
- Estimated mileage per day: 47.6 miles

Estimated operating cost for twelve weeks, three days per week

- \$3,151 (GSA)
 - Cost per rider (assuming 15 passengers per round trip): \$5.84
 - Cost per rider (assuming 5 passengers per round trip): \$17.51
- \$8,971 (commercial provider)
 - Cost per rider (assuming 15 passengers per round trip): \$4.13
 - Cost per rider (assuming 5 passengers per round trip): \$12.46

Estimated operating cost for twelve weeks, seven days per week (GSA)

- \$5,112 (GSA)
 - Cost per rider (assuming 15 passengers per round trip): \$4.06
 - Cost per rider (assuming 5 passengers per round trip): \$12.17
- \$12,571 (commercial provider)
 - Cost per rider (assuming 15 passengers per round trip): \$2.49
 - Cost per rider (assuming 5 passengers per round trip): \$7.48

Other potential significant costs

- Driver training
- Marketing and branding
- Reservation services
- Food and/or refreshments if included in package
- Vehicle cleaning (GSA)

Pilot test recommendation for Scenario 2: Red Route Ext

Operator

- MVB NHS, driven by ranger, with option for interpretation

Route Description

- One round trip per day from the Hudson train station, with service to Kinderhook from MVB NHS

Stakeholders

- MVB NHS
- City of Hudson
- Village of Kinderhook
- Columbia County Historical Society

* Based on 2012 GSA monthly and mileage rate. <http://www.gsa.gov/graphics/fas/2012CONUSRATEBULLETINFINAL.pdf>

[†] Based on scan of passenger van rental prices in the region. Expect costs to vary significantly, however, depending on length of rental, vehicle delivery charges, day vs. weekend rental, and mileage.

Vehicle acquisition

- 12-24 passenger cutaway shuttle
- Leasing options include:
 - a) U.S. General Services Administration (GSA) on a month-to-month basis, or
 - b) Local commercial provider on a day-to-day basis.

Estimated operating expense

- Assumed lease rate
 - \$560.00 per month plus \$0.525 per mile (GSA)[†]
 - \$700.00 per weekend or \$1000.00 per week (commercial provider)[†]
- Estimated fuel: \$4.00/gallon
- Estimated vehicle fuel economy: 12 miles/gallon
- Estimated mileage per day: 63.8 miles

Estimated operating cost for twelve weeks, three days per week

- \$3,651 (GSA)
 - Cost per rider (assuming 15 passengers per trip): \$6.76
 - Cost per rider (assuming 5 passengers per round trip): \$20.28
- \$9,165 (commercial provider)
 - Cost per rider (assuming 15 passengers per trip): \$5.84
 - Cost per rider (assuming 5 passengers per round trip): \$12.73

Estimated operating cost for twelve weeks, seven days per week

- \$6,280 (GSA)
 - Cost per rider (assuming 15 passengers per trip): \$4.98
 - Cost per rider (assuming 5 passengers per round trip): \$14.95
- \$11,786 (commercial provider)
 - Cost per rider (assuming 15 passengers per trip): \$2.34
 - Cost per rider (assuming 5 passengers per round trip): \$7.02

Other potential significant costs

- Driver training
- Marketing and branding
- Reservation services
- Food and/or refreshments if included in package
- Vehicle cleaning (with GSA lease)

Pilot test recommendation for Scenario 3: Blue Route

Operator

- Concessionaire

Route Description

- Seven round trips per day from the Hudson train station, with service to Olana State Historic Site, Thomas Cole National Historic Site, and the Village of Catskill

* Based on 2012 GSA monthly and mileage rate. <http://www.gsa.gov/graphics/fas/2012CONUSRATEBULLETINFINAL.pdf>

[†] Based on a scan of passenger van rental prices in the region. One would expect costs to vary significantly depending on season, length of rental, vehicle delivery charges, day versus weekend rental, and mileage.

Stakeholders

- City of Hudson
- Village of Catskill
- Olana State Historic Site
- Thomas Cole National Historic Site
- Other regional institutions, such as Columbia-Greene Community College or Columbia Memorial Hospital

Vehicle acquisition

- No acquisition required. 12-24 passenger cutaway shuttle, licensed, owned, driven, and maintained by concessionaire

Estimated operating expense

- \$61.68 per hour of operation⁷

Estimated operating cost for twelve weeks, three days per week

- \$17,764
 - Cost per rider (assuming 15 passengers per trip): \$3.66
 - Cost per rider (assuming 5 passengers per round trip): \$10.96

Estimated operating cost for twelve weeks, seven days per week

- \$41,449
 - Cost per rider (assuming 15 passengers per trip): \$3.66
 - Cost per rider (assuming 5 passengers per round trip): \$10.96

Other potential significant costs

- Marketing and branding

Pilot test recommendation for Scenario 4: Blue Route + Red Route Ext

Recognizing that it would be the most challenging to coordinate, the project team believes Scenario 4 is the ideal option for a pilot project. It entails concurrent testing of Scenarios 2 and 3, with an additional system-wide marketing and branding component.

The recommendations, operating details, and estimated costs of this scenario are simply a combination of Scenarios 2 and 3 discussed above.

Pilot test recommendation for Scenario 5: All-inclusive County Tour

Operator

- Concessionaire (charter bus company), with option for interpretation by park staff

Route Description

- Varies. Includes travel from the Hudson train station to three or four destinations in the county. Destinations may be grouped thematically.

Stakeholders

- Columbia County Department of Tourism
- Any potential destination

⁷ *Federal Lands Alternative Transportation Systems Study: Summary of National ATS Needs*, p. A-3. Operating figure is adjusted to 2011 dollars based on the 2001 report. http://www.fta.dot.gov/documents/3039_study.pdf

Vehicle acquisition

- 50+ passenger bus. Licensed, owned, driven, and maintained by charter bus company.

Estimated operating expense

- \$1000 per day¹

Estimated operating cost for twelve weeks, two days per week

- \$24,000
 - Cost per rider (assuming 50 passengers per trip): \$20

Other potential significant costs

- Marketing and branding
- Reservation services
- Food and/or refreshments if included in package

Pilot funding opportunities

There are a variety of potential funding sources that MVBNHS and its local partners could apply to in order to pursue pilot opportunities discussed in this report. Preliminary information about several potential sources is provided below.

Paul S. Sarbanes Transit in Parks Program (TRIP)

Congress established the Paul S. Sarbanes Transit in Parks Program, formerly Alternative Transportation in Parks and Public Lands (ATPPL) Program, to enhance the protection of national parks and federal lands and increase the enjoyment of those visiting them. Administered by the Federal Transit Administration in partnership with the Department of the Interior and the Forest Service, the program funds capital and planning expenses for alternative transportation systems such as shuttle buses and bicycle trails in national parks and public lands. The goals of the program are to conserve natural, historical, and cultural resources; reduce congestion and pollution; improve visitor mobility and accessibility; enhance visitor experience; and ensure access to all, including persons with disabilities.

Funds may be used for projects that are located off-site, if there is an obvious connection to how they support access to the unit by alternate transportation. Federal lands units may partner with local governments or other entities in applying for funds. Funds are only available for project planning and capital expense; funds are not available for vehicle/system operation and maintenance. For more information see:

http://www.fta.dot.gov/funding/grants/grants_financing_6106.html

Public Lands Highways Discretionary (PLHD)

The Public Lands Highways – Discretionary (PLHD) Program provides funding for transportation planning, research, and engineering and construction of, highways, roads, parkways, and transit facilities that are within, adjacent to, or provide access to Indian reservations and federal public lands, including national parks, refuges, forests, recreation areas, and grasslands. PLH funds can be used for any type of Title 23 transportation project providing access to or within federal or Indian lands and may be used for the State/local matching share for apportioned federal-aid Highway Funds, as described in 23 USC 120(l). The program is administered by the federal Highway Administration's Federal Lands Highway Office. Eligible activities include operations and maintenance of transit facilities, parking areas, and provisions for pedestrians and bicycles. For more information see: <http://flh.fhwa.dot.gov/programs/plh/discretionary/>

¹ Figure based on examples at <http://www.busrates.com/buses/Bus-Types/>. The national average price for a charter deluxe motor coach is \$943 per day (June 2011).

Surface Transportation Program (STP)

The Surface Transportation Program provides flexible funding that may be used by states and localities for projects on any federal-aid highway, including the National Highway System, bridge projects on any public road, transit capital projects, and intra-city and inter-city bus terminals and facilities. The federal share is generally 80 percent, requiring a 20 percent local match. For more information see: <http://www.fhwa.dot.gov/safetealu/factsheets/stp.htm>

Park Roads and Parkways (PRP)

The Park Roads and Parkways Program (PRP) provides funding for the design, construction, reconstruction, maintenance, or improvement of refuge roads and bridges that provide access to or are within a unit of the National Park Service (NPS). PRP funds can be used for any type of Title 23 transportation project providing access to or within NPS lands and may be used for the state/local matching share for apportioned federal-aid Highway Funds, as described in 23 USC 120(l). Eligible activities include operations and maintenance of transit facilities, parking areas, and provisions for pedestrians and bicycles. Typically the backlog of basic maintenance of existing roads requires all of the allotted funding for this program. For more information see: <http://flh.fhwa.dot.gov/programs/prp/>

Conclusion

ATS offers an opportunity to bring visitors to MVB NHS by means other than driving. However, it must be acknowledged that travel destinations in and around Columbia County are all quite easily accessed by private automobile. All of the common car-related problems – limited parking, traffic congestion, restricted access – are issues rarely encountered by visitors to MVB NHS.

Consequently, the primary benefit of a shuttle to MVB NHS is to attract visitors who do not have access to a car. While there are undoubtedly local residents who could benefit from this type of service, the primary target user is coming from the New York City region, where a significant portion of the population does not have access to a private vehicle.

Unfortunately, there is little more than anecdotal data to suggest enough demand from the out-of-town car-free demographic to support a shuttle system. The anecdotal data does suggest, however, that there is some demand, and that there is the potential for greater demand if the service existed and was thoroughly marketed to prospective users.

Based on these indications, the Volpe Center suggests five potential scenarios for pilot testing a shuttle service. The purpose of the pilot tests would be to gather demand data while minimizing investment in a full shuttle program. Each scenario depends on stakeholders who are interested in participating in the pilot program and are in keeping with a greater vision for improved alternative transportation throughout the entire Hudson Valley region.

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14. ABSTRACT
The Martin Van Buren National Historic Site (MVBNHS) Alternative Transportation Feasibility Study examines the feasibility of alternative transportation system (ATS) service to MVBNHS. The report investigates opportunities for a shuttle carrying visitors from the Amtrak station in Hudson to MVBNHS in Kinderhook, as well as more extensive service to several destinations in and around Columbia County. Based on the opportunities and challenges presented in this report, the report identifies five potential scenarios for pilot testing a shuttle service. The viability of each scenario depends on the participation of other regional destinations in supporting a new ATS. The report also presents a vision for improved ATS throughout the Hudson Valley region, where connectivity between counties and traveler destinations is currently limited.

15. SUBJECT TERMS
Martin Van Buren National Historic Site; MAVA; NPS; alternative transportation; shuttle; Hudson, New York; Kinderhook, New York; Columbia County, New York; Hudson Valley; rural transit; regional transit

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