

National Park Service
U.S. Department of the Interior

Adams National Historical Park
Quincy, Massachusetts



Adams National Historical Park

Expanded Transit Service Evaluation



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John A. Volpe National Transportation Systems Center
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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 project team was led by Paul Christner, of the Service and Operations Assessment Division, and included Elsa Chan, Scott Lian, Miriam Sorrell, Jeff Bryan, Eric Plosky, Elizabeth Machek, Gary Ritter, Frances Fisher, and Lindsey Morse.

The Volpe Center began work on this project in 2005, with most of the field work, technical assistance, and evaluation work occurring between June 2006 and June 2007. Due to staff turnover at both the Volpe Center and Adams National Historic Park, completion of the evaluation report is taking place in December 2009.

This effort was undertaken in fulfillment of PMIS 89847. The project statement of work was included in the FY2005 (October 2004) interagency agreement between the National Park Service and the Volpe Center (NPS agreement 4505041114) and additional funding was provided in the fourth modification in March 2006.

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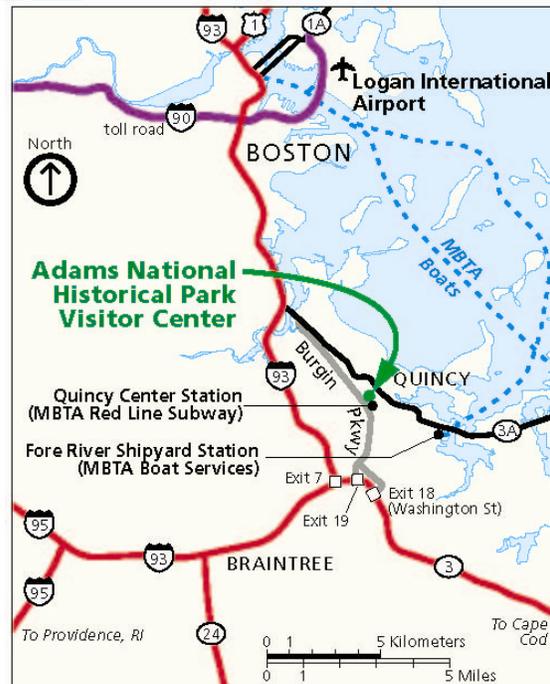
1 Introduction

In 2005 and 2006, Adams National Historical Park piloted expanded shuttle service, with the aim of promoting car-free access for its visitors. This report evaluates the 2006 season of operation.

Adams National Historical Park (NHP) is located approximately ten miles south of Boston in Quincy, MA (see Figure 1), and comprises eleven historic structures and a cultural landscape totaling almost 14 acres. The story told by Adams NHP is that of five generations of the Adams family—from 1720 to 1927—including two U.S. presidents.

Figure 1
Location of Adams NHP

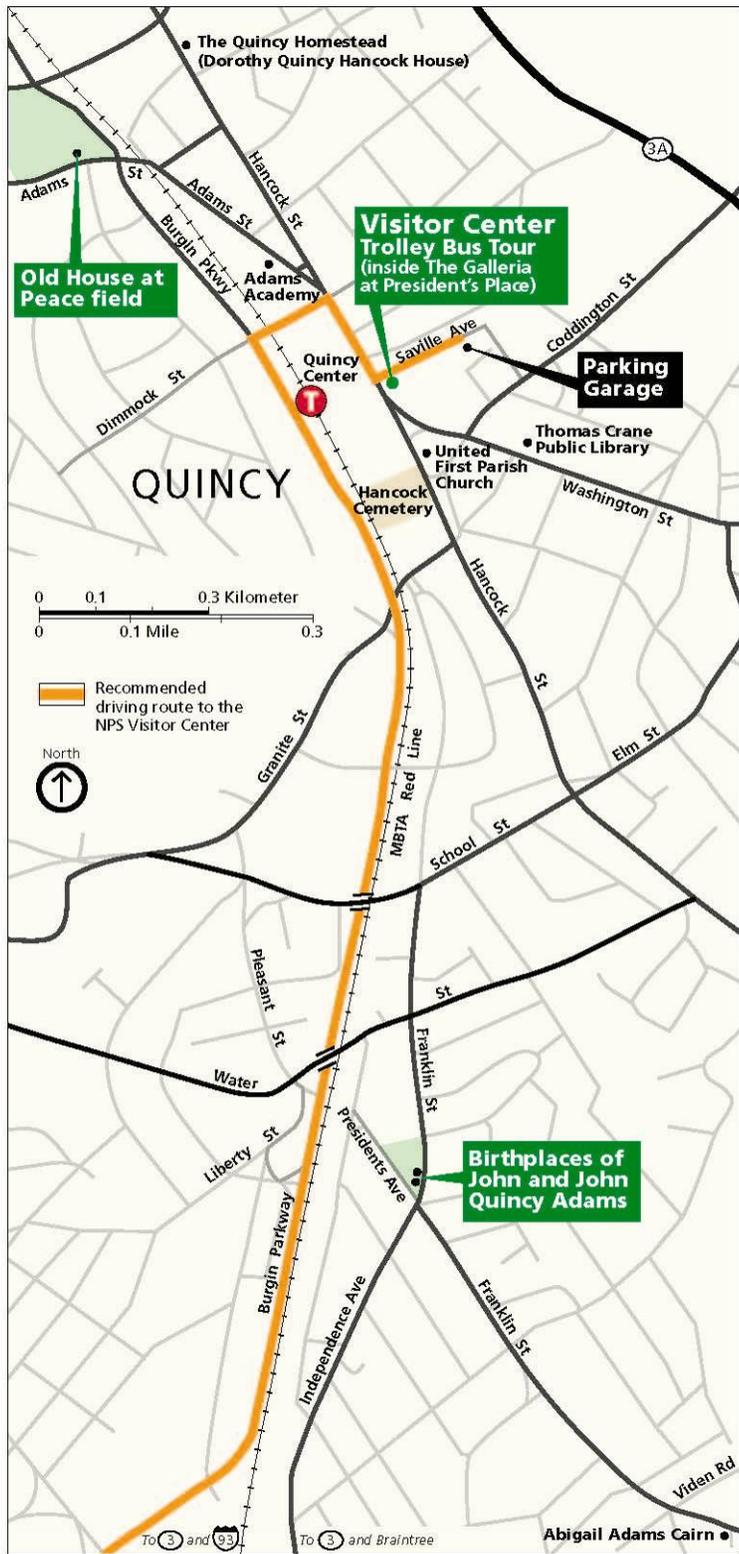
Source: Harpers Ferry Center (<http://www.nps.gov/hfc>)



The park has three major sites that are open to the public within Quincy: the Visitor Center, the Birthplaces of John Adams and John Quincy Adams, and the Old House, the Adams family residence which includes John Quincy Adams' Stone Library (see Figure 2). Tours of the buildings cost \$5 for adults and is free for children under the age of 16.

Figure 2
Adams NHP

Source: Harpers Ferry Center (<http://www.nps.gov/hfc>)



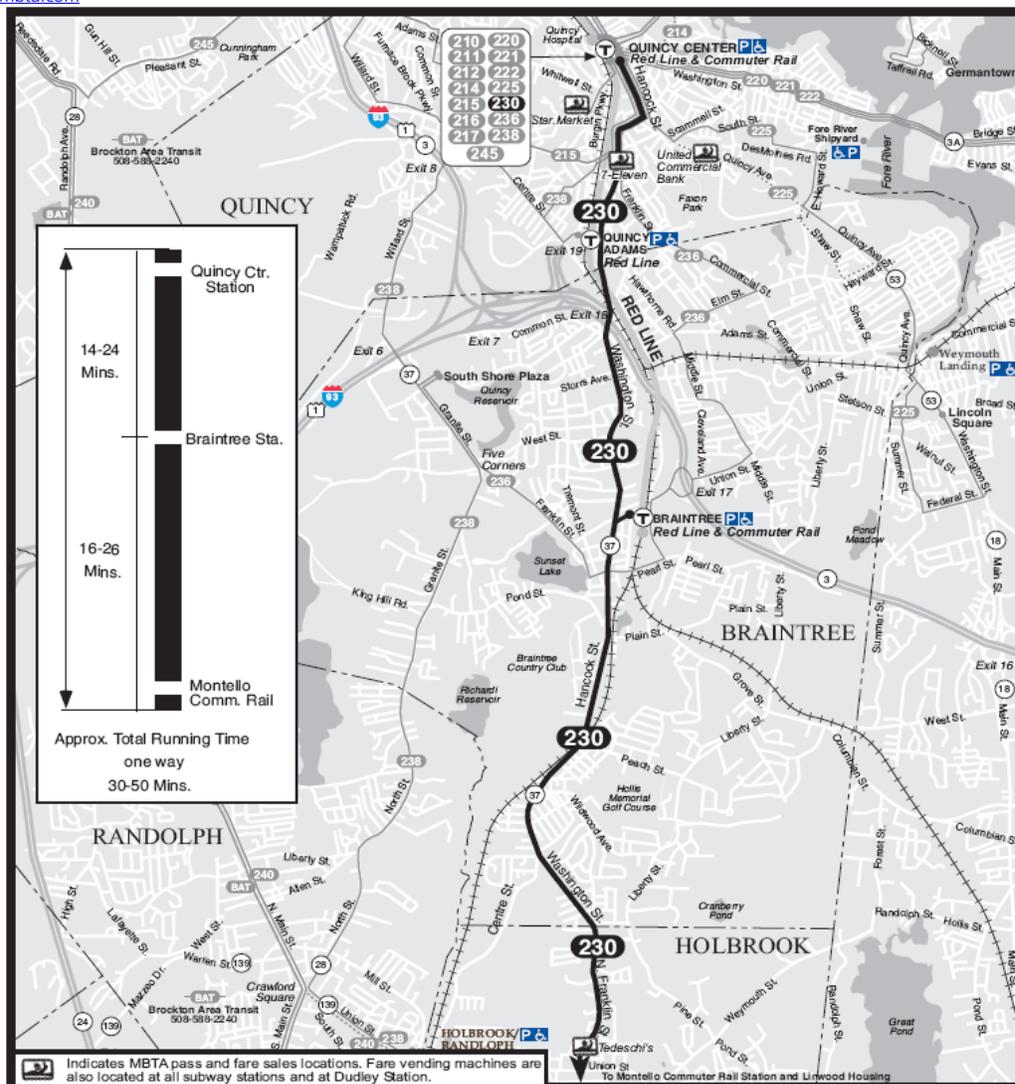
Overview of Existing Transportation Options

As demonstrated in Figures 1 and 2, the Visitor Center, located in downtown Quincy, is accessible by public transit; it is located less than a quarter of a mile from the Quincy Center station, which serves the Massachusetts Bay Transportation Authority's red subway line and three commuter lines (Greenbush, Kingston/Plymouth, and Middleborough/Lakeville). The Park's main historic structures are not as directly served by transit; the Old House is a half-mile north of the Quincy Center station and the Birthplaces are located half-way between Quincy Center Station and Quincy Adams Station (about a mile from each).

MBTA Bus 230, which runs from Quincy Station to Braintree and the Montello Commuter Rail Station in Brockton (11 miles south of the Adams NHP Visitor Center), does serve the Birthplaces, but only runs every 30 minutes to an hour on the weekdays, every hour on Saturday, and every hour and a half on Sunday. (See Figure 3).

Figure 3
Map of MBTA Bus Route 230

Source: www.mbta.com



None of the historic sites have parking areas and there is very limited on-street parking. The Visitor Center offers validated parking for a parking garage in the rear of the building where the Center is located; park visitors are encouraged to leave their cars in favor of the trolley service, which is included in the cost of the tour. It is possible for visitors to purchase tour tickets at the Old House and just tour the one site without using the trolley.

The Birthplaces and the Old House are accessible from the Visitor Center by a rubber-tired historic replica trolley service (see Figure 4). The trolley operates from April 19 to November 10. The trolleys leave the Visitor Center approximately every thirty minutes, on the quarter-hour, and travel first to the Birthplaces, then to the Old House, and then back to the Visitor Center (see map below). Park trolley riders receive guided tours at each of the historic sites (30 minutes at the Birthplaces, 1 hour at the Old House) and travel as a group from site to site. If the visitor takes both tours, the entire trip will take approximately two hours. The route itself is 3.3 miles long, with an approximate travel time of 12-15 minutes.

Figure 4
Adams NHP Trolley (Internal)

Source: Volpe Center, photograph



The Adams NHP trolley service was first introduced in 1993 in order to improve visitor access to the park sites and to help minimize traffic congestion in downtown Quincy. It now is credited with enhancing the visitor experience at the park as well. The Adams trolley facilitates the interpretation of the various park sites, allowing visitors to move easily through the park sites in chronological sequence, following the lives of the two Adams Presidents and their families from birth to death. Prior to the introduction of the trolley service, visitation at the various sites was loosely connected and potentially confusing to anyone not familiar with the City of Quincy, or the majority of visitors. Park staff view the trolley as an essential visitor service. Nearly half of all visitors currently use the trolley to visit the historic buildings, while the other half either does not take the tour or just tours the Old House, which can be accessed from the Visitor Center easily by foot. Adams NHP owns three trolleys, two of which are operated simultaneously by a contractor to serve the route, with the third trolley acting as a spare. The park uses base operating funds to pay for operations.

Expanded Trolley Service

The idea for an expanded trolley service in Quincy arose in the early 2000's from an interest by the National Park Service, local politicians, and local businesses in providing a car-free link between Adams NHP, ferry service to the Boston Harbor Islands (BHI), local hotels, and other destinations within Quincy that would facilitate tourists' ability to visit the sites. Linking BHI and Adams NHP is an important part of an effort to enhance regional cultural tourism in the Boston area that has been spearheaded by Congressman William Delahunt, who represents the Tenth Congressional District of Massachusetts – which includes Cape Cod, the Islands of Martha's Vineyard and Nantucket, and Boston's South Shore (including Quincy). The Adams NHP General Management Plan (GMP) and the BHI GMP identify Quincy as a potential gateway to the BHI with access to the islands via ferry transportation.

The closest ferry service to Adams NHP is the MBTA Harbor Express, located at the Fore River Shipyard. It provides ferry service year-round to Logan Airport and Boston (Long Wharf). The service also has in the past, including 2009, provided daily summer ferry service to Georges Island, one of the islands within BHI. From Georges Island, visitors can catch a ferry to other Boston Harbor Islands. (See Figure 5). However, this service is decided on an annual basis and is not guaranteed. Marina Bay, which is adjacent to a proposed site of a future ferry terminal, would provide shorter connections to BHI.

Figure 5
Map of Ferry Routes to BHI

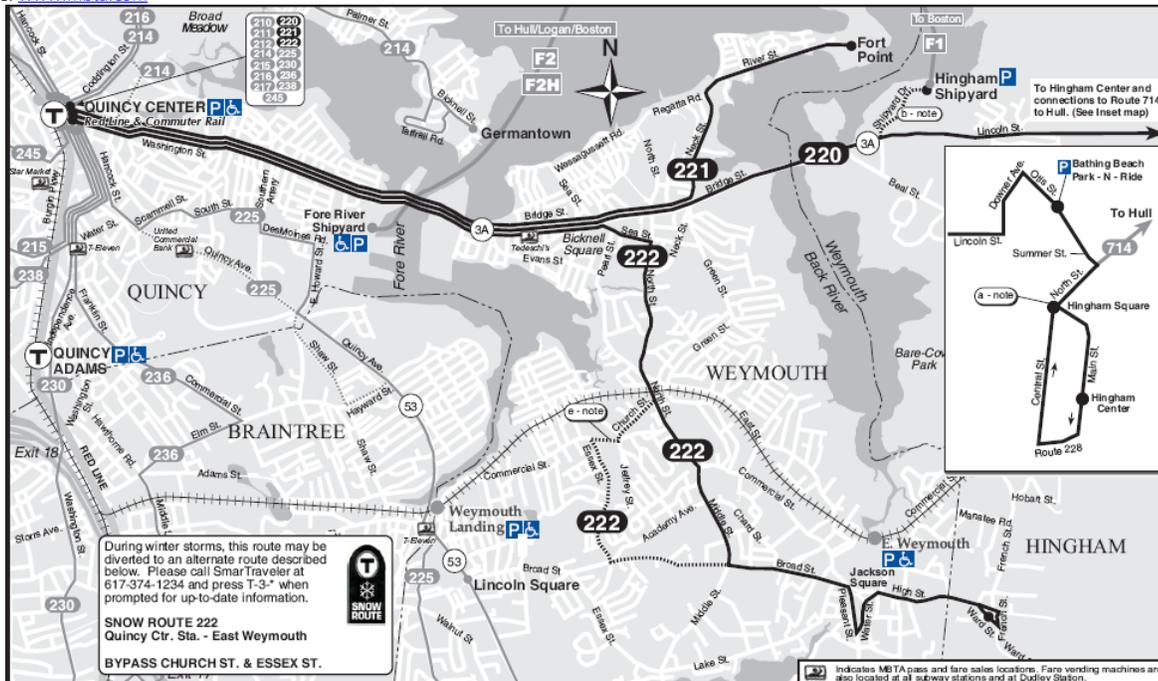
Source: Boston Harbor Island Alliance 2009 BHI Brochure (http://islandalliance.org/pdf/BHI%20Park%20Brochure_for_web_2009.pdf)



Three MBTA bus routes serve the Fore River Shipyard, running from Quincy Center station eastward: 220 Hingham Square Via Washington St, 221 Fort Point Via N. Weymouth, and 222 East Weymouth Via Middle St. (See Figure 6)

Figure 6
Map of MBTA bus routes 220, 221, and 222

Source: www.mbta.com

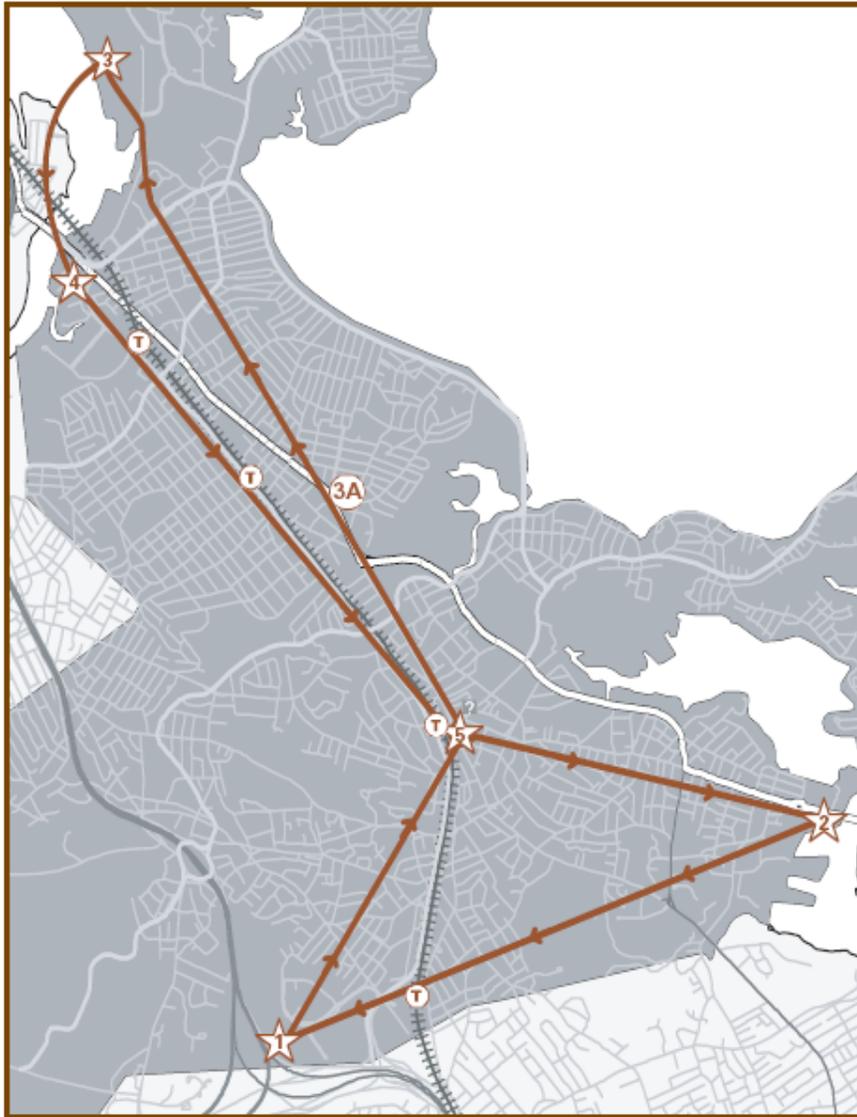


In response to this interest, Adams NHP, two local hotels - the Best Western Adams Inn and the Boston Marriott Quincy - and Discover Quincy, a local non-profit organization, came together to plan an expanded trolley service. Funding was provided from a 2004 Public Lands Highway Discretionary Program grant. The group originally considered two options for the trolley service: one hour-long continuous loop serving all the stops in one direction with 30-minute headways and two separate northern and southern loops each with 30-minute headways. The single loop raised concerns about the length of the ride but running the route in both directions to increase frequency would require additional cost, drivers, and vehicles. The two-loop service raised concerns about the ease of transferring at the Visitor's Center, but it was decided that could be improved by coordinating the schedules of the two loops to arrive at the Visitor's Center at the same time. Adams NHP and its partners eventually chose the two-loop service as the preferred alternative.

As mentioned above, the two-loop service connected to each other and to the Adams NHP park trolley service at the Visitor Center. The southern route, also known as the Harbor Express Route, served the Harbor Express Ferry Terminal at Fore River and the Boston Marriott Quincy. The northern route, also known as the Marina Bay Route, served Marina Bay and the Best Western Adams Inn. Marina Bay was selected as a destination because of its status as a waterfront entertainment destination with restaurants and shops. (See Figure 7).

Figure 7
Map of Expanded Trolley Service Routes

Source: Rack card developed by the Volpe Center, August 2005



MARINA BAY LOOP



HARBOR EXPRESS LOOP

Numbered stops (star symbols):

- 1) Boston Marriott Quincy
- 2) Harbor Express Ferry Terminal at Fore River Shipyard
- 3) Marina Bay
- 4) Best Western
- 5) Adams NHP Visitor Center

After the preferred alternative was chosen, the Volpe Center project team helped develop a statement of work for the contractor who would operate the service. The statement of work became a part of the official request for proposals and the eventual contract. The contract specified the two loops and designated 30 minute headways as the preferred level of service. The Volpe Center project team helped National Park Service (NPS) staff evaluate the single bid received from Brush Hill Tours, Inc. for operation of the expanded service. The Volpe Center project team participated in negotiations with Brush Hill and provided technical assistance to NPS contracting staff. Brush Hill was subsequently awarded the contract and began operating the expanded service in July of 2005.

This report focuses on the 2006 season of the two expanded trolley routes.

2 Operational Profile of Expanded Service

This section outlines the operational characteristics of the expanded trolley service for 2006.

Route

The service operated two continuous loops, the Harbor Express Loop and the Marina Bay Loop. The routes are described in detail below; however, from observations and conversations during the study, it is unclear that one specific route was always followed by the trolley operators.

The **Harbor Express Loop** served the Adams NHP Visitor Center, the Boston Marriott Quincy, and the Harbor Express Ferry Terminal at Fore River. The route originally proposed by Adams NHP was 8.5 miles in length, with an estimated 32 minutes of travel time. Brush Hill, Inc., the company that was awarded the contract, proposed a slightly shorter route of 8 miles, with an estimated 30 minutes of travel time. The shortest route would be 7.8 miles and 27 minutes.

Route Directions

Boston Marriott Quincy to Visitor Center: Right on Centre Street, left on Burgin Parkway Extension, right onto Dimmock, first right onto Hancock St.

Visitor Center to Quincy Harbor Express Terminal: Hancock Street, left on Temple St. Right on Washington St. to Harbor Express.

Harbor Express to Boston Marriott Quincy: Go around the rotary back onto Washington St., left on South St., becomes E. Howard St. Right on Quincy Ave. (Rte. 53), left on Faxon Park Road, becomes Kendrick Ave. Left on Franklin, right on High Street. Take 93 N exit to Quincy Center/Burgin Parkway exit. Left onto Centre Street, left into Crown Colony.

For the third leg, Brush Hill proposed Washington St., left on Hancock, right on Granite, left on Burgin Parkway Extension, right on Centre, left into Crown Colony. The shortest route would take Quincy Ave to Water Street and then a road west of Burgin Parkway.

The **Marina Bay Loop** served the Adams NHP Visitor Center, the Best Western Adams Inn, and the Marina Bay district of Quincy. The route originally proposed by Adams NHP was 10.1 miles, with an estimated 32 minutes of travel time. The shortest route would be 9.5 miles, with 27 minutes of travel time. The shortest route differs from that proposed by using Hancock St. for both north and southbound rather than Newport Avenue and Quincy Shore Drive.

Route Directions:

Best Western Adams Inn, 29 Hancock St. to Visitor Center, 1250 Hancock Street: From Hancock St., turn right onto Newport Ave. Extension, which becomes Newport Ave. Left onto Dimmock St., first right onto Hancock St. to Visitor Center.

Visitor Center to Marina Bay: From Hancock St., turn left onto Temple St., which becomes Coddington, then Sea St. Left onto Quincy Shore Drive. Right onto East Squantum Street, left onto Victory Road to Marina Bay.

Marina Bay to Best Western: Victory Road to Seaport Drive, left on Commander Shea Blvd. Left on unnamed road (connects Commander Shea Blvd. to Quincy Shore Dr.), right on Quincy Shore Drive, take exit ramp to Hancock Street to Best Western.

Schedule

During 2006, the expanded trolley service operated Fridays, Saturdays, and Sundays from April to mid-June; daily from mid-June to mid-September; and on Fridays, Saturdays, and Sundays from mid-September to mid-November. The service operated the two continuous loops, the Harbor Express Loop and the Marina Bay Loop, described above, at 40-minute headways from approximately 9:30am to 6pm (see Tables 1 and 2 below). The schedule was developed such that none of the trolley routes (the internal Adams NHP loop, the Harbor Express Loop, and the Marina Bay Loop) overlapped at the Visitor Center to avoid congestion. However, this meant that the transfer between the Harbor Express and Marina Bay Loops was not as coordinated as originally desired. The transfer from the Marina Bay Loop to the Harbor Express Loop was much shorter (6 minute wait) than the opposite; the Harbor Express Loop arrived a couple of minutes after the most recent Marina Bay Loop departure and visitors had to wait over 30 minutes for the next Marina Bay Loop trolley.

Table 1
Schedule for Harbor Express Route

Source: Volpe Center and Adams NHP files

Harbor Express Shuttle Schedule		
Marriott Quincy	Visitor Center	Harbor Express
9:25 AM	9:36 AM	9:47 AM
10:05 AM	10:16 AM	10:27 AM
10:45 AM	10:56 AM	11:07 AM
11:25 AM	11:36 AM	11:47 AM
12:05 PM	12:16 PM	12:27 PM
12:45 PM	12:56 PM	1:07 PM
1:25 PM	1:36 PM	1:47 PM
2:05 PM	2:16 PM	2:27 PM
2:45 PM	2:56 PM	3:07 PM
3:25 PM	3:36 PM	3:47 PM
4:05 PM	4:16 PM	4:27 PM
4:45 PM	4:56 PM	5:07 PM
5:25 PM	5:36 PM	

Table 2
Schedule for Marina Bay Route

Source: Volpe Center and Adams NHP files

Marina Bay Shuttle Schedule		
Best Western	Visitor Center	Marina Bay
9:55 AM	10:10 AM	10:27 AM
10:35 AM	10:50 AM	11:07 AM
11:15 AM	11:30 AM	11:47 AM
11:55 AM	12:10 PM	12:27 PM
12:35 PM	12:50 PM	1:07 PM
1:15 PM	1:30 PM	1:47 PM
1:55 PM	2:10 PM	2:27 PM
2:35 PM	2:50 PM	3:07 PM
3:15 PM	3:30 PM	3:47 PM
3:55 PM	4:10 PM	4:27 PM
4:35 PM	4:50 PM	5:07 PM
5:15 PM	5:30 PM	5:47 PM

The initial schedule, developed by the Volpe Center project team, was based on the 30-minute headway requirement, but the Team revised the schedule to 40-minute headways after receiving initial data on the actual run times (see Table 3 below, which also includes estimates from Google Maps). Because of traffic, Brush Hill Tours, Inc., was not able to meet the frequency requirements of the initial schedule.

Table 3
Table of Travel Times (Calculated and Estimated) for Each Loop by Stop

Sources: Brush Hill data received by the Volpe Center and Google Maps.

Segment	Calculated Travel Time (minutes)		Google Maps Estimated Travel Time (minutes)	
	Peak	Off Peak	Proposed route	Recommended route
Marina Bay Loop				
Best Western to Visitor Center	11	7	9	6
Visitor Center to Marina Bay	13	13	13	12
Marina Bay to Best Western	4	4	9	9
<i>Total travel time</i>	28	24	31	27
<i>Total time, including three 2-minute stops</i>	34	30	37	33
Harbor Express Loop				
Marriott to Visitor Center	8	8	8	8
Visitor Center to Harbor Express	7	6	7	7
Harbor Express to Marriott	13	12	16 (13 with adjustment)	11
<i>Total travel time</i>	28	26	31 (28 with adjustment)	26
<i>Total time, including 2-minute stops</i>	34	30	37 (34 with adjustment)	32

Contractors and Vehicles

As mentioned previously, a private contractor, Brush Hill Tours, operated the service using replica historic trolleys with a maximum capacity of 28 passengers each. The trolleys were red in color (see cover page) which distinguished them from park trolleys, which are green (see Figure 4 on page 4).

3 Service Evaluation

This section evaluates the performance of the expanded shuttle service as implemented in the 2006 season.

Marketing and Passenger Information

Several efforts were made to provide information to the public about the new routes. However, overall, these efforts were limited, in part due to the lack of designated funding for advertising, branding, and promotion and in part due to timing, in that the service began before all the marketing efforts could be completed. The lack of promotion may have had a large effect on the ridership that makes it difficult to project potential ridership under more favorable circumstances

The Volpe Center produced guidance on initial marketing and roll-out strategies, summarized in a Memorandum for the Trolley Roll-Out Strategy (see Appendix) at the start of the first season of the expanded service, in July 2005. The Volpe Center then developed an informational brochure (see Figure 8) and rack card (see Figure 9) in August 2006 with a “Ship to Shore” logo (full-size copies included in Appendices). The brochure contained schedules for the two loops as well as the internal Adams NHP loop and Harbor Express weekend service to the Boston Harbor Islands and was made available at each stop. The stops were otherwise unmarked. The rack card contained schedules and a map of the two loops; is unclear where the rack cards were made available. Neither was made available on the trolleys themselves.

Figure 8
Trolley & Water Shuttle Schedules Tri-fold
Source: The Volpe Center

ADAMS NATIONAL HISTORICAL PARK

ADAMS NATIONAL HISTORICAL PARK TOUR

Both the Marina Bay and the Harbor Express trolley services stop at the Adams National Historical Park Visitor Center. How you can connect with the Adams National Historical Park tour trolley.

Admission to the park is \$5 for adults and free for children under 16 years old. The park is open daily from 9 a.m. to 5 p.m. between April 15th and November 10th, 2006.

PARK TROLLEY
9:35 AM
9:45 AM
10:15 AM
10:45 AM
11:15 AM
11:45 AM
12:35 PM
12:45 PM
1:15 PM
1:45 PM
2:15 PM
2:45 PM
3:15 PM

Harbor Express Ferry Schedule

The schedule below shows departures from the Harbor Express Ferry Terminal at Fort Hill in the Boston Harbor Islands. Passengers can also connect to downtown Boston and Logan International Airport. See www.harborexpress.com for the full schedule.

Depart Quincy	Arrive Georges Island	Depart Georges Island	Arrive Quincy
9:30 AM	9:40 AM	9:45 AM	10:10 AM
9:50 AM	10:10 AM	10:15 AM	11:25 AM
11:00 AM	11:20 AM	11:25 AM	12:25 PM
11:30 PM	11:50 PM	12:05 PM	1:15 PM
1:30 PM	1:45 PM	2:40 PM	3:05 PM
2:30 PM	2:35 PM	3:25 PM	3:45 PM
3:15 PM	3:25 PM	4:05 PM	4:55 PM
3:55 PM	5:15 PM	5:15 PM	5:25 PM
5:05 PM	6:05 PM	6:10 PM	6:25 PM

Trolley & Water Shuttle Schedules

FREE

SUMMER/FALL 2006

QUINCY SHIP TO SHORE TROLLEY

Daily through September 10, 2006

Weekends Only September 15-November 10, 2006

Welcome to Historic Quincy!

Birthplace of the American Dream!

From historic landmarks to harbor views, there's a lot to see and do in the City of Presidents, and we hope our free trolley service will help you experience all that Quincy has to offer.

The enclosed schedule provides departure times for two trolley routes, both of which stop at the Adams National Historical Park Visitor Center in downtown Quincy. So whether you're traveling from the Harbor Express Ferry in Marina Bay or the Bus "Western Adams Inn" to the Adams National Historical Park (one our connecting trolley routes will take you there).

For additional assistance in getting around historic Quincy, please call:

National Park Service Visitor Center: (617) 770-1175

Harbor Express Ferry Service: (617) 222-6599

Discover Quincy: (617) 657-4927

We are here to assist you and hope you enjoy your visit to Quincy!

Marina Bay Trolley Route

This route stops at the Bus "Western Adams Inn," the Adams National Historical Park Visitor Center (in downtown historic Quincy), and Marina Bay. Connect at the Visitor Center with the Harbor Express Trolley, MBTA transit services, and the Adams National Historical Park tour trolley (admission \$5, children under 16 free). Connect at the Harbor Express Ferry Terminal with Harbor Express Ferry Service to the Boston Harbor Islands, Downtown Boston, and Logan International Airport.

Best Westerns	Visitor Center	Marina Bay
9:55 AM	10:10 AM	10:27 AM
10:35 AM	10:50 AM	11:07 AM
11:15 AM	11:30 AM	11:47 AM
11:55 AM	12:10 PM	12:27 PM
12:35 PM	12:50 PM	1:07 PM
1:15 PM	1:30 PM	1:47 PM
1:55 PM	2:10 AM	2:27 PM
2:35 PM	2:50 PM	3:07 PM
2:15 PM	3:30 PM	3:47 PM
3:55 PM	4:10 PM	4:27 PM
4:35 PM	4:50 PM	5:07 PM
5:15 PM	5:30 PM	5:47 PM

ALL TIMES APPROXIMATE DUE TO TRAFFIC

Harbor Express Trolley Route

This route stops at the Boston Marriott Quincy, the Adams National Historical Park Visitor Center, and the Harbor Express Ferry Terminal at Fort Hill. Connect at the Visitor Center with the Marina Bay Trolley, MBTA transit services, and the Adams National Historical Park tour trolley (admission \$5, children under 16 free). Connect at the Harbor Express Ferry Terminal with Harbor Express Ferry Service to the Boston Harbor Islands, Downtown Boston, and Logan International Airport.

Marriott	Visitor Center	Harbor Express
9:25 AM	9:36 AM	9:47 AM
10:05 AM	10:16 AM	10:27 AM
10:45 AM	10:56 AM	11:07 AM
11:25 AM	11:36 PM	11:47 AM
12:05 PM	12:16 PM	12:27 PM
12:45 PM	12:56 PM	1:07 PM
1:25 PM	1:36 AM	1:47 PM
2:05 PM	2:16 PM	2:27 PM
2:45 PM	2:56 PM	3:07 PM
3:25 PM	3:36 PM	3:47 PM
4:05 PM	4:16 PM	4:27 PM
4:45 PM	4:56 PM	5:07 PM
5:25 PM	5:36 PM	

ALL TIMES APPROXIMATE DUE TO TRAFFIC

Figure 9
Marina Bay Loop and Harbor Express Loop Rack Card

Source: The Volpe Center



The Volpe Center conducted some preliminary efforts to develop a website but due to funding and timing restraints, the website was not able to be completed in time for the 2006 season.

As mentioned above, expanded service vehicles were red, which helped differentiate them from the green Adams NHP trolleys. The trolleys were also designated with hand-written signs placed in the window reading either “Harbor Express” or “Marina Bay” but otherwise had no other markings.

There are several important lessons that can be learned from the marketing efforts that occurred. While the brochure was useful, a map and/or information about the locations of the stops would have been helpful since most passengers were unlikely to be familiar with the area. It also would have been helpful if the brochure and/or rack card could have been made available on board the trolleys. Additional signage at each stop would have helped identify when and where potential passengers could board the trolleys. Emphasizing that the service was free could help with ridership. The hand-written signs that designated trolleys as either “Harbor Express” or “Marina Bay” trolleys were difficult for passengers to read; a large logo prominently on these vehicles along with a professionally printed sign designating the loop may have provided more clarity. The expanded-service trolleys were two of several other historic trolley services in the Boston area (see box below); as such, there is an elevated need for a distinct branding strategy so that potential passengers can distinguish between services. A website, or information made available on the websites of Adams NHP and its partners, would also help with promotion of the trolley service.

There are a number of historic trolley tours offered in the Boston area, each with their own distinctive look. None of these trolleys serve Quincy. Some examples of these tours are:

- Old Town Trolley of Boston, which uses orange and green trolleys, and covers Historic North End, North Station, Fenway Park, MIT and Kendall Square in Cambridge, Boston Convention & Exposition Center, and the Seaport District. The company also offers a separate Chocolate Tour and Ghosts and Gravestones tour; the latter has its own distinctive dark gray trolley.
- Super Trolley Tours, which uses white trolleys and covers from South Station/Boston Children's Museum to Back Bay and Charlestown, as well as Kendall Square in Cambridge.
- Brush Hill Tours, Inc., which runs the Red Beantown Trolley and covers South Boston, the MFA, Fenway, MIT and Kendall Square in Cambridge, downtown, and Charlestown.
- CityView, which uses grey trolleys, and covers from South Station/Boston Children's Museum to the Boston Common to Charlestown.

Ridership

Overall, ridership on both pilot routes was low, when compared to ridership on the established, internal trolley service. The Adams NHP trolley service averages more than 100 passengers per day and more than 130 passengers per day during the peak visitation periods of July and August. The two routes of expanded service averaged around 15 to 20 passengers per day combined (see Figure 11). However, as was discussed above, the lack of promotion efforts may have been a significant factor for the low ridership.

One conclusion that can be made from the ridership in 2006 was that the Harbor Express Loop had significantly more riders than the Marina Bay Loop (see Figures 10 and 11). The Harbor Express Loop averaged its best ridership on August weekends with 32 passengers per day. Weekends are defined as Friday, Saturday and Sunday. There was a spike in ridership in August on the Harbor Express Loop; on a few days, the route attracted over 100 riders. This was due to a conference of military personnel who were staying at the Marriott Hotel who did not have automobiles. In addition, schedule information was placed in their rooms.

Another conclusion is that for both loops, there was significantly higher ridership on weekends, defined as Friday, Saturday, and Sunday, then on weekdays. Weekend ridership dominated in all months except June, July, and August, when weekend ridership still made up half of total ridership. (See Figure 12).

Figure 10
2006 Harbor Express and Marina Bay Ridership: Total Passengers and Total Weekend Passengers
 Source: Data provided by Brush Hills and analyzed by the Volpe Center

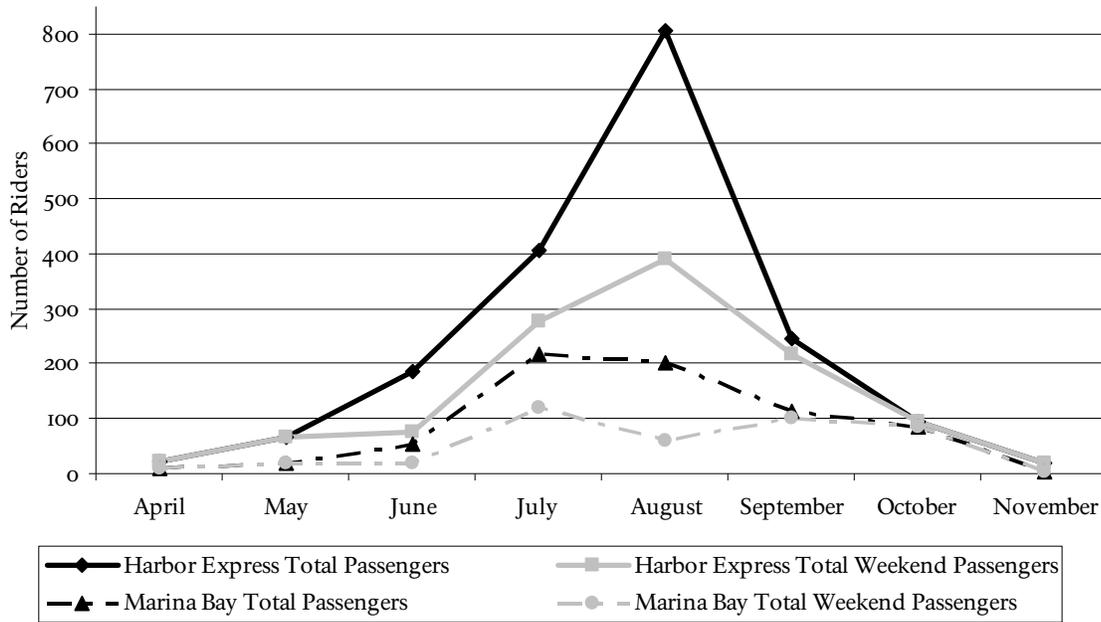


Figure 11
2006 Harbor Express and Marina Bay Ridership: Daily and Weekend Average
 Source: Data provided by Brush Hills and analyzed by the Volpe Center

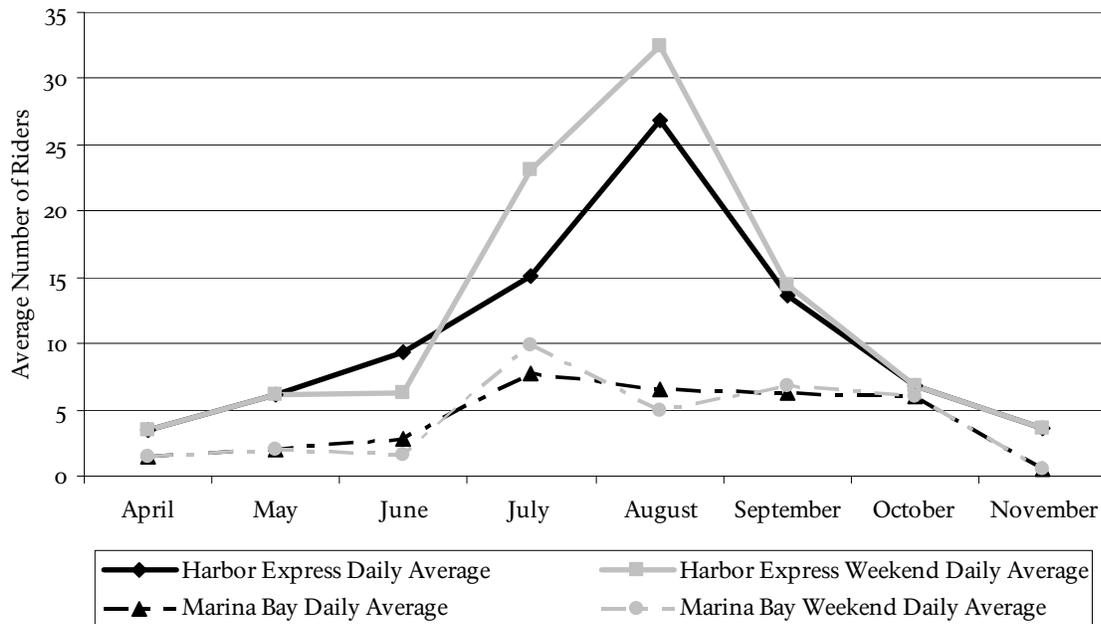


Figure 12
Distribution of Passengers: Weekend Ridership as a Percentage of Total Ridership

Source: Data provided by Brush Hills and analyzed by the Volpe Center

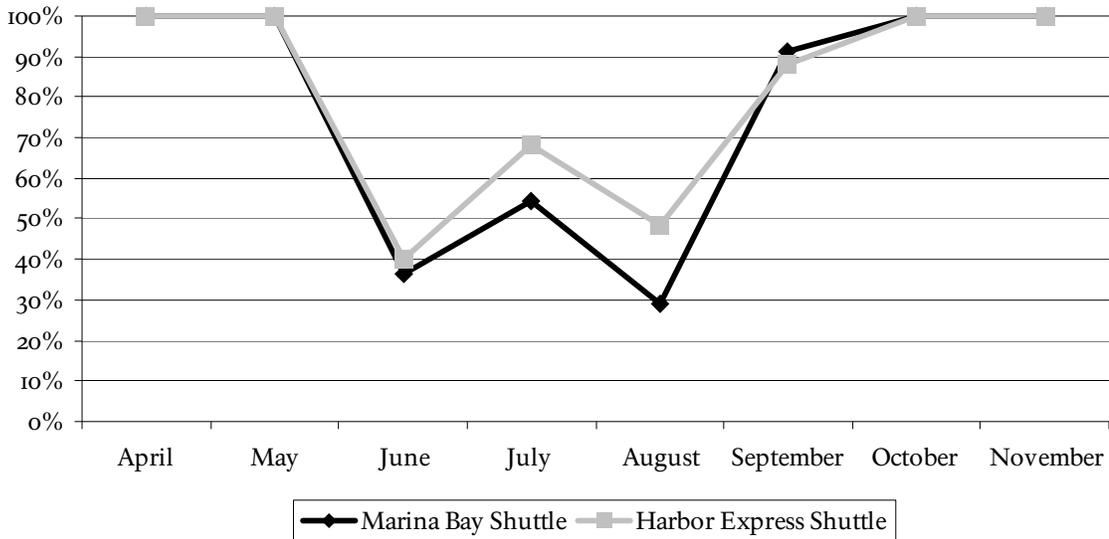


Table 4
Total and average ridership, daily and weekend for the Marina Bay and Harbor Express Loops (2006)

Source: Data provided by Brush Hills to the Volpe Center

2006 Marina Bay Ridership									
	April	May	June	July	August	September	October	November	Total
Total Passengers	9	18	55	218	203	112	85	3	703
Daily Average	2	2	3	8	7	6	6	1	5
Weekend Total Passengers	9	18	20	119	59	102	85	3	415
Weekend Daily Average	2	2	2	10	5	7	6	1	5

2006 Harbor Express Ridership									
	April	May	June	July	August	September	October	November	Total
Total Passengers	21	67	186	407	807	246	96	18	1848
Daily Average	4	6	9	15	27	14	7	4	14
Weekend Total Passengers	21	67	75	277	389	217	96	18	1160
Weekend Daily Average	4	6	6	23	32	14	7	4	13

Table 5
Monthly and Daily Ridership Information for the Adams NHP Park Trolley (2006)

Source: Data provided by Brush Hills to the Volpe Center

2006 Adams NHP Internal Trolley Ridership								
	April	May	June	July	August	September	October	Total
Monthly Totals	1197	2125	2655	4115	3330	2880	2976	19278
Daily Average	100	69	89	133	139	96	96	103

On-time Performance

Both loops generally were able to maintain 40 minute headways. There were some issues with lateness in the beginning of the season, which likely were attributable to drivers learning the routes. Additionally, there were some instances of traffic congestion, accidents, and drawbridge raisings that led to significant delays in service. However, lateness generally was not due to elements within the control of the operator.

Stops

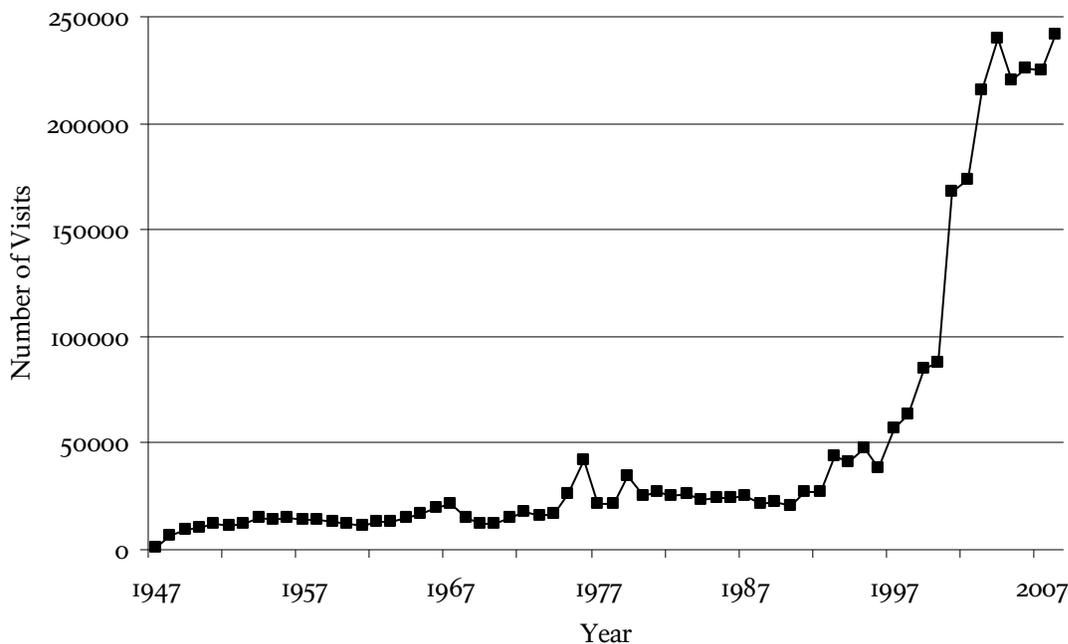
Little information was documented about the amenities present at the individual stops; all of the stops lacked good signage and information about the trolley service. The Marriott stop had a covered waiting area close to the lobby with a nice view. The Marina Bay stop had a bench. The Harbor Express stop did not have any outdoor passenger amenities. No observations were documented regarding the Visitor Center or Best Western stops.

Demand Analysis

The expanded trolley service was targeted at several audiences: visitors to Adams NHP, Boston Harbor Islands (BHI), and Quincy and hotel guests at the Boston Marriott Quincy and Best Western Adams Inn. Adams NHP has experienced a dramatic increase of 400% in visitation in the past 10 years. In 2008, it received nearly 250,000 visitors. (See Figure 13). With the release of the Emmy Award-winning 2008 television miniseries on John Adams, visitation is expected to continue to increase.

Figure 13
Visitation to Adams NHP, 1947-2008

Source: National Park Service Public Use Statistics (www.nature.nps.gov/stats/)



Boston Harbor Islands (BHI) does not have readily available visitation data; in 2002, however, visitation was estimated at 250,000 according to the Boston's Foundation's Boston Indicators Project. The Marriott has 456 hotel rooms and 8 hotel suites; the Best Western 99. Assuming 100%

of rooms were booked at double-occupancy, the two hotels together could provide a maximum of 1,126 potential passengers on any given day. A more realistic estimate, assuming the 20-year Boston average of 67.6% annual occupancy,⁷ brings the total to 761. However, occupancy would vary seasonally.

For all of these audiences, not all of the visitors or hotel guests will be interested in visiting Adams NHP, BHI, or Marina Bay, and of those that are interested, not all will choose to use a trolley service. Many of these visitors to BHI access the islands from the four other ferry terminals that serve the islands (Long Wharf in Boston, EDIC Pier in South Boston, Hingham Shipyard in Hingham and Pemperton Point in Hull). Many hotel guests are in town for business or have other destinations in mind. Many of the Adams NHP visitors are solely interested in visiting that park. However, the connection of these destinations and sources of riders provides a strong case that the ridership experienced by the pilot loops was lower than could be expected, especially if some of the lessons learned from the pilot could be applied to future service. The connection between Adams NHP and BHI via the Harbor Express Ferry Service is particularly important because it could connect two popular destinations as well as provide Adams NHP visitors with a ferry service option. This fact may be the reason behind the relative success of the Harbor Express Loop in the pilot.

One audience that the pilot expanded trolley service did not target was MBTA riders. Four MBTA red line stations (North Quincy, Wollaston, Quincy Center, and Quincy Adams) and one commuter rail station (Quincy Center) are located along the two routes but the trolley service did not stop at these stations. These stops could act as feeders to Adams NHP, BHI, Marina Park, and other destinations. In addition, there are existing MBTA bus routes that should be taken into account for access and connection opportunities.

Operational Performance

The Volpe Center project team performed ride checks on four different occasions throughout the 2006 season, as well as a preliminary service ride check for the 2005 season. Notes on the July 8, 2005 ride check and memoranda on the first two 2006 ride checks are provided in the Appendix. In 2006, ride checks were performed on Sunday, May 14th, Friday, June 23rd, Wednesday, August 30th, and Thursday, September 7th. During each ride check a member of the Volpe Team rode each loop once and observed operations. After each of the first two ride checks, a memorandum was prepared and recommendations were offered to improve service. The second two ride checks showed improvement in operator behavior but continued limitations in marketing and publicity; they did not reveal any additional recommendations but instead reinforced the existing ones.

During the ride checks only three passengers were observed by the Volpe Team. In discussions with these passengers it was clear that there was a lack of information. The passengers using the trolley had learned of it through word of mouth. One passenger did not have access to a car. The passengers observed were traveling between the hotels and downtown Quincy.

Operator behavior seemed not to be well regulated during the initial ride checks. Instances of route deviation, schedule deviation, and visible tip jars were observed. These issues were largely corrected by the end of the season.

Vehicles that were in less than good repair were also observed during the ride checks. In particular, rainwater leaked into vehicles causing uncomfortable and potentially hazardous conditions on two occasions.

⁷ PKF Consulting as cited in a Boston Globe article. Wong, Nicole. Boston hoteliers apt to sleep soundly in '09 August 21, 2008. http://www.boston.com/business/articles/2008/08/21/boston_hoteliers_apt_to_sleep_soundly_in_09/

Cost

The 2006 season of operations for the expanded trolley service cost the National Park Service approximately \$200,000. This means that serving each passenger on the Marina Bay Loop cost approximately \$140 and each passenger on the Harbor Express Loop cost approximately \$50; these costs are high due to the low ridership. For comparison, the internal Adams NHP trolley service generated more than ten times the ridership that the Harbor Express Loop generated for similar costs. However, as mentioned above, the ridership most likely did not reflect the full potential of the services. It is difficult to quantify the benefits associated with the expanded trolley service, as they could include increased visitation, improvement in visitor satisfaction and service, reduced vehicle use and thus reduced congestion and pollution, and increased awareness of Adams NHP and the other sites.

4 Future Funding Potential

This section considers potential future funding sources, as the initial funding was from a one-time grant.

If Adams NHP is interested in piloting an expanded trolley service in the future, it must consider how to fund it.

Partnerships

Partnerships with local stakeholders are one way to fund an expanded service. As mentioned above, the National Park Service and others regard Quincy as a gateway to BHI. This point of view has raised questions about how best to connect the two, for example, by offering more direct ferry service from Quincy to BHI perhaps through Squantum Point Park or another location. Funding is available to upgrade the Squantum Point Park dock to ADA requirements, and Adams NHP received an FY2008 Federal Transit Administration (FTA) planning grant for \$250,000 for a plan to develop the Adams Landing Transportation Hub, which may consider Squantum Point Park and other options for ferry services to BHI. It may be possible for a trolley service to Adams NHP to become part of this proposal and be supported by some of the funding available.

In the case of the pilot expanded trolley service, Discover Quincy and the City of Quincy both expressed interest and support for the project but did not contribute financially and may not be able to in the future. Both hotels seemed very interested in the expanded service; however, they did not contribute to it financially. Adams NHP could meet with the hotels to see if they would be willing to contribute to operational funds and possibly to help hire drivers or store and fuel vehicles. The hotels currently have vans that they use to transport guests. However, in meetings with them, the hotel managers seemed interested in a more efficient and regular service to connect their properties to downtown Quincy.

Other nearby, related historical sites may have limited relevance to an expanded route. The Abigail Adams Birthplace, run by the Abigail Adams Historical Society, is located 6.8 miles from the Visitor Center, 2.5 miles further east along Washington Street from the current location of the Harbor Express at Fore River. This site could be added to the Harbor Express Route that was piloted if the demand for the Harbor Express service remains even with the possibility of future ferry service to BHI from elsewhere in Quincy. The Quincy Homestead, operated by the National Society of the Colonial Dames of America and open limited Saturdays during the summer, is located a half-mile north of the Visitor Center and a quarter-mile east of the Old House. Similarly, the Adams Academy, operated by the Quincy Historical Society and open year-round Mon-Fri 9am-4pm and Saturdays 12-3pm April through November, is located a quarter-mile north of the Visitor Center and a third-mile south of the Old House. Thus, both are within walking distance of the Visitors Center and the Old House and could be incorporated into the existing park trolley route if desired. (The Quincy Homestead and Adams Academy sites are both shown in Figure 2 on page 2).

As mentioned above, the MBTA – other than the Harbor Express service – was not directly involved in the expanded trolley service but could and should be regarded as a potential partner in terms of coordination, service, advertising and funding.

Adams NHP might propose the formation of a transportation working group of interested parties. This group could organize funding, consider jointly funding the service, and make decisions on how to implement the service

Grants

The two-year pilot service was funded by a Public Lands Highway Discretionary Program grant from the Federal Government provided by a Congressional earmark. While this is an unlikely

source of ongoing funding, there are other Federal grant programs that might be able to fund planning or implementation of an expanded service. The Volpe Center helped Adams NHP apply for \$60,000 in funding from the Alternative Transportation in Parks and Public Lands (ATPPL) FY2007 grant process to study the sustainability of an expanded historic trolley service based on the results of the first two years of service (see Appendix). That application was unsuccessful, but Adams NHP recently received an FY2008 planning grant for \$250,000 for a plan to develop the Adams Landing Transportation Hub, a project related to the new Squantum Point Park proposal described above.

Fares

The expanded service was provided free of charge. Charging fares can help fund part of the operational costs of the service, however there would need to be additional analysis on how much could be charged without negatively impacting ridership. It may be more advantageous to look elsewhere for funding support if providing free service was a priority for the partners involved.

5 Conclusions and Recommendations

This section provides considerations for the NPS in any future implementation of expanded shuttle service.

It is difficult to evaluate the expanded trolley service fairly because of the issues highlighted in the service evaluation section. Marketing and passenger information were lacking and this may have contributed to the low levels of ridership. It was evident that the Harbor Express Loop showed more potential than the Marina Bay Loop and that there was higher ridership on the weekends. However, it is clear that both routes had high costs per rider as they were implemented during the 2006 season. With some recommended improvements, it appears possible that the Harbor Express Loop could become more cost-effective and attract more ridership. The higher potential for a route that serves the Harbor Express may be reflected in a route to any new ferry services made available to BHI.

Recommendations for future implementation

- **Set clear ridership and performance goals.** Ridership and performance goals would be useful in determining what would make the service a success according to NPS and in refining or expanding operations. Because the pilot service was implemented quickly, ridership and performance goals were not clearly established. One way to incorporate such goals is through performance-based contracting.
- **Work with the Massachusetts Bay Transportation Authority (MBTA).** The MBTA has several bus routes that closely parallel the Harbor Express route between the visitor center and Harbor Express Ferry Terminal. The MBTA might be willing to divert a route slightly to better serve the ferry terminal. The MBTA may also be a candidate for operating future expanded service. Several MBTA rail stations are located in the area, including four along the two pilot routes. Additionally, the MBTA offers a good venue for advertising if any new service were to be introduced. Partnerships with the MBTA should be explored.
- **Improve planning.** Because of the nature of the Federal grant, the expanded trolley service was implemented with a shortened planning window. Improved, longer-term planning would allow for study of optimal routes and potential rider catchment areas.
- **Improve marketing and passenger information.** Marketing and passenger information are critical to successful implementation of a new transit service. Promotion and awareness of a service are key factors in attracting passengers. There should be a dedicated marketing and advertising budget for any future service. Branding should be a major part of this effort, with appropriate and professional logos and signage displayed on the trolleys and at each stop. Once passengers know a service exists, specific information regarding the service must be provided. Maps and schedules should be available at every stop and on board the vehicles at a minimum. Maps, schedules, fare information, and information about connections to other services should be provided online and in marketing materials if spaces allows.
- **Work with local stakeholders.** Local stakeholders may be willing to provide funding if it means that they do not have to support their own transportation. Hotels might be willing to help pay for part of operations if they could save money by not operating their current vans.
- **Coordinate the schedules of various trolley, MBTA, and ferry services.** Well-timed connections that reduce wait time and improve the efficiency of transfers will improve ridership and rider experience.
- **Focus on weekend service.** Weekend service proved more effective than weekday service, especially in July and August on the Harbor Express Loop. Additionally, weekend service is more easily marketable and requires a lower level of operational funding at the outset. A weekend service may be more acceptable to stakeholders in terms of providing financial support.
- **Focus on the Harbor Express Loop.** The Harbor Express Loop showed significantly more potential than the Marina Bay Loop. The Marriott Hotel and the Harbor Express were active in supporting and promoting the service. There were a few spikes in ridership that showed the potential in operating this route with the correct marketing and passenger information. Additionally, well-timed connections to the ferry service could enhance ridership on both the

trolley and the ferry. The higher potential for a route that serves the Harbor Express would need to be reevaluated if new ferry services to BHI are offered from elsewhere in Quincy. Such an addition could eliminate the need for two loops.

- **Train the vehicle operators.** Operators should be trained so that service is consistent. Service should not vary based on the vehicle operator.
- **Designate someone to oversee the trolley service.** The pilot service did not have a clear overseer within the National Park Service. This caused confusion at times as to who was responsible for implementing changes to service and dealing with the contractor.
- **Incorporate data collection into the contract and service.** Ridership data needs to be collected in order to analyze the effectiveness of the trolley service; this could be done by installing counters on board the trolleys. The time schedule could be improved by requiring drivers to keep time log books or installing electronic tracking or timing devices in the trolleys and/or at stops.
- **Develop a trip planner tool for visitors to use.** A trip planner tool that incorporates ferry, trolley, and MBTA schedules would be very helpful to the customers.

Appendices

Adams Memorandum: Volpe Center Summary of Activities, October 2005

Adams Memorandum: Trolley Roll-Out Strategy, July 2005

Trolley & Water Schedules Tri-Fold

Ship to Shore Trolley Card Rack

Technical memoranda prepared after performing ride checks

- July 8, 2005 initial run of routes with findings and subsequent recommendations
- May 14, 2006 ride check findings and subsequent recommendations
- June 23, 2006 ride check findings and subsequent recommendations

ATPPL 2007 Planning Application



Adams

Memorandum: Volpe Center Summary of Activities



DRAFT
October 2005

John A. Volpe National Transportation Systems Center
Research and Innovative Technology Administration
U.S. Department of Transportation



Summary of Tasks

This document summarizes the various tasks completed by the Volpe Center Study Team in planning and implanting the 2005 Season of expanded trolley service at Adams National Historical Park. These tasks were completed starting in October 2004 and continued through the first season ending in October 2005. Expanded trolley service began in July of 2005.

Alternatives Analysis

The Volpe Center Study Team consulted with stakeholders and provided several alternatives as to how the new prototype service would be operated. After meeting with all of the stakeholders, the preferred alternative was chosen to be a two-loop service using replica historic trolleys. The northern loop would serve Marina Bay, the Best Western Adams Inn and the Adams NHP Visitor Center. The southern loop would serve the Marriott Hotel in Quincy, the Harbor Express Ferry Terminal at Fore River, and the Adams NHP Visitor Center.

Development of Statement of Work for Expanded Trolley Service

After the preferred alternative was chosen, the Volpe Center Study Team helped develop a statement of work for the contractor who would eventually operate the service. The statement of work became a part of the official request for proposals and the eventual contract. The contract specified the two loops as described above and designated 30 minute headways as the preferred level of service.

Bid Evaluation

The Volpe Center Study Team helped National Park Service staff evaluate the bid received from Brush Hill Tours, Inc. for operation of the expanded service. The Volpe Center Study Team participated in negotiations with Brush Hill and provided technical assistance to NPS contracting staff. Brush Hill was subsequently awarded the contract and began operating the expanded service in July of 2005.

Schedule Development

The Volpe Center Study Team developed an initial schedule for the beginning of the expanded service in July 2005. The schedule was based on the half hour headway requirement. The Volpe Center Study Team revised the schedule after receiving initial data on the actual run times. Because of traffic, Brush Hill was not able to meet the frequency requirements of the initial schedule. The Volpe Center Study Tea, revised the schedule to make run times longer during peak periods so that the new schedule would be more reliable.

Marketing and Roll-out Strategies

The Volpe Center Study Team provided guidance on initial marketing and roll-out strategies. The Volpe Center Study Team led a roll-out and marketing strategy meeting towards the end of the first season of service. The Volpe Center Study Team produced a draft report of strategies for roll-out and marketing.



Adams

Memorandum: Trolley Roll-Out Strategy



DRAFT

July 2005

John A. Volpe National Transportation Systems Center
Research and Innovative Technology Administration
U.S. Department of Transportation



Trolley Roll-Out Strategy

This document outlines various strategies that could be used in the roll-out of the prototype shuttle service for Adams National Historical Park. These strategies can help increase awareness of the shuttle and develop its ridership.

Purpose

The purpose of the shuttle is to facilitate the movement of visitors to Adams National Historical Park, between the Park's Visitor Center, the Boston Harbor Island National Recreation Area, and other Quincy attractions and destinations, including Marina Bay, the Harbor Express Ferry Terminal, and area hotels.

Stakeholder Coordination

There are several different stakeholders who have an interest in or impact on the success of the shuttle and might be able to help with the roll-out. These stakeholders can collaborate to develop a comprehensive roll-out plan which may include some or all of the strategies described below. The primary stakeholders that will be continually involved in the roll-out process are Adams NHP, Harbor Express, Discover Quincy, the City of Quincy, and Brush Hill Tours. These organizations may be involved in different aspects of the roll-out, from printing publications to spreading information via word of mouth. In addition, other organizations such as the Quincy Business Association, the MBTA, the Massachusetts Highway Department, and local hotels may be contacted as part of stakeholder management.

Character and Branding

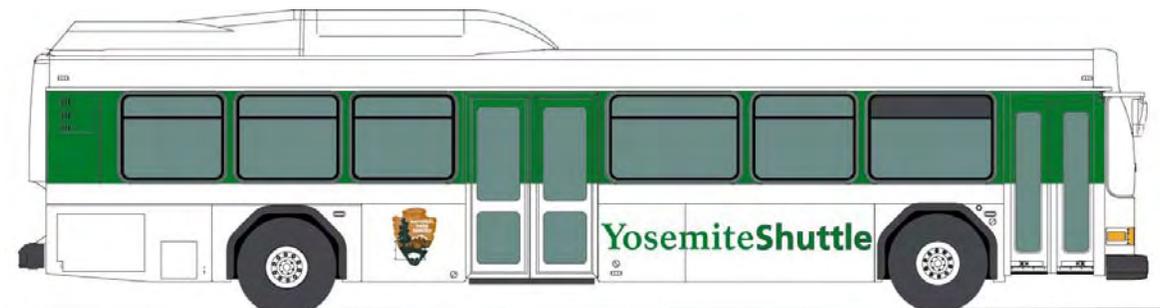
All material produced for the new shuttle service must be consistent in style and in content. It would be appropriate for the materials to be stylistically similar to the existing brochures for Adams NHP or Discover Quincy. The following character components could be developed:

- An easy-to-remember name for the service
- A logo that will be recognizable when printed on brochures and when enlarged to be placed on signage
- An official map and schedule
- A family of fonts and colors

In addition, there should be consistency in the tone of voice (e.g. how formal or casual any text is), layout, and type of photographs or other graphics displayed in any printed materials. The

Figure 1
Yosemite shuttle

Source: Yosemite National Park



trolley itself is distinctive in character and this should be taken into consideration in the development of a brand.

There are several good examples of brand development from the National Park Service; the NPS Graphic Identity Program is the most prominent. This program “develops and promulgates graphic standards that guide the design of a broad range of communication media;” more information can be found at <http://www.nps.gov/hfc/products/identity.htm>. An example on a smaller scale, and specifically related to transportation, is the branding of the Yosemite Shuttle, as seen in Figure 1. Another example is the Island Explorer at Acadia National Park; more information can be found at <http://www.exploreacadia.com>.

Target Audiences

In order to launch an effective roll-out, it is important to gain an understanding of the different market segments that may be interested in the transportation service, and determine the best way to reach each segment. The shuttle is generally intended for tourists visiting Adams NHP, the Boston Harbor Islands, and visiting Quincy, but details about these visitors are needed, such as:

- Where are visitors from? Which states or countries?
- If visitors are from out of town, where do they stay? Do they come by plane, drive, or by public transportation? How long do they stay?
- How old are visitors to Adams? What size or type of group do they come in (e.g. families, couples, school field trips)? How much money do they spend during their trip?
- Are visitors making their first trip to Adams, or are they repeat visitors? How regularly might they come?
- Among visitors, what distinctions can be made between those that are interested in recreational activities, cultural activities, and historical activities? What other places besides Adams NHP or Quincy do they visit during their stay?

Roll-Out Strategy Suggestions

A plan to increase awareness and create ridership for the new service would comprise several different strategies, from carefully placed printed brochures to word of mouth. Some of the strategies would be more effective at attracting the attention of tourists while others may be more relevant to local residents, and more market research would help determine where roll-out efforts should be focused. Below are several examples of strategies that we expect would help draw ridership to the service; any or all of these could be undertaken but it is important that efforts are coordinated so as to ensure that the brand and character are consistent throughout.

Printed Material

Printed material will be one of the primary sources of information about the new trolley service. All printed material will follow the branding and character specifications outlined above, and will contain the following features:

- Map—a stylized map of the system will allow people to visualize/contextualize the routes and whether other local attractions might fit into their schedule. The map need not show the exact route of the shuttle since it does not stop in between the major destinations. The MBTA stations should be labeled with “to Boston” and the ferry landing with “to Harbor Islands,” “to Boston,” etc., similarly to the map in the current Discover Quincy brochure.
- Schedule—the printed schedule must be easy to understand and linked with the map in terms of showing potential passengers when and where they will arrive. In addition, some versions of the schedule may use bold letters or asterisks to show which trolleys are timed to meet Harbor Express Ferries or the park trolley that runs to the Park’s historic homes.
- Photos/descriptions of attractions—some potential riders will be unfamiliar with the area or will not have definite plans for what they would like to visit; this type of visitor needs to be shown the possibilities in the Quincy area. This can be accomplished through photos or

brief descriptions of the many sites and activities that are accessible via the shuttle and connecting modes of transportation.

In addition, the fact that the shuttle is complimentary this season is very important for attracting attention. This should be promoted in print material.

Some types of publications that could be produced are:

- Card inserts—inserts can be placed in the existing Discover Quincy brochure, to show visitors to Adams NHP how the service can be useful for reaching the destinations outlined in the brochure. Placement: wherever Discover Quincy brochures are already distributed, as well as on the trolley itself.
- Folded pamphlets/brochures—because the summer season is already underway and next year’s service may be slightly different, producing glossy, color brochures may not be financially feasible for this season. Nevertheless, a folding brochure that potential passengers can take with them might be a one- or two-color pamphlet printed on white paper similar to MBTA bus and subway schedules. Placement: pamphlets could be available at all trolley stops and other local hotels, on the trolley, at the Quincy Center MBTA station, at any other cultural or historic sites in downtown Quincy, and at any Quincy cultural events during the summer. Market research may suggest other locations for distribution.

Web Site

The web site would be very similar to printed brochures, with the same style and basic content: the home page can have a map and photographs of attractions, and links to the schedule and to information for each shuttle stop. The site could contain relevant links to other attractions in Boston and Quincy, as well as links to other transportation sites such as the MBTA web page. In addition, relevant outside web sites that are willing to provide links to the shuttle’s web site should be identified and contacted. The web site should go online as soon as possible since this is one of the easiest ways to reach many people.

One website that is an example of how the site might be organized is for the Ipswich/Essex Explorer: <http://www.ipswich-essexexplorer.com/default.htm>.

Shuttle Signage

The shuttle and shuttle stops should be recognizable to people who intend to ride the service, should be consistent with other material, and should attract the attention of those who do not know about the shuttle.

Stop signage for the shuttle should act not only as an indication of where to board the shuttle, but as an advertisement for the system. It would be in the same character as all other materials, with the logo and name of the service prominently displayed. In addition, these signs would ideally be large enough to include a map, a schedule, and photos or a list of attractions. Additionally, signage could include a contact number or address for the system’s web site. The City of Quincy should be contacted to determine whether there are any restrictions on the signs that can be placed on city sidewalks or streets, and whether the City can aid in financing and producing the signs. The Massachusetts Highway Department might also be contacted about signage on roads.

The vehicle itself should have its destinations displayed prominently, and could also display basic information about the system itself. This information could be in the form of a sign that would be affixed in the window of the trolley and could be changed out when different vehicles are in use.

Way-Finding Signage

In addition to signage at boarding locations, there could be signage directing people to the trolley stops. This way-finding signage could be placed at key locations such as the Quincy Center MBTA

station and Marina Bay. This signage would include similar information to stop signage, but in addition would show users how to get between the trolley stops and other destinations. This is important in locations such as the Quincy Center MBTA station which does not have a line of sight directly to the park visitor center and trolley stop.

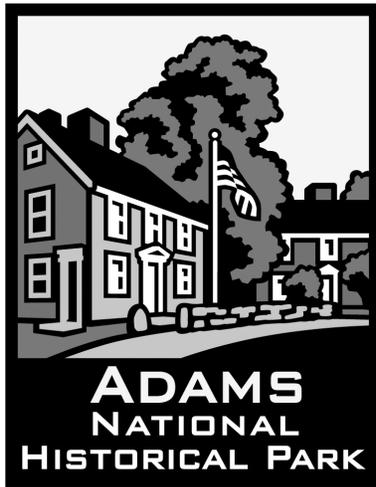
Local Outreach

Some prospective trolley riders may be tourists staying in one of the Boston area's many hotels. In addition to the two hotels stationed along the route (the Quincy Marriott and the Adams Inn Best Western), any local hotel with access to the MBTA or to the Harbor Express ferries could be identified and contacted. While the Marriott and Best Western have a direct interest in the shuttle service and have the opportunity to be actively involved in outreach, other hotels would need to be contacted and informed about the shuttle's existence and relevance to guests. The most effective way to ensure that hotels can provide information to their guests may be to speak to the concierges directly; meetings could be set up with the head concierge for each of the Quincy and Boston area hotels that have easy access to the MBTA, the ferry, or the shuttle service. Once printed materials become available these should be distributed to the hotels as well.

Local cultural or community events are an additional way to get information about the service to prospective passengers. A representative for the service could be present at such events, or else arrangements might be made with representatives for complementary organizations to distribute information about the service.

Roll-Out Time Frame

A schedule should be laid out identifying which aspects of a roll-out strategy would have higher or lower priority.



PARK TROLLEY	
Visitor Center	
9:15 AM	
9:45 AM	
10:15 AM	
10:45 AM	
11:15 AM	
11:45 AM	
12:15 PM	
12:45 PM	
1:15 PM	
1:45 PM	
2:15 PM	
2:45 PM	
3:15 PM	

Adams National Historical Park Tour

Both the Marina Bay and the Harbor Express trolley services stop at the Adams National Historical Park Visitor Center. Here you can connect with the Adams National Historical Park tour trolley. Admission to the park is \$5 for adults and free for children under 16 years old. The park is open daily from 9 a.m. to 5 p.m. between April 19th and November 10th, 2006.

Harbor Express Ferry Schedule

The schedule below shows departures from the Harbor Express Ferry Terminal at Fore River to the Boston Harbor Islands. Passengers can also connect to downtown Boston and Logan International airport. See www.harborexpress.com for the full schedule.

Harbor Express Harbor Islands Weekend Schedule			
Depart Quincy	Arrive Georges Island	Depart Georges Island	Arrive Quincy
9:20 AM	9:40 AM	9:45 AM	10:55 AM
9:50 AM	10:10 AM	10:15 AM	11:25 AM
11:00 AM	11:20 AM	11:25 AM	12:35 AM
11:30 PM	11:50 PM	12:55 PM	1:15 PM
1:20 PM	1:40 PM	2:45 PM	3:05 PM
2:10 PM	3:20 PM	3:25 PM	3:45 PM
3:15 PM	3:35 PM	4:35 PM	4:55 PM
3:55 PM	5:10 PM	5:15 PM	5:35 PM
5:05 PM	6:05 PM	6:10 PM	6:25 PM



Trolley & Water Shuttle Schedules

SUMMER/FALL 2006



Daily through September 10, 2006

Weekends Only September 15-November 10, 2006

Welcome to Historic Quincy:

Birthplace of the American Dream!

From historic landmarks to harbor views, there 's a lot to see and do in the City of Presidents, and we hope our free trolley service will help you experience all that Quincy has to offer.

The enclosed schedule provides departure times for two trolley routes, both of which stop at the Adams National Historical Park Visitor Center in downtown Quincy. So whether you 're traveling from the Harbor Express ferry to Marina Bay, or the Best Western Adams Inn to the Adams National Historical Park tour, our connecting trolley routes will take you there.

For additional assistance in getting around historic Quincy, please call:

National Park Service Visitor Center:
(617) 770-1175

Harbor Express Ferry Service:
(617) 222-6999

Discover Quincy:
(617) 657-0527

We are here to assist you and hope you enjoy your visit to Quincy!



Marina Bay Trolley Route

This route stops at the **Best Western Adams Inn**, the **Adams National Historical Park Visitor Center** (in downtown historic Quincy), and **Marina Bay**. Connect at the Visitor Center with the Harbor Express Trolley, MBTA transit services, and the Adams National Historical Park tour trolley (admission \$5, children under 16 free).

MARINA BAY TROLLEY SCHEDULE		
Best Western	Visitor Center	Marina Bay
9:55 AM	10:10 AM	10:27 AM
10:35 AM	10:50AM	11:07 AM
11:15 AM	11:30AM	11:47 AM
11:55 AM	12:10 PM	12:27 PM
12:35 PM	12:50 PM	1:07 PM
1:15 PM	1:30 PM	1:47 PM
1:55 PM	2:10 AM	2:27 PM
2:35 PM	2:50 PM	3:07 PM
3:15 PM	3:30 PM	3:47 PM
3:55 PM	4:10 PM	4:27 PM
4:35 PM	4:50 PM	5:07 PM
5:15 PM	5:30 PM	5:47 PM
ALL TIMES APPROXIMATE DUE TO TRAFFIC		

Harbor Express Trolley Route

This route stops at the **Boston Marriott Quincy**, the **Adams National Historical Park Visitor Center**, and the **Harbor Express Ferry Terminal at Fore River**. Connect at the Visitor Center with the Marina Bay Trolley, MBTA transit services, and the Adams National Historical Park tour trolley (admission \$5, children under 16 free). Connect at the Harbor Express Ferry Terminal with Harbor Express Ferry Service to the Boston Harbor Islands, Downtown Boston, and Logan International Airport.

HARBOR EXPRESS TROLLEY SCHEDULE		
Marriott	Visitor Center	Harbor Express
9:25 AM	9:36 AM	9:47 AM
10:05 AM	10:16 AM	10:27 AM
10:45 AM	10:56 AM	11:07 AM
11:25 AM	11:36 PM	11:47 AM
12:05 PM	12:16 PM	12:27 PM
12:45 PM	12:56 PM	1:07 PM
1:25 PM	1:36 AM	1:47 PM
2:05 PM	2:16 PM	2:27 PM
2:45 PM	2:56 PM	3:07 PM
3:25 PM	3:36 PM	3:47 PM
4:05 PM	4:16 PM	4:27 PM
4:45 PM	4:56 PM	5:07 PM
5:25 PM	5:36 PM	
ALL TIMES APPROXIMATE DUE TO TRAFFIC		



MARINA BAY LOOP SCHEDULE

Best Western	Visitor Center	Marina Bay
9:55am	10:10am	10:27am
10:35am	10:50am	11:07am
11:15am	11:30am	11:47am
11:55pm	12:10pm	12:27pm
12:35pm	12:50pm	1:07pm
1:15pm	1:30pm	1:47pm
1:55pm	2:10pm	2:27pm
2:35pm	2:50pm	3:07pm
3:15pm	3:30pm	3:47pm
3:55pm	4:10pm	4:27pm
4:35pm	4:50pm	5:07pm
5:15pm	5:30pm	5:47pm

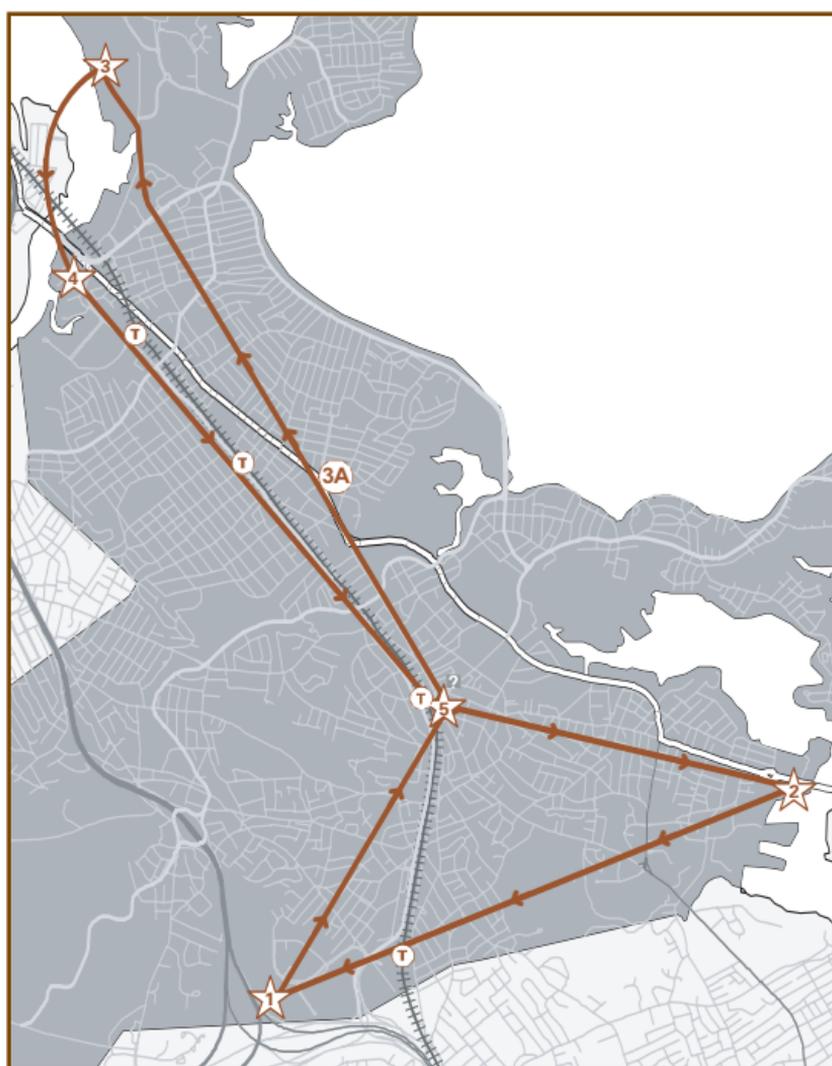
HARBOR EXPRESS LOOP SCHEDULE

Marriott	Visitor Center	Harbor Express
9:25am	9:36am	9:47am
10:05am	10:16am	10:27am
10:45am	10:56am	11:07am
11:25am	11:36am	11:47am
12:05pm	12:16pm	12:27pm
12:45pm	12:56pm	1:07pm
1:25pm	1:36pm	1:47pm
2:05pm	2:16pm	2:27pm
2:45pm	2:56pm	3:07pm
3:25pm	3:36pm	3:47pm
4:05pm	4:16pm	4:27pm
4:45pm	4:56pm	5:07pm
5:25pm	5:36pm	

TROLLEY STOPS

- 1 BOSTON MARRIOTT QUINCY
Parking, Lodging, Dining, Visitor Information and Restrooms
- 2 HARBOR EXPRESS FERRY TERMINAL
Parking, Restrooms, Ferry Connection to Downtown Boston, Boston Harbor National Parks Sightseeing Cruise, USS Salem Ship Museum, Visitor Information
- 3 MARINA BAY
Parking, Restrooms, Waterfront Dining, Boardwalk, Great Views of the Boston Skyline
- 4 BEST WESTERN
Parking, Restrooms, Waterfront Dining, Visitor Information
- 5 ADAMS NHP VISITOR CENTER
Adams NHP Tours, Historic Downtown Quincy, Restrooms, Dining, Visitor Information

TROLLEY ROUTES



Marina Bay Loop



Harbor Express Loop

Volpe National Transportation Systems Center Adams National Historical Park Prototype Shuttle Observations, July 8, 2005

The main purpose of today's trolley run was to familiarize the drivers with the route and determine any scheduling or other problems that might arise. Drivers kept track of the day's trip times and Brush Hill should be able to provide data for the entire day. Below are the times and observations from the two trips that made by Volpe.

Southern Loop:

Visitor Center—boarded at 9:50 AM
Harbor Exp.—arrived at 10:04, departed at 10:05
Marriott—arrived at 10:20, departed 10:22
Visitor Center—arrived at 10:32
Total trip time—42 minutes

In addition to taking photographs of the stops, Volpe made the following observations:

- The Marriott stop has good passenger amenities including a covered waiting area that is close to lobby and a nice view. A sandwich board would be a good option for stop signage.
- The Harbor Express landing did not have any outdoor passenger amenities.

Northern Loop:

Visitor Center—boarded at 10:33
Marina Bay—arrived at 10:51, departed at 10:52
Best Western—arrived at 10:57, departed at 10:59
Visitor Center—arrived at 11:11
Total trip time—38 minutes

In addition to taking photographs of the stops, Volpe made the following observations:

- The Marina Bay stop has good passenger amenities including a bench. However, it was not clear from the immediate area surrounding the stop where tourists might proceed. Signage designating the stop as well as where to find Marina Bay attractions might be useful.
- The northern loop trolley run time is slightly less than 40 minutes. If the operator must wait to make the correct schedule, it should be at the Best Western so as not to conflict with movements of other trolleys at the Visitor Center.
- It may be preferable from a tourist's perspective to run the trolley along Quincy Shore Drive instead of Newport Avenue especially since there is some time flexibility (see above). This route would be more scenic. However, there may be a vehicle weight limit on this road.

General Notes:

- Drivers reported that they stop for two minutes at each place for boarding and alighting even though there were no passengers.
- Time for bathroom breaks may need to be built into the schedule.
- There were two instances of the trolley arriving when a NPS trolley was there; this should not be a problem if the drivers follow the schedule.
- Drivers had tip buckets which may not be permissible according to the rules of the contract.
- One driver suggested marketing at other Boston area hotels. This would be especially relevant for those hotels with access to Harbor Express Ferry stops or Red Line T stops.



U.S. Department
of Transportation

Research and
Innovative Technology
Administration

Technical Memorandum

John A. Volpe National
Transportation Systems Center

Subject: Adams National Historical Park Expanded Trolley Service -
Observations

Date: May 16, 2006

From: Paul Christner, Community Planner
Planning and Policy Analysis Division

Reply to
Attn of: DTS-46

To: Marianne Peak, Superintendent, Adams National Historical Park

Cc: Caroline Keinath, Deputy Superintendent, Adams National
Historical Park
Peter Steele, National Park Service, Northeast Regional Office

On Sunday May 14, 2006, I traveled to Quincy to ride both of the expanded Adams National Historical Park (NHP) trolley loops and observe the service. The day was particularly cold and rainy with widely reported localized flooding, which could have adversely affected ridership. No riders were observed on either loop. Following is a bulleted summary of my rides on each loop.

Harbor Express Loop

- The trolley departed the Harbor Express Ferry Terminal at Fore River at 2:08 pm, approximately 20 minutes off schedule.
- Upon entering the trolley, I informed the driver that I was going to Adams NHP. The trolley proceeded directly to the Adams NHP Visitor Center without a stop at the Marriot and arrived at 2:14 pm. This is a significant route diversion.
- There was little information available for passengers about the trolley at the Harbor Express Terminal. Harbor Express staff knew the trolley existed but were not able to provide specific schedule information.
- The Harbor Express Loop trolley was observed at the Visitor Center at 2:38 pm and 3:23 pm, both times that would indicate significant schedule deviation.
- A tip basket with cash in it was seen at the front of the trolley.

Marina Bay Loop

- I boarded the trolley and told the driver I would like to ride the entire loop. The driver was hesitant to allow me to ride the entire loop and asked me to exit the trolley until I identified myself as a US DOT employee working on the expanded trolley project. I was then allowed to ride.
- The trolley departed Visitor Center at 2:44 pm, which is 6 minutes early.
- The trolley generally arrived a few minutes early at the stops on the loop, but waited until the designated time on the schedule to depart the stops.
- There was no signage to indicate the trolley stops at any stops. There was a small generic sign indicating a shuttle stop at Marina Bay. This is where the trolley stopped.
- The trolley had significant water leakage through its roof and was difficult to ride comfortably. Rainwater was leaking in on most seats.

Recommendations for improvement

Based on my observations, there are several areas that need improvement on the two expanded trolley loops in order to improve prospects for success.

1. Signs are needed at each stop and on each trolley vehicle. This would allow tourists to see where to board the trolleys and where the trolleys are going.
2. Maps and schedules should be posted at each stop and on the trolleys themselves. Maps and schedules should also be available at each of the stops to be handed out to visitors.
3. Staff at each stop should be informed and knowledgeable about the trolley service so they can explain it to visitors.
4. The operator should be reminded that vehicles need to be in good working condition and should not have issues such as leaks. Vehicles with such problems should be taken out of service and replaced with vehicles in good repair.
5. Drivers should be trained on the schedule and route. Adhering to the schedule and route is extremely important. Diversions cause confusion and adversely affect the chances for the success of the route.
6. Drivers should be trained in customer service and the intended purpose for the expanded trolley operation. The trolley is being implemented for visitors to Adams NHP, Historic Quincy, Marina Bay, and the Boston Harbor Islands. Drivers should be courteous and only turn away riders when absolutely necessary. Drivers should be encouraged to promote the service.



U.S. Department
of Transportation

Research and
Innovative Technology
Administration

Technical Memorandum

John A. Volpe National
Transportation Systems Center

Subject: Adams National Historical Park Expanded Trolley Service -
Observations

Date: August 10, 2006

From: Paul Christner, Community Planner
Planning and Policy Analysis Division

Reply to
Attn of: RTV-3B

Elsa Chan, Student Co-op
Service and Operations Planning Division

To: Marianne Peak, Superintendent, Adams National Historical Park

Cc: Caroline Keinath, Deputy Superintendent, Adams National
Historical Park
Peter Steele, National Park Service, Northeast Regional Office

I traveled to Quincy via the MBTA to experience the expanded Adams National Historical Park trolley service on June 23rd, 2006 (Friday). The weather was sunny from my arrival until about three o'clock when it started raining heavily.

When I first exited the train station at Quincy Center, I had trouble finding my way to the Visitor Center and the trolley stop. No signs were found at the train station.

I arrived at the Visitor Center at 11:35am. The red trolleys were both parked in front of the Visitor Center when I arrived. I told the ranger at the visitor center that I would like to go to the Marriot; he told me to ride the Harbor Express trolley and gave me a trolley schedule. He also stated that the trolley service is quite on schedule.

Harbor Express Loop:

- I boarded the Harbor Express Loop at 11:43 am, the driver told me that since the bridge on the route to Harbor Express was opening at that time, and the traffic will be backed up, he would be skipping the Harbor Express stop and headed straight to the Marriot. The trolley left the Visitors Center at 11:45 am, 9 minutes behind schedule. I was the only passenger on the bus.
- We arrived at the Marriot hotel stop and the driver parked the trolley across a few vacant parking spaces in the parking lot, around 200 feet away from the entrance to the hotel. There were no signs indicating that there is a trolley stop anywhere. A driver change for a lunch break occurred at this stop. We departed the Marriot Hotel parking lot at 12:07 pm. The second driver was very customer friendly; however, it was not clear that he was paying close attention to the road ahead.
- We arrived at the visitor center at 12:25 pm and the trolley left for the harbor express stop right away. The trolley was still 9 minutes behind schedule.

Marina Bay Loop:

- The trolley was observed departing the visitor center at 11:38 am, 8 minutes after the scheduled time.
- I boarded the Marina Bay Trolley at 2:45 pm, 2 riders were observed on board.
- The trolley departed the visitor center at 2:50 pm as scheduled. During this time, it started raining heavily, the windows on one side of the trolley, however, were still open, therefore, one side of the seats became wet.
- I asked the other 2 riders how they knew about the service, and they said that the concierge at the Best Western informed them about the service. They also joked that this trolley service was one of 'the best kept secrets'.
- Due to some heavy traffic, the trolley departed Marina Bay at 3:10 pm, 3 minutes after the scheduled time.
- The driver on the Marina Bay trolley was also very friendly, however, at one point, he pulled over to the side of the road to tell us some history about that road.
- We arrived at the Best Western at the scheduled time (3:15 pm), and departed at 3:17 pm, we then headed back to the visitor center.
- There was a little leakage from the ceiling of the trolley during the downpour. The stairs on the trolley were very slippery.

Recommendations:

- Signs for Marina Bay and Harbor Express should be put up in front of the Visitor Center to let riders know the route of the trolleys. A trolley schedule should also be posted at stops for the riders' convenience.
- It would be helpful if there were signs directing T riders to the visitor center as well as the trolley stop at the train station.
- The 'tips are appreciated' sign on the trolleys should be covered up.
- Drivers should be trained on the route and schedule. Although there might be delays with bridge openings, they should not deviate from the assigned routes. This would confuse the riders who are waiting at the skipped stop.
- More advertising is needed at the hotel and the visitor center so that tourists know the trolley service exists.



**U.S. Department of Transportation
Federal Transit Administration**

**Alternative Transportation in the Parks and Public Lands Program
Project Proposal for Fiscal Year 2007 Funds – Planning Project**

BASIC PROJECT INFORMATION			
Park: Adams National Historical Park			
Project Title: Enhance Trolley Service. Adams National Historical Park Trolley Financial Sustainability Study would focus on alternatives for developing a sustainable expanded historic trolley service for Adams NHP and historic Quincy.			
Proposed Funding Recipient: Adams National Historical Park			
Public land unit(s) involved: National Park Service		<u>Location of Project</u> City: Quincy County: Norfolk State: Massachusetts Congressional District: 10	
Federal Land Management Agency managing the above unit(s): <input type="checkbox"/> Bureau of Land Management <input type="checkbox"/> Bureau of Reclamation <input type="checkbox"/> Fish and Wildlife Service <input type="checkbox"/> Forest Service <input checked="" type="checkbox"/> National Park Service		Type of Planning Project: (Implementation projects, please use the alternate form) <input checked="" type="checkbox"/> Planning	
<input type="checkbox"/> Proposal is to plan for a possible new alternative transportation system where none currently exists. <input checked="" type="checkbox"/> Proposal is to plan for a possible expansion or enhancement of an existing alternative transportation system.			
ATPPL Funding Requested during FY 2007 \$60,000		Total Cost of Planning Project at Completion (All sources) \$60,000	
Were you awarded FY 2006 ATPPL funds? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If answer "Yes," please provide amount awarded: \$			
Do you plan to request additional ATPPL funds in future years? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Note: If you wish to compete for future ATPPL fiscal year funds you must reapply).			
If answer "Yes," please specify ATPPL proposed funding levels for out years below:			
FY 2008 \$	FY 2009 \$	FY 2010 \$	
FY 2007 Funding Amounts from sources other than ATPPL funds? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If answer "Yes," please specify funding levels per source below:			
State \$	Local \$	Federal (other than ATPPL) \$	Private sources \$

CONTACT PERSON

Name: Marianne Peak

Phone: 617-773-1177

Position: Superintendent, Adams NHP

E-mail: Marianne_Peak@nps.gov

Address: 135 Adams Street, Quincy, MA 02169

OTHER PROJECT SPONSORS (in addition to funding recipient)**Boston Harbor Islands National Recreation Area****REQUIREMENTS**

If a State, Tribal, or local government entity is proposing the project, the applicant has contacted the manager of the federal land unit(s) and has the consent of the Federal land management agency or agencies affected.

X The project is consistent with the metropolitan and statewide planning process.

X The project is consistent with agency plans.

X The planning project will analyze all reasonable alternatives, including a non-construction option.

BASIC PROJECT DATA

Number of Visitors (Annual): 227,911

Daily Number of Visitors (Peak season): Average per day for the entire season is 1,112 per day. This number is substantially higher in the peak.

Average Number of Vehicles per Day at Peak Visitation: The park does not have this data as it is located on public streets in several locations.

Current Road Level of Service at Peak Visitation: There are high levels of congestion on city streets near the visitor center.

(Please consult guidance where available on determining this variable. You may use observational accounts or pictures to provide an assessment of this datum for FY 2007 proposals).

What time of the year does your land unit experience Peak Visitation?

 Spring Summer Fall Winter

Current Carrying Capacity of Existing Roads: N/A the park is on public roads (vehicles/day)

What percent of that capacity is the site operating at during peak periods? This question is not applicable because the park has no road system within its boundary. Visitors access the park on public roads.

Current parking shortages during peak visitation: Parking shortages can occur at some of the sites away from the visitor center.

Current Number of Persons who use the alternative transportation system (if one already exists) at peak visitation:

Average of 163 passengers per day for all days. This would be substantially higher during the peak period. (average number of visitors/daily at peak)

Estimated Annual Number of Persons who will use the alternative transportation system at project completion: The planning study will address this issue. (anticipated number of riders or users/annually)

Average number of auto collisions with wildlife in the area? N/A park is in an urban area.
collisions/year

Executive Summary

Please provide an executive summary of your proposal that is no more than one page in length.

Historic downtown Quincy is a place where it is difficult to drive and difficult to park. Because of this, Adams National Historic Park (located in Historic Quincy) has provided historic trolley service to its park sites. This is the only way that visitors can gain access to the historic houses that are part of the park. Adams NHP has seen a steady increase in visitation in recent years and is looking to alternative transportation to help manage visitors to the park and to downtown Quincy.

Adams National Historical Park (NHP) currently owns three historic replica trolleys. Two are required to provide half hourly service between the visitor center and the park sites. The Park uses a contractor to provide this service. In an effort to form partnerships with the Boston Harbor Islands National Recreation Area, local hotels, existing ferry transportation systems, public transit systems and other historic sites, the NPS operated an expanded service during the 2005 and 2006 seasons. The expanded service was also contracted and used contractor vehicles. The expanded service served different routes than the internal park route. Ridership on the expanded routes was low compared with the internal park route. However, local partners are still interested in forming a successful expanded service beyond the internal park route. This study will explore opportunities for using the three historic replica trolley vehicles that Adams NHP owns to expand the current internal park route.

Adams NHP currently uses base operating funds to operate the internal park route. If this route were expanded to serve other sites in Quincy, operating costs could be shared with local stakeholders. Lessons learned from the prototype expanded service in 2005 and 2006 will help shape the study focus for sustainable service. There were some spikes in ridership on the service that connected the visitor center with a local Marriott Hotel and a ferry service to the Boston Harbor Islands NRA.

To carry out this project, Adams NHP would research the possibility of financial partnerships with local stakeholders in order to sustain an expanded service using the existing park vehicles. This could potentially lower costs to the park for operation of the current route within the park.

Using park trolleys on one expanded route would also provide visitors with a seamless way to visit historic Quincy and access ferry service to the Boston Harbor Islands.

Project Description

What activities would be funded by the requested ATPL financial assistance? Please provide a project description that is no more than one page in length. You may attach up to two pages of maps or other illustrations that do not count towards the page limit.

This project would focus on alternatives for developing a sustainable expanded historic trolley service for Adams NHP and historic Quincy. The project would include the following tasks:

- Research partnership opportunities with local stakeholders
- Research optimal routes and schedules for an expanded service
- Develop a contingency plan for vehicles that go out of service
- Develop a marketing and information dissemination plan
- Develop a financial plan for provision of expanded service including possible transportation fees, funding from stakeholders and possible grants.
- Research a baseline alternative which would involve visitor levels increasing at the same rates as in recent years without transportation enhancements.
- Develop a plan for connections to the Harbor Express Ferry Terminal and the Boston Harbor Islands
- Develop a business plan to illustrate sustainability options through partnerships

Alternative Transportation in the Parks and Public Lands Planning Evaluation Criteria

(There are separate evaluation factors for implementation projects. Use the implementation project proposal template for implementation projects.)

Criteria	Points	Weight
1. Demonstration of Need		50%
a. Visitor mobility & experience	(1-5)	
b. Environmental condition as result of existing transportation system	(1-5)	
2. Methodology for Assessing: Visitor Mobility & Experience Benefits of Project		15%
a. Reduced traffic congestion	(1-5)	
b. Enhanced visitor mobility, accessibility, and safety	(1-5)	
c. Improved visitor education, recreation, and health benefits	(1-5)	
3. Methodology for Assessing: Environmental Benefits of Project		15%
a. Protection of sensitive natural, cultural, and historical resources	(1-5)	
b. Reduced pollution	(1-5)	
4. Methodology for Assessing: Operational Efficiency and Financial Sustainability of Alternatives		20%
a. Effectiveness in meeting management goals	(1-5)	
b. Financial plan and cost effectiveness	(1-5)	
c. Cost effectiveness	(1-5)	
d. Partnerships and funding from other sources	(1-5)	

Planning Justification

Your responses to these questions must total no more than eight pages.

1. Demonstration of Need

- a. Visitor mobility and experience:** Describe the site's current and/or anticipated transportation problem or opportunity for improvement. You should include information on issues such as traffic congestion, traffic delays, parking shortages, difficulty in accessing destinations, safety issues, lack of access for persons with disabilities, lack of access for individuals with lower incomes or without cars, and visitor frustration. Please cite reports, plans, studies, and other documentation to support your description.

Adams NHP Visitor Center and sites are located in downtown Quincy. Downtown Quincy is a place where it is difficult to drive and the city offers limited and time restricted parking. The NPS instituted a shuttle service using replica trolleys for the convenience of visitors to access all the park sites. All the trolleys are ADA compliant. The service contributes to reducing traffic congestion and associated delays in Quincy. Visitors avoid city traffic frustrations and have an enhanced experience. The service interfaces with several public and commercial transit systems making it possible for individuals with lower incomes or no vehicle to experience the park. The historic trolley service has been a success for the NPS as visitation has increased. In 2005/2006 the NPS expanded the trolley service on a trial basis to provide access to partner sites and other transit systems. The trial demonstrated that there was support and a demand for an expanded service. The proposed project will analyze the operational and financial factors to determine is a permanent expanded trolley service can be sustainable.

- b. **Environmental condition as a result of the existing transportation system:** Describe the site's current or anticipated problem or opportunity for improvement of the environment in this area. You should include information on current or anticipated problems such as air pollution, noise pollution, run-off, water quality, harm to vegetation and wildlife, and other impacts or stressors on natural, scenic, cultural and/or historic resources caused by the existing transportation system. Please cite documentation in agency plans, studies, reports and other documentation that will help to support your description.

Adams NHP is an urban park. The major environmental concerns are pollution and preservation of open and green space. Alternative transportation systems result in reduction of air and noise pollution and reduce the need to develop open space for parking and other transportation related facilities. Expansion of existing transportation services only increases the beneficial impacts on the environment. Reducing traffic and associated impacts on pollution makes it possible to better preserve the scenic and cultural landscapes of the historic elements of the park and Quincy.

Scope of Work and Methodology

The planning project's scope of work and methodology should include tasks that will assess the areas below in a thorough and professional manner. The planning project should have a scope of work and methodology at this proposal phase, although it may be refined later.

2. Methodology for Assessing - Visitor Mobility & Experience Benefits of Project

Please address how the planning project's scope and methodology will assess the visitor mobility & experience benefits of a potential alternative transportation system improvement in the following areas:

- a. **Reduced traffic congestion:** This criterion includes: reduced average number of daily motorized vehicle trips during peak visitation, time lost to traffic delays, visitor frustration, and the area's current capacity of the existing transportation system.

Scope:

This project will focus on expanding an existing transportation system. The expansion will provide more transportation options and reduce the demand for road space by single occupant vehicles. This reduces the potential for traffic congestion. Expansion alternatives will focus on areas that have high levels of visitation or high potential for visitation with better access.

Methodology:

- **Data collection – ID/verify vehicle trip and traffic delay (LOS) data**
- **Condition analysis – use existing and developed baseline data**
- **Estimate potential ridership – include peak and special event use**
- **Visitor survey – new or analyze existing – look for transportation related satisfaction/frustration**
- **Collect current visitation demographics data (school groups, elderly, disabled, low income, etc.)**
- **Map problem areas**
- **Alternative analysis – apply above data/statistical modeling to alternatives**

- b. **Enhanced visitor mobility, accessibility, and safety:** This criterion includes enhanced intermodal interconnectivity, improved public access to resources, improved access for those with disabilities and low incomes, traffic safety, pedestrian/cycling safety, and safety in the case of catastrophic events (i.e., forest fires or security threats).

Scope:

There are several public and commercial transit systems in Quincy that the trolley does or can interface with that would provide access to the many historic sites in the area for visitors, including those with disabilities and low incomes. Expanded service could connect to the ferry service to the Boston Harbor Islands as well as other local historic sites and businesses. This project will focus on alternatives that improve access to Adams NHP and other partner organizations in Quincy.

Methodology:

- Analyze existing and potential interconnectivity (internal and external to park unit)
- Identify potential partners and scope of partnership
- Identify and analyze equipment alternatives for ADA compliance – compare results – reference to visitor survey information
- Cost/benefit analysis of potential fare structures
- Analyze related catastrophic incidents and identify issues/results
- Analyze relationship to park unit Emergency Management Plan

- c. **Improved visitor education, recreation, and health benefits:** Describe how the project's scope and methodology will assess improved visitor education, recreation and health benefits?

Scope:

This project will assess the health benefits of expanding the current alternative transportation service. Improved air quality is a possible health benefit that could result from a successful alternative transportation project. Alternatives will be explored to add interpretation on the transportation service for the other historic sites in Quincy.

Methodology:

- Analyze park unit Interpretive Plan for transportation related opportunities
- Identify opportunities external to park unit

3. **Methodology for Assessing - Environmental Benefits of Project**

Please address how the planning project's scope and methodology will assess the environmental benefits of a potential alternative transportation system improvement in the following areas:

- a. **Protection of sensitive natural, cultural, and historical resources:** This criterion includes energy conservation, energy efficiency, ecosystem sustainability, preservation of archeological and/or historical resources, viewshed and watershed preservation, reduction in auto-wildlife collision rates, improved habitat connectivity, ensuring that visitation does not exceed an area's ability to handle increased levels of visitation or the "carrying capacity" of the land unit, and other protection benefits where applicable.

Scope:

By expanding the current alternative transportation service energy conservation and efficiency would be increased by contributing to less traffic. The Adams NHP trolleys are historic replicas of streetcars which helps preserve the viewshed of the historic houses. Because Adams NHP is an urban park, there is not significant wildlife in the area. Each alternative will be examined in how it affects natural cultural and historical resources. The proposed study will ensure that the ATP will not and does not exceed the park's ability to handle increased levels of visitation or carrying capacity. To date

with the expanded shuttle trial and the internal park route the park has not experienced this risk.

Methodology:

- Identify/analyze alternative equipment for energy performance
- Environmental analysis of effects on natural/cultural resources
- Visitor Experience Resource Protection (VERP – NPS carrying capacity process) analysis specific to transportation related sites/areas

- b. **Reduced pollution:** This criterion includes air pollution, water pollution, noise pollution, and visual pollution.

Scope:

Trolley service has the ability to reduce air and visual pollution. Fewer private automobiles would result in less air pollution. Additionally, the historic trolleys are replica streetcars that reduce visual pollution of modern vehicles with historic structures. This project will explore the pollution reduction potential of each expansion alternative.

Methodology:

- Environmental analysis of effects on air, water, noise, and visual quality
- Identify/analyze alternative equipment for pollution performance

4. **Methodology for Assessing - Operational Efficiency and Financial Sustainability**

Please address how the planning project's scope and methodology will assess the operational efficiency and the financial sustainability of a potential alternative transportation system improvement in the following areas:

- a. **Operational efficiency:** This criterion includes considerations of how a potential alternative system may/may not meet identified management goals and objectives for this site, including consideration of multiple alternatives.

Scope:

A General Management Plan Goal is to provide a seamless alternative transportation system utilizing existing systems such as MBTA and Harbor Express Ferry Service. This expanded trolley system links park programs and resources prior to arriving on site. For example, the system links to the City of Boston and Logan Airport.

Methodology:

- Conduct document search of existing plans/studies for goals/objectives (internal and external to park unit)
- Conduct matrix style test of alternatives to goals/objectives

- b. **Financial feasibility:** This criterion includes the development of a financial plan that will incorporate a potential alternative transportation system, including the evaluation of multiple alternatives.

Scope:

This project will explore multiple options for funding an expanded service. Local stakeholders will be approached to discuss their interest in helping fund expanded

service to their sites. Grant opportunities will be investigated. Adams NHP will explore sharing the costs of its trolley system in order to expand and sustain it.

Methodology:

- Develop proforma (income/expense analysis) for proposal – major points costs to NPS, costs to visitors, costs to partners (NOTE: sequence would be to do VA/CBA on alternatives first – see 4c)

- c. **Cost effectiveness:** This criterion includes the development of an analysis of cost effectiveness considerations that includes multiple alternatives.

Scope:

This project will investigate multiple options on how to operate in a cost effective manner. Contracting will be examined as well as in-house operation by Adams NHP.

Methodology:

- Use Value Analysis/Choosing By Advantage (VA/CBA) process to evaluate alternatives

- d. **Partnerships and funding from other sources:** This criterion includes planning projects that would be carried out or funded in partnership with other entities in addition to the sponsor and will receive points depending on the level of partnership. Documentation (e.g., partnership agreements, letters of partnership support, letters of confirmation of financial contribution, letters of in-kind contributions, etc.) that supports and verifies involvement of partners and level of partnership *must* accompany this proposal.

Scope:

Local park partners include Discover Quincy, an organization promoting tourism within the city. This organization consists of other partners including major hotel chains, (Marriott and Best Western), the Harbor Express ferry operation and other businesses who have identified the benefits of linking sites throughout the city. They have expressed interest in working with the park service to provide alternative transportation service.

Methodology:

- Document existing partnerships
- Search for potential internal/external partners/projects
- Identify partnership opportunities (alternative development)

REPORT DOCUMENTATION PAGE

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	5b. GRANT NUMBER
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6. AUTHOR(S) Paul Christner, Elizabeth Machek, and Lindsey Morse	5d. PROJECT NUMBER PMIS No. 89847
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9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Department of the Interior National Park Service Northeast Region 15 State Street, Boston, MA 02109	10. SPONSOR/MONITOR'S ACRONYM(S) NPS NER & Adams NHP
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13. SUPPLEMENTARY NOTES This report addresses alternative transportation decision factors as indicated below (Y/N/NA): (Y) Non-construction options; (N) park carrying capacity; (N) life-cycle/ops. & maintenance costs; (N) cost-effectiveness.
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14. ABSTRACT This report evaluates the 2006 season of operation of a pilot expanded trolley service that operated at Adams National Historical Park from 2005 to 2006.
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15. SUBJECT TERMS national park, park, alternative transportation, transportation, shuttle
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16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT NA	18. NUMBER OF PAGES 25	19a. NAME OF RESPONSIBLE PERSON Peter Steele, NER & Marianne Peak, Adams NHP
a. REPORT None	b. ABSTRACT None	c. THIS PAGE None			19b. TELEPHONE NUMBER (Include area code) 617-223-5130, NER & 617 773-1177, Adams NHP



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