



Mississippi National River and Recreation Area

Shuttle Market Analysis



Clockwise from top left: Coldwater Spring; Minnehaha Falls Regional Park; Minnesota Valley National Wildlife Refuge Visitor Center

Source: National Park Service

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Report Notes

This report was prepared by the U.S. Department of Transportation John A. Volpe National Transportation Systems Center, in Cambridge, Massachusetts. The Volpe Center was led by Ben Rasmussen of the Transportation Planning Division and included Heather Richardson and Jonathan Frazier of the Transportation Planning Division, and Jared Fijalkowski of the Organizational Performance Division.

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Definitions

The following terms are used in this report:

Adams NHP	Adams National Historic Park
ELRO	Eleanor Roosevelt National Historic Site
GGNRA	Golden Gate National Recreation Area
HOFR	Home of Franklin Roosevelt
MISS	Mississippi National River and Recreation Area
NPS	National Park Service
VAMA	Vanderbilt Mansion
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled

Introduction

Since 2011, the Mississippi National River and Recreation Area (MISS) has worked with the U.S. Department of Transportation John A. Volpe Center National Transportation Systems Center (Volpe Center) to identify, develop, promote, and expand the alternative transportation system that serves the park. The goal of these activities is to reduce vehicles in the park and to increase the number of visitors that walk, bicycle, and take transit to and within the park.

One of the Volpe Center's tasks is to plan for a shuttle service to and within the park that would allow visitors to access key destinations without the use of a car. The Volpe Center completed this plan in the winter of 2014. The plan proposes a "Confluence Shuttle," which would pilot shuttle service to several park and partner destinations near the confluence of the Mississippi and Minnesota Rivers. The park and partners were interested in the shuttle but needed more information before funding the service. Accordingly, the park asked the Volpe Center to perform an additional study to estimate ridership for the Confluence Shuttle and determine how, in general terms, ridership is impacted by marketing as experienced by other parks with similar shuttle service in comparable urban areas.

This document provides marketing information and ridership estimates for the Confluence Shuttle. The Volpe Center compiled this document by interviewing National Park Service (NPS) and transportation provider staff at four sites around the country that are running similar transit services. The four market study parks were:

- Adams National Historical Park (Adams NHP) in Quincy, MA
- The Home of Franklin D. Roosevelt National Historic Site (HOFR) in Hyde Park, NY
- New Bedford Whaling National Historical Park (NEBE) in New Bedford, MA
- Presidio Trust, which is within the Golden Gate National Recreational Area (GGNRA) in San Francisco, CA, but operates independently

These units provide full marketing to very little marketing of their shuttle services. As expected, the units that carry out more robust marketing of their shuttle service generally experience greater ridership than those with little to no marketing of the service. It is interesting to note some services have successfully branded their vehicles to become the most effective marketing source for the service. The case studies of the units below identify where on the spectrum of marketing each falls and how marketing has impacted ridership. The results are used to estimate ridership for the MISS shuttle based on the level of marketing deployed.

Methodology

Peer Interviews

With more than 150 transit services operating in NPS units, there are several potential peers for MISS to look to for lessons learned about operating a shuttle service in an urban area and between destinations of related interest. The best source for information on these services is the staff responsible for their operations or management. These individuals have already created and/or are involved in the operation and marketing of services similar to what is proposed at MISS. Their successes and challenges can be used to ensure that the Confluence Shuttle is as successful as possible. The Volpe Center selected peer services based on these criteria:

- Urban or suburban contexts, as opposed to rural wild lands parks
- Close partnerships with local agencies and organizations
- Transit service designed to move visitors between several destinations, as opposed to parking shuttles
- Service is voluntary and competes well with driving personal vehicles

The Volpe Center interviewed staff familiar with the peer shuttle services to learn what has and has not worked for their services. The focus of the interviews was marketing, but the Volpe Center and peers also discussed initial start-up, funding, and other issues. Interviewees sent additional materials and data to help illustrate this document and to inform ridership estimates.

Ridership Estimating Methodology

A ridership estimate is an early step to determine whether even a pilot service is worth implementing. An estimate that is too high can encourage the implementation of a pilot shuttle that has lower-than-expected ridership, using scarce dollars that could be spent on other park improvements. Conversely, a ridership estimate that is too low would result in poor service quality as riders are left behind at stops and experience crowded buses.

Ridership on transit systems serving public lands generally ranges between five and 15 percent of all visitors to that unit. This average is based on ridership on voluntary systems from several agencies, mostly serving single rural wild lands parks. However, the facts that MISS is not an entry gate park, the confluence shuttle intends to connect several different recreational areas and locations, and its urban context make this estimate less than wholly reliable. Accordingly, the Volpe Center used a different methodology to provide a range of estimated ridership that accounts for different levels of marketing as well as the percentage of visitors riding shuttles at parks considered peers for the MISS's Confluence Shuttle.

The Volpe Center collected total visitation and ridership data from each of the peer transit systems interviewed to determine an approximate percent of visitors using the shuttle service. The Volpe Center refers to this as "ridership share:" the greater the percent of visitors using the shuttle, the higher the ridership share. From there, the Volpe Center looked at the nuances of the individual services, including marketing efforts, to try to understand what was contributing to visitors' use of the transit service. The analysis led to a spectrum of shuttle marketing (Figure 1). The peer unit data is analyzed in the following sections and placed upon the spectrum in the conclusion.

Figure 1: Marketing Spectrum

Source: U.S. DOT Volpe Center



One purpose of this analysis is to help estimate potential ridership of the MISS Confluence Shuttle across a range of marketing levels of effort. In order to establish an estimate of ridership, the analysis must start with current recreational visitation levels from which ridership will be drawn (see Table 1). The international airport and Mall of America pose a unique challenge in using a formula to estimate ridership since there are few examples of shuttle services between these types of locations and recreational destinations. Accordingly, the ridership estimate will primarily be determined using a percentage of recreational visitation from the recreational areas. Additional ridership will be added for the Mall of America and airport but at a smaller rate that is informed to the degree possible by existing data available. The range of estimates based on the degree of marketing will be discussed in the conclusion.

Table 1: 2014 Visitation Data for MISS Confluence Shuttle Proposed Destinations

Source: U.S. DOT Volpe Center

Location	Seasonal Visitation	Visitation Data Extent	Average/Month
Mall of America	13,500,000	June to August	4,500,000
Minnesota Valley NWR	10,967	May to August	2,742
Airport	6,468,622 [†]	May to August	1,617,156
Ft Snelling State Park*	139,494	May to August	34,874
Historic Ft Snelling Fort	33,832	June to August	11,277
Coldwater Spring	6,000	May to August	1,500
Minnehaha*	691,800	June to August	230,600
TOTAL	20,844,715		6,396,648
Recreational Total	882,093		280,993

[†]Enplanements in May to August 2014

*2013 data

Case Studies

Adams National Historic Park – Historic Trolley

Service Overview

The Adams National Historic Park (Adams NHP) in Quincy, MA, includes a visitor center, the John Adams Birthplace, the John Quincy Adams Birthplace, and the Old House at Peace field. The park lands also include the 1870 Stone Library, the 1873 Adams Carriage House, and 12 acres of historic grounds. There is a free trolley shuttle service between the visitor center and the three historic houses from April 19 to November 10 (see Figure 2). Park trolley riders receive guided tours at each of the historic houses and remain with their designated group throughout the length of their visit. The trolleys leave the visitor center approximately every thirty minutes on the quarter-hour. Visitors receive free validated parking at the Presidents Place Parking Garage adjacent to the visitor center, and park visitors are encouraged to leave their cars in favor of the trolley service.

Adams NHP started the historic trolley shuttle service in 1993 to improve visitor access to the park sites and reduce congestion in downtown Quincy. The park piloted an expansion of the existing trolley service in partnership with local stakeholders to include connections to Harbor Express ferry service (to Boston) at Fore River, Marina Bay, the Best Western Adams Inn, and the Boston Marriott Quincy during part of the 2005 season and all of the 2006 season. Its purpose was to provide a car-free link between the hotels, Adams NHP, the Boston Harbor Islands and other tourist attractions in Quincy. These additional stops were served Friday through Sunday on the shoulder seasons (mid-April to mid-June, mid-September to mid-October) and daily during the peak season (mid-June through mid-September). The park evaluated the 2006 operating season and found the expanded service was not as successful as the internal Adams NHP service, handling only 15-20 percent of the ridership that the internal service carried at a cost of approximately \$140 per rider. The pilot expansion ended in 2009 and the trolley service continued to operate on its original route between Adams NHP locations. The park believes that the low ridership on the pilot expansion was due at least in part to poor communications/marketing about the service expansion.

Adams NHP owns the three trolleys used for its service and contracts out operations and maintenance to Brush Hill Tours (Figure 3). During the off season, the vehicles are stored on-site at the park to reduce winter storage costs. The trolleys are nearing the end of their useful lives and have had maintenance problems with the hydraulic lifts that make them wheelchair accessible.

Figure 2: Adams NHP Historic Trolley Route

Source: U.S. DOT Volpe Center

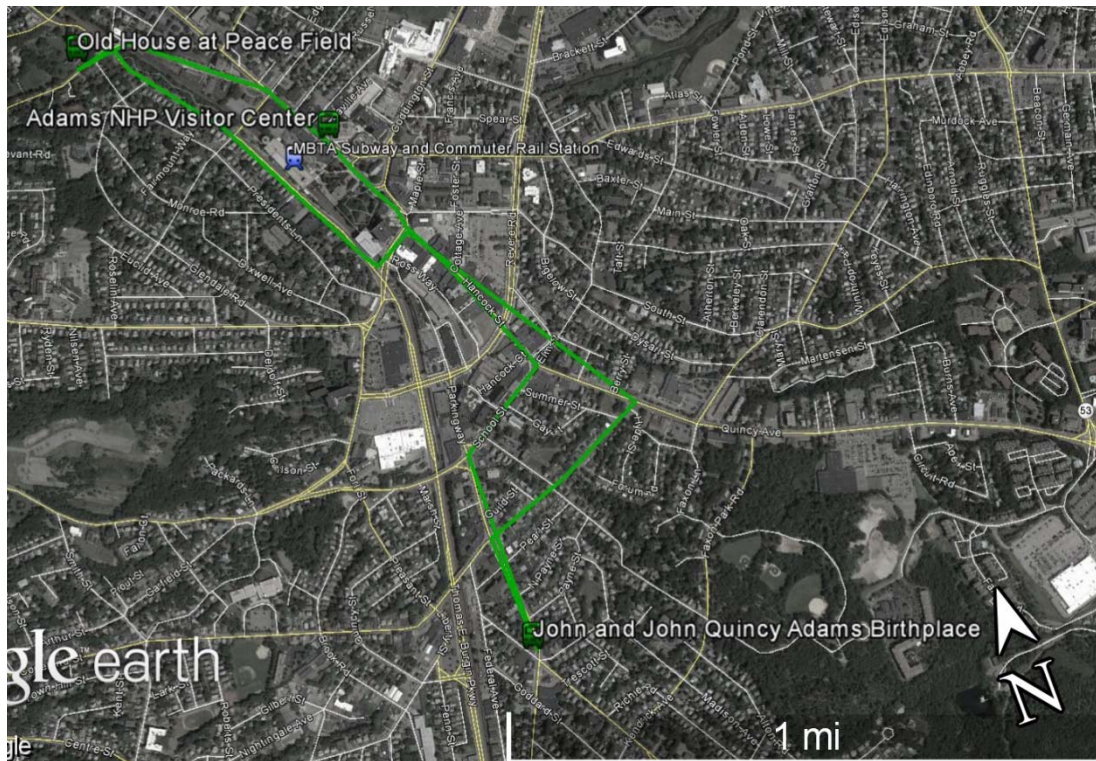


Figure 3: Adams NHP Historic Trolley and Trolley Stop

Source: U.S. DOT Volpe Center



Ridership and Factors Impacting Ridership

In 2013, 285,501 individuals visited Adams Historic Park. Of these visitors, 62,679 or about 22 percent of visitors rode the trolley (Table 2). It is assumed that other visitors walked, used public transit, or drove their own vehicles. The City of Quincy has limited street parking, especially near the park's destinations. The trolley offers visitors the opportunity to park once and explore the area without spending additional time and money to look for parking. The visitor center is located across the street from the Quincy Center MBTA subway station, which enables car-free access from downtown Boston and connecting suburbs. Table 2 presents the operational details of the Adams Historic Trolley.

Table 2: Adams Historic Trolley Operational Details

Source: Adams National Historic Park

Operating Season	Mid-April to mid-November
Days and Times	Daily from 9:00 AM to 5:15 PM
Service Area	Three NPS sites in Quincy, MA
Transit Connection	Quincy Center red line transit station Three commuter rail lines Numerous public bus lines
Route Duration	12-15 minutes; 2.5 hours inclusive of tours
Service Frequency	30 minutes
Vehicle Capacity	25 passengers
Fare or Fee	Entrance fee of \$5 per person (16+ years old)
Cost per Rider	Not Available
2014 Ridership	68,979 (335/day)
2013 Ridership	62,679 (304/day)
2012 Ridership	69,906 (339/day)

Marketing

The Volpe Center assisted Adams NHP in developing a marketing plan in 2005 as part of the pilot service expansion. The plan included strategies for the park's website (?), shuttle signage, print materials, and public outreach; however, it is not clear to what extent the marketing plan was implemented. The evaluation of the pilot documented several lessons learned about marketing of the expanded service:¹

- Most trolley passengers were unlikely to be familiar with the area; a map and/or information about the locations of the stops would have been helpful.
- A brochure and/or a rack card were not available on the trolleys themselves, which could have been a useful distribution method for trolley information.
- Additional signage at each stop would have helped identify when and where potential passengers could board the trolleys. The fact that the service was free could have been emphasized more to increase ridership.
- Signs distinguishing between the "Harbor Express" or "Marina Bay" trolleys were handwritten and hard to read; a large logo prominently displayed on the vehicles along with a professionally printed sign illustrating the loop may have provided more clarity.
- A greater web presence on the websites of Adams NHP and its partners would have helped with promotion of the trolley service.

¹ U.S. DOT Volpe Center. 2009. *Adams National Historical Park Expanded Transit Service Evaluation*. DOT-VNTSC-NPS-10-01. <http://ntl.bts.gov/lib/37000/37800/37850/DOT-VNTSC-NPS-10-01.pdf>

Today, the strongest marketing impact is the visual presence of the trolley. Its branding is distinctive and advertises the park. Adams NHP engages in several community events with the trolley throughout the year. The trolleys are used to and they are included in the annual Flag Day Parade, which draws more than 10,000 spectators. Adams NHP often runs the trolleys in the Christmas parade as well. Local partners participate in promoting the trolleys by carrying the Adams NHP brochures and sending visitors to the park. The local partners include Discover Quincy (the local tourism board), Abigail Adams Historical Society, the Quincy school system, Weymouth Historical Society, Crane library, Dorothy Quincy Homestead, Boston Harbor Islands, and the Massachusetts Historical Society. Adams NHP staff noted that some schools use the trolley for trips to the park; however, there are issues with seating capacity for large groups since the capacity of each trolley is 25 passengers.

Lessons Learned

Adams NHP has learned many lessons in its 22 years of operating its historic trolley service. A key component to successful service has been strong communication and partnerships. Adams NHP works closely with its service contractor to communicate needs and expectations for the service to ensure a positive visitor experience. The park has numerous partners with common missions, including other historic sites and tourist sites. It would be beneficial to also have stronger partnerships with local public transit, which could establish better wayfinding between the park and public transit stations.

Adams NHP learned from the pilot expansion experience that it is important to have an implementation plan for the marketing strategy worked out with partners in advance of implementing the service. Parks are limited in what they are able to do for marketing. Partnerships with stakeholders that are able to provide marketing assistance are helpful when all parties are in communication about their roles and responsibilities.

Finally, when operating a service using a contract, Adams NHP emphasizes the need for active engagement with the contractor. It ensures the park's needs are being met and reduces the possibility of vendor complacency with regard to maintenance and driver quality.

Home of Franklin D. Roosevelt National Historic Site – Roosevelt Ride

Service Overview

The Roosevelt Ride shuttle service started in 2001 when the NPS acquired the Top Cottage site as part of HOFR. NPS wanted to preserve the intimacy of a small group setting that President Roosevelt had fostered for his personal retreat. A shuttle service that provided exclusive access to Top Cottage enabled NPS to manage crowds as well as minimize traffic impacts for a residential housing development that was already established between the Wallace Center at HOFR and Top Cottage. (The only other access to Top Cottage is by a steep 1.5 mile hiking trail from Val-Kill.) The NPS started Roosevelt Ride in 2001 as a one-year pilot service with one vehicle that the NPS operated through a service contract. Upon the success of the initial service, the NPS expanded the service in subsequent years to provide access to the Vanderbilt Mansion (VAMA) and Val-Kill sites,² each of which is a separate NPS unit. The NPS also expanded the route to serve the Poughkeepsie Train Station on the Metro-North Hudson commuter line, enabling visitors from New York City to reach the site without the use of a car. When the service contract expired in 2009, NPS chose not to renew it. Instead the park purchased the current 28-passenger hybrid diesel bus (Figure 4) and began operating the service with park staff.

² Val-Kill is part of the Eleanor Roosevelt National Historic Site (ELRO).

Figure 4: Roosevelt Ride Bus

Source: Sandra Foyt (<http://albanykid.com/2013/05/10/hyde-park-ny/>)



The Roosevelt Ride operates daily for free from 10:45am to 6:00pm May through October. Service starts with the arrival of the Metro-North train from Grand Central Station at 10:37am.³ The shuttle takes visitors from the train station to Wallace Center at HOFR. From there it continues on to Top Cottage via Val-Kill. The shuttle circulates between Wallace Center and the three destinations at various times throughout the day (see Table 3). Top Cottage has six stops per day on the half hour. Val-Kill has five stops per day while Vanderbilt Mansion has two stops. At the end of the day, it departs the Wallace Center at 5:00pm to return to the train station for passengers to catch the 5:40pm Metro-North train back to Grand Central Station. Table 4 presents the operational details and Figure 5 shows the stops and route of the Roosevelt Ride.

Table 3: Roosevelt Ride 2014 Schedule

Source: Home of Franklin D. Roosevelt NHS

Metro North Station	Wallace Center	Val-Kill	Top Cottage	Vanderbilt	Val-Kill	Wallace Center
10:45 PM	11:10 am	11:20 am	11:30 am	-	-	11:50 am
-	-	-	12:30 pm	-	12:40 pm	12:50 pm
-	1:10 pm	1:20 pm	1:30 pm	1:45 pm	-	1:55 pm
-	2:10 pm	-	2:30 pm	-	2:40 pm	2:50 pm
-	3:10 pm	3:20 pm	3:30 pm	3:45 pm	-	3:55 pm
5:20 pm	4:10 pm	-	4:30 pm	-	4:40 pm	4:50 pm

³ This describes the schedule in service for 2014 operating season; which may change from year to year.

Table 4: Roosevelt Ride Operational Details

Source: Home of Franklin D. Roosevelt NHS

Operating Season	May to October
Days and Times	Daily from 10:45 AM to 5:20 PM
Service Area	Poughkeepsie Train Station, HOFR, Top Cottage, Val-Kill, Vanderbilt Mansion
Route Duration	Train station to HOFR – 10 minutes (5 miles) HOFR – Val-Kill – Top Cottage - VAMA – 35 minutes (14 miles) HOFR – Top Cottage – 20 minutes (8 miles)
Transit Connection	Poughkeepsie Train Station (Metro-North and Amtrak trains)
Service Frequency	See Table 3
Vehicle Capacity	28 passengers
Fare or Fee	Entrance fee(s) for individuals 16+ in age: HOFR/FDR Library (\$18), Top Cottage (\$10) Val-Kill (\$10), VAMA (\$10)
Cost per Rider	Estimated around \$5
2014 Ridership	22,058 (122/day)
2013 Ridership	6,952* (38/day)
2012 Ridership	19,791 (109/day)

*Government sequestration eliminated the run to Top Cottage

Ridership and Factors Impacting Ridership

Ridership on the Roosevelt Ride is primarily driven by access to Top Cottage, since it provides exclusive vehicle access to the site from the Wallace Center at HOFR. In 2013, a government sequestration required HOFR to limit the shuttle service by eliminating the stop at Top Cottage. Ridership for that year plummeted by approximately two-thirds (see Table 4). Ridership the following year quickly rebounded when the NPS reinstated service to Top Cottage.

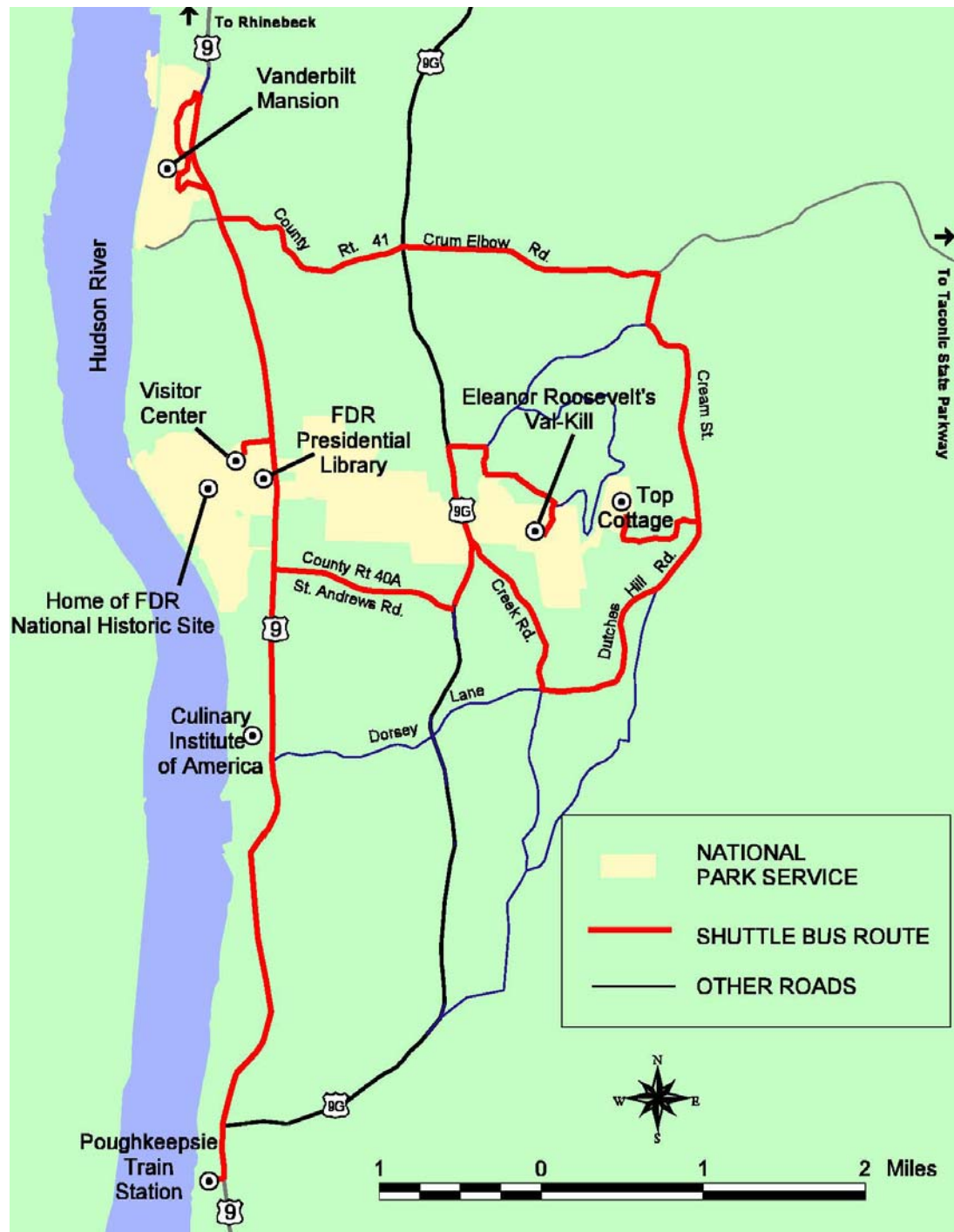
Shuttle ridership for 2014 was also lower than it could have been due to mechanical issues with the shuttle bus that severely reduced service capacity. When the bus requires maintenance, it is replaced with two government minivans that each has a capacity of six. The overall capacity of the shuttle is thus reduced from 28 to 12. The bus had several maintenance issues over the 2014 operating season, including being out of service in late October 2014 when there is typically a spike in visitation related to the fall foliage season. The shuttle's unique hybrid system limits maintenance providers to a small list of specialists and further increases the time out of service. Fortunately, HOFR received federal grant funding for the purchase of a second backup vehicle that will arrive for the 2015 operating season. Beyond 2015, the second vehicle could be used as a way to expand service but the NPS has yet to make a final decision on this possibility.

It is challenging to quantitatively determine how the Roosevelt Ride impacts visitation and access to the different NPS units that it serves. While the percentage of visitors using the shuttle is a useful metric for understanding the benefits of a shuttle system, the structure of the Roosevelt Ride serving different NPS units with varying degrees of accessibility makes this metric less clear. Of all visitors to HOFR, Val-Kill, and VAMA in 2014, about three percent of visitors used the shuttle;⁴ however, this is not an accurate representation of use because 100 percent of visitors to Top Cottage used the shuttle. The shuttle provides sole access to one portion of the site while visitors are able to drive to other areas, making it difficult to use overall visitation compared to ridership as a metric of demand for the service.

⁴ Calculated by dividing total 2014 ridership by the sum of 2014 visitation of the three units

Figure 5: Locations on Roosevelt Ride Route

Source: HOFR



Marketing

Marketing for the Roosevelt Ride consists of participation in travel conferences, hosting travel writers, printing and distributing schedule brochures, information via social media and the park's website, and partnering with local businesses as well as the Dutchess County Tourism, Inc. (DCT), the local tourism bureau. Park representatives participate in annual travel conferences in New York City, Washington, DC,

and Connecticut as well as the Metro-North “One Day Getaway” event in New York City (separate from the travel conference). HOFR partners with Metro-North and DCT to host a travel writers tour every April. Metro-North provides free train tickets up to Poughkeepsie where the writers are picked up in the Roosevelt Ride and taken to HOFR, ELRO, and VAMA. The NPS’s partners provide writers lunch and tours of the NPS sites. Several of the writers have in turn written articles about the experience. One such article, published in the New York Times in May 2012, resulted in a noticeable increase in visitation that year.⁵ The park contracts with a vendor to print and distribute a brochure and schedule for the Roosevelt Ride that is distributed throughout New York City, including in Grand Central Station where the Metro-North trains originate. HOFR also advertises in Metro-North’s One Day Getaway brochure. Finally, the park is one of two NPS sites to be associated with a presidential library and coordinates with the FDR Presidential Library on some activities. The presidential library is located between the Wallace visitor center and Home of FDR.

Overall, HOFR spends approximately \$6,000 per year on marketing across the various activities. The cost of participating in the travel conferences is offset by partnering with DCT, Walkway Over the Hudson, Rhinebeck Area Chamber of Commerce, and local restaurants. The partners split the registration fees and distribute materials together as a regional destination. The majority of the budget is spent on distribution of the schedules through the marketing contract.

Park staff could not attribute one marketing strategy as being significantly more successful than the others at increasing visitation. The social media tools, such as posts to Facebook and Twitter (@NPS_HydePark), are considered to be working well based on comments and feedback. It is unclear how effective distribution of the printed schedule has been because there are no feedback mechanisms for tracking how visitors heard about the park units.

Lessons Learned

After starting out as a small pilot program from the Wallace Center to Top Cottage, the NPS expanded service to become a valuable option for visitors to explore several park units without a car. In the five years since NPS became the owner and operator of the system, the primary lessons learned revolve around vehicle maintenance. NPS staff emphasized the need for a maintenance plan, which includes having a backup vehicle when the primary bus requires maintenance. The plan also includes consideration of who is available to perform maintenance on the vehicle and where they are located as part of the vehicle selection process.

New Bedford Whaling National Historic Park – NB Line

Service Overview

The New Bedford Whaling National Historic Park (NEBE) preserves a wide range of artifacts, places, and stories to interpret the whaling history of New Bedford, MA. Similar to MISS, the NPS unit itself owns and directly manages only a few parcels of the total land designated as the park. The park was designated by Congress in 1996 to help coordinate the activities and collections of several historical societies and museums.

Using transit to connect these sites was an early priority for the park and its partners. The City of New Bedford wished to see a decrease in traffic and street parking by park visitors. The NPS funded a shuttle planning study which proposed two circulator routes: one to take visitors from a parking garage on the outskirts of downtown New Bedford into an area with park and partner sites downtown and the other to serve two outlying destinations: a zoo and a historic coastal fort that now hosts a popular beach (Figure 6).

⁵ Rothstein, Edward. May 3, 2012. “Next Stop, Modern Presidency.” *New York Times*.
<http://www.nytimes.com/2012/05/04/arts/roosevelt-ride-to-hyde-park-and-the-modern-presidency.html>

The park and the City of New Bedford used the plan to secure grant funding to purchase shuttle buses. The buses were operated by the Southeastern Regional Transit Authority (SRTA) through a cooperative agreement with the City of New Bedford.

Figure 6: NB Line Route Map and Stop List

Source: New Bedford Whaling National Historic Park



SRTA and the park launched a pilot service called the NB Line using the new buses in 2012. Riders were charged a \$1 fare to ride the shuttle, which ran from 10:00 am to 6:00 pm. Service ran seven days a week during the summer peak season and on weekends during the spring and fall shoulder months. The park

modified NB Line a few times based on ridership, cutting service to the zoo and adding service during special events on Thursday evenings.

The shuttle service did not attract enough riders to warrant permanent implementation and was cancelled at the end of the 2014 season. A new administration at the City of New Bedford was less interested in continuing the cooperative agreement to run the shuttle beyond the pilot phase than the administration that began the service. Additionally, park staff that were key to the NB Line’s initiation and operations have since left. The buses remain available to the park for occasional special events, but no replacement service is planned.

Ridership and Factors Impacting Ridership

Ridership was fairly light throughout the pilot period, hence the pilot was cancelled. There were 276,374 visitors to the park in 2013 with only 1,531 shuttle riders, which is about 0.01 percent of total visitation. Low ridership meant that the cost per passenger was approximately \$25. Especially damaging to the pilot was the fact that only a small share of the already few riders were using the shuttle to visit the park; most users were riding as an alternative to SRTA. The NB Line was cheaper than SRTA service and ran on Sundays, unlike SRTA. Table 5 presents the operational details of the NB Line.

Table 5: NB Line Operational Details

Source: New Bedford Whaling NHS

Operating Season	Memorial Day to early October
Days and Times	Weekends May-June, September-October Daily July-August 10:00 AM to 6:00 PM
Service Area	Historical Park and downtown New Bedford
Route Duration	Downtown Route: 16 minutes Fort Taber Route: 23 minutes
Transit Connection	VC within 5 blocks of SRTA bus terminal
Service Frequency	Downtown Route: 20 min Fort Taber Route: 30 min
Vehicle Capacity	18 passengers
Fare or Fee	\$1 fare; children and students free
Cost per Rider	Approximately \$25
2014 Ridership*	2,875 (31/day; 94-day schedule)
2013 Ridership*	1,531 (17/day; 91-Day schedule)
2012 Ridership*	1,385 (19/day; 73-day schedule)

* Ridership counts do not include children under 12 who ride for free.

Marketing

Students at the nearby University of Massachusetts Dartmouth drafted an initial marketing plan. The plan called for outreach through a wide variety of media. Flyers and posters established a print presence, but the park’s limited marketing budget of \$2,500 meant that print runs were fairly small.

The shuttle had an online presence including a page on the park’s website at <http://www.nps.gov/nebe/planyourvisit/nb-line.htm> and a Facebook page at <https://www.facebook.com/NBLINEShuttle>. The park page was used to share basic service details while the Facebook page was frequently updated with special events and things to do in downtown New Bedford.

Shuttles were initially unbranded, which resulted in some visitor confusion with general SRTA transit service. Several months into the service, the park paid for SRTA to apply full vinyl wraps with bright branding and information on the exterior of the buses as seen in Figure 7. The SRTA-provided shuttle

drivers provided some information about the destinations, but tourist riders reported that they wanted more of an interpretive tour while riding the shuttle.

Figure 7: NB Line Branding

Source: New Bedford Whaling National Historic Park



Lessons Learned

The NB Line was an idea discussed for over a decade, but a pilot service demonstrated the difficulties in sustaining a transit service. The pilot was terminated due to both a lack of use and a lack of support.

The service area, with the exception of stops at the zoo and the beach, was compact and only covered a 13-block area. The shuttle's main competition for mode share was walking, which is an attractive alternative in a historic downtown area during the fair weather of the summer tourist season. Most riders were thus using the shuttle as an alternative to SRTA rather than to visit the park, which increased tensions with SRTA.

Support for the shuttle waned between the time the city and park applied for funds and the present day. Staff at the park turned over, and a new administration in city hall was less interested in what they saw as the previous administration's project. Finally, the lack of formal agreements to operate the shuttle made it easy to cancel the pilot. A contract or cooperative agreement could have included goals or targets to help decide if the shuttle should or should not be made permanent.

Presidio Trust – PresidiGo Bus

Service Overview

When the Presidio of San Francisco was decommissioned as a military facility, Congress transferred the site to the NPS but placed it under the management of an independent federal agency known as the Presidio Trust. The Presidio is now home to over 3,000 residents and 3,000 jobs. Although only five miles from downtown, the Presidio is far from core San Francisco transit services provided by Muni and BART, so the Trust initially funded special service from the Presidio to downtown with Muni buses to facilitate commuting. Escalating costs and a lack of autonomy led the Presidio to end the agreement with Muni and run services through a private contractor. The Presidio first provided a loop shuttle in 2002 to circulate residents and visitors throughout the Presidio and soon added a commuter bus route to downtown San Francisco. Two additions added a second loop shuttle route and a shuttle from San Francisco's Caltrain station to downtown San Francisco. The two park loop shuttles include the Crissy Field Route, which serves the northern Presidio including the Main Post, Golden Gate Bridge, Fort Scott and Letterman District, and the Presidio Hills Route, which is a bi-directional route serving the Letterman District, Main Post, Inspiration Point, Washington Boulevard, Baker Beach, and Public Health Service District (Figure 8).

Daily downtown service hours are 5:45am to 9:30 pm on weekdays and 10:00 am to 7:30pm on weekends, and the circulator routes begin at 6:30 am and end at 7:30 pm on weekdays and operate from 11:00 am to 6:30 pm on weekends. During peak commuting hours, the downtown service is only open to Presidio tenants, workers, residents, and visitors holding Muni's tourist passes. The service is open and free of charge to all during other times. The downtown route makes one stop between the Presidio and Downtown; to avoid competition with Muni riders are not allowed to board at this stop for travel towards downtown.

The Presidio Trust owns eleven buses with varying capacities. The smaller buses are used for circulator service within the Presidio and the larger buses are used for service to downtown San Francisco (Figure 9). All vehicles have bike racks mounted to the front. The Trust operates PresidiGo through a contract. The first operator after the Presidio opened to the public was Muni, but the Trust then put the service out to bid and selected MV Transportation. The Trust briefly went to another contractor at a significantly lower price, but later returned to MV Transportation. The Trust owns the vehicles, plans the routes, and manages the contract, but MV Transportation manages the day-to-day hiring and scheduling of drivers.

Funding comes from several sources. The most frequently used source is the Presidio's operations accounts, which give Trust staff flexibility and autonomy to use for the shuttle operations contract. The Trust is now self-sustaining with several income sources such as leases, parking permits, and various fees, and uses some of these revenue streams to support PresidiGo service. Purchasing new vehicles is more difficult than funding operations; trust staff must generally seek funds outside of the regular operations account. San Francisco's Air Quality Management District⁶ has provided vehicle funds in the past, but staff are searching for a funding source for the next wave of vehicle replacements.

⁶ A regional environmental protection agency authorized under State of California laws

Figure 8: PresidiGo Downtown and Around the Park Bus Route Map

Source: PresidiGo

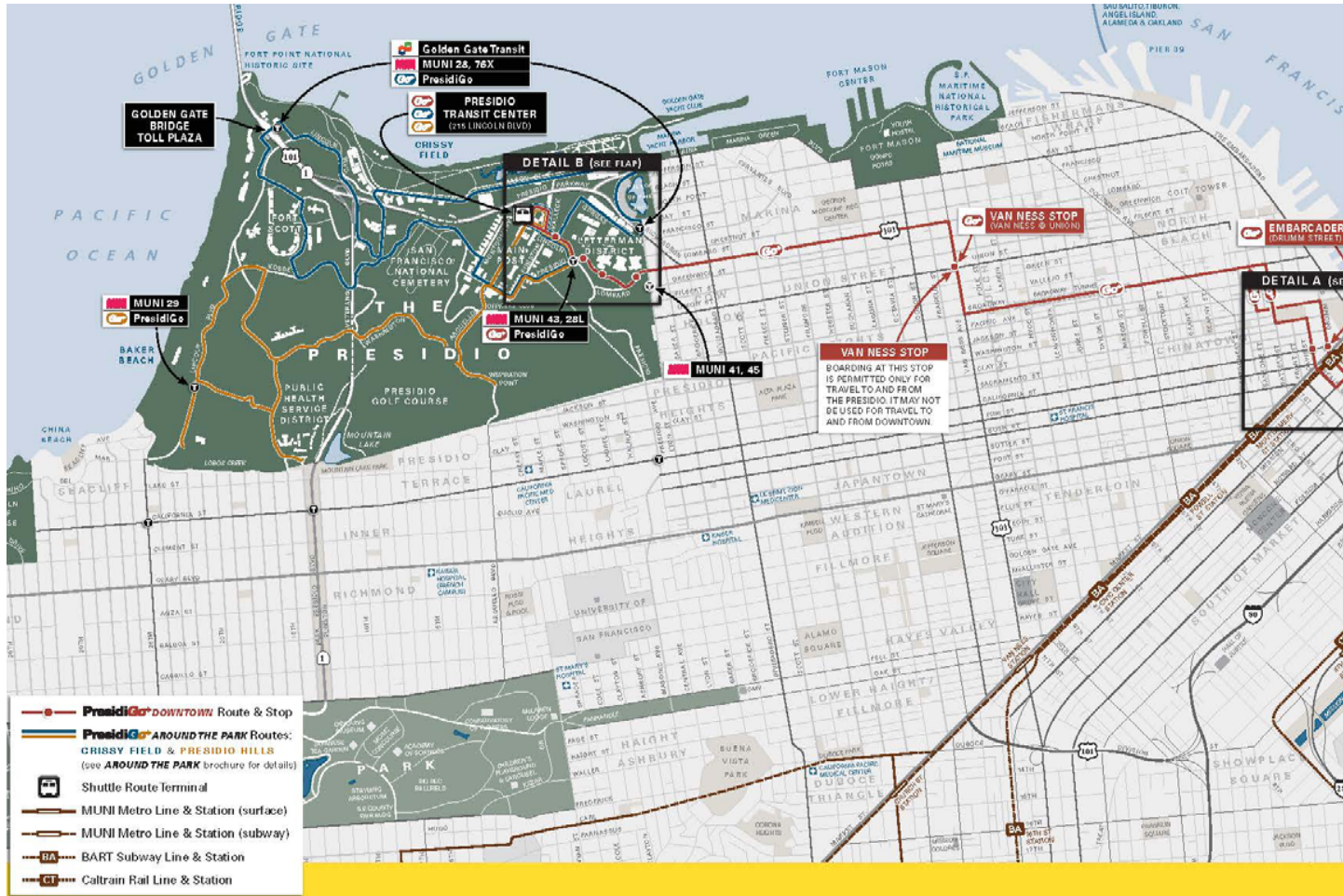


Figure 9: A branded and wrapped PresidiGo bus

Source: PresidiGo



Ridership and Factors Impacting Ridership

Table 6: PresidiGo Operational Details below presents ridership information on the PresidiGo’s downtown commuter service and its circulators around the Presidio. Ridership on both services has increased in the last few years, continuing the trend of overall ridership growth for the service.

Table 6: PresidiGo Operational Details

Source: The Presidio Trust

Ridership	Downtown Route	Around the Park Routes
Operating Season	Year round	
Days and Times	Weekdays: 5:45 AM – 9:30 PM Weekends: 7:30 AM – 4:00 PM	
Fare or Fee	Free at all times to Presidio residents and employees Muni Passport required of non-residents/employees during commuting hours Free for non-residents/employees on weekends and non-commuting hours	
Service Frequency	Weekdays: every 15-60 minutes Weekends: every 30 minutes	Every 30 minutes
Vehicle Capacity	37 seated, 18 standing 24 seated, 11 standing (Caltrain connector)	30 seated, 10 standing
Service Area	Presidio to San Francisco Financial District	Presidio Hills and Crissy Field
Route Duration	25 minutes, one way	25 minutes
Transit Connection	Muni buses, Embarcadero BART station, Transbay Terminal	7 Muni bus stops, Golden Gate Transit
Cost per Rider	\$2.00	\$3.50
2014 Ridership	361,762 (991/day)	161,980 (444/day)
2013 Ridership	316,632 (867/day)	147,975 (405/day)
2012 Ridership	307,822 (843/day)	121,550 (333/day)

Marketing

General marketing for PresidiGo is fairly light, and what does exist targets Presidio residents and employees. Trust staff regularly send out specific information on the shuttle to their email lists. Staff also reach out individually to people and organizations hosting events in the Presidio to forward information about PresidiGo on to their attendees.

Branding on the Trust's vehicles is varied, with the larger buses having full advertising wraps publicizing the service while the smaller shuttles have only small signs. Since the larger shuttles operate outside the Presidio, the Trust spent additional money to make sure the branding was unique and promoted the service as a way to get to the Presidio. Signage and information is present and highly visible at major PresidiGo stops. Smaller stops have small information placards.

The shuttle has a robust online presence at presidiobus.com and at presidio.gov. These websites include basic information about the service and live status information. A map presents the location of all shuttle vehicles and stops in real-time and another page presents live arrival time predictions at each of the PresidiGo stops. The information on all pages are accessible for both desktop and mobile users. Users without smartphones can access the same information using text messaging. All users can also subscribe to text alerts.

The PresidiGo shares transit data in the standard General Transit Feed Specification format, which makes it possible for website and app developers to include the service in transit maps and directions. Information about PresidiGo is thus present on Google Maps as well as other maps, websites, and apps used locally.

Marketing for the Presidio as a destination is more outwardly-focused than specific PresidiGo marketing. The Presidio targets several markets across many forms of media. Broad Presidio marketing usually includes some information on the PresidiGo service as a way for tourists to reach the site. The Presidio Trust and the Golden Gate National Recreation Area (GGNRA) rarely collaborate on marketing, and the Trust's marketing budget is slim. GGNRA's website includes information on the Presidio, including a description of the shuttle service and how to use it.

Lessons Learned

The service model where one party owns the vehicles and manages marketing and planning and another operates vehicles from day to day works well for the Presidio Trust. The Trust has found that quality, responsive operations are worth paying for, and returned to a better but more expensive service provider after once contracting with a cheaper provider. One weakness of the model is the difficulty funding replacement vehicles at the end of their useful lifespan.

Robust online marketing and open schedule data help to stretch a limited marketing budget. Visitors are able to get the information they need in many formats and on any internet-capable device.

Conclusion

Implementing a transit system for a recreational area requires a significant amount of research to determine the sustainability of the system with regard to finances and ridership. The purpose of this study was to estimate ridership for the Confluence Shuttle and determine how, in general terms, ridership is impacted by marketing as experienced by other parks with similar shuttle service in comparable urban areas. The criteria used to establish peer agencies included proximity to an urban area, transit service between several destinations, and partnerships with local organizations. The peer interviews provided a set of lessons learned and best practices regarding marketing of transit systems that serve recreational areas.

Overall Lessons Learned

There were several common issues discussed by the various transportation providers: commitments, communications, and contract management. Each of the peer agencies has partner organizations that they work with to various degrees on different activities. While a formal commitment from partners may not be necessary for certain tasks, such as participation on an ad-hoc advisory committee, the implementation, marketing, and operations of a shuttle system are major investments that require

agreement on ongoing participation. Accordingly, partners should develop a formal commitment or agreement, such as a memorandum of understanding or agreement that clarifies roles and responsibilities for each party. This commitment is especially important for marketing since the parks have limitations on how much they can spend or engage in marketing activities. Parks that did not establish a formal commitment from partners regarding specific roles or responsibilities for the shuttle found it difficult to maintain their participation. NEBE specifically noted that a change in leadership among partners changed the dynamic of the relationship regarding the shuttle. Staff mentioned that having a commitment in writing may have helped guide them through the change in leadership more effectively.

Good and consistent communication with partners, contractors, and riders is also a critical component of marketing and operating a shuttle. PresidiGo regularly receives comments from their customers through the website and does their best to act on those comments. Their responsiveness demonstrates to customers that they are being heard and it creates a sense of investment among riders. Communication with partners is also critical to make and confirm decisions. All of the stakeholders need to be aware of deadlines and implementation dates, especially at the start of service and for marketing events.

Finally, several of the agencies operate the shuttle service through contracts. Active management of the contract helps to ensure better service. PresidiGo and Adams NHP commented that regular interaction and follow up with contractors lead to better results in performance and maintenance of the vehicles. When contract management was less involved or is run through a third party, as is the case for NEBE, it is harder to maintain service standards.

Best Practices

A number of best practices were identified from the peer interviews that are relevant to shuttle service and marketing as MISS moves forward with the Confluence Shuttle.

- Adams NHP: The park maintains active engagement with their contractor to ensure quality service. This includes on-time performance and drivers providing a good visitor experience. The drivers are employees of the contractor, not the park. Active engagement with the contractor enables the park to provide regular and appropriate feedback should the service quality not meet the park's standards.
- HOFR: Staff at HOFR use creative marketing and promotions with partners through local travel conferences and one-day events. The park is attuned to their target audience hailing mostly from New York City and the need to advertise the experience as a relaxing escape from the busy urban core. They apply this knowledge and target their advertising messages to markets that reach this audience. Staff also use Facebook and Twitter to let the public know about the park and shuttle, the success of which is evident in the number of comments and "likes" received.
- NEBE: NEBE created a great online brochure to brand the service and inform riders of the schedule and route. The information was easy to find on the park website and provided a concise overview of the service.
- Presidio Trust: The Presidio Trust provides great online transit information, including real-time bus location information. Riders can sign up for shuttle updates by email and can use the website to submit complaints and suggestions for improving service.

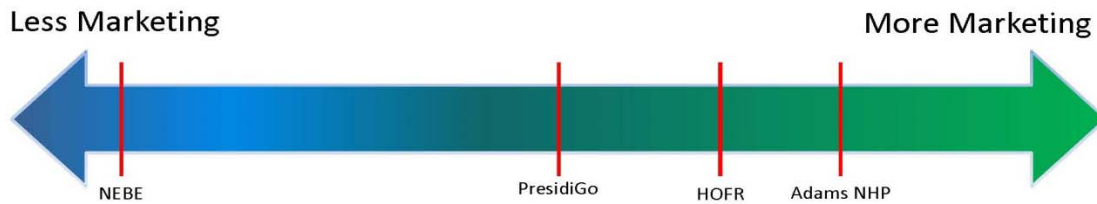
Marketing and Ridership

It is difficult to determine precisely how much marketing directly impacts transit ridership for parks in urban areas. It is also difficult to assess the proportion of visitors that use a shuttle in systems that visit multiple sites with varying levels of access. Data from ridership on voluntary transit systems in parks shows that ridership on transit systems serving public lands generally ranges between five and fifteen percent of all visitors to that unit. Rather than focus on a percentage of visitation riding the shuttle to gauge the effectiveness of marketing, the Volpe Center team placed the peer park units along a marketing

spectrum (Figure 10) and provides a qualitative analysis on the impacts the level of marketing has had on the service below.

Figure 10: Marketing and Ridership Share Spectrum with Peer System Rankings

Source: U.S. DOT Volpe Center



NEBE conducted the least amount of marketing among the peer parks that were interviewed. While marketing materials were developed with assistance from student researchers from the University of Massachusetts Dartmouth, the park did not have funding to produce and distribute marketing materials beyond what was hosted online. Ridership of the system was very low, which increased the cost per rider (approximately \$25 per passenger). A rough calculation of average ridership is one passenger per vehicle run. The system operating area was relatively small and did not have a very significant presence on the road despite eventually getting the buses branded with logos. The combination of limited funds for marketing, delayed vehicle branding, and the small road presence limited potential ridership for the service. The park decided to end the pilot program after two years of operations.

The PresidiGo is a larger shuttle system than the NB Line. It has a larger fleet of branded vehicles with more stops, which enables the service to market itself to some degree. The Presidio Trust markets the Presidio as a destination within the greater San Francisco metropolitan area. The PresidiGo shuttle is mentioned in some of the general Presidio materials; however, it does not have dedicated marketing materials that advertise the shuttle service separate from the rest of the Presidio. Part of this may be due to a non-competition agreement with the city's existing public transportation provider. Ridership on PresidiGo is relatively high but the vast majority of the riders are residents or employees of the area instead of recreational visitors. A rough calculation of average ridership is 18 passengers per vehicle run, although this does not differentiate weekdays from weekends and holidays. The residents and employees of the Presidio are a relatively contained set of passengers with riding behaviors that are very different from visitors to the area. This core group of riders enables the system to have good ridership with limited marketing.

HOFR actively pursues marketing opportunities in the form of travel conferences and information distribution to the region, especially New York City. The marketing message focuses on car-free access to HOFR, Val-Kill, Top Cottage, and VAMA from New York City using the commuter rail and the Roosevelt Ride. The overall budget for marketing is very small. The park makes effective use of a limited budget by partnering with other historic destinations in the area, the regional tourism bureau, and the Metro North commuter rail. A key aspect of marketing that has yielded good visitation and ridership on the shuttle has been hosting travel writers. The park experiences a boost in visitation following publication of a review by one of the many travel writers the park hosts on an annual basis. The park also reported having good results from marketing on social media, such as Facebook, by noting the number of "likes" or comments a post or set of posts receives. Ridership on the Roosevelt Ride is largely tied to access to Top Cottage because it is the sole access to the location. It is unclear exactly how much marketing of Top Cottage drives visitation to HOFR in general. A rough calculation of average ridership is 15 passengers per vehicle run, not differentiating weekdays from weekends and holidays.

Adams NHP conducts the most marketing of the park units interviewed. The primary marketing method is the historic trolleys themselves. Their road presence is unique and common in downtown Quincy. The park also uses its website and printed copies of the schedules to market the service. The trolleys are used

in local parades and events to further raise the profile of the park and the trolley system. More than one-third of visitors to the park ride the shuttle, which is well above the average of five to fifteen percent of ridership typical of voluntary shuttle systems at parks. Of course, limited parking, the relatively close proximity of the trolley destinations, and being no cost make using the trolley an easy sell to visitors arriving at the visitor center.

Ridership Estimates for MISS Shuttle Based on Marketing Scenarios

Based on the information collected from the peer service interviews, the Volpe Center generated ridership estimates for the Confluence Shuttle that are presented in Table 7. Summer visitation data for each of the confluence stops was collected and broken down to provide average expected summer day visitors. The average daily visitation is based on 100 days of service (Memorial Day to Labor Day) and does not distinguish between weekday and weekend ridership.⁷

The estimated daily ridership was multiplied by a percentage based on the level of marketing pursued by the shuttle stakeholders. These range from minimal marketing with a low of five percent to significant marketing with a high of fifteen percent. The range of five to fifteen percent is consistent with the experiences of existing voluntary NPS shuttle systems nationwide. A range of one to three percent was used to estimate potential ridership for Minnehaha since there is not a direct shuttle stop planned for the location and many local visitors are there to attend weddings, reunions, and other occasions. The estimates focus on visitors to recreational areas and do not include a percentage of visitors from the Mall of America or airport. It is extremely difficult to predict how many visitors to the mall and airport will choose to use the shuttle, especially when there are no peer systems that serve similar destinations along their routes. Ridership data for the mall and airport could be collected as part of a pilot shuttle service to help determine how much these stops will contribute to overall shuttle ridership.

Table 7: Confluence Shuttle Ridership Estimates Across Marketing Spectrum

Source: U.S. DOT Volpe Center

Location	Summer Visitors/ Month	Summer Visitors/ Day	Level of Marketing		
			Low (5%)	Medium (10%)	High (15%)
Mall of America	4,500,000	147,541	-	-	-
Minnesota Valley NWR	2,742	90	5	9	14
Airport	1,617,156	53,021	-	-	-
Ft Snelling State Park	34,874	1,143	57	114	171
Historic Ft Snelling Fort	11,277	370	19	37	56
Coldwater Spring	1,500	49	3	5	7
Minnehaha	230,600	7,561	76*	151*	227*
DAILY RECREATIONAL TOTAL	280,993	9,213	159	316	475
SEASONAL RECREATIONAL TOTAL[†]			5,088	10,125	15,188
Riders per Roundtrip			20	40	59

* The Minnehaha ridership percentages applied for low, medium, and high levels of marketing were one, two, and three percent, respectively.

[†] Based on weekend service totaling 32 days for the season

The analysis indicates that ridership on the Confluence Shuttle could range from 159 passengers to 475 passengers per day depending on the level of marketing pursued (Table 7). The proposed shuttle schedule calls for eight roundtrips per day, which breaks down into a low estimate of about 20 passengers per trip and a high estimate of 59 passengers per trip. If shuttle service were only provided on weekends (32 days

⁷ Visitation data was not specific enough to enable analysis of visitor fluctuation across the days of the week.

for the season), the low, medium and high marketing ridership for the season is estimated to be around 5,000, 10,000 and 15, 000, respectively. As mentioned previously, the greater the ridership, the lower the per passenger costs of service. Recreational visitors are much more likely to use a shuttle service to facilitate car free trips between areas when they know the service exists, which is why marketing of the service is critical to its success. While marketing is not free, effective and efficient marketing has potential to significantly increase ridership, which brings overall costs down. As demonstrated by HOFR, sharing the costs of marketing amongst partners, improves the potential outcome while keeping costs lower than an individual agency acting alone.

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