



Colonial National Historical Park *Shuttle Service Survey Report*



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Executive Summary

In 2004, Colonial National Historical Park (Colonial NHP) initiated a demonstration shuttle service to link key visitor attractions in the area, including Colonial Williamsburg, Historic Jamestown, and Yorktown. Funding for the shuttle service, however, expires in 2010. In support of the National Park Service (NPS), the Volpe National Transportation Systems Center (Volpe Center) is conducting a multi-year operations evaluation of the shuttle service and is developing a business plan that provides recommendations for continued operations beyond 2010. As part of this evaluation effort, the NPS Alternative Transportation in Parks and Public Lands Program (ATPPL) has funded the Volpe Center to conduct a survey of shuttle users at Colonial NHP. The survey provides the opportunity to obtain information on how visitors are using the shuttle and their level of satisfaction with different aspects of the service.

The shuttle service is composed of two components: the Historic Triangle Shuttle (HTS) and the Jamestown Area Shuttle (JAS). The HTS service operates buses from the Colonial Williamsburg Visitor Center to each of the key destinations in Colonial NHP: Yorktown and Jamestown. The JAS service is a single bus which operates continuously on a loop, with stops at the Historic Jamestowne Visitor Center, the Jamestown Glasshouse, the Jamestown Settlement, and the Jamestown Information Station (when open for overflow parking).

Volpe Center staff administered the survey to shuttle users July 9 -July 12, 2009. Shuttle users were intercepted at different shuttle stop locations, including the Historic Jamestowne Visitor Center, the Jamestown Settlement and the Yorktown Victory Center. Overall, 133 visitor groups completed the survey.

The survey finds that the large majority of shuttle users arrived in the area by personal vehicle (87%) and started their shuttle ride at Colonial Williamsburg on the HTS. Shuttle riders were more likely to visit Jamestown sites using the shuttle compared to Yorktown sites. The survey estimates that 64% of riders rode the JAS. The majority of JAS riders arrived on the HTS; only 5% of riders parked at a Jamestown site and used the JAS. On average, respondents visited 3 sites using the shuttle service and said they planned on visiting 1 more site using the shuttle.

Visitors' responses regarding their sources of information on the shuttle suggest that a majority was unaware of the shuttle system's existence prior to arriving in the Colonial Williamsburg area. When asked how they learned about the shuttle service, the most commonly cited sources of information were: staff at visitor sites (23%); hotel staff (17%); and shuttle bus signs (or saw shuttle) (12%).

Overwhelmingly, visitors viewed the shuttle as contributing to a pleasant and enjoyable park experience: 72% of groups cited "I am able to relax and view the scenery" among their reasons for taking the shuttle. Some groups (between 8% and 13% of visitor groups) had not brought a personal vehicle into the area at all, and relied exclusively on the shuttle system to reach visitor sites in the area. Importantly, three groups with members who had mobility impairments reported that the shuttle system made the park more accessible to them.

Visiting groups intercepted over the survey period expressed a very high level of overall satisfaction with the shuttle service: 99% of groups riding the HTS and 99% of those on the JAS reported that they were either "very satisfied" or "satisfied" with their overall experience on the shuttle. Visitors similarly reported being pleased with specific features of the shuttle service, including timeliness, frequency of service and number of sites covered, and ease of understanding shuttle route information and locating stops. For each of these features of the service, three-quarters or more of respondents reported being "very satisfied."

The two features of the shuttle service in which less than a majority said they were "very satisfied" were ability to hear the audio programming (46% very satisfied) and usefulness of the audio

programming” (43% very satisfied). Nonetheless, large majorities said they were satisfied (very satisfied or satisfied) with these aspects of the service (70% and 81%, respectively).

In the open-ended question, where respondents were asked to provide any additional feedback on the service, a majority of the comments were positive, praising the convenience of the service and the friendliness of the bus drivers. Of the relatively few respondents who mentioned a concern or criticism with the service, the two most frequently mentioned issues included:

- Run service between 3:30 and 5:00 pm, and later into the evening (after 5:30 pm) (5 groups)
- Provide benches and shade for visitors waiting for buses at the Jamestown Settlement (5 groups)

Responses to several survey questions, as well as anecdotal evidence from survey staff interactions with survey respondents suggested a high degree of confusion among visitors regarding the identification and location of tourist sites within Colonial NHP. Many groups emphasized that the shuttle services (and, in particular, the shuttle operators themselves) were helpful or instrumental in orientating them toward available sites, in addition to making these sites accessible, during their visit to the park.

Overall, the survey findings indicate that users strongly support the shuttle service. The survey data clearly demonstrate that visitors value the service and feel that it enhances their experience at the park. The shuttle service enables visitors to relax and enjoy the sites, relieving the stress associated with driving in an unfamiliar area. In addition, the shuttle assists visitors with orientation, contributing to their understanding of park resources. The data, as well as anecdotal evidence from the bus drivers, also suggest that there is an opportunity to increase ridership on the shuttle through enhancing publicity of the service in the Historic Triangle area and improving signage at the Colonial Williamsburg Visitor Center.

Introduction

In 2004, Colonial National Historical Park (Colonial NHP) initiated a demonstration shuttle service to link key visitor attractions in the area, including Colonial Williamsburg, Historic Jamestown, and Yorktown. Another key purpose of the shuttle is to orient the visitor to the park and to enrich the visitor experience through providing historical interpretation. In addition, in anticipation of the large crowds attending the 400th celebration of the founding of Jamestowne, the shuttle service was viewed as critical in easing traffic congestion and improving visitor mobility.

Funding for the shuttle service, however, expires in 2010. In support of the National Park Service (NPS), the Volpe National Transportation Systems Center (Volpe Center) is conducting a multi-year operations evaluation of the shuttle service and will develop a business plan that provides recommendations for continued operations beyond 2010.

As part of this evaluation effort, the NPS Alternative Transportation in Parks and Public Lands Program (ATPPL) has funded the Volpe Center to conduct a survey of shuttle users at Colonial NHP. The survey provides the opportunity to obtain information on how visitors are using the shuttle and their level of satisfaction with different aspects of the service. In addition to providing valuable input to the business plan, the survey will provide Colonial NHP with feedback that can be used to improve the service. This document describes the survey methodology and administration and presents findings from the survey.

Colonial National Historical Park Visitor Sites

Primary tourist attractions in the area of Colonial NHP are located at the three “points” of the Historic Triangle of Colonial Virginia: Colonial Williamsburg, Jamestown, and Yorktown. Most visitors staying in the area lodge in the town of Williamsburg. From Williamsburg, visitors may access tourist sites in and around the Jamestown Island and the town of Yorktown; both are part of Colonial National Historical Park, and are accessible by separate legs of the scenic Colonial Parkway.

In the Yorktown area, tourists may visit the Yorktown Visitor Center (located at the Yorktown Battlefield) and the Yorktown Victory Center (about a mile away from the Battlefield). The town of Yorktown spans the distance between the two sites, and includes restaurants and shops, as well as a beach area. In Jamestown, the three primary tourist attractions are each about one mile apart: the Visitor Center, which is situated at the site of the first permanent English settlement, and offers archeological excavations, visitor museums, and guided tours; the Jamestown Glasshouse, which hosts glassblowing demonstrations and activities; and the Jamestown Settlement, which is a living history museum. In addition, the Jamestown Information Station on Colonial Parkway is used for overflow parking as required.

Notably, neither the Jamestown Settlement nor the Yorktown Victory Center is part of Colonial National Historical Park: both sites are owned and operated by the Commonwealth of Virginia and have separate admission fees (though visitors may purchase a “package” which enables them to visit sites operated by both NPS and the Commonwealth of Virginia). The admission fee to visit the sites operated by Colonial NHP is \$10 per adult for a seven-day pass (children age 15 or younger are free). Admission can be purchased at either the Yorktown or Historic Jamestowne Visitor Center and includes access to all Colonial sites.

Colonial Shuttle System

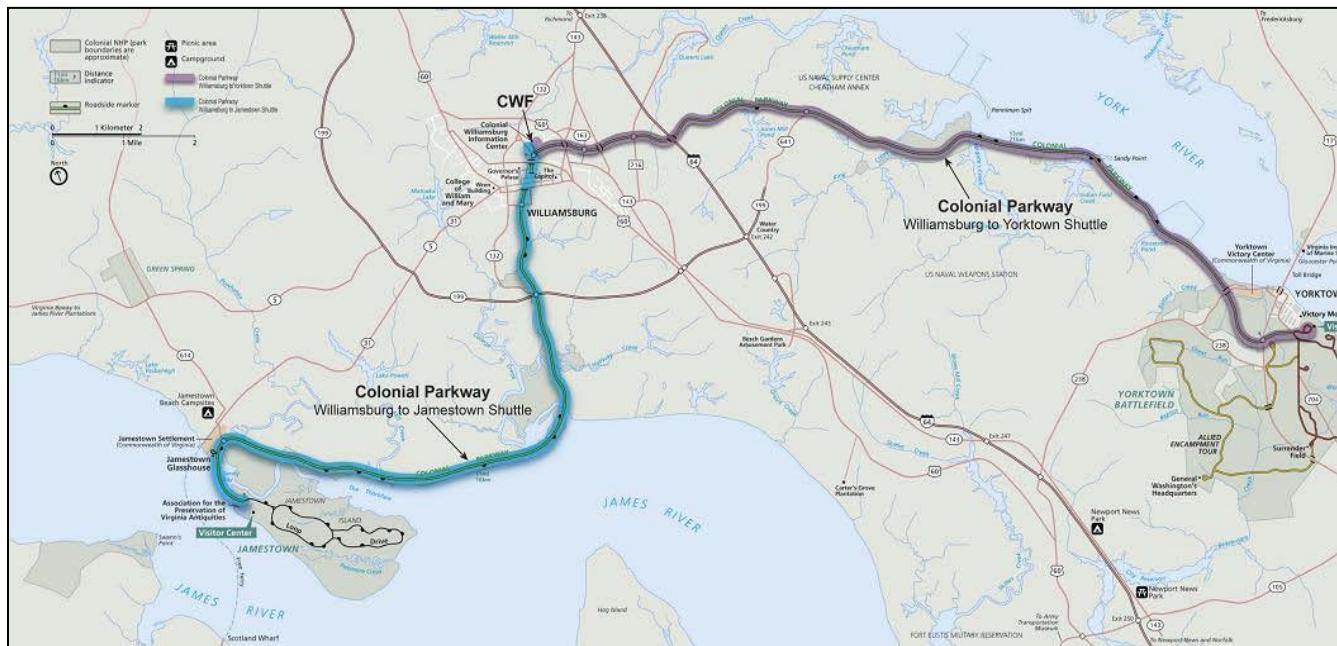
The shuttle service operated by Colonial NHP consists of the Historic Triangle Shuttle (HTS) and the Jamestown Area Shuttle (JAS). Both shuttle services are free of charge, and service is currently available from March 16 to November 1. The Historic Triangle Shuttle (HTS) service operates buses from the Colonial Williamsburg Visitor Center to each of the key destinations in Colonial NHP: Yorktown and Jamestown. In 2004, at its inception, the HTS service consisted of two hour headways, Memorial Day to Labor Day, and in 2005 the shuttle service was expanded to hourly headways. Full service operations began in April of 2006, with shuttles to both locations departing at half-hour intervals from the Colonial Williamsburg Visitor Center between 9:00 a.m. to 3:30 p.m. daily. The trip to Yorktown is 13 miles long

the Colonial Parkway and takes about twenty minutes. The shuttle makes stops first at the Yorktown Visitor Center and then Yorktown Victory Center prior to returning to Colonial Williamsburg. The trip to Jamestown is a slightly shorter ride on the Colonial Parkway (10 miles), and the shuttle service stops at the Historic Jamestowne Visitor Center then the Jamestown Settlement. Return service to Colonial Williamsburg departs every half-hour from 9:30 a.m. to 4:00 p.m. with a final pickup from Historic Jamestowne at 5:15 p.m. Each shuttle service makes 13 round trips from Colonial Williamsburg. The HTS schedule for 2009 is shown in Appendix B2 as it appears on the National Park Service website.

A map of the HTS route, which includes service to Historic Jamestowne and to Yorktown, is shown in Figure 1.

Figure 1
Colonial National Historical Park Historic Triangle Shuttle Routes

Source: NPS

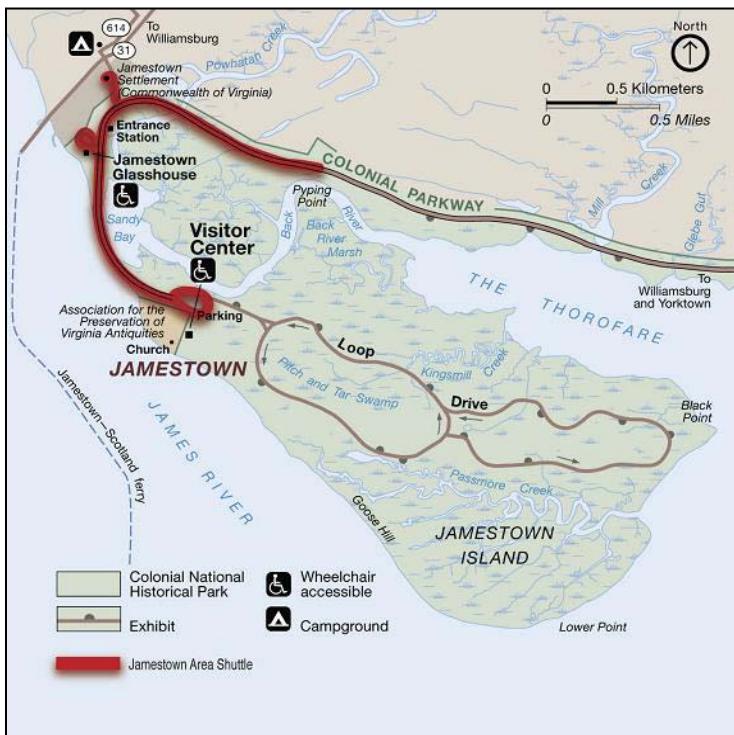


The Jamestown Area Shuttle (JAS) service is a single bus which operates continuously between the hours of 9 a.m. and 5 p.m. The JAS departs from the Historic Jamestowne Visitor Center, and makes stops at the Jamestown Glasshouse, the Jamestown Settlement, and the Jamestown Information Station (when open for overflow parking). The loop (Figure 2) takes approximately 15 minutes to complete.

Figure 2

Jamestown Area Shuttle Route

Source: NPS



Outside of the HTS and JAS, visitors may choose to take a personal vehicle to any of the sites in Colonial NHP. Parking is free. In addition, the Yorktown Trolley, operated by York County, is available to visitors in the Yorktown area free of charge. The trolley operates continuously from 10 a.m. to 6 p.m. It leaves the Yorktown Visitor Center at 20 minute intervals, and makes stops at the Yorktown Victory Center, Riverwalk Landing, and other points of interest throughout Yorktown (see Appendix B3: Yorktown Trolley Service Route).

Section 1: Survey Methodology

Description of the Survey Instrument

The survey was designed to reveal riders' use of and satisfaction with the Colonial NHP shuttle service (see Appendix B4 for the survey). The Volpe Center designed the survey in consultation with staff at Colonial. Key survey topics included:

- Sources of information about the shuttle service
- Reasons for using the shuttle service
- Site visitations (and planned site visitations) using the shuttle service and using personal means of transportation
- Satisfaction with various features of the shuttle service (for example, reliability, ease of finding shuttle stops, and so on)
- Visit characteristics
- Visitor/group characteristics

The survey consisted of twenty questions – some in multi-part or open-response format – arranged into a four-page booklet. The estimated time burden of the survey was five minutes. NPS staff conducted a small pre-test in April of 2008 to test the survey instrument among shuttle users. In the debriefing of respondents (conducted upon completion of the survey), respondents reported they had no questions or problems completing the questionnaire.

The survey was approved by the Office of Management and Budget (OMB) in June 2009 (OMB # 1024-0224, ID# 08-038). Originally, the survey had been submitted to OMB in April 2008, with the intent of administering the survey during the summer of 2008. However, the approval procedure at OMB required more time than anticipated, resulting in a delay in the survey administration.

Survey Administration Period

Once OMB approval was obtained, Volpe staff selected the period of Thursday, July 9, through Sunday, July 12, 2009 for survey administration. The Volpe Center sought a four-day period during which a significant number of shuttle users could be intercepted to provide feedback on the service. Past ridership data indicated that mid-summer is a peak operational period for the shuttle service.¹ The survey staff gathered data over a four day period so that it might obtain a sufficient sample size and so that it would include groups at different points in the duration of their visits (beginning and end). In addition, the survey team included weekdays as well as a weekend in the survey period to ensure representation of both visitor types in the sample.

Intercept Locations

Due to the design of the shuttle service (three shuttle segments), the survey was administered at several different venues. Since riders conceivably could ride one segment of the system without riding the other two segments, it was necessary to sample all three segments – the Yorktown HTS, the Jamestown HTS and the JAS – in order to obtain a representative sample of each segment. To this end, staff was assigned to the Historic Jamestowne and Yorktown Visitor Centers and the Williamsburg Visitor Center to administer (or collect) surveys. At the Jamestown and Yorktown Visitor Centers, staff members distributed surveys to all groups as they boarded the HTS to return to Colonial Williamsburg. HTS riders would fill in the survey during the bus trip, and a staff member would be present at the Colonial Williamsburg Visitor Center to collect the completed surveys as riders disembarked. Given the duration of the shuttle ride (20 minutes, on average), survey staff felt respondents would have ample time to

¹ While Independence Day weekend (July 4) has historically had high visitation rates and significant shuttle use, administering the survey over the holiday weekend may have overwhelmed staff resources, so this weekend was not selected.

complete the survey, and in fact, shuttle riders would be more likely to participate (e.g. compared to being intercepted prior to boarding the HTS or upon disembarking from the HTS).

In the case of the JAS, groups were intercepted and asked to complete the survey as they exited the JAS at the Historic Jamestowne Visitor Center.

Two modifications were made to the survey administration plan during the first day of the survey administration period. First, in the early afternoon of July 9, staff began intercepting HTS Jamestown riders from the Jamestown Settlement, rather than from the Historic Jamestowne Visitor Center, since the Jamestown Settlement is the shuttle's last stop prior to its return to Colonial Williamsburg. By intercepting HTS riders at the Historic Jamestowne Visitor Center (as originally planned), staff realized that they would not capture visitors who boarded the HTS at the Jamestown Settlement, bypassing the Visitor Center altogether, to return to Colonial Williamsburg. Because this oversight was identified and corrected in the morning – before most visitors could be expected to have explored the sites and returned to Colonial Williamsburg – it is unlikely that any visitor groups were missed.

Survey staff recognized a similar problem at the Yorktown sites: survey staff at the Yorktown Visitor Center would not capture riders who took the Yorktown trolley (or walked) from the Visitor Center to the Yorktown Victory Center, where they could ride the Yorktown HTS back to Colonial Williamsburg. Thus a survey staff person was moved from the Yorktown Visitor Center to the Yorktown Victory Center to intercept riders returning to Colonial Williamsburg.

Table 1 shows the final four locations of survey administration.

Table 1
Intercept Locations

Source: The Volpe Center

Intercept Locations	Purpose
Yorktown Victory Center	Intercept HTS riders boarding the shuttle to Colonial Williamsburg (riders complete survey on bus)
Jamestown Settlement	Intercept HTS riders boarding the shuttle to Colonial Williamsburg (riders complete survey on bus)
Historic Jamestowne Visitor Center	Intercept JAS users disembarking from the shuttle
Colonial Williamsburg	Collect completed surveys from HTS riders returning from Jamestown and Yorktown

Respondent Intercept

A single survey was administered to each group of visitors traveling together, and completed by one adult in the group (that is, a person of age 18 or older). Survey staff used the “next birthday” method to randomly select the group member who would complete the survey.² Staff informed potential respondents that the survey was being administered on behalf of the National Park Service, and that all responses were voluntary and anonymous. Because visitors could use more than one segment of the shuttle throughout their visit, an introductory screening question was asked to ensure that groups were not surveyed more than once. Survey staff recorded date, location, and group characteristics each time

² Staff requested that the survey be completed by the adult member of the group who had the next upcoming birthday. This procedure was intended to ensure randomness with regards to the specific individual completing the survey, and thus prevent bias in survey administration.

that a group declined to complete a survey (in cases where the group had previously completed a survey, as well as for groups refusing all survey efforts).

Respondent Sample

A total of 133 surveys were collected over the four-day period: 88 (66%) were completed in Jamestown (of which 74% were administered on the Historic Triangle Shuttle), and 45 (33%) at Yorktown. Table 2 displays the number of surveys collected by staff at each location by date.

Table 2

Surveys Collected (July 9-12, 2009).

Source: Volpe Center

Survey Date	Location			Total
	HTS Jamestown	HTS Yorktown	Jamestown Area Shuttle	
7/9/2009	AM	2	6	8
	PM	22	12	39
	Total	24	18	47
7/10/2009	AM	1	2	4
	PM	15	6	26
	Total	16	8	30
7/11/2009	AM	1	2	3
	PM	8	11	20
	Total	9	13	23
7/12/2009	AM	2		2
	PM	14	6	25
	Total	16	6	27
All Days	65	45	23	133

The average group size among participants was consistent with initial expectations: that is, about three persons per group.³ The response rate among those intercepted was significantly higher than the expected rate of 75%: Only five of the groups approached by staff declined to fill out the survey (the other 10 recorded instances of refusal were from groups to whom the survey had previously been administered). Four of the five refusing groups were riding the HTS Yorktown. Two of these groups – of two and three riders, respectively – appeared to lack fluency in English. The other two groups intercepted at Yorktown were individual visitors; both declined to participate in the survey, citing lack of interest. The five-member group at Jamestown who offered a refusal stated that they felt they had waited too long for the Jamestown Area Shuttle to arrive.

³ Estimates of group size and individual ridership rely upon Survey Question 17, in which respondents manually identified the number of group members whose age fell within each range listed. Because respondents were asked to write the total number of group members in each age range (as opposed to, for example, checking a single box to indicate group size), information at the individual traveler level cannot be considered to be equally precise as that at the group level; however, only one group (observed to be made up of four riders) neglected to respond to the question entirely. From these data, we derive a sample size estimate of 406 individual riders.

Despite the low refusal rate, the four-day survey effort yielded only two-fifths as many completed surveys as had been anticipated. Based on past years' ridership data, the expected size of the respondent pool was estimated at 322 groups. The smaller-than-expected sample size limits the types of analysis which can be performed using the survey data.

Both shuttle drivers and park staff expressed surprise at what they characterized as exceptionally low ridership over the survey period, given the time of year. Weather did not appear to offer an explanation for low ridership. Other possible explanations offered by shuttle operators and park staff included a lull in vacationing after Independence Day weekend and fewer trips undertaken due to the economic climate. Shuttles were not observed to be full (that is, close to seating capacity) on any of the trips made throughout the survey period.

Section 2: Survey Findings

The following section on survey findings provides detailed findings on visit characteristics, use of the shuttle and visitor satisfaction with the shuttle.

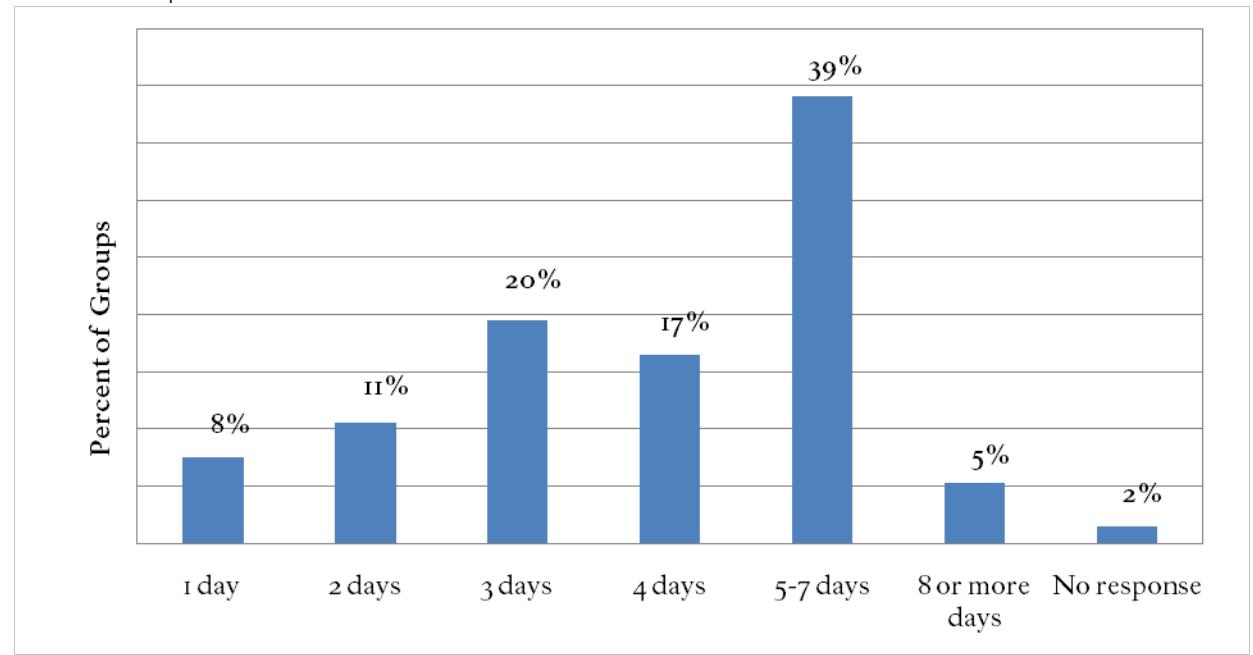
Visit Characteristics

Length of Visit

Figure 3 below shows the duration of visitation for the sample of shuttle riders. While no comparative information is available regarding visitors who use exclusively personal transportation during their visit, the sample of shuttle riders appeared to have had relatively lengthy visits to the area: the median category reported for length of stay by shuttle users was four days, and 44% of respondent groups planned to be in the area for five days or longer. Groups made up partially or wholly of family members tended to plan somewhat longer stays in the area than other group types, by an average of about 10%.

Figure 1
Length of Visit to Historic Triangle/Colonial Williamsburg Area, N=133.

Source: The Volpe Center

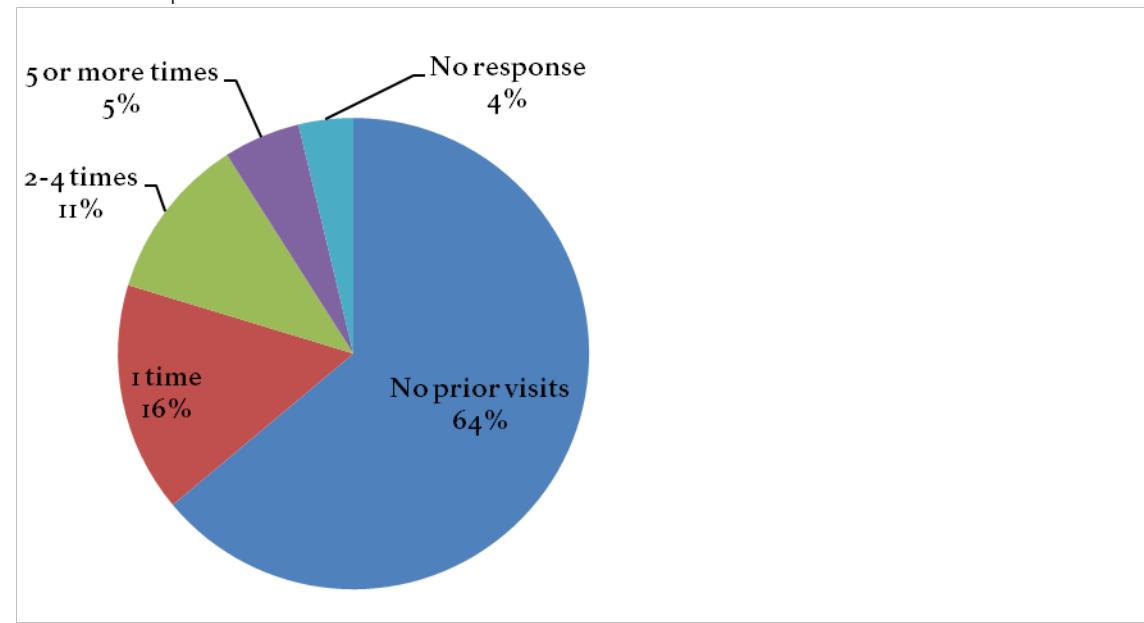


Returning Visitors

As shown in Figure 4 below, 64% percent of respondent groups were first-time visitors to Colonial, and 32% of groups had visited on a prior occasion (4% did not respond). Sixteen percent of shuttle riders had visited only once before; 11% had visited on two to four prior occasions, and only 5% reported five or more prior visits.

Figure 2
Prior Park Visitations, N=133.

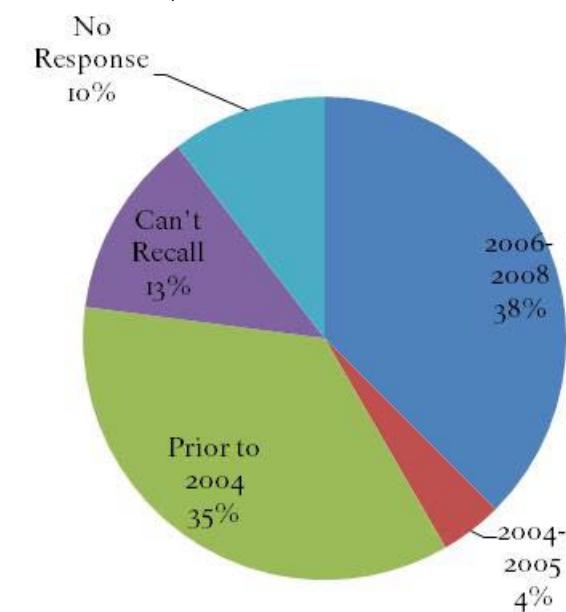
Source: The Volpe Center



Of returning visitors, 38% of these reported having visited in 2006 or thereafter (that is, since the shuttle system achieved full functionality), while another third said they visited prior to 2004 and only 4% visited in either 2004 or 2005 (as illustrated in Figure 5).

Figure 3
Last Visitation Period of Returning Groups, N=48

Source: The Volpe Center



Visitor Profile

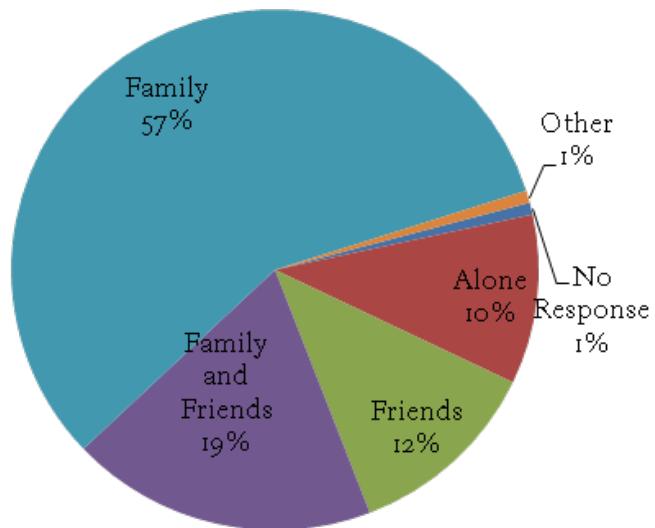
Demographic questions pertained to both the visiting group as a whole, and to the specific individual completing the survey. Individual respondents were asked to provide their country or state of residence, birth year, and gender. Information on the group at large included the age group of each member, the nature of the affiliation among group members (family, friends, etc.), and whether the group was part of a larger organized trip to the area (school group, church group, etc.).

Visitor Group Types

As Figure 6 illustrates, families were the dominant group structure among groups in the survey sample: three-quarters of shuttle riders were visiting the park with family members. The average size of groups made up exclusively of family members was 3.2; of friends, 2.5; and for combined groups of families and friends, 4.1. Fifty-eight percent of the groups made up of families (either families traveling alone or with friends) were traveling with children under 18; 51% were traveling with one or more seniors (persons aged 65 or older).

Figure 4
Visitor Group Types, N=133

Source: The Volpe Center



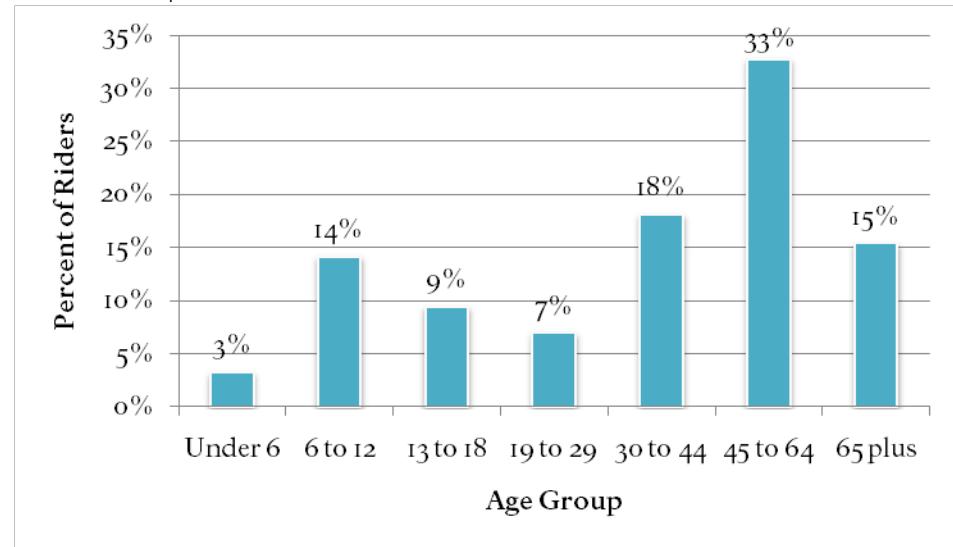
Only three groups reported that they were part of a large organized visitation; however, none of the three indicated what type of organization they were traveling with. It is notable that no large organized groups appear to have made use of the shuttle over the survey period.

Age and Gender Profile

Survey Question 17 asked respondents to identify each of their fellow group members by age group. The responses, illustrated in Figure 7 (next page), show that the median age of riders was in the range of 30 to 44 years. Middle-aged adults constituted a large portion of the sample: one-third of riders were between the ages of 45 to 64, 18% were aged between 30 and 44, and an additional 15% of riders were senior citizens. Collectively, children made up about 27% of riders: 14% of all riders were 6 to 12 years old, 9% were 13 to 18, and children under 6 accounted for 3% of total ridership.

Figure 5**Age Distribution of Shuttle Riders, N=403**

Source: The Volpe Center



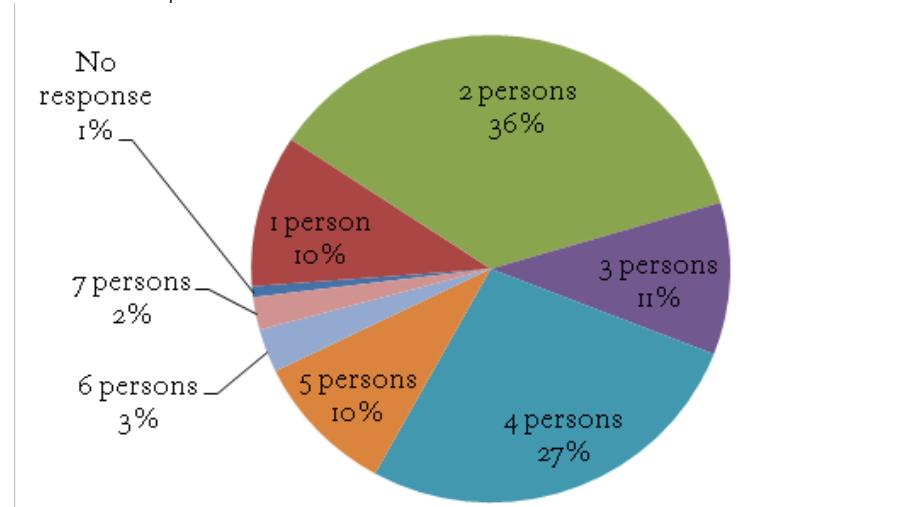
As noted above, in addition to revealing the age distribution of shuttle riders, Question 17 was also the primary source of information on group size. Of the 403 individual riders in responding groups, 108 were children (18 or under), 233 were adults (ages 19-64), and 62 were senior citizens. Average group size was slightly greater than three individuals – and no groups reported having more than seven members.

As shows, the majority of groups were either two-person groups (36%) or four person groups (27%). One-in ten respondents reported they were either traveling alone (10%); traveling in a three person group (11%) or a five person group (10%).

Just over half of all groups had at least one child aged 18 or under; the average of the number of children among these 61 groups was 1.77. Only 9%, or twelve groups, had one or more very young children (under the age of six).

Figure 6**Breakdown of Groups by Group Size, N=133**

Source: The Volpe Center



The survey also collected information on the birth year and gender of the individual who recorded responses on behalf of the group. Slightly over 60% were female and 38% male (two individuals did not respond). Among the respondents who provided a year of birth (this question had a non-response rate of 9%), the average age was 49. Seventeen percent were senior citizens, and 76% were over the age of 40.

Place of Residence

Colonial NHP attracts a geographically-diverse set of visitors. Residents of 29 different states and four different countries are represented within the survey sample. Appendix A contains a list of the origins of respondent groups (twelve groups did not respond).

Of the 121 responding groups, 94% had come from within the United States. Fourteen groups (12% of those traveling domestically) indicated that some or all group members were visiting from elsewhere in Virginia. Other states with large representations in the domestic visitor sample included New York (14 groups, or 12% of domestic travelers); Florida and Pennsylvania (12 groups each, or nearly 11% of U.S. visitors); Maryland and New Jersey (9 groups each, or 8%); and Indiana (5 groups, or 4%). Among all groups, 46% were from southern states, one-third (33%) were from the Northeast; 14% from the Midwest and 7% from the West.

Seven groups had come from outside of the United States: four from Russia, and one each from England, Germany, and Australia. Shuttle operators informed survey staff that many young people from Russia and other areas in Eastern Europe arrive in the summertime to staff visitor sites and amusement parks in the area. Consistent with this observation, all 12 individuals of these four groups from Russia intercepted over the weekend were between the ages of 19 and 29. The visiting group from Germany also appears to have fit this description. None reported having driven into the park. All but one group were intercepted at Yorktown; indications are that the shuttle was used to go to the Yorktown beach area.

The groups from England and Australia both comprised two members above the age of 45. Neither group had a personal vehicle in the area: the group from England had arrived from Newport News for a long stay (five to seven days), and had learned of the shuttle service on the web. They had visited all six area visitor sites on the shuttle. The Australian group, on the other hand, was planning a two-day stay, and had learned of the shuttle when already in the area (through visitor staff, hotel personnel, and shuttle signs).

Use of the Shuttle

Reason for Shuttle Use

Visitors were asked to select as many options as were applicable to describe their reasons for using the shuttle service – and to circle the most important reason – from among a list of six pre-determined options:

- no knowledge of visitor site locations
- dislike of driving in unfamiliar areas
- historical information provided on the shuttle ride
- the opportunity to relax/view the scenery
- the cost of fuel
- environmental friendliness of the shuttles

Additional space was provided for groups to add other explanations for their use of the shuttle, and twenty-two groups made use of this option.

Overall, 29% checked a single reason for using the shuttle, 22% cited two reasons, 31% gave three reasons, and 17% gave four or more reasons for their decision to use the shuttle. Forty-six groups (35% of those responding) also circled one of the options to distinguish it as their primary reason for shuttle use.

As Figure 9 illustrates, most respondents – 72% of all visitor groups – cited “I am able to relax/enjoy the scenery on the shuttle bus” among their reasons for using the shuttle, and 18% of these groups described this as their primary reason for using the service. Given the extent of visitor confusion (observed by

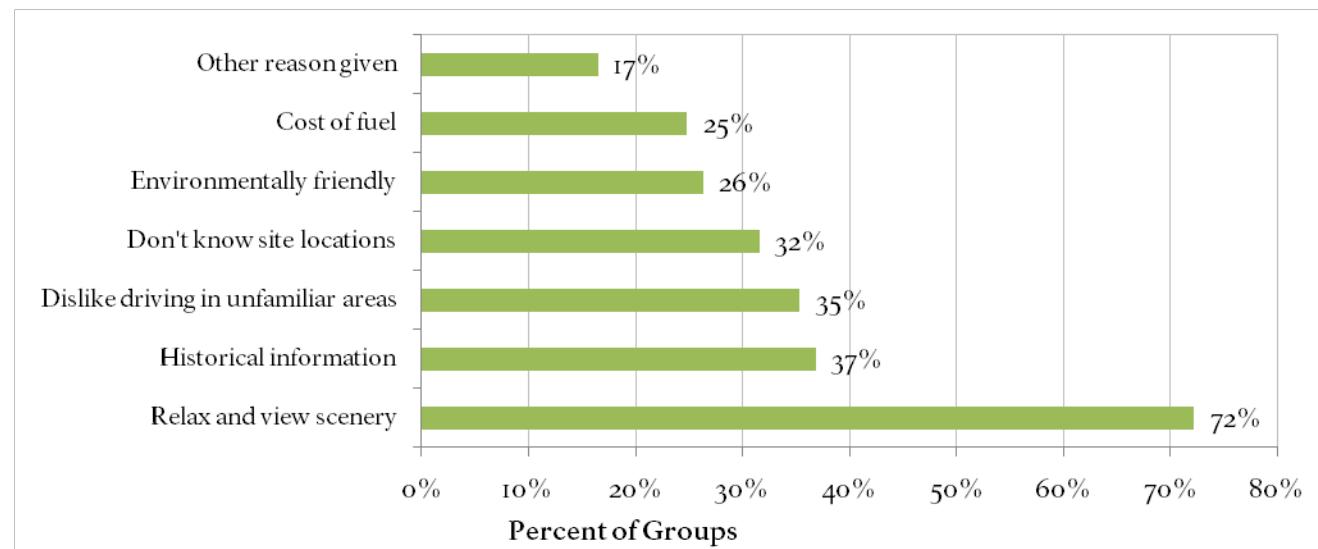
survey staff) over the location, name, and function of the various sites throughout Colonial NHP and the surrounding area, it is not surprising that more than half of the groups reported having taken the shuttle either because they were unaware of where visitor sites were located (32%) or did not like to drive in unfamiliar areas (35%). Well over half of all visitor groups (53%, or 71 groups) selected at least one of these two reasons. Visitor commentary in open-response questions (see Appendix A2) further demonstrates that the shuttle service was highly valued in its capacity as an alternative to driving. Some comments provided by respondents include:

- “Loved the convenience. Didn’t have to drive the entire stay”
- “I loved the convenience of parking and allowing someone else to drive”

In addition, 37% of groups reported that the historical information available on the shuttle bus ride had factored into their decision to use the shuttle; however, few reported historical information to be their primary reason for using the service. Likewise, many visitors appeared to appreciate the fact that the shuttle service was environmentally friendly and saved on fuel costs; however, fewer than 5% of those who signaled a primary reason for shuttle use selected either of these two choices (see Figures 9 and 10).

Figure 9
Reasons for Shuttle Use

Source: The Volpe Center



These findings suggest that visitors used the shuttle system primarily to facilitate a more enjoyable experience, and as functional means of transportation for locating and reaching sites within the park. This observation is supported by those visitors who specified “other” reasons for shuttle use (e.g. other than those options proffered by the survey; see Appendix A2). Foremost among these written responses were lack of personal vehicle access; 8% (6 groups) directly reported in comment sections that they had no personal vehicle access in the area; at least this share of visitors would not have been able to reach sites in the park if shuttle service were not available. Importantly, one group commented that not only was a personal vehicle not accessible, but that no members were able to drive; this may have been the case for other groups who did not bring personal vehicles to the area, as well. One group’s comments implied that biking to park sites was their only alternative to shuttle use. Notably, 14% of those who provided specific written comments (3 out of 22 groups) remarked that they had used the shuttle because of the mobility impairment of a group member:

- “My husband is handicapped, [and the shuttle] made getting around easier”
- “Bus is accessible for handicapped people”

- “Mobility (impaired)”

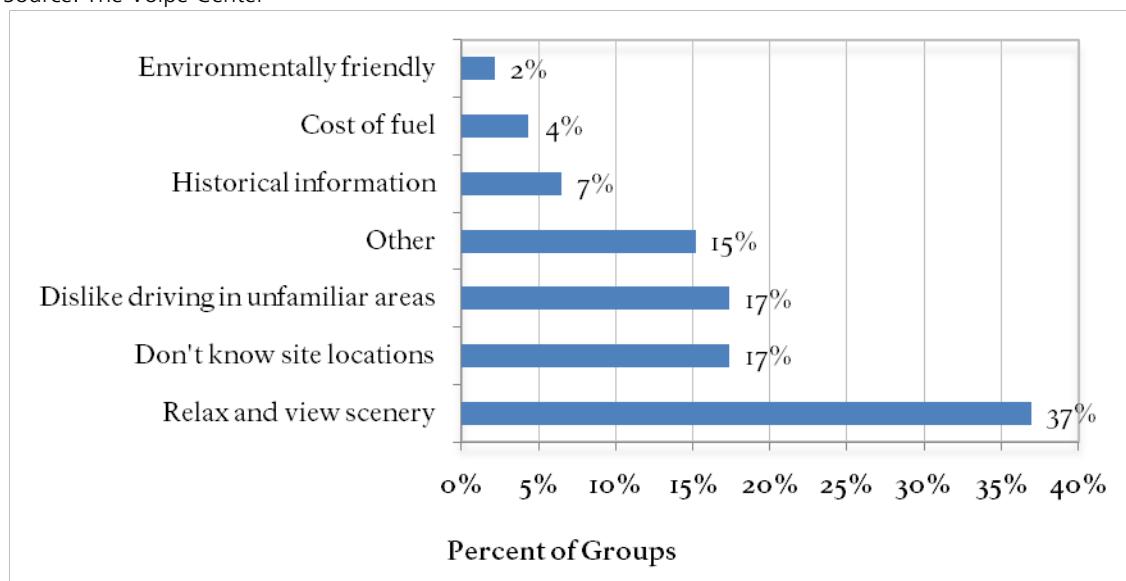
For all of such group types, the availability of shuttle transportation may be an influential or necessary factor in their decision to visit the park.

Visitors offered other reasons for using the shuttle in their comments, including: convenience (3), and ease (particularly in comparison to driving) (4). Others reported having used the shuttle because it was free (2) or because it eliminated the need to look for parking (2). One group remarked that the shuttle service allowed the two couples traveling together to see different sites.

As noted above, 35% of respondents indicated which of their reasons for using the shuttle was “most important.”⁴ Figure 10 shows that a large portion (37%) of these respondents had taken the shuttle primarily because it allowed them to relax and view the scenery. Nearly one-fifth reported their primary reason was because they don’t like to drive in unfamiliar areas (17%) or they have no knowledge of visitor site locations (17%).

Figure 10
Primary Reason for Shuttle Use, N=46

Source: The Volpe Center



This data suggests that while riders enjoy and appreciate certain amenities offered by the service (e.g., historical information, environmental friendliness), their key motivations for using the shuttle were related to two factors: transportation and enjoyment of visitation experience. First, the shuttle service is seen as a favorable alternative to driving a personal vehicle for those groups who had vehicle access, and – in the case of those visitors who did not, or for whom driving was impossible for reasons of impairment – an indispensable means for reaching park sites. Secondly, the shuttle is considered by many who take it to provide a more enjoyable experience than driving to sites in the park: As one group commented on their reason for using the shuttle, “It sounded like fun, and we enjoyed it!”

⁴ While it is not possible to distinguish between respondents who knowingly declined to respond from those who inadvertently omitted this portion of the question, the low response may be due to an inattentive reading of the instructions provided for the question in full: designation of an “important reason” was included as part of Question 6, rather than as a separate question.

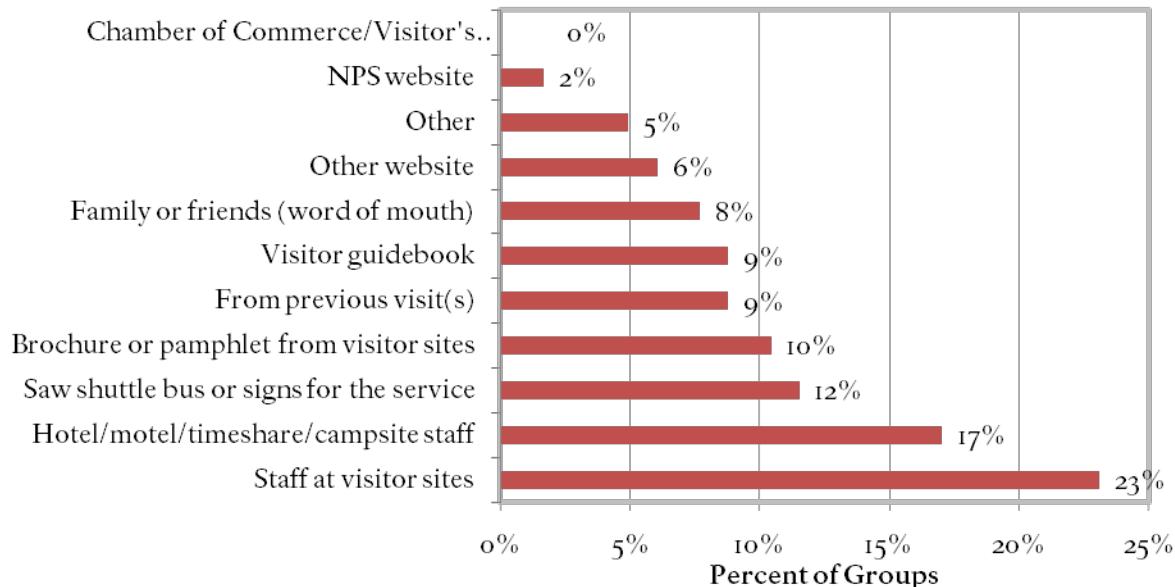
Initial Information about the Shuttle

The survey also included a question on how visitors learned about the shuttle service (see Figure 11). Overwhelmingly, visiting groups indicated that visitor site staff informed them about the existence of the shuttle service. It appeared that most respondents learned of the shuttle during (rather than prior to) their visit to the park. The categories suggested by the survey were not mutually exclusive, and most groups marked more than one reason (with only one group providing no response at all); however, 63% (84 of the 133 groups) marked one or more of the following: "saw bus or sign," "hotel," "brochure or pamphlet," or "staff at visitor sites"⁵ suggesting that nearly two-thirds of visiting groups were unaware of the service prior their arrival in the area. (In addition, "visitor guidebooks" also may have referred, in some cases, to materials accessed after arrival in the area.)

One might expect websites to be a primary source of information for those planning a trip to the area – and, furthermore, all shuttle information (e.g., schedules, descriptions, and so on) is available on the NPS website. However, Figure 11 shows that few visitors had taken advantage of this resource. This may indicate that shuttle information, while available, is not easily recovered from the website. Several groups did report having accessed other multimedia resources, though. Comments mentioned www.historictriangle.com and 1-800-History.

Figure 11
Visitor Source of Information on Shuttle Service, N=133

Source: The Volpe Center



Information gathered from this question suggests that many visitors were unaware of the shuttle service prior to their arrival in the area, perhaps due to lack of publicity for the service. Anecdotally, survey staff found this to be the case: visitors were surprised and pleased to learn of the service. Thus, it is likely that at least some of those who drive into the park may do so due to lack of awareness of the shuttle service, rather than lack of interest in using the service (since private vehicle users were not surveyed in this effort, it is not possible to know the extent to which they were aware of the shuttle's existence). Since the availability of the shuttle service could be an influential factor in the initial decision to visit the park on the part of some visitors – particularly those for whom personal transportation is inaccessible or highly

⁵ Or indicated directly in the allotted comment space that they had learned of the shuttle service from a source encountered during the course of their visit to the area.

inconvenient – better publicity for the service has the potential to raise overall visitation rates to Colonial, as well as increase shuttle usage among current visitors.

In general, survey staff found that visitors were not well-informed about the shuttle service. Shuttle operators themselves were frequently the main source of information for visitors. Survey staff observed that most drivers expected and anticipated questions from nearly every individual group of riders, and consistently ensured that each group who boarded was informed about where the shuttle would take them. Several comments indicated that the shuttle was not widely known to be a free service; for example, one group reported that they took the shuttle because it was “included with our stay.” The extent of confusion and lack of information about service and price of the shuttle may mean that some visitors who would otherwise choose to use the shuttle service are not doing so.

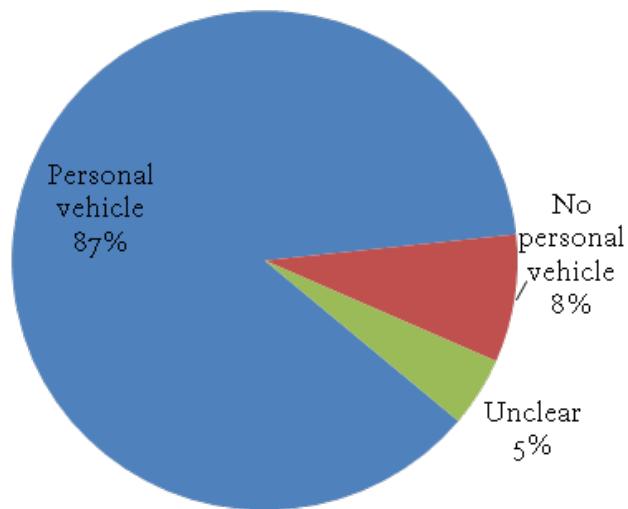
Interestingly, not all those who reported having previously visited the park while the shuttle service was in operation indicated that this was how they had learned of the shuttle: Of the 18 groups last visiting after full system deployment (that is, in 2006 or afterward), seven did not cite the earlier visit as a source of information. Of the two groups whose last visit to the park was between 2004 and 2005, one had learned about the shuttle during that experience.⁶

Personal Vehicle Access and Parking

As Figure 12 illustrates, a large majority of groups – 116 groups, or 87% of those surveyed – had brought a personal vehicle to the Colonial Williamsburg/Colonial NHP area. It is possible that up to 13% of survey respondents (17 groups) had not brought a personal vehicle to the Colonial Williamsburg/Colonial NHP area at all. Eight percent (11 groups) directly stated in written comments that they had no personal vehicle in the vicinity; these groups stated “no car,” “no personal vehicle,” etc. or made note of alternate means of transportation from external areas (e.g., taxis from the airport, Amtrak, and water transport). However, for an additional 5% (6 groups), it is not clear from the survey data whether or not they arrived in the area by personal vehicle.⁷

Figure 12
Personal Vehicle Access of Park Visitors, N=133

Source: The Volpe Center



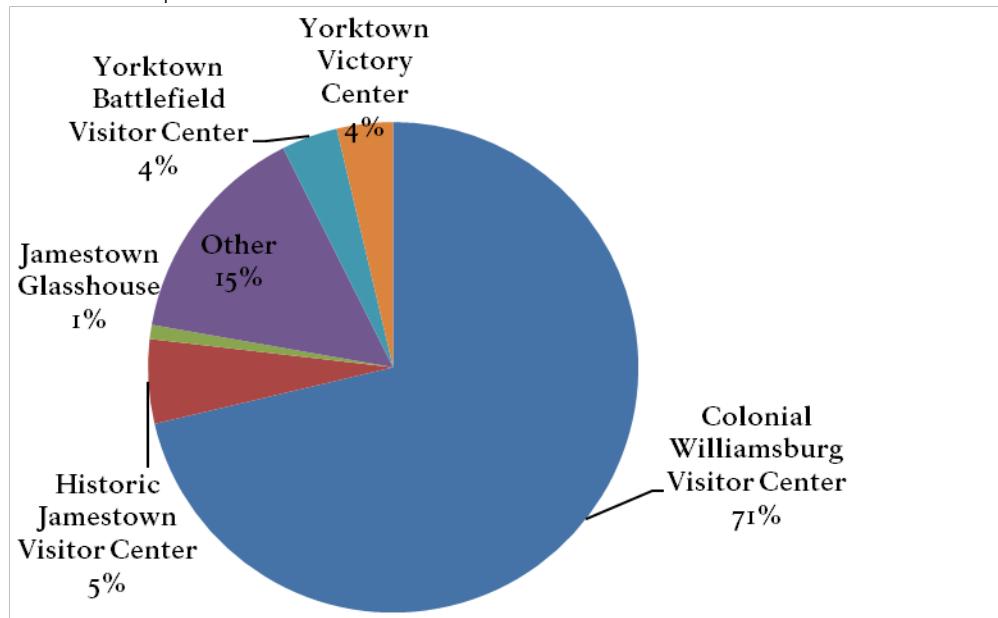
⁶ Interestingly, two groups claiming to have learned of the shuttle on a prior park visit did not report having made such a visit when responding to Question 2; an additional two such groups had visited only prior to 2004.

⁷ These shuttle riders did not respond to the question of where their vehicle was parked and did not indicate that they visited or planned to visit any sites using personal transportation.

Figure 13 shows the parking location of those visitors who reported having a vehicle and who specified where their vehicle was parked (the 6% of respondents who did not specify where their vehicle was parked were omitted from this analysis). Among those who arrived by personal vehicle, 71% had parked at the Colonial Williamsburg Visitor Center. Sixteen groups (nearly 15%) who marked “other” for vehicle parking location noted that they had left vehicles at their place of lodging: 81% at a hotel, and 19% at various campgrounds in the area. Only 10% of the groups with a vehicle in the vicinity had driven into and parked in Colonial NHP itself. Although only 36% of surveys were administered at Yorktown, shuttle users intercepted at Yorktown accounted for more than half of the groups who drove into the park (53%). This suggests that visitors visiting or planning to visit Yorktown are more likely to be those with personal vehicles. Visitors may be more likely to drive to Yorktown because they want to tour the battlefield, which is not accessible by the shuttle. Of the eight groups who drove to Yorktown before boarding a shuttle, half were parked at the Yorktown Visitor Center; the other half had parked at the Victory Center. With the exception of a single group that parked at the Glasshouse, all those arriving by their own means in Jamestown had parked at the Historic Jamestowne Visitor Center (5%).

Figure 13
Parking Location of Groups with Personal Vehicles, N=109

Source: The Volpe Center



Of the 17% of visitor groups who were intercepted after riding the Jamestown Area Shuttle, 30% (7 groups) reported that they had parked and boarded the shuttle at Historic Jamestowne Visitor Center (6) or the Glass House (1). Thus, a number of groups made use of the JAS while in Jamestown despite having a personal vehicle close at hand. Furthermore, this suggests that about 70% of those surveyed while using the JAS must also have used the HTS, since they had not left vehicles at the Jamestown visitor sites.

Site Visits

Survey Questions 8 and 9 gathered information about which sites in the park groups had already visited or planned to visit, using either the shuttle service or personal transportation. Information compiled from these questions may be limited by two factors. First, survey staff found that visitors were often unable to

distinguish among sites in the park by name.⁸ Secondly, respondents may not have been particularly attentive to the distinction between the columns and rows in the two questions (i.e., past versus planned visitations; shuttle versus personal transportation visitations). Both of these potential limitations were evidenced by discrepancies in some groups' responses, when compared with their responses to other survey questions. Where possible, survey staff attempted to clarify points of confusion with respondents themselves at the time of interception, and all surveys were checked for consistency. Nevertheless, some error in the data is likely to exist.

Responding groups completed the survey when intercepted, regardless of how far along they were in the duration of their visit to Colonial. Because they were intercepted while exiting the JAS or re-entering the HTS, all respondents had presumably made at least one site visit using the shuttle service. Beyond this, however, some groups may have completed all planned site visits, while some may just have begun to explore areas in the park. Moreover, visitors may have used either the shuttle or a personal vehicle for these past or planned site visits. Thus, to obtain a complete picture of shuttle use, the survey collected information on both past and planned site visits, including which sites and the type of transportation used. However, some visitor groups may have reported planned site visits which they did not end up completing; thus, this information is somewhat less reliable than the data collected on past visits.

Shuttle and Personal Vehicle Visits

At the time of interception, the average number of sites already visited using the shuttle was just under three (2.76) of the six available sites (i.e. Colonial Williamsburg, Jamestown Settlement, Historic Jamestowne Visitor Center, Jamestown Glasshouse, Yorktown Visitor Center, Yorktown Victory Center). Groups planned to visit on average, nearly one further site (0.76) using the shuttle service.⁹ Figure 14 displays the percentages of groups who visited each of the sites accessible by shuttle – as well as the distribution of planned and/or past visits. Eighty percent of groups planned to use only the shuttle services to visit sites within Colonial NHP (i.e., visitor sites other than Colonial Williamsburg) for the duration of their visit, rather than bringing personal transportation into the park.

The majority of groups had already visited the Jamestown Settlement and the Historic Jamestowne Visitor Center using the shuttle – perhaps surprisingly, a greater share (61%) had visited the Settlement than the Visitor Center (53%). The Jamestown Glasshouse had already been visited by 25% of visiting groups. Despite the fact that it was closed over the weekend, 37% of groups nevertheless reported that they had visited the Jamestown Information Station. Forty percent of groups had visited the Yorktown Visitor Center, and 27% had been to the Yorktown Victory Center. The number of planned visits to Yorktown sites was higher than that for Jamestown sites, due largely to the fact that two-thirds of groups were surveyed in Jamestown. For example, 22% and 24% planned to visit the Yorktown Visitor Center and the Victory Center, respectively, compared to 10% who planned to visit either the Jamestown Settlement or the Historic Jamestowne Visitor Center.

Of the 66% (88 groups) who were surveyed in Jamestown (after using either the JAS or the HTS Jamestown), 23% had already been to one or more of the Yorktown sites: 80% of these groups had visited one or more Yorktown sites on the shuttle, and 40% had visited one or more places in Yorktown using a personal vehicle. Of the 77% of Jamestown riders who had not yet visited Yorktown, 43% reported that they planned to do so using the shuttle.

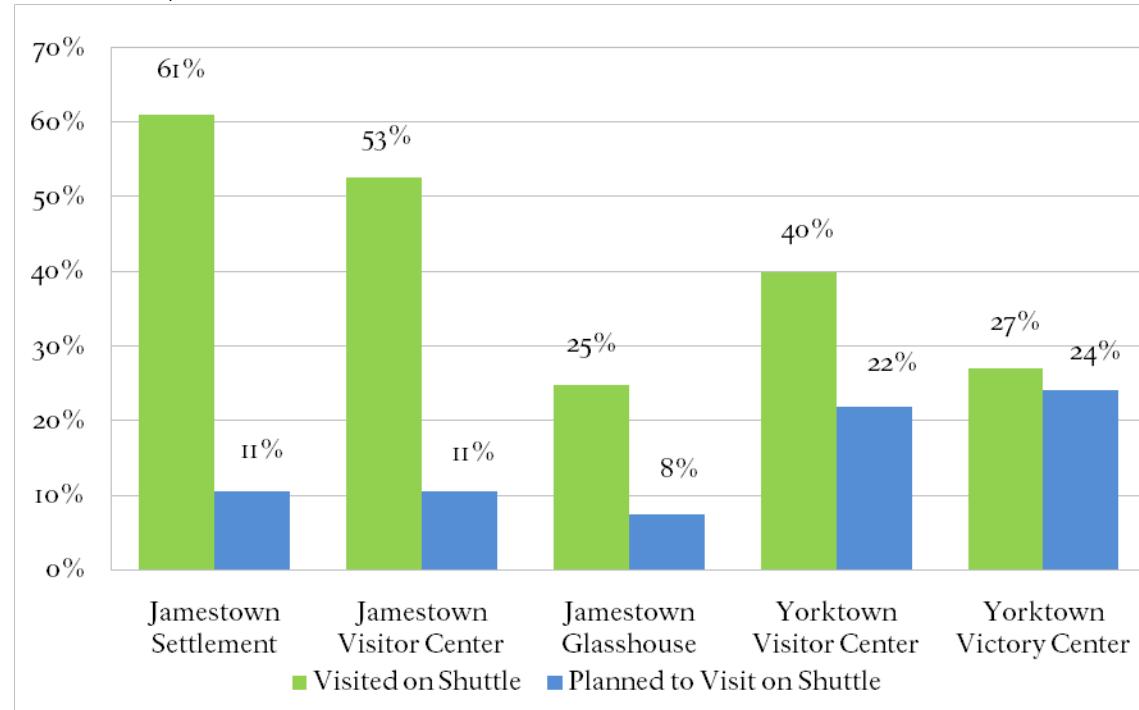
Among the 33% of riders (45 groups) intercepted at Yorktown, 44% (20 groups) had already been to Jamestown: 95% of these had used the shuttle bus to get to Jamestown; however, 25% also reported accessing one or more Jamestown sites with a personal vehicle. Of the 56% of Yorktown shuttle riders who had not yet visited Jamestown, 44% had plans to do so using the shuttle.

⁸ For example, many reported having visited the Jamestown Information Station on the shuttle, though it was closed for the survey period and the shuttle did not stop there. It may have been the case, for example, that visitors were not aware of which attractions were available by shuttle, and simply marked all Jamestown (or all Yorktown) sites listed on the survey.

⁹ The graph excludes Colonial Williamsburg, since it is not within the domain of the park.

Figure 14**Park Site Visits and Planned Visits Using Shuttle, N=133**

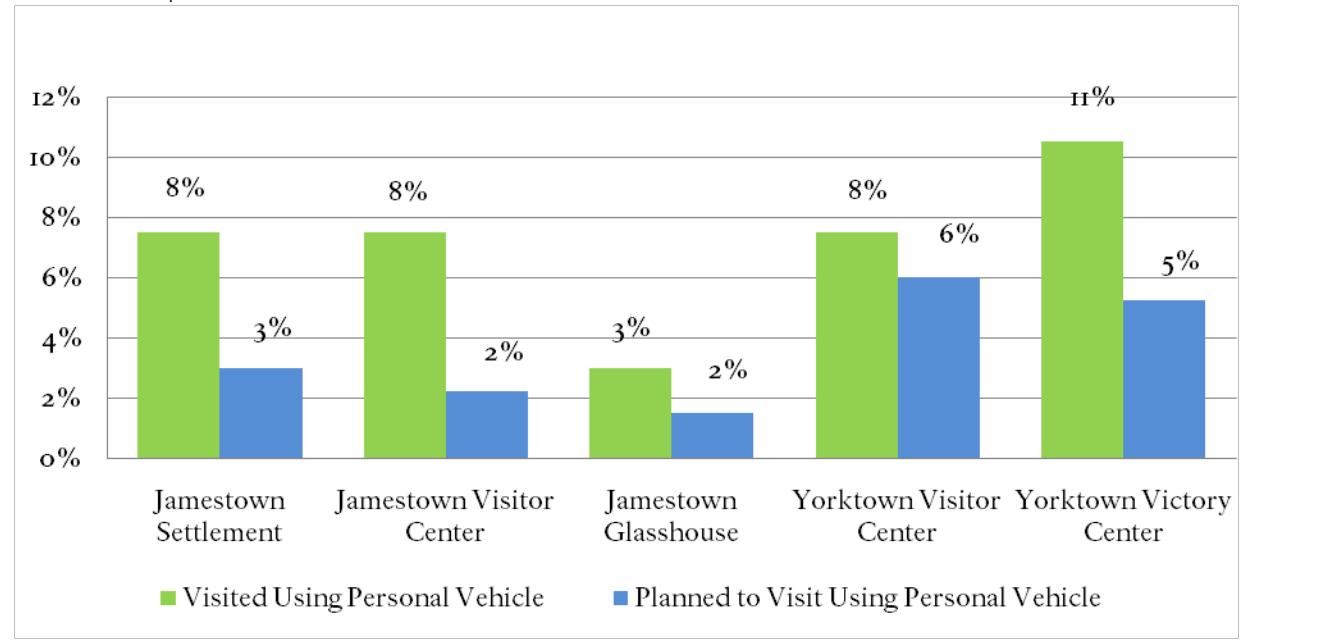
Source: The Volpe Center



As previously described, surveyed shuttle users were asked if they had visited or planned to visit any of the sites using their personal vehicle, to determine whether shuttle riders also use their personal vehicle to visit some sites. Not surprisingly, visits using personal vehicles were much lower, on average, than visits using the shuttle (as shown in Figure 15): the two most popular shuttle destinations – the Jamestown Settlement and the Historic Jamestowne Visitor Center – had been visited by only 8% of visitor groups using personal vehicles. The Yorktown Victory Center had the greatest number of past and planned visits by personal vehicle: 11% of groups had already visited, and 16% had either visited or planned to visit using their own means of transportation.

Figure 15**Park Site Visits and Planned Visits Using Personal Vehicle, N=133**

Source: The Volpe Center

***Yorktown Trolley***

Survey Question 10 asked respondents whether or not they used the Yorktown Trolley, a free transportation service that provides access to key visitor attractions in the Yorktown area, including the Yorktown Victory Center, the Yorktown Visitor Center (NHP) and Riverwalk Landing. This question had a high non-response rate:¹⁰ 29% of groups left the question blank. Of those who responded, 32% had taken the Yorktown Trolley, and 68% reported that they had not. Of the 62 groups (47% of the sample) who reported having visited at least one of the two Yorktown sites – whether by personal transportation or on the shuttle – 48% had taken the trolley. Eighteen of the groups who used the trolley (60%) had visited both Yorktown sites by shuttle, nine groups (30%) had visited only one, and three (10%) had made exclusive use of a personal vehicle to get to the Yorktown sites.

Visitor Satisfaction

Visitors were asked to rate their satisfaction with eight different features of the shuttle service. Groups gave their opinion on frequency and reliability of service, number of sites covered, ease of finding stops and understanding schedule and route information, and audibility and usefulness of the audio programming – as well as an assessment of their overall experience – on a five-point scale (very satisfied, satisfied, neutral, dissatisfied, very dissatisfied), for both the Historic Triangle Shuttle and the Jamestown Area Shuttle. Nearly 95% of all survey respondents had ridden at least one segment of the HTS; the sample size for HTS rider satisfaction questions is 126 groups. Fewer groups had used the JAS: the sample size for these questions is 85 groups.¹¹

¹⁰ Non-response may have been due to the position of the question on the survey: The question occupied only a single line at the bottom of the second page of the booklet. Twenty-seven percent of those who gave no response had not visited either of the Yorktown sites; it is possible that they did not know what the question referred to.

¹¹ When interpreting results on satisfaction, it should be noted that some respondents had trouble differentiating between the HTS and JAS. Several groups provided satisfaction ratings for both services despite having only ridden one line. When possible, survey staff verified responses directly with visitor groups, if responses appeared inconsistent or improbable.

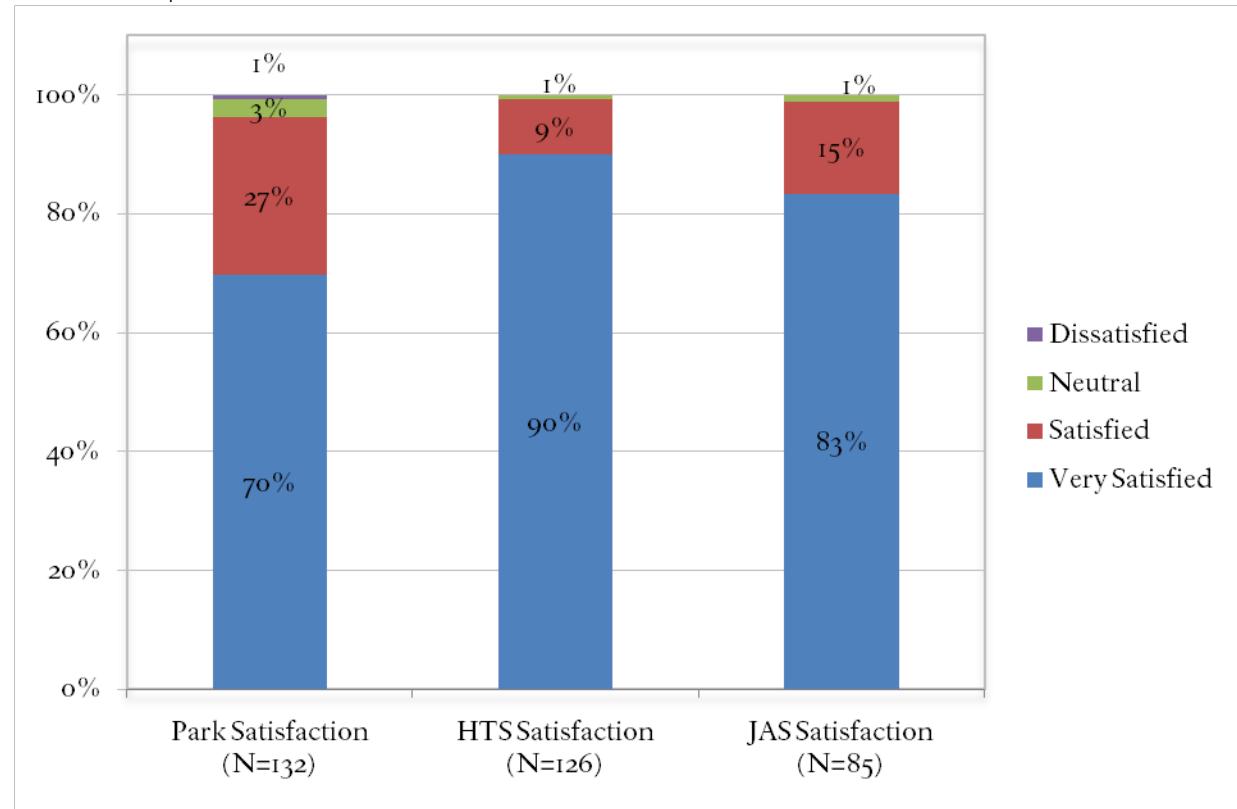
Following the guided ratings requested in Question 11, space was provided for elaboration of both specific points of rider dissatisfaction (Question 12), and additional comments and feedback on the shuttle service (Question 13). Appendix Tables A3 and A4 list these comments in full.

Overall, riders were extremely satisfied with both of the shuttle services. When asked to rate their overall experience on the shuttle, 99% of responding riders on both the HTS and the JAS either satisfied or very satisfied with the shuttle services in general (non-respondents -- 5% for the HTS and 8% for the JAS were excluded from this analysis). Moreover, 90% of responding groups that rode the HTS were "very satisfied" with their experience on that line, as were 83% of responding groups who took the JAS line. In the case of each shuttle, only a single group reported feeling "neutral" with respect to their overall experience on the shuttle, and no groups were dissatisfied.

Figure 16 compares responses to the two questions regarding overall satisfaction: satisfaction with the shuttle services, and satisfaction with the visit to the park as a whole. Overall, visitors reacted even more positively toward the shuttle services than toward their overall experience at the park itself: Whereas 90% of visiting groups riding the HTS and 83% of JAS responding riders were "very satisfied" with their overall experience on the shuttle, 70% chose this option to describe their overall visit to Colonial NHP.

Figure 16
Overall Satisfaction Respondents

Source: The Volpe Center



Specific Shuttle Service Features

The subsections that follow present the responses to each component of the survey question individually.¹² Where relevant, trends in visitor comments in the open-response questions (Survey Questions 12 and 13) are also described. Overall, the large majority of riders were satisfied with all the aspects of the shuttle service. Excluding non-responding groups, the share of “very satisfied” or “satisfied” riders ranged from 75% to 99% for the HTS, and 81% to 99% for the JAS. The fraction of groups who reported being “very satisfied” with the service was slightly higher in the HTS sample than the JAS sample.

Sites Covered by Shuttle Service

As shown in Figure 17, most visiting groups were pleased by the tourist sites included in the shuttle service routes: 87% of HTS riders who responded to Part (b) were “very satisfied” (as were 80% of responding JAS riders). A further 11% and 18%, respectively, were “satisfied.” In the case of each shuttle segment, only 2% and 3% of riders were neutral toward the issue – and none expressed any degree of dissatisfaction.

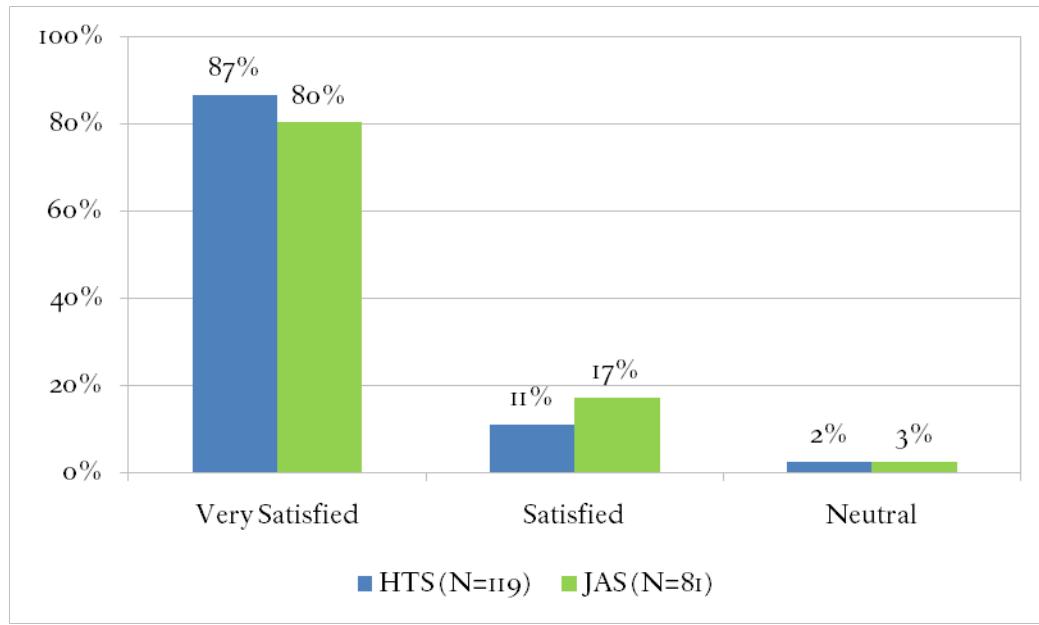
Two specific comments in Question 13 suggested that the shuttle service additionally be available to the Yorktown Battlefield, to the city of Williamsburg (indicating, perhaps, areas outside of Colonial

¹² Non-response rates were fairly consistent across all eight parts of the question for both services (between about 6% and 8%). Non-responding survey participants who used the segment of the shuttle service in question are excluded in the graphical illustrations.

Williamsburg), and to Busch Gardens (a nearby amusement park). Furthermore, two visitor groups made mention of direct service between Yorktown and Jamestown: One group was confused as to whether such service existed, and the other suggested that it be implemented, so that visitors would not have to return to Williamsburg and change buses to travel between the two areas.

Figure 17
Sites Covered by the Shuttle

Source: The Volpe Center



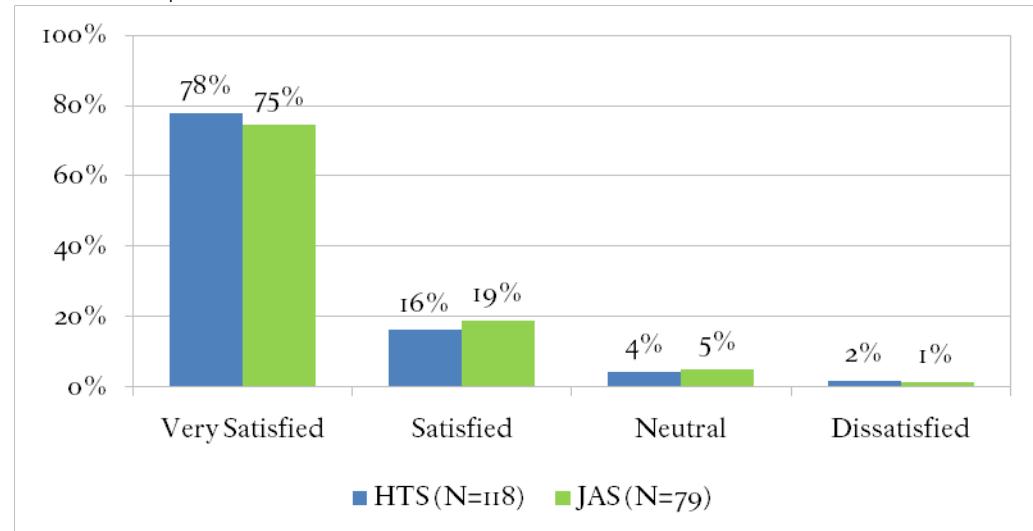
Frequency of Service

Seventy-eight percent of groups who rode the HTS (and provided a response to this question) – and 75% of groups evaluating the JAS – reported very high satisfaction with the frequency of shuttle service (see Figure 18). An additional 16% and 19% were satisfied with the two shuttle segments; and 4% and 5% of riding groups were neutral. Very few groups were dissatisfied with the frequency of service (2% for the HTS and 1% for the JAS).

There were few indications of dissatisfaction with the frequency of shuttle service during the better portion of service hours – though one group specifically commented that too much time elapsed between departures of the HTS from Jamestown to Colonial Williamsburg. However, visitors noticed and remarked upon the frequency of shuttle departures in the interim between 3:30 pm and 5:15 pm: Three groups commented that shuttles should run with greater frequency throughout this time span. Furthermore, several groups requested that the shuttle service continue later into the evening, as well (“6:30”; “till 7 pm”).

Figure 18**Frequency of Service**

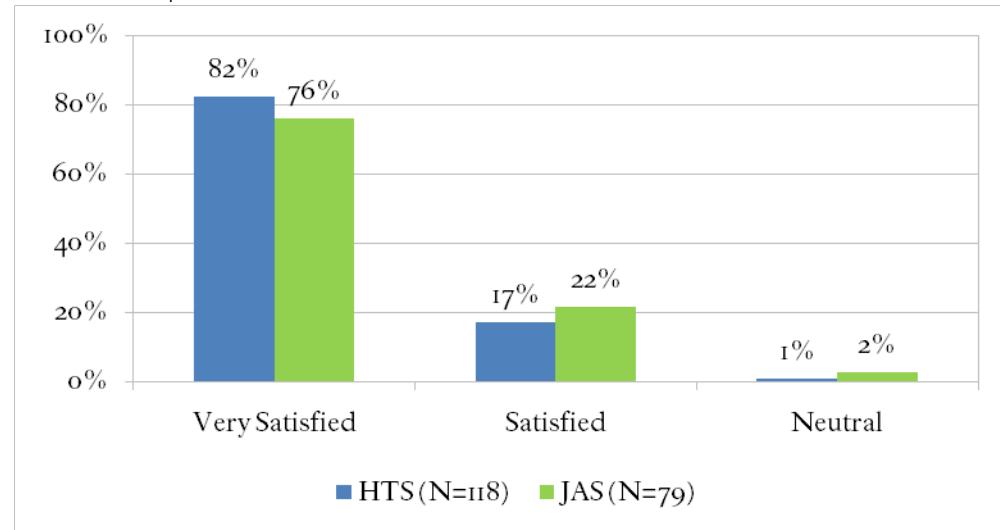
Source: The Volpe Center

*Reliability*

While several comments and suggestions were received regarding the frequency and hours of shuttle service, no riders expressed dissatisfaction with the reliability of either shuttle service. As shown in Figure 19, 82% of HTS riders were very satisfied, 17% “satisfied,” and 1% were “neutral.” The equivalent breakdown of those assessing the JAS was 76%, 22%, and 2%.

Figure 19**Reliability**

Source: The Volpe Center

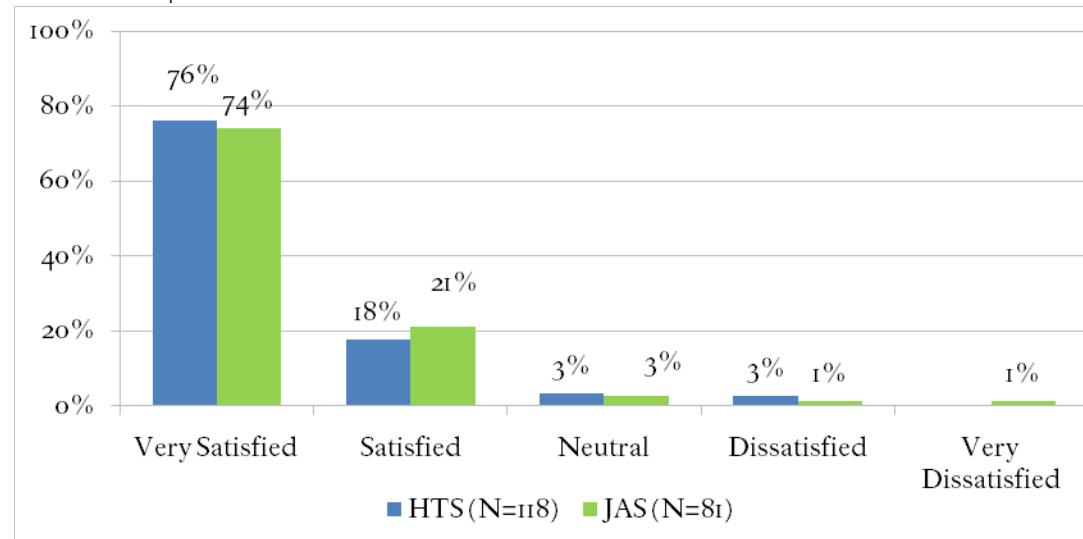
*Ease of Understanding Schedule and Route Information*

The overwhelming majority of visitors were either satisfied or very satisfied with the ease of understanding schedule and route information (94% of HTS riders, and 95% of JAS riders). Three-quarters of responding groups were “very satisfied” with this aspect of service (76% and 74% for the HTS and JAS, respectively); nearly one-fifth were satisfied (18% and 21%); 3% were neutral; 3% and 1% of riders were dissatisfied; and a single group (1%) who rode the JAS reported being very dissatisfied with the ease of understanding route and schedule information (see Figure 20).

As noted above, there is some confusion on the part of groups over which tourist sites can be visited in the area, and where the sites are in relation to one another. One visitor group suggested that a map of tourist sites visited by the shuttle services be readily available: “Addition of a system tour map (what to do/where to go).” Several groups’ comments appreciatively noted that the shuttle relieved them of the responsibility of determining which sites they ought to visit in the area (in addition to the responsibility of transporting themselves to those sites). Written comments also supported the anecdotal reports of survey staff: Shuttle drivers themselves are frequently the primary source of information and clarification regarding the shuttle service’s routes, schedule, and stops. The words “informative,” and “helpful” were used several times in comments to describe bus drivers.

Figure 20
Schedule and Route Information

Source: The Volpe Center



Ease of Finding Shuttle Stops

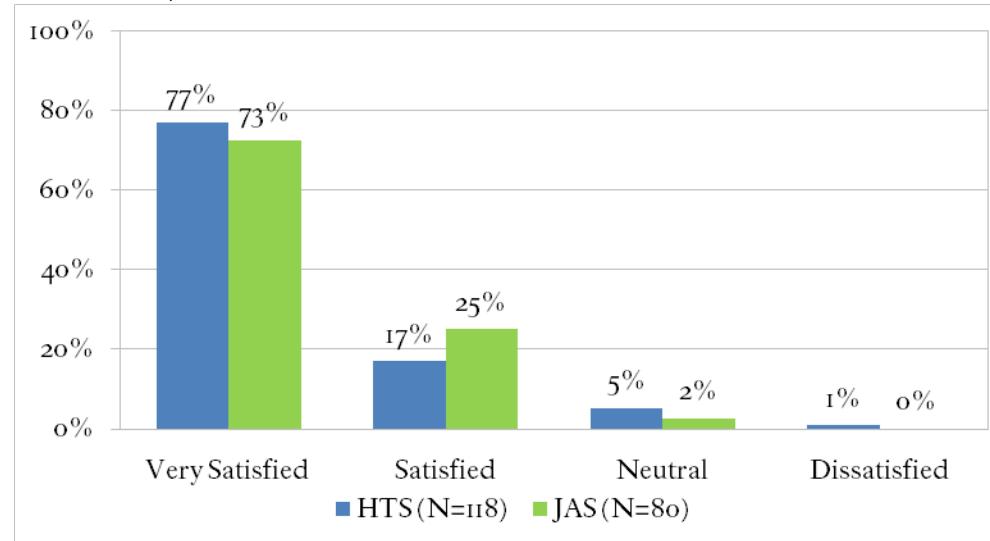
As illustrated in Figure 21, nearly all visitors were content with the ease of locating shuttle stops; 77% of HTS riders and 73% of JAS riders were “very satisfied,” and an additional 17% and 25%, respectively, were satisfied. Few were neutral (5% and 2%), and only a single group reported dissatisfaction with this aspect of the HTS.

Several groups elaborated on their feeling that “Shuttle stops not always well marked.” Specifically, the stops at Jamestown Settlement and Colonial Williamsburg were mentioned in this context (“Better direction at Jamestown Settlement”; “Need signs at Williamsburg – waited awhile before moved downstairs”). One group also noted that they missed the first shuttle they had intended to take because they lacked specific information on the shuttle stop location. Whereas other difficulties in locating shuttle stops were encountered when groups were already present at the site of departure, this particular group seems to have heard of the shuttle before arriving at the Colonial Williamsburg Visitor Center, and was at first unable to discover how to make use of it. If it is the case that this confusion is common, and lack of information on how to use the shuttle prevents some potential riders from making use of the service, that information would not be reflected here (since only successful shuttle riders were surveyed). While able

to find the schedule information (from the Colonial Williamsburg Inn), the group was unable to find out where the shuttle picked up. No groups noted difficulties at Yorktown sites.

Figure 21
Ease of Finding Shuttle Stops

Source: The Volpe Center

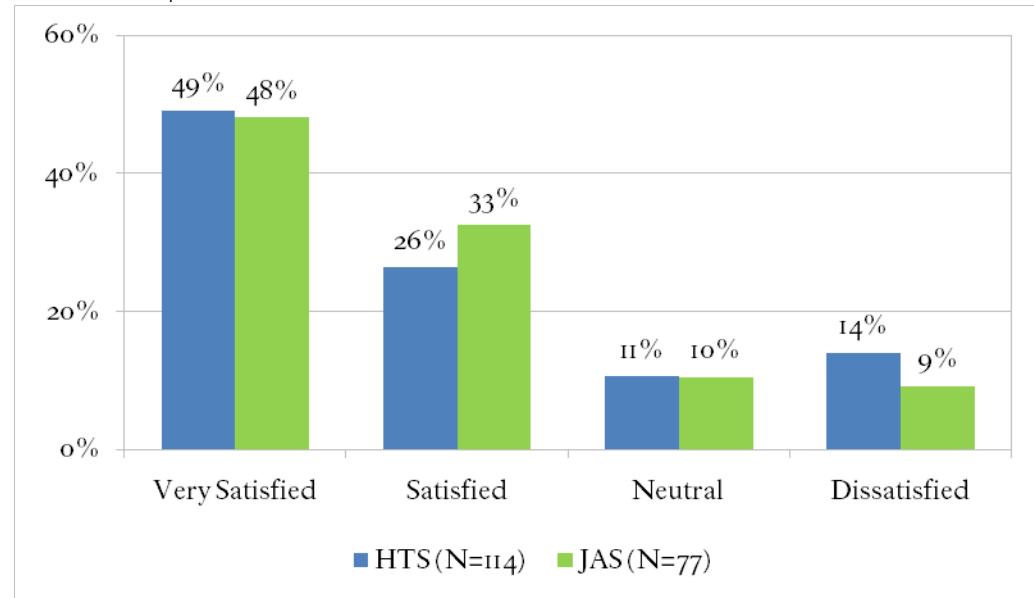


Ability to Hear Audio Programming

The survey also addressed the shuttles' audio programming, which provides historic information and background on visitor sites throughout the shuttle routes. While the non-response rates for these two parts of the question were consistent with those of the previous six parts, shuttle-riding groups expressed somewhat lower levels of satisfaction with the audio programming than with other aspects of the shuttle service. When asked to rate their ability to hear the audio programming on each shuttle line, 14% of HTS riders were dissatisfied, and for those evaluating the JAS, 9% were dissatisfied (see Figure 22). A much lower percentage of riders were "very satisfied" with the audibility of the programming (49% and 48% for the HTS and JAS, respectively), compared to their ratings for other features of the service. A higher portion of riders shifted instead to ranking their attitude as "satisfied" (26% of those who responded with regards to the HTS, and 33% of JAS respondents) or "neutral" (11% and 10% of HTS and JAS respondents, respectively) than in previous questions. While the distribution of ratings indicates that a sizeable majority of riders were satisfied with this aspect of the shuttle service (75% of HTS riders and 81% of JAS riders), the responses nevertheless stand in contrast to the *extremely* high levels of satisfaction with other features of the service (on average 96% and 97% of responding riders were either "satisfied" or "very satisfied" with the other non-audio-related features of the service).

Figure 22**Ability to Hear Audio Programming**

Source: The Volpe Center



Ability to hear the audio programming received the greatest follow-up in written commentary: Of those groups who elaborated upon specific points of dissatisfaction, 57% directly addressed the audio programming (Appendix Table A3 lists these comments). Thus, 12% of total visiting groups made written mention of the audio programming. The nature of the problems reported were common between the HTS and JAS: Riders emphasized that the audio was difficult to hear (particularly over the fellow passengers or in the back of the bus), was not sufficiently clear, or – according to two groups visiting Jamestown on the HTS – was never played at all.

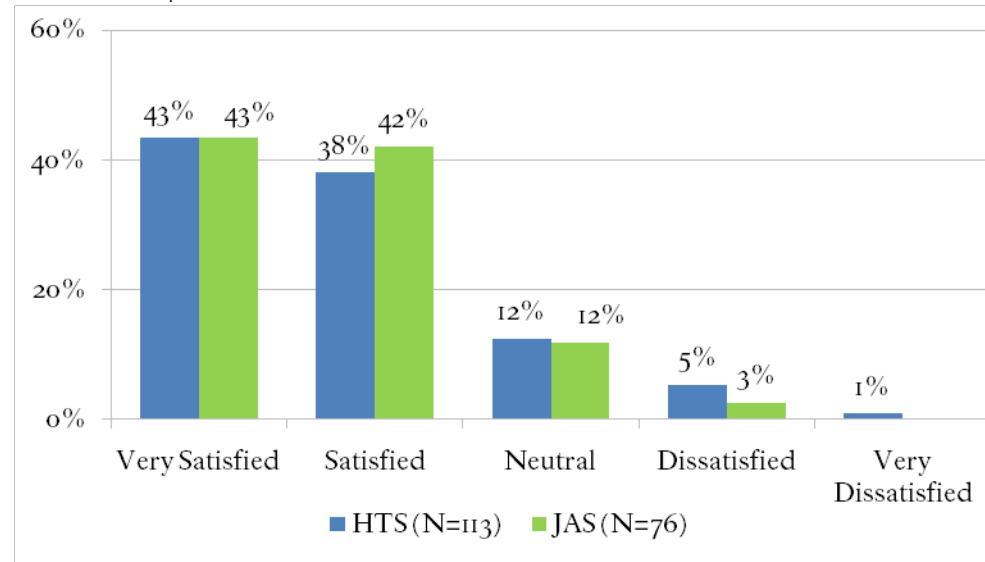
Eleven of these 16 comments (69%) expressing dissatisfaction with the audio programming came from groups intercepted on the HTS Jamestown. An additional 19% of such comments came from Yorktown riders, and 13% were from groups riding the JAS.

Usefulness of Audio Programming

Groups' assessment of the usefulness of the audio programming was slightly more favorable than that given for ability to hear the audio programming. As illustrated in Figure 23, only 6% of those who assessed the HTS and 3% of JAS respondents were either dissatisfied or very dissatisfied with the content of the programming; 81% and 85%, respectively, were either satisfied or very satisfied. Roughly one-in-ten had no strong feelings on the subject: 12% were "neutral" with regards to the programming's usefulness. Of course, some riders may have been unable to provide an adequate evaluation if they could not hear the audio programming.

Figure 23
Usefulness of Audio Programming

Source: The Volpe Center



Only a single group commented on the content of the programming: After stating that the audio was difficult to hear because of the noisy environment, the respondent wrote: “What I was able to hear was enjoyable.”

Visitor Written Comments

As noted above, Questions 12 and 13 provided space in an open-response format for visitor comments. The first question requested elaboration on any points of dissatisfaction with the specific features of the service addressed in Question 11, and the second question provided room for any additional comments or feedback on the service. Comments are listed in full in Appendix Sections A3 and A4.

Responses to Question 12 were received from 26% of groups who completed the survey. Two of these responses bore no relevance to the shuttle service. Furthermore, 17% of those who provided a comment reiterated nothing but satisfaction with the service (e.g., “Very satisfied” ; “Satisfied with all” ; “The service is great”).

Of the remaining 26 written responses, the majority (62%) expressed frustration with the audio programming on the bus. Of these, 12% had not heard the programming played at all. All other respondents (88%) reported that the audio programming was not loud or clear enough to hear (e.g., “Unable to hear audio” ; “Audio program is not very clear and loud” ; “Hard to hear the audio on the bus” ; etc.). Several groups gave reasons for the difficulty in hearing, including:

- Seating in the back of the bus
- Bus noises/noisy environment
- Conversations of other passengers
- Noise/static in the speakers

One group suggested that multiple speakers would help solve the problem.

Other concerns, mentioned by only one or two visitor groups, included:

- Uncertainty about visitor sites serviced (e.g., “Difficult to understand the schedule i.e. what we would see when we got off.”)
- Lack of shuttle stop/route information (“Information received at Colonial Williamsburg did not specify exact place, location of shuttle pick-up…” ; “Shuttle stops not always well marked.”)

- Confusion about traveling between Jamestown and Yorktown (“Confused about how to get to Jamestown Settlement only from Yorktown”)
- Safety (children standing and roaming while the shuttle was in motion when seats were available)
- Frequency of buses following well-attended reenactments (at the Jamestown Settlement)

Fifty-seven groups (43% of those who completed the survey) gave additional feedback in the space provided in Question 13. Feedback was overwhelmingly positive: 65% of comments were solely complementary, offering no suggestions for alterations to the service. Many of these comments simply exclaimed about the service (“Very good service” ; “Great experience” ; “Very happy!”). Many also emphasized specific points of satisfaction. Several representative subjects among these comments include:

- Bus drivers’ friendliness and helpfulness (“…bus drivers were very friendly and informative” ; “…driver finally gave us the best info and advice.”)
- Alternative to driving (“I like that I don’t have to drive.”)
- Orientation to visitor sites (“This is a very good way to get around and not miss anything” ; “It was very nice to have, being this is our first visit and had no idea how to get around to the places.”)
- Comfort (“Shuttle buses were very clean and accommodating” ; “Enjoyed riding in the air conditioning.”)
- Convenience (“Love the convenience of the shuttle. Didn’t have to drive the entire stay.”)
- Free service (“Amazed that it’s free!” ; “Great value!”)
- Environmental friendliness (“…helped save gas, less traffic”)

Main topics among visitor feedback and suggestions were:

- Providing service between 3:30 and 5:00 pm, and later into the evening (after 5:30 pm) (5)
- Need for benches and shade for visitors waiting for buses at the Jamestown Settlement (5)
- Need for more signs for and maps of the shuttle service (3)
- Direct service from Jamestown to Yorktown (3)

No more than two respondents made the following comments and suggestions:

- Shuttle service into Williamsburg city and Busch Gardens; shuttle tour of Yorktown Battlefield
- Buses were too cold
- Service was not sufficiently frequent
- Make water available at shuttle stops
- Cushions at the back of seats

Section 3: Conclusions

The survey finds that the large majority of shuttle users arrived in the area by personal vehicle (87%) and started their shuttle ride at Colonial Williamsburg on the HTS. Shuttle riders were more likely to visit Jamestown sites using the shuttle compared to Yorktown sites. The survey estimates that 64% of riders rode the JAS. The majority of JAS riders arrived on the HTS; only 5% of riders parked at a Jamestown site and used the JAS. On average, respondents visited 3 sites using the shuttle service and said they planned on visiting 1 more site using the shuttle.

Overwhelmingly, visitors viewed the shuttle as contributing to a pleasant and enjoyable park experience: 72% of groups cited “I am able to relax and view the scenery” among their reasons for taking the shuttle. Through both reasons given and comments, visitors who had brought a personal vehicle to the area strongly expressed that the shuttle service was a preferable alternative to using that vehicle in the park: overall, 80% of visiting groups intercepted had used and planned to use only the shuttle to visit sites in the park. Some groups (between 8% and 13% of visitor groups) had not brought a personal vehicle into the area at all, and relied exclusively on the shuttle system to reach visitor sites in the area. Importantly, three groups with members who had mobility impairments reported that the shuttle system made the park more accessible to them.

Visiting groups intercepted over the survey period expressed a very high level of overall satisfaction with the shuttle service: 99% of groups riding the HTS and 99% of those on the JAS reported that they were either “very satisfied” or “satisfied” with their overall experience on the shuttle. Visitors similarly reported being pleased with specific features of the shuttle service, including timeliness, frequency of service and number of sites covered, and ease of understanding shuttle route information and locating stops. For each of these features of the service, three-quarters or more of respondents reported being “very satisfied.” Comments and feedback received were overwhelmingly positive: Of the 43% of survey respondents who chose to leave written comments regarding the shuttle system, 65% were purely praising the shuttle service. A significant number of visiting groups highlighted their appreciation of the service because it obviated the need to drive on their visit to the park. Shuttles were characterized as comfortable and convenient.

The two features of the shuttle service in which less than a majority said they were “very satisfied” were ability to hear the audio programming (46% very satisfied) and usefulness of the audio programming” (43% very satisfied). Nonetheless, large majorities said they were satisfied (very satisfied or satisfied) with these aspects of the service (70% and 81%, respectively).

In the open-ended question, where respondents were asked to provide any additional feedback on the service, a majority of the comments were positive, praising the convenience of the service and the friendliness of the bus drivers. Of the relatively few respondents who mentioned a concern or criticism with the service, the two most frequently mentioned issues included:

- Run service between 3:30 and 5:00 pm, and later into the evening (after 5:30 pm) (5 groups)
- Provide benches and shade for visitors waiting for buses at the Jamestown Settlement (5 groups)

Responses to several survey questions, as well as anecdotal evidence from survey staff interactions with survey respondents suggested a high degree of confusion among visitors regarding the identification and location of tourist sites within Colonial NHP. Many groups emphasized that the shuttle services (and, in particular, the shuttle operators themselves) were helpful or instrumental in orientating them toward available sites, in addition to making these sites accessible, during their visit to the park.

Overall, the survey findings indicate that users strongly support the shuttle service. The survey data clearly demonstrate that visitors value the service and feel that it enhances their experience at the park. The shuttle service enables visitors to relax and enjoy the sites, relieving the stress associated with driving in an unfamiliar area. In addition, the shuttle assists visitors with orientation, contributing to their understanding of park resources.

The data, as well as anecdotal evidence from the bus drivers, also suggest that there is an opportunity to increase ridership on the shuttle through enhancing publicity of the service in the Historic Triangle area and improving signage at the Colonial Williamsburg Visitor Center. Visitors' responses regarding their initial sources of information on the shuttle suggest that most were unaware of the shuttle system's existence prior to arriving in the Colonial Williamsburg area. Given the high level of satisfaction with the service in the case of those who used it (and the expressed preference for shuttle use over personal vehicle use in the case of those who had a personal vehicle available), there may be significant numbers of visitors to Colonial NHP who would choose to use the shuttle system but lack sufficient initial information on its availability to utilize it.

Appendix A

A1: List of Visitors' Place of Residence

Table A1-1

Respondent Country of Residence (Survey Question 18)

Source: The Volpe Center

Country of Residence	Number of Groups	Number of Individuals
Australia	1	2
England	1	2
Germany	1	1
Russia	4	12
United States	114	362
No Response	12	27
Total	133	406

Table A1-2**Respondent US State of Residence (Survey Question 18)**

Source: The Volpe Center

US State of Residence	Number of Groups Listing State ¹³	All Individuals in Groups from State
AL	2	4
AZ	2	7
CA	3	8
CO	2	8
CT	1	2
DE	1	4
FL	12	38
GA	3	8
IL	6	13
IN	5	14
KS	2	4
KY	2	2
LA	2	8
MA	2	12
MD	10	33
MI	2	9
MN	1	2
MO	3	15
NC	3	4
NJ	10	32
NY	14	35
OR	2	4
PA	12	37
SC	1	2
TN	1	2
TX	3	8
VA	15	43
WA	1	0
WV	1	4
Total	124	362

¹³ Some survey respondents noted that group members hailed from multiple states.

A2: Specified Reasons for Shuttle Use

“Other” Specified Written Reason for Shuttle Use (Survey Question 6)

- “Can't drive”
- “Included with our stay”
- “Came without car - airport/taxi/hotel”
- “My husband is handicapped, made getting around easier”
- “Free”
- “Better than riding bicycle”
- “No car”
- “Bus is accessible for handicapped people”
- “Motor home at campsite”
- “No car”
- “Convenience”
- “It sounded like fun, and we enjoyed it!”
- “Mobility (impaired) ”
- “Don't have to worry about finding a parking space”
- “Free”
- “Convenience, ease of parking, I don't like to drive”
- “More convenient”
- “Two couples going at different times”
- “No personal vehicle”
- “Easiest way to get from place to place”
- “No use of car”
- “It's just easier than driving”

A3: Dissatisfaction with Service Features: Open-Response Comments (Survey Question 12)

Audio

- “Unable to hear audio.”
- “Audio program is not very clear and loud.”
- “Couldn't hear the radio.”
- “There's so much talking on the buses that it's almost impossible to hear the audio.”
- “Audio on one of the buses was not clear - drive got noise when she tried to use the speaker system.”
- “It was difficult to hear the audio because of the noisy environment. Possibly multiple speakers would help. What I was able to hear was enjoyable.”
- “Satisfied with Jamestown shuttle, on Historic Triangle there were so many people talking you could not hear the audio.”
- “Could not hear audio clearly due to bus noises (rattles) and people conversation.”
- “On some shuttles we were not able to hear the audio. Also, sometimes when there was room children were allowed to stand and roam which worried us. If seats are there, children and adults should sit.”
- “Audio could be more clear.”
- “Hard to hear the audio on the bus.”
- “No - other than not clearly hearing it.”
- “Hard to hear Jamestown shuttle audio in back of bus.”
- “Audio on the bus was OK for some seats but not for others. I happened to be in the back.”
- “No audio service on bus.”
- “Never had audio on the Historic Shuttle”
- “I've heard it many times.”

Positive Comments

- “The service is Great.”
- “Very satisfied.”
- “Very satisfied”
- “Satisfied with All”
- “Very Satisfied”

Schedule Information

- “List times for Jamestown shuttle.”
- “Difficult to understand the schedule i.e. what we would see when we got off.”

Location/Signage for Shuttle Stops

- “Shuttle stops not always well marked.”
- “Information received at Colonial Williamsburg Inn check did not specify exact place, location of shuttle pick-up thereby causing us to miss our 1st planned shuttle”

Service Configuration

- “QE-The fact that you couldn't get to Jamestown from the same bus. You had to go back to Williamsburg then board another bus.”

Frequency of Shuttle

- “Frequency of shuttles - number of shuttles at peak time such as after reenactment.”

Other Comments

- “Confused about how to get to Jamestown Settlement only from Yorktown.”

- “Too many diesel fumes - bus”

A4: Overall Experience on Shuttle: Open-Response Comments (Survey Question 13)

Positive Comments (N=39)

- “Keep up the good work.”
- “This is a very good way to get around and not miss anything.”
- “Appreciate the convenience of the buses.”
- “Great Value!”
- “I appreciated the friendly drives and young ladies at the stops who were both pleasant and helpful.
- “It was very nice to have, being this is our first visit and had no idea how to get around to the places.
- “Enjoyed riding in the air conditioned buses.”
- “Both the Colonial and Yorktown services are truly wonderful.”
- “Loved the convenience of the shuttle. Didn't have to drive the entire stay.”
- “Shuttle buses were very clean and accommodating, bus drivers were friendly and informative. It was a very pleasant experience.”
- “Nice as is.”
- “See above. Very Satisfied!”
- “Everything was great.”
- “I think it was funny and I think it was very smart and enjoyable.”
- “Very good service.”
- “Great service, friendly smile!!!”
- “Friendly bus drivers”
- “Great experience”
- “Allowed us to see so much more in a shorter time”
- “Excellent and friendly service. Convenient service for people like me who don't like to drive. ”
- “Drivers extremely helpful and friendly. Service very convenient, reduces pollution. Gives more time to relax and enjoy the area.”
- “It's cool that you can visit a beach! Good Job, guys!”
- “Pleasant ride. Amazed that it's free! ”
- “This is a convenient service for the travelers who are unfamiliar with the area. I loved the convenience of parking in one spot and allowing someone else to drive. Thank you.”
- “I think everyone is doing a great job!”
- “Excellent service - helped save gas, less traffic.”
- “Very Nice.”
- “Loved the service and the staff.”
- “There should be comfortable shelter for visitor while waiting for shuttle. Where are visitors supposed to sit on the curb on other park visitors cars?”
- “Very Good”
- “A great service. Like to see it all year instead of 8 months. Don't stop the service.”
- “Nice shuttle bus (Historic Triangle) driver finally gave us the best info and advice.”
- “Very good service - good staff and clean equipment.”
- “Easy to use, staff friendly, and very helpful.”
- “Very Happy!”
- “Very helpful and convenient!”
- “I think the shuttle is great so we don't have to drive.”
- “Great service and the people doing the survey.”

- “Each bus driver was pleasant and willing to give information (save one). They made the shuttle rides very enjoyable and informative.”

Issues and Concerns

Frequency/Schedule of Service

- “The last bus from Williamsburg to Yorktown is 3:30 pm - it would be nice to have an earlier service, perhaps 4:30 pm.”
- “More buses could be used between 4&6pm when buses are over-crowded.”
- “We think it may be convenient to maybe run the shuttles a little later, like maybe till 7pm. On a hot day it was relaxing and refreshing to be able to sit in the cool before more walking, plus you can't beat the price.”
- “Last shuttle from Jamestown back to Williamsburg visitor center should be later (6:30?)”
- “Bus/shuttle schedules too "confining" for days activities. Too large of span of time to wait for shuttle from Jamestown back to Historic Visitor Center. Could not adequately hear audio toward rear of shuttle.”

Shuttle Stops

- “Need shade and benches at Jamestown Settlement Shuttle stop.”
- “Need benches and shade at Jamestown Settlement.”
- “Need benches/shade at the Jamestown Settlement stop.”
- “Need benches at Jamestown settlement while waiting for shuttle.”

Signage/Information

- “Better direction at Jamestown Settlement.”
- “Addition of system tour map (what to do/where to go)”
- “Needs signs at Williamsburg - waited awhile before moved downstairs.”

Service Configuration

- “Would be nice to have shuttle from Jamestown to Yorktown”
- “Wish shuttle went to Busch Garden so didn't have to drive and into Williamsburg city. I like it that I don't have to drive.”
- “Provide tour of Yorktown Battlefield. Provide service between 4-5:25.”

Comfort of bus

- “There is no cushion at the back.”
- “Buses were too cold.”

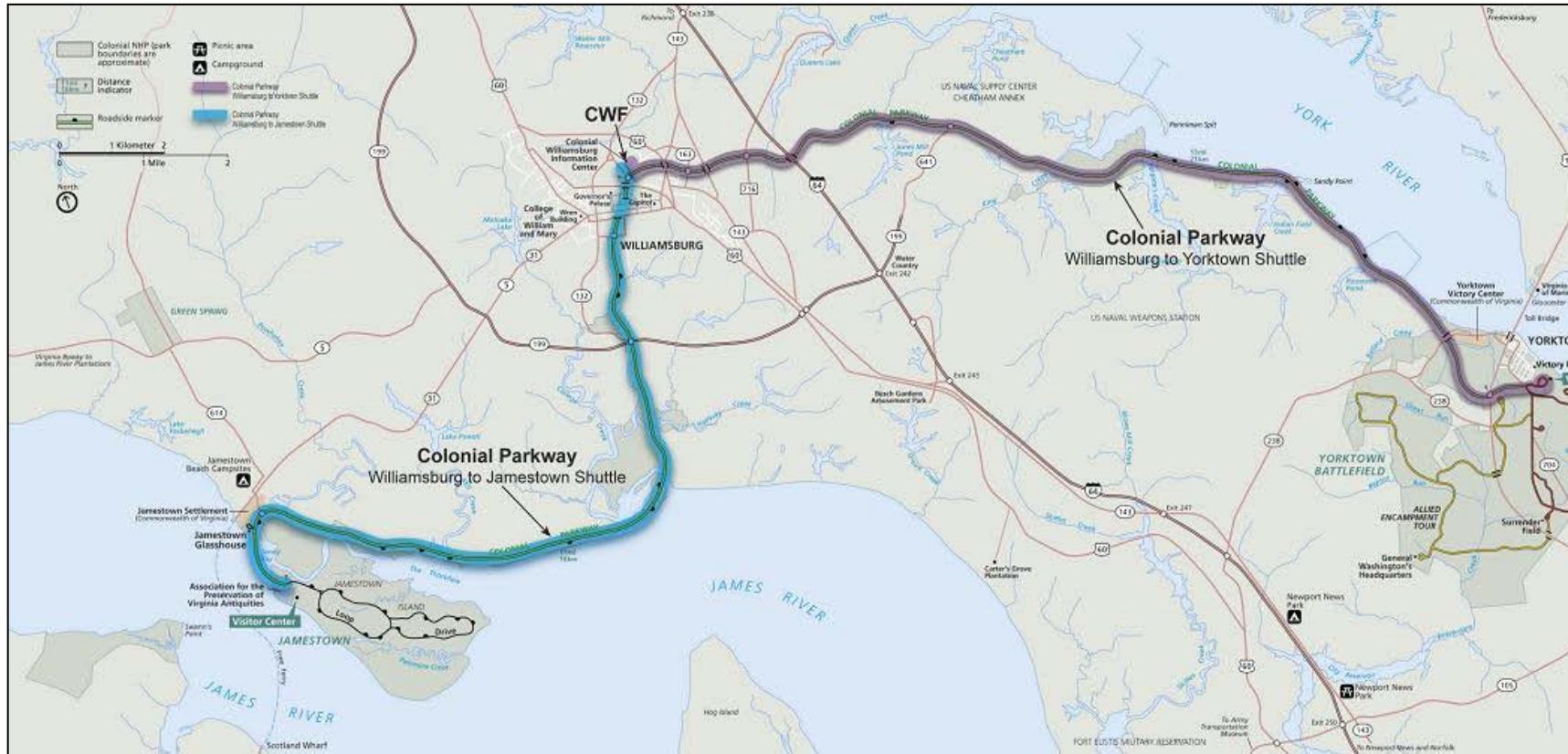
Other

- “Water bottles at each station during summer months.”

Appendix B: Attachments

B1: Map of Colonial Shuttle Service Routes

Source: NPS



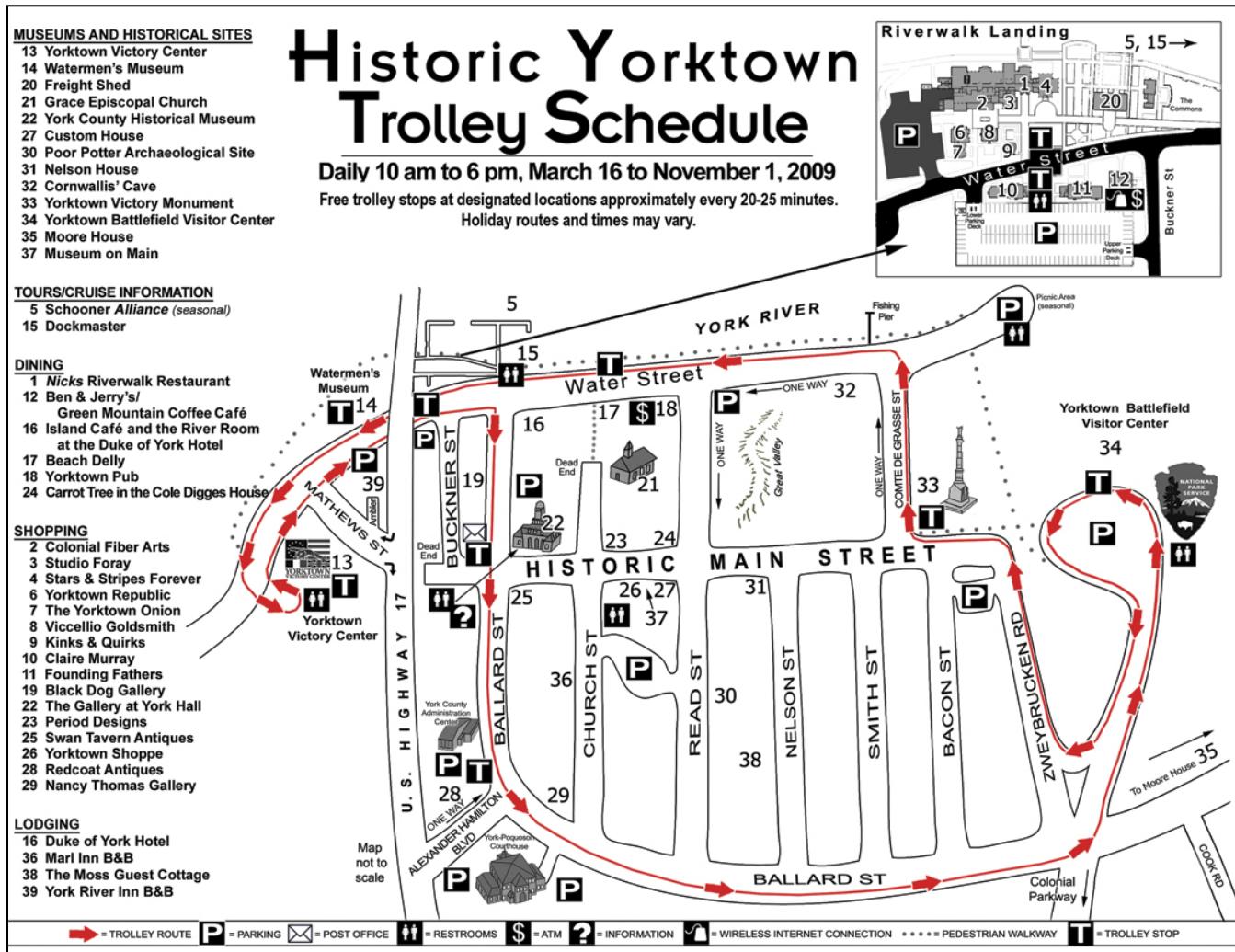
B2: Historic Triangle Shuttle Schedule

Source: NPS

All service available from March 16 through November 1, 2009			
 HISTORIC TRIANGLE SHUTTLE		 HTS	
Jamestown Route		Yorktown Route	
Colonial Williamsburg to Jamestown	Jamestown to Colonial Williamsburg	Colonial Williamsburg to Yorktown	Yorktown to Colonial Williamsburg
9:00 am 9:30 am 10:00 am 10:30 am 11:00 am 11:30 am 12:00 pm 12:30 pm 1:00 pm 1:30 pm 2:00 pm 2:30 pm 3:00 pm 3:30 pm	9:30 am – Historic Jamestowne 9:35 am – Jamestown Settlement 10:00 am – Historic Jamestowne 10:05 am – Jamestown Settlement 10:30 am – Historic Jamestowne 10:35 am – Jamestown Settlement 11:00 am – Historic Jamestowne 11:05 am – Jamestown Settlement 11:30 am – Historic Jamestowne 11:35 am – Jamestown Settlement 12:00 am – Historic Jamestowne 12:05 am – Jamestown Settlement 12:30 pm – Historic Jamestowne 12:35 pm – Jamestown Settlement 1:00 pm – Historic Jamestowne 1:05 pm – Jamestown Settlement 1:30 pm – Historic Jamestowne 1:35 pm – Jamestown Settlement 2:00 pm – Historic Jamestowne 2:05 pm – Jamestown Settlement 2:30 pm – Historic Jamestowne 2:35 pm – Jamestown Settlement 3:00 pm – Historic Jamestowne 3:05 pm – Jamestown Settlement 3:30 pm – Historic Jamestowne 3:35 pm – Jamestown Settlement 5:15 pm – Historic Jamestowne 5:25 pm – Jamestown Settlement	9:00 am 9:30 am 10:00 am 10:30 am 11:00 am 11:30 am 12:00 pm 12:30 pm 1:00 pm 1:30 pm 2:00 pm 2:30 pm 3:00 pm 3:30 pm	9:30 am – Yorktown Battlefield 9:40 am – Yorktown Victory Center 10:00 am – Yorktown Battlefield 10:10 am – Yorktown Victory Center 10:30 am – Yorktown Battlefield 10:40 am – Yorktown Victory Center 11:00 am – Yorktown Battlefield 11:10 am – Yorktown Victory Center 11:30 am – Yorktown Battlefield 11:40 am – Yorktown Victory Center 12:00 pm – Yorktown Battlefield 12:10 pm – Yorktown Victory Center 12:30 pm – Yorktown Battlefield 12:40 pm – Yorktown Victory Center 1:00 pm – Yorktown Battlefield 1:10 pm – Yorktown Victory Center 1:30 pm – Yorktown Battlefield 1:40 pm – Yorktown Victory Center 2:00 pm – Yorktown Battlefield 2:10 pm – Yorktown Victory Center 2:30 pm – Yorktown Battlefield 2:40 pm – Yorktown Victory Center 3:00 pm – Yorktown Battlefield 3:10 pm – Yorktown Victory Center 3:30 pm – Yorktown Battlefield 3:40 pm – Yorktown Victory Center 5:15 pm – Yorktown Battlefield 5:30 pm – Yorktown Victory Center
 JAMESTOWN AREA SHUTTLE		 YORKTOWN TROLLEY	
Service between Historic Jamestowne, Jamestown Glasshouse and Jamestown Settlement. Stops every 10-15 minutes from 9:00 a.m. to 5:00 p.m.		Service to Yorktown Battlefield Visitor Center, Yorktown Victory Center, Riverwalk Landing and other points of interest in Yorktown. Stops every 20 minutes from 10:00 a.m. to 6:00 p.m.	

B3: Yorktown Trolley Service Route

Source: NPS



B4: Survey

Source: NPS and the Volpe Center

National Park Service
U.S. Department of the Interior

Colonial National Historical Park: Shuttle Service Visitor Survey



INTERVIEWERS: OMB # 1024-0224/ NPS ID #: 08-038

LOCATION (Check one): HTS Jamestown HTS Yorktown Jamestown Area Shuttle Expiration Date: 1/31/2010

DATE (Circle one): 7/9 7/10 7/11 7/12 TIME (Circle one): AM PM

Please take a few minutes to answer the following questions; your feedback is critical to improving the shuttle service and the overall visitor experience in the park. Please fill out one survey per family or group.

This survey is about your perceptions of the Historic Triangle Shuttle and the Jamestown Area Shuttle (NOT the Historic Area Shuttle Bus System that provides service to Colonial Williamsburg sites).

Section I: General Trip Characteristics

- How many days are you visiting this area (including the Historic Triangle of Jamestown, Williamsburg and Yorktown, and other surrounding attractions)?
 1 day 2 days 3 days 4 days 5-7 days 8 days or more
- Have you visited Colonial National Historical Park (including Historic Jamestowne and Yorktown Battlefield) before today? (Please note that Colonial Williamsburg is NOT part of Colonial National Historical Park)
 Yes (Go to Question 2a) No (Go to Question 3)
 - When did you last visit the park? (Check One)
 2006 – 2008 2004-2005 Before 2004 Can't recall
 - Not including this trip, approximately how many times have you previously visited this park?
 1 time 2-4 times 5 or more times
- For today's visit to Colonial National Historical Park, did you arrive by personal vehicle (e.g., personal car, rental vehicle, truck, RV, motorcycle)?
 Yes No
- Where is your vehicle currently parked? (Check One)
 Colonial Williamsburg Visitor Center Jamestown Information Station
 Historic Jamestowne Visitor Center Yorktown Battlefield Visitor Center
 Jamestown Settlement Yorktown Victory Center
 Jamestown Glasshouse Other (please specify: _____)

Section II: Use of the Shuttle Service

- How did you learn about the shuttle service provided at Colonial National Historical Park (including the Historic Triangle Shuttle and the Jamestown Area Shuttle)? (Check All That Apply)
 From previous visit(s) Visitor Guidebooks
 Family or friends (word of mouth) National Park Service website
 Saw the shuttle bus or signs for the service Other website
 Staff at one of the visitor sites Hotel/motel/timeshare/campsite staff
 Brochures/pamphlets from the visitor sites Chamber of Commerce/Visitor's Bureau
 Other (please specify: _____)

6. Why did you decide to use the shuttle service? (Check All That Apply and Circle the Reason that is Most Important)

- I do not know where the visitor sites are located
- I do not like to drive in unfamiliar areas
- The shuttle bus provides historical information
- I am able to relax/view the scenery on the shuttle bus
- The cost of fuel
- The shuttle bus is environmentally friendly
- Other (Please specify: _____)

7. Where did you first board the shuttle service today? (Check One)

- | | |
|---|--|
| <input type="checkbox"/> Colonial Williamsburg Visitor Center | <input type="checkbox"/> Jamestown Information Station |
| <input type="checkbox"/> Historic Jamestowne Visitor Center | <input type="checkbox"/> Yorktown Battlefield Visitor Center |
| <input type="checkbox"/> Jamestown Settlement | <input type="checkbox"/> Yorktown Victory Center |
| <input type="checkbox"/> Jamestown Glasshouse | |

8. During your visit to this area, please indicate all the sites that you and your group visited (in column A) OR plan to visit (in column B) using either the Historic Triangle Shuttle or the Jamestown Area Shuttle. (Check All That Apply)

	A. Visited Using Shuttle	B. Plan to Visit Using Shuttle
Colonial Williamsburg Visitor Center	<input type="checkbox"/>	<input type="checkbox"/>
Jamestown Glasshouse	<input type="checkbox"/>	<input type="checkbox"/>
Jamestown Information Station	<input type="checkbox"/>	<input type="checkbox"/>
Jamestown Settlement	<input type="checkbox"/>	<input type="checkbox"/>
Historic Jamestowne Visitor Center	<input type="checkbox"/>	<input type="checkbox"/>
Yorktown Battlefield Visitor Center	<input type="checkbox"/>	<input type="checkbox"/>
Yorktown Victory Center	<input type="checkbox"/>	<input type="checkbox"/>

Do not plan to visit other sites on shuttle

9. During your visit to this area, please indicate all the sites that you and your group visited (in column A) or plan to visit (in column B) using your own means of transportation (such as a personal vehicle).

	A. Visited Using Own Transportation	B. Plan to Visit Using Own Transportation
Colonial Williamsburg Visitor Center	<input type="checkbox"/>	<input type="checkbox"/>
Jamestown Glasshouse	<input type="checkbox"/>	<input type="checkbox"/>
Jamestown Information Station	<input type="checkbox"/>	<input type="checkbox"/>
Jamestown Settlement	<input type="checkbox"/>	<input type="checkbox"/>
Historic Jamestowne Visitor Center	<input type="checkbox"/>	<input type="checkbox"/>
Yorktown Battlefield Visitor Center	<input type="checkbox"/>	<input type="checkbox"/>
Yorktown Victory Center	<input type="checkbox"/>	<input type="checkbox"/>

Did not visit any sites using own transportation
 Do not plan to visit sites using own transportation

10. Have you used the Yorktown Trolley? Yes No

11. Please rate the Historic Triangle Shuttle (which transports visitors between the Colonial Williamsburg Visitor Center and Jamestown/Yorktown) and the Jamestown Area Shuttle (which transports visitors around Jamestown Island, including stops at the Jamestowne Visitor Center, the Glasshouse, Jamestown Settlement and Jamestown Information Station). (For each shuttle service, please check one response for each item, a through h)

12. If you were dissatisfied with any of the service features described in Q.11, please tell us which service you were dissatisfied with and describe the reason for your dissatisfaction.

13. Please use the space below to provide any additional comments or feedback on your experience using the shuttle service during this visit.

14. Thinking about your overall visit to Historic Jamestowne and/or Yorktown Battlefield, how satisfied are you with your experience?

Very Satisfied Satisfied Neutral Dissatisfied Very dissatisfied

Section II: Visitor Profile Data. Please answer the following questions about yourself.

15. On this visit, what kind of personal group (not guided tour or school group) are you with? (Check one).

Alone Friends Family & friends Family Other (please specify: _____)

16. Are you and your personal group traveling with any larger, organized group (e.g. tour, scouts, club, school, church, etc)?

Yes No

17. Including yourself, how many people in your personal travel group are:

____ 5 years and under ____ 13 – 18 years ____ 30 – 44 years ____ 65 or older
____ 6 – 12 years ____ 19 – 29 years ____ 45 – 64 years

18. Do you live in the United States?

Yes (In what state do you live? _____)

No (In what country do you live? _____)

19. In what year were you born? _____

20. Are you (Check One): male female

PRIVACY ACT and PAPERWORK REDUCTION ACT statement:

16 U.S.C. 1a-7 authorizes collection of this information. This information will be used by park managers to better serve the visiting public. Response to this request is completely voluntary and anonymous. No action will be taken against you for refusing to supply the information requested. Permanent data will be anonymous. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number.

BURDEN ESTIMATE STATEMENT: Public reporting burden for this form is estimated to average 5 minutes per response. Direct comments regarding the burden estimate or any other aspect of this form to: Dorothy Geyer, Colonial National Historical Park, 10815 George Washington Highway, Yorktown, VA 23690; Dorothy_Geyer@nps.gov

Thank you for your help in completing this survey!

Appendix C: Data Tables for Figures, Charts and Graphs

Figure 1 Data Table

Length of Visit to Historic Triangle/Colonial Williamsburg Area, N= 133.

Source: The Volpe Center

Length of Visit	Count of Survey ID
1 day	7.5%
2 days	10.5%
3 days	19.5%
4 days	16.5%
5-7 days	39.1%
8 or more days	5.3%
No response	1.5%
Grand Total	100.00%

Figure 2 Data Table

Prior Park Visitation, N=133

Source: The Volpe Center

Number of Prior Visits	N of responses	Percentage
No prior visits	85	64%
1 time	21	16%
2-4 times	15	11%
5 or more times	7	5%
No response	5	4%

Figure 3 Data Table

Last visitation period of returning groups, N=48

Source: The Volpe Center

Last Visit Year	Count of Survey ID	Sum of Survey ID
2006-2008	18	36.13%
2004-2005	2	3.59%
Prior to 2004	17	33.55%
Can't Recall	6	14.99%
No Response	5	11.73%

Figure 4 Data Table
Visitor Group Types, N=133
Source: The Volpe Center

Group type	Count	Percentage
No Response	1	1%
Alone	14	11%
Friends	16	12%
Family and Friends	25	19%
Family	76	57%
Other	1	1%
Grand Total	133	100.00%

Figure 5 Data Table
Age Distribution of Shuttle Riders, N=403
Source: The Volpe Center

Under 6	6 to 12	13 to 18	19 to 29	30 to 44	45 to 64	65 plus	Total
3.20%	14.10%	9.40%	6.90%	18.10%	32.80%	15.40%	100.00%

Figure 6 Data Table
Breakdown of Groups by Group Size, N=133
Source: The Volpe Center

Group size	N	% of total
1 person	14	11%
2 persons	48	36%
3 persons	14	11%
4 persons	36	27%
5 persons	13	10%
6 persons	4	3%
7 persons	3	2%
Totals	132	100%

Figure 9 Data Table
Reasons for Shuttle Use
Source: The Volpe Center

Reason for using the shuttle	N	% of users citing as important
Relax and view scenery	96	72%
Historical information	49	37%
Dislike driving in unfamiliar areas	47	35%
Don't know site locations	42	32%
Environmentally friendly	35	26%
Cost of fuel	33	25%
Other reason given	22	17%

Figure 10 Data Table
Primary Reason for Shuttle Use, N=46

Source: The Volpe Center

Reason for using the shuttle	% of users citing as most important
Relax and view scenery	37%
Don't know site locations	17%
Dislike driving in unfamiliar areas	17%
Other	15%
Historical information	7%
Cost of fuel	4%
Environmentally friendly	2%
Grand Total	100%

Figure 11 Data Table
Visitor Source of Information on Shuttle Service, N=133

Source: The Volpe Center

Source of Information	N	%
Staff at visitor sites	42	23%
Hotel/motel/timeshare/campsite staff	31	17%
Saw shuttle bus or signs for the service	21	12%
Brochure or pamphlet from visitor sites	19	10%
From previous visit(s)	16	9%
Visitor guidebook	16	9%
Family or friends (word of mouth)	14	8%
Other website	11	6%
Other	9	5%
NPS website	3	2%
Chamber of Commerce/Visitor's Bureau	0	0.0%

Figure 12 Data Table
Personal Vehicle Access of Park Visitors, N=133

Source: The Volpe Center

Vehicle status	N of visitors	% of visitors
Personal vehicle	116	87%
No personal vehicle	11	8%
Unclear	6	5%

Figure 13 Data Table**Parking Location of Groups with Personal Vehicles, N=109**

Source: The Volpe Center

Vehicle Parked	Total
Colonial Williamsburg Visitor Center	77
Historic Jamestown Visitor Center	6
Jamestown Glasshouse	1
Other	16
Yorktown Battlefield Visitor Center	4
Yorktown Victory Center	4
Grand Total	108

Figure 14 Data Table**Park Site Visits and Planned Visits Using Shuttle, N=133**

Source: The Volpe Center

Location	Visited on Shuttle	Planned to Visit on Shuttle
Jamestown Settlement	61%	11%
Jamestown Visitor Center	53%	11%
Yorktown Visitor Center	40%	22%
Yorktown Victory Center	27%	24%
Jamestown Glasshouse	25%	7.5%

Figure 15 Data Table**Park Site Visits and Planned Visits Using Personal Vehicle, N=133**

Source: The Volpe Center

Location	Visited Using Personal Vehicle	Planned to Visit Using Personal Vehicle
Jamestown Settlement	9%	4%
Jamestown Visitor Center	9%	3%
Yorktown Visitor Center	9%	7%
Yorktown Victory Center	13%	6%
Jamestown Glasshouse	4%	2%

Figure 16 Data Table**Overall Satisfaction Respondents**

Source: The Volpe Center

Level Satisfaction	Park Satisfaction (N=132)	HTS Satisfaction (N=126)	JAS Satisfaction (N=85)
Very Satisfied	70%	90%	83%
Satisfied	27%	9%	15%
Neutral	3%	1%	1%
Dissatisfied	1%	0%	0%
Very Dissatisfied	0%	0%	0%

Figure 17 Data Table
Sites Covered by the Shuttle

Source: The Volpe Center

Satisfaction	HTS	JAS
Very Satisfied	87%	80%
Satisfied	11%	17%
Neutral	2%	3%

Figure 18 Data Table
Frequency of Service

Source: The Volpe Center

Satisfaction	HTS	JAS
Very Satisfied	78%	75%
Satisfied	16%	19%
Neutral	4%	5%
Dissatisfied	2%	1%

Figure 19 Data Table
Reliability

Source: The Volpe Center

Satisfaction	HTS	JAS
Very Satisfied	82%	76%
Satisfied	17%	22%
Neutral	1%	3%

Figure 20 Data Table
Schedule and Route Information

Source: The Volpe Center

Satisfaction	HTS	JAS
Very Satisfied	76%	74%
Satisfied	18%	21%
Neutral	3%	2%
Dissatisfied	3%	1%
Very Dissatisfied	0%	1%

Figure 21 Data Table
Ease of Finding Shuttle Stops

Source: The Volpe Center

Satisfaction	HTS	JAS
Very Satisfied	77%	73%
Satisfied	17%	25%
Neutral	5%	3%
Dissatisfied	1%	0%

Figure 22 Data Table
Ability to Hear Audio Programming

Source: The Volpe Center

Satisfaction	HTS	JAS
Very Satisfied	49%	48%
Satisfied	26%	32%
Neutral	11%	10%
Dissatisfied	14%	9%

Figure 23 Data Table
Usefulness of Audio Programming

Source: The Volpe Center

Satisfaction	HTS	JAS
Very Satisfied	43%	43%
Satisfied	38%	42%
Neutral	12%	12%
Dissatisfied	5%	3%
Very Dissatisfied	1%	0%

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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14. ABSTRACT					
<p>As part of an effort to evaluate the shuttle service at Colonial National Historical Park, The Volpe National Transportation Systems Center administered a survey to a sample of shuttle users in July 2009. The key purpose of the survey was to learn how visitors are using the shuttle service and to measure their level of satisfaction with the service. The survey finds that the large majority of shuttle users arrived in the area by personal vehicle (87%) and started their shuttle ride at Colonial Williamsburg on the Historic Triangle Shuttle. Visiting groups intercepted over the survey period expressed a very high level of overall satisfaction with the shuttle service: 99% of groups riding the shuttle reported that they were either "very satisfied" or "satisfied" with their overall experience on the shuttle. Visitors similarly reported being pleased with specific features of the shuttle service, including timeliness, frequency of service and number of sites covered, and ease of understanding shuttle route information and locating stops. For each of these features of the service, three-quarters or more of respondents reported being "very satisfied." Overall, the survey findings indicate that users strongly support the shuttle service. The survey data clearly demonstrate that visitors value the service and feel that it enhances their experience at the park.</p>					
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