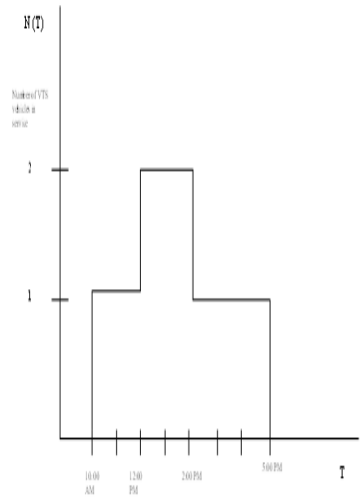
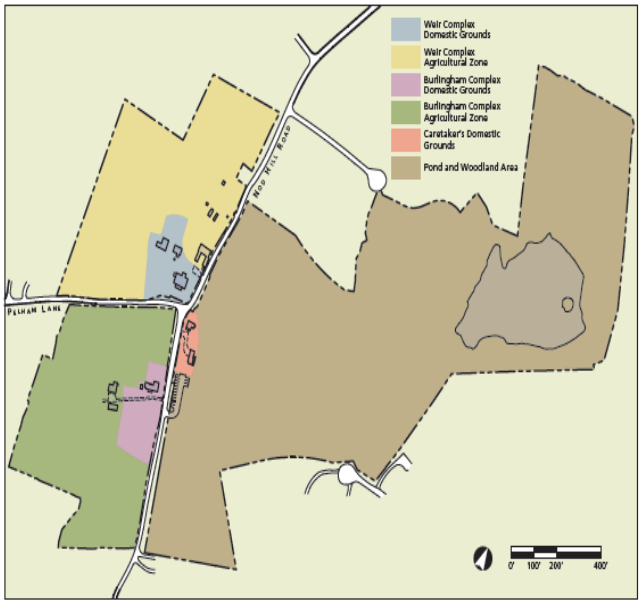
National Park Service
U.S. Department of the Interior

Weir Farm National Historic Site
Wilton, Connecticut

Weir Farm National Historic Site
Alternative Transportation Feasibility Study





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Report Notes

This report was prepared by the U.S. Department of Transportation John A. Volpe National Transportation Systems Center, in Cambridge, Massachusetts. The project was led by David Spiller of the Transportation Planning Division. The project team included Luis Mejias, of the Transportation Planning Division and Catherine Duffy of Macrosys Corporation.

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Executive Summary

The National Park Service Northeast Region (NPS NERO) and Weir Farm National Historic Site ("the park") have requested that the U.S. Department of Transportation/Volpe Center conduct a planning study of alternative transportation for the park, in southeastern Connecticut. Weir Farm NHS was home to three generations of American artists. Julian Alden Weir, a leading figure in American art and the development of American Impressionism, acquired the farm in 1882. After Weir, the artistic legacy was continued by his daughter, painter Dorothy Weir Young and Dorothy's husband, sculptor Mahonri Young, followed by New England painters Sperry and Doris Andrews. Today, the 60-acre farm, which includes the Weir House, Weir and Young Studios, barns, gardens, and Weir Pond, is one of the nation's finest remaining landscapes of American art.

Weir Farm NHS is located in the towns of Wilton and Ridgefield, CT, 45 miles from Hartford and 55 miles from New York City. Public transit operates within three miles of the park. Established in 1990, visitation has generally increased, with over 20,000 visitors in 2010.

Existing Conditions

Annual visitation has been at a relatively steady level – averaging 11,000-19,500 per annum. Park visitation is highest beginning in the spring through the fall, with the busiest months being July and October.

Future visitation may increase due to the opening of the Weir House and Weir and Young Studios, which have recently undergone a major rehabilitation program with planned completion in 2013. (Comparable historic sites which have undergone major historic structure rehabilitation, such as Martin van Buren NHS and Hampton NHS, have experienced visitation increases, although Weir Farm has seasonal closures that could limit visitation.)

The park has a single visitor parking area with space for 18 cars, and one accessible automobile space (no buses/RVs); this regularly fills on peak season weekends. Staff from the park and partner organizations, including volunteers and board members, filled over half the current parking area until last summer when a second lot was added for employees. During peak visitation, park staff use an overflow parking 'lot' on the landscape to accommodate the level of visitation and vehicular parking demand. The park has noted the inadequacy of the on-site visitor lot, and reports that it was built in anticipation of future transportation alternatives.

Neighbors expressed concern about traffic, tour buses, and RVs during the General Management Planning (GMP) process in the mid-1990s. This concern led to language in the park's legislation[*], requiring the NPS to reach agreement with the local towns for the purposes of managing bus traffic to the historic site and limiting parking for large tour buses and RVs to an offsite location. Neighbors have also expressed concern about the level of visitation traffic and parking, and the impact it may have on the local scenic roads, resident commuter traffic, and the local neighborhood. As commuter or visitor traffic on Nod Hill Road increases, the park has indicated that it shares this concern, and seeks to find practical solutions in cooperation with others. However, the park believes that the impact of visitation on the surrounding area has been minimal, and estimates that visitor traffic accounts for less than 4% of the traffic on Nod Hill Road.

[*] Public Law 105-363 . 363ic Law 13)(B): managing bus traffic to the historic site and limiting parking for large tour buses to an offsite location.

Transportation Options

Three options have been articulated to manage the flow of visitors and vehicles to and at Weir Farm NHS, including traffic management and control and parking-related issues. The options have been deliberately designed to differ substantially in the range of impacts (positive and negative) affecting the site and its resources (historic, cultural and natural), Weir Farm NHS staff and park operations, and visitors and the visitor experience.

The three options are the following:

- Option 1 - Baseline ('Do-Nothing' or status quo)
- Option 2 - Parking Reservation Management System
- Option 3 – Visitor Transportation Shuttle (VTS) system with Off-Site Staging and Parking Hub

An element common to all three options – Special Event Procedures – is also discussed, and suggested improvements described.

For each option, both positive and negative impacts are analyzed and discussed. For Option 1, the critical negative impact is that continuation of the baseline or 'status quo' is contrary to the spirit if not the letter of the Enabling Legislation which established the purpose and significance of the park, as well as core park planning studies including the preferred alternative under the General Management Plan (GMP) /EIS, and the Treatment Plan associated with the Cultural Landscape Report. An extensive Visual Analysis indicated adverse impacts on the resource, and on the visitor experience.

Option 2 is technically feasible, but imposes significant complexity and cost, requires complementary enforcement systems, and imposes restrictions on the freedom of action of visitors. It also is inconsistent with the natural evolution in the growth of the park's visitation (allowable within the carrying capacity of the park and historic structures), particularly with the extensive rehabilitation program undertaken for the Weir House and studios.

Option 3 – Visitor Transportation Shuttle (VTS) system with Off-Site Staging and Parking Hub – seems to show the most promise, based on its own merits and also on a planning process of 'choosing by elimination of other options'. Financial analysis indicates a high likelihood that it is sustainable. Within this option, multiple potential land parcels for establishing the staging area and parking hub were evaluated. Out of this process (based on an evaluation criteria set), the Branchville Station stands out as the best or optimal off-site location.

Weir Farm NHS Transportation Program

The study also sketched a Transportation Program for Weir Farm NHS to develop the Branchville Station site as a suitable VTS staging area and parking hub (with suitable ancillary infrastructure).

1. Introduction

The National Park Service Northeast Region (NPS NERO) and Weir Farm National Historic Site ("the park") have requested that the U.S. Department of Transportation/Volpe Center conduct a planning study of alternative transportation for the park, in southeastern Connecticut. Weir Farm NHS was home to three generations of American artists. Julian Alden Weir, a leading figure in American art and the development of American Impressionism, acquired the farm in 1882. After Weir, the artistic legacy was continued by his daughter, painter Dorothy Weir Young and Dorothy's husband, sculptor Mahonri Young, followed by New England painters Sperry and Doris Andrews. Today, the 60-acre farm, which includes the Weir House, Weir and Young Studios, barns, gardens, and Weir Pond, is one of the nation's finest remaining landscapes of American Impressionism art.

Weir Farm NHS is in Wilton and Ridgefield, CT, 45 miles from Hartford and 55 miles from New York City. Public transit operates within three miles of the park. The park was established in 1990. With the rehabilitation program complete, the park's core historic structures will be open to the public.

This study evaluates:

1) Connections to existing regional and local public transit systems.
2) Options for managing visitor traffic and parking to and at the site, including an option for providing an off-site staging area for visitor overflow and tour bus/recreational vehicle (RV) parking. A shuttle would operate between the staging area, train station and the park (and possibly other sites to serve the greater community).
3) An integrated visitor information infrastructure, including media and signage.
4) Visitor special event transportation operations.

a. Enabling Legislation: Purpose for Establishing the Park Unit

Concerned about the loss of Weir Farm NHS to suburban development, Cora Weir Burlingham, Doris and Sperry Andrews, and local neighbors worked with the private non-profit group Trust for Public Land to purchase lots around Weir Pond in 1985. Local advocates continued their efforts, petitioned Congress, and on October 31, 1990, enabling legislation was enacted to create Weir Farm National Historic Site. The enabling legislation[*] listed a three-part purpose for the site as a unit of the National Park Service:

1) To preserve a site of profound significance for the tradition of American Impressionism and an outstanding example of the country retreats and landscapes associated with that movement and the evolving artistic methods of the late 19th century;

2) To maintain the integrity of a setting that inspired artistic expression and encourages public enjoyment;

3) To offer opportunities for the recreation and education of the American people.

Congress also asserted that Weir Farm NHS is the best preserved site with a home, workplace, and *landscape* (emphasis added[†]) associated with the American Impressionism movement and larger developments in American art in the late 19th century, including shifts in subject matter from heroic wilderness vistas to familiar, domesticated landscapes and in working methods from studio to *open air* (emphasis added) painting.

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[*] The enabling legislation is cited As 'Weir Farm National Historic Site Establishment Act of 1990' (Public Law 101-485).
[†] Effect on landscape including visual impacts is a key element of the analysis that appears later in the study.

Between 1992 and 1994, the Trust for Public Land and the Connecticut Department of Environmental Protection transferred property to the National Park Service totaling approximately sixty acres. The new national historic site comprised roughly a quarter of the total land that J. Alden Weir had once owned[*].

The three purposes articulated in the enabling legislation provide a core benchmark test against which all planning and management actions need to be weighed. Operationally, this means that when multiple options that may address the flow of visitors and vehicles to the site are evaluated, and each is deemed to be cost-effective, the option that maintains the integrity of the site to the greatest degree is to be preferred.

b. Park Planning

Weir Farm NHS has engaged in two fundamental planning efforts, with attendant public involvement processes, yielding two key documents: General Management Plan/Environmental Impact Statement and Cultural Landscape Report (consisting of Volume 1. Existing Conditions and Volume 2. Treatment Plan). Both documents circumscribe what is acceptable and what is not acceptable in managing the site at all geographic scales. This Alternative Transportation Feasibility Study in effect tiers off of the previous efforts to provide both coherence and consistency with these core documents and guiding principles in the development of options to manage the flow of visitors and vehicles to and at the site.

[*] *Weir Farm National Historic Site General Management Plan / Environmental Impact Statement* (United States Department of the Interior, National Park Service, September 1995), 1.

The General Management Plan (GMP)/Environmental Impact Statement (1995) sets forth three alternatives for consideration, but selected the following preferred alternative after extensive background research and public input[*]:

- Reunite the historic property, presented as it appeared historically, with the art it inspired.

Adopting this alternative as the plan for managing Weir Farm NHS, the plan emphasizes the relationship of art to landscape in two ways: by reuniting works of art with the landscape that inspired them, and by presenting the farm's buildings and landscape to the visitor as they appeared to their historic occupants[†].

A number of implications derive from this fundamental requirement to preserve (where extant) and restore (if necessary) the landscape and historic structures (provided historic documentation exists to do so). Modern intrusions are not allowed, necessitating the need to site new facilities but in close proximity to Weir Farm NHS (based on such site location factors as adequate access, proximity to resources, appropriate topography, absence of wetlands, minimal impact on neighbors, adequate lot size and configuration, and the presence of appropriate existing structures for rehabilitation[‡]). The need to preserve the historic integrity and character of the landscape and historic structures also creates a requirement to keep wayside signage and exhibits to a minimum[§], to deem the expansion of large on-site parking areas inappropriate due to the site's scale, intimacy, configuration and geophysical features[**], to exclude the parking of buses and Recreation Vehicles (RVs) on-site[††] and to constrain full accessibility of the historic structures if such actions would

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[*] See National Park Service (1995), *Weir Farm National Historic Site: General Management Plan/Environmental Impact Statement, Executive Summary*, p. ii; Background research included the following studies:
1990 *Weir Farm Suitability/Feasibility Study*. Prepared by the Division of Planning and Design, North Atlantic Region, Boston, MA in cooperation with the Trust for Public Land.
1991 *Ecological Survey of Weir Farm* Prepared by the Division of Natural Resources, North Atlantic Region, Boston, MA.
1992 *Workshop Findings and Recommendations, Painting and Sculpture Theme Study Workshop*. Prepared by the Denver Service Center, Denver, CO.
1992a *Weir Farm NHS Survey of Comparable Sites*. Prepared by the Division of Planning, North Atlantic Region, Boston, MA.
1992b *White-tailed Deer Issues and Concerns*. Prepared by the Division of Natural Resources, North Atlantic Region, Boston, MA.
1993 *Scope of Collection Statement*. Prepared by the Division of Cultural Resources, North Atlantic Region, Boston, MA.
1993a *Weir Farm NHS Dam Assessment* contained in the National Park Service Maintenance, Operations and Safety of Dams Program Annual Report for the North Atlantic Region. Prepared by the Division of Engineering, North Atlantic Region, Boston, h4A.
1994 *Archeological Investigation at the Weir Garden, Weir Farm National Historic Site*. Prepared by the Archeology Branch, Cultural Resources Center, North A&tic Region, Lowell, MA.
1994a *Historic Landscape Assessment for the Weir Garden, Weir Farm National Historic Site*. Prepared by the Olmsted Center for Landscape Preservation, Brookline, MA.
1994b *Historic Furnishings Report*. Prepared by the Division of Historic Furnishings, Harpers Ferry Center, Harp&x Ferry, WV.
1994~ *Identification and Documentation of Original Painting Sites at Weir Farm NHS*. Prepared by Weir Farm National Historic Site, Wilton, CT.
1994d *Landscape Management Plan for Weir Farm National Historic Site*. Prepared by the Olmsted Center for Landscape Preservation, Brookline, MA.
1995 *Historic Structure Report*. Prepared by the Building Conservation Branch, Cultural Resource Center, North Atlantic Region, LowelI, MA.

[†] National Park Service (1995), ibis., p.24

[‡] Ibid. , 10

[§] Ibid.., p. 25

[**] Ibid., p. 17

[††] Ibid., p. 17

require the removal of historic fabric and adversely affect the significant qualities of the historic landscape[*].

The farm's landscape inspired J. Alden Weir's art for nearly four decades. Many of Weir's friends and colleagues, including Childe Hassam, John Twachtman, Albert Pinkham Ryder, and Emil Carlsen, painted scenes on the farm during visits there. Park staff conducted a survey suggesting that Weir and other artists completed more than 250 paintings of the Branchville farm[†]. Of these, about 50 scenes have been discovered and documented. In conjunction with works of art depicting this landscape, these sites offer insight into Weir's artistic process and permit a precise understanding both of how the site appeared during Weir's tenure and how it has changed[‡]. This reuniting of the landscape to the art it inspired is a major theme in the management and interpretation of Weir Farm NHS.

The General Management Plan/Environmental Impact Statement also established future estimates of probable visitation based on examination of 16 comparable sites, yielding a range for annual visitation between 25,000 and 40,000 persons, a level of visitation that has not been realized[§]. Residents of the area use Nod Hill Road as a commuter route, and park managers want to ensure that Weir Farm NHS visitors will not add to a disproportionate increase in local traffic congestion. To determine the potential impact visitors will exert on traffic patterns, a study[**] was conducted to measure existing (circa 1994) vehicular travel rates on Nod Hill Road and Pelham Lane and calculate the percentage increase in traffic based on the predicted visitation levels. The study determined that in the future an average of 42 vehicles can be expected to enter and leave the park each day (84 total trips), which represents between 3 and 4 percent of total traffic. Assuming twice as many vehicles visit the site on a Saturday during peak season (accounting for seasonal and day-of-week variation in visitation level), Weir Farm NHS traffic (i.e. destined to the site) constitutes about 7 percent of total traffic on the local road system. The study considered such increases in auto travel on Nod Hill Road to be minimal, and likely to not be noticeable to local commuter drivers or neighbors[††].

The Cultural Landscape Report is the primary document used by the National Park Service to guide the treatment and management of a cultural landscape. In 1996, the Site History and Existing Conditions (Volume 1) noted in particular those character-defining features of the landscape and building complexes that were still extant (relative to the historic period for interpretation, circa 1940, encompassing the tenure of both J. Alden Weir, and subsequently his daughters – Dorothy Weir Burlingham and Cora Weir Burlingham). The Treatment Plan (Volume 2) was initially completed in 1997, and subsequently amended in 2010 based on changes in existing conditions and new documentation and research. This documentation and research includes oral histories, correspondence, J. Alden Weir's and friends' sketches and paintings, historic and personal photographs of the site and families, and aerial imagery. Specialized investigations – such as archeological excavations, structural determination of the Weir Pond dam, U.S. Department of Agriculture assessments of meadow condition and maintenance issues, and wetlands mapping – completed the effort.

For Weir Farm NHS, treatment seeks to preserve and enhance the landscape's historic character within the context of other park management goals, such as public access, natural resource

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[*] Ibid., p. 17

[†] See Weir Farm NHS, *Identification and Documentation of Original Painting Sites at Weir Farm NHS*, 1994.

[‡] National Park Service (1995), Op. cit., p. 12

[§] National Park Service (1995), Op. cit., p. 12

[**] See Balloffet and Associates (1995), *Weir Farm National Historic Site Traffic Counting Operations Report.*

[††] National Park Service (1995), ibid. p. 13.

conservation, recreation and interpretation[*]. Specific treatment strategies have been developed for each of the character areas that also correspond to the GMP's management zones (see Figure 1).

Figure 1
GMP Management Zones
Source: Cultural Landscape Report, Volume 2, p. 34

These strategies include replacing missing historic features from the circa 1940 period provided there is adequate documentation to guide the replacement[†], clearing overgrown fields with priority assigned to those areas that contain the largest concentration of documented painting sites[‡], adaptation to historic structures to provide universal accessibility provided they do not require the removal of historic fabric and will not adversely affect the significant qualities of the historic landscape[§], and replacement of specimen trees such as the sugar maple on the west side of the walkway to the Weir House[**]. When development of facilities is allowed per the GMP – such as staff parking to relieve parking demand on the small visitor parking lot east of Nod Hill Road opposite the Burlingham House – the Treatment Plan has developed schematics and a site location that screens the soft surface lot from Nod Hill Road, thereby preserving the rural character of the road

[*] National Park Service, *Cultural Landscape Report for Weir Farm National Historic Site, Volume 2: Treatment 2011 and Record of Treatment*, p. 1
[†] NPS, CLR, Volume 2 p. 43
[‡] Ibid., p. 44
[§] Ibid., p. 44
[**] Ibid., p. 59

and the visual experience as experienced by drivers on Nod Hill Road[*]. Both Nod Hill Road and Pelham Lane are now given legal protection by being designated by the Towns of Ridgefield and Wilton as scenic rural roads. Both roads are deemed central to the visitor's experience and also to the site's historic setting. Scenic designation is meant to preserve the character of the roadways and controls any changes along the road such as widening, surface material, drainage and grading, signage or alterations to the abutting stone walls. This extends even to the vegetation along the margins beyond the pavement edge and abutting the stone walls. This is to be maintained in a more rural state, in keeping with the 'country-like' character of the roadway[†].

c. *Site Context*

The park has a single parking area with space for 18 cars (no buses/RVs), which regularly fills on peak season weekends. Staff from the park and partner organizations, including volunteers and board members, can often fill over half the current parking area. An employee parking lot, off of Burlingham Drive, has relieved this situation.

Neighbors expressed concern about traffic, tour buses, and RVs during the General Management Planning (GMP) process. This concern led to language in the park's legislation[‡], requiring the NPS to reach agreement with the local towns for the purposes of managing bus traffic to the historic site and limiting parking for large tour buses and RVs to an offsite location. Over the years, the park has been successful in managing traffic and parking while being sensitive to neighborhood concerns. Both the park and the towns acknowledge the positive impact that visitors have to the area. The park goes to great extent to manage access to the park and communicate events and activities to the public, and park staff have indicated their interest in finding new ways to connect visitors to other local businesses, alternative transportation, trails, and other local services, to help build community and contribute in even greater ways to local communities.

This study has two core sections. They include:

- Existing Conditions
- Transportation Options

[*] Ibid., p. 71

[†] Ibid., p. 43 and p. 52.

[‡] Public Law 105-363 . 363ic Law 13)(B): managing bus traffic to the historic site and limiting parking for large tour buses to an offsite location.

2. Existing Conditions

This section reviews existing conditions at Weir Farm NHS, including visitation, site circulation, vehicular access, pedestrian, bicycle, and bus group tours, and highlights a number of issues/problems that this study addresses.

a. Facilities

i. Burlingham House/Visitor Center

The Burlingham House/visitor center is the main contact station for visitors to Weir Farm NHS. The visitor center is open from 10AM-4PM, Thursday-Sunday from April through November. From December through March, the visitor center is open on Saturdays and Sundays only. The visitor center has a store and exhibit space, where visitors can view the introductory video and gallery with changing exhibits on the history of the site.

ii. Burlingham Barn

The Burlingham Barn is near the visitor center and is where the NPS hosts a variety of activities; it is the park's main meeting space. There are three parking spaces that the park uses for staff during busy days. The park recently finished construction of a staff parking lot behind the barn for 15 vehicles.

iii. Weir House

The Weir House is the historic residence of J. Alden Weir and subsequent artists. The home is currently undergoing renovation, and NPS anticipates opening the house to visitors, likely through scheduled tours by late 2013. The park is also completing construction of an accessible pedestrian path between the visitor center and the Weir House area.

iv. Weir and Young Studios

The Weir and Young studios are the former art studios of J. Alden Weir and the sculptor Mahonri Young, respectively. The park plans to open the studios by the end of 2013.

v. Weir Barn

Historically, this building housed farm implements and livestock. The current use is for equipment storage for the maintenance and resource management divisions. Some collection items also remain in the barn. While it is not currently open to the general public, there are plans to do so, though with no set date.

vi. Caretaker's House and Studio

The Caretaker's House and artist studio are currently in use to support the resident artist program. The house is not open to the public, but the studio is part of the park tour on Saturdays.

vii. Wire Mill Maintenance Site

Weir Farm NHS leases space from the Georgetown Land Development Company at the site of the Gilbert and Bennett Wire Factory in Wilton, CT, about 2.3 miles from the park. The park uses the site for maintenance and curatorial office space, workspace and storage, and to park the shuttle bus. The Georgetown Development Company has plans to develop the wire factory site to a mixed-use, transportation-oriented development (TOD) project, including a new Metro-North Railroad station on the Danbury Line. The project is currently dormant, and the resumption of development plans is unclear.

viii. Branchville School

Weir Farm NHS, in agreement with the Board of Education of the Town of Ridgefield, uses the parking lot at the Branchville School for overflow parking, particularly during special events. When this occurs, the park implements a shuttle service to bring visitors between the school site and the park (see Branchville School Parking Shuttle, iii page 25). The Branchville School is about 1.5 miles from the park.

ix. Storage House on Old Branchville Road

Weir Farm NHS also owns a modern Colonial home on Old Branchville Road that it uses for storage.

b. Visitation

Annual visitation has been at a relatively steady level – averaging 11,000-19,500 per annum. Park visitation is highest beginning in the spring through the fall, with the busiest months being July and October (see Figure 2 and Figure 3).

Figure 2
Annual Visitation (2000-2010)
Source: NPS

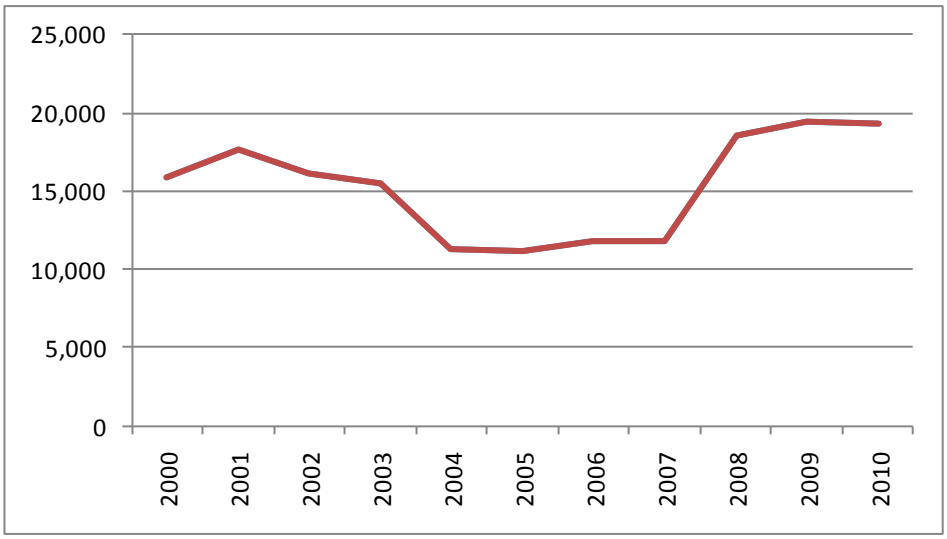
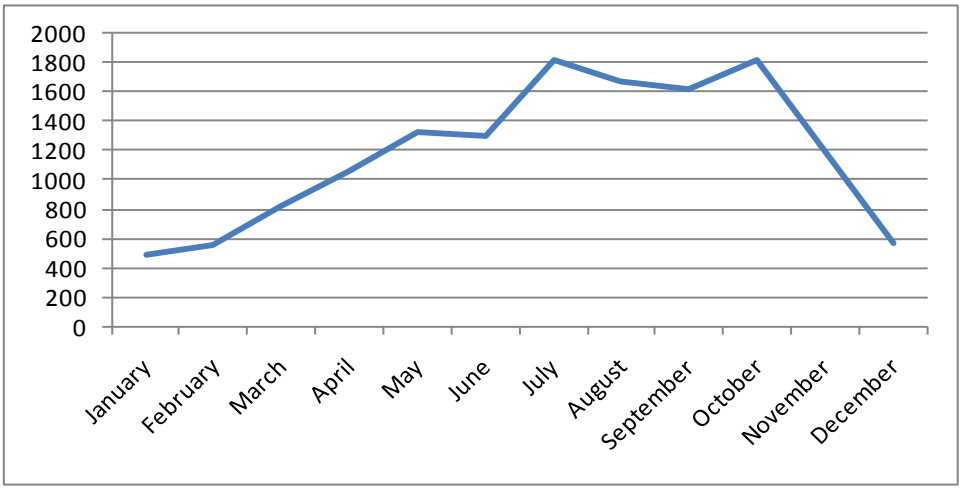
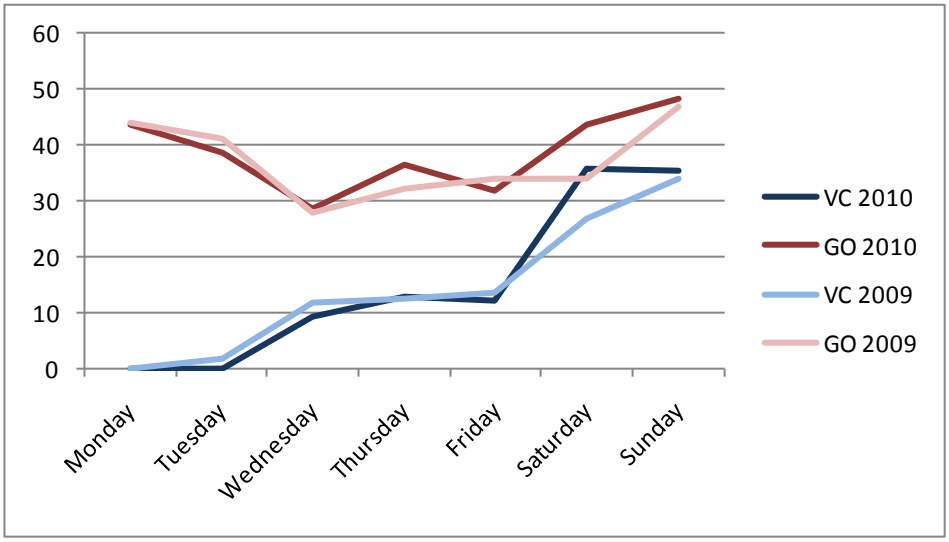


Figure 3
Average Monthly Visitation (2000-2010)
Source: NPS



Visitation also varies by day of week. Data from 2009 and 2010 (see Figure 4) shows that the busiest days at the park are Saturday and Sunday at the visitor center, when there are an average of 35 visitors per day. This initial chart shows the average visitation by day at the visitor center (VC) and grounds only (GO) that includes recreational visitors who do not go to the visitor center but likely go for walks or otherwise recreate on the Weir Farm NHS grounds, the Weir Preserve, and state and local open space. The visitor center is open four days per week between April and November and Saturday and Sunday December through March; the grounds are open year-round.

Figure 4
Visitation by Day of Week (2009 & 2010)
Source: NPS



Since the visitor center is open four days per week between April and November*, it is useful to consider the average for Thursday-Sunday for months the visitor center is open (see Figure 5).

* Weir Farm visitation data does show some light visitation on Tuesday and Wednesday even though the visitor center is technically closed.

Figure 5
Average Visitation by Day of Week (exclusive of Monday-Wednesday)
Source: NPS

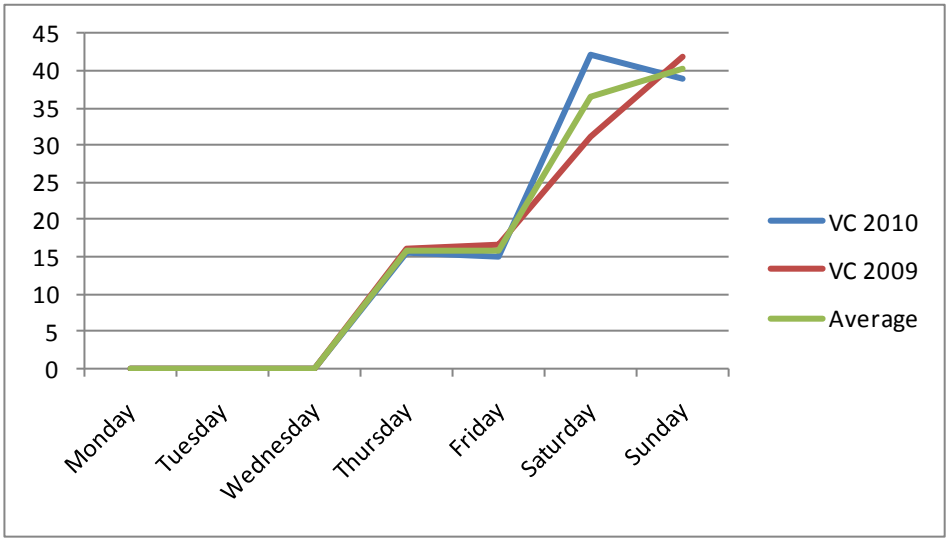


Figure 5 shows that average visitation to the visitor center for 2009/2010 is highest on weekends, when there are between 35 and 45 visits.

For parking facility purposes, the total visitation by day of week is useful to understand. Both Table 1 and Figure 6 demonstrate both VC and GO visitation by day of week. The data will be helpful in assessing the current parking conditions at Weir Farm NHS, particularly since private vehicle is the predominant mode of travel to the site.

Figure 6
Total Average Visitation by Day of Week (2009 & 2010)
Source: NPS

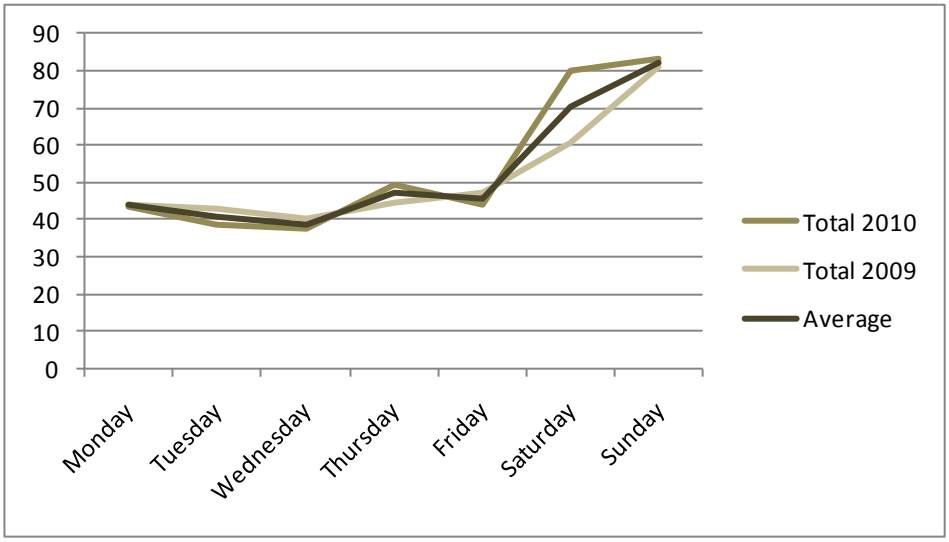


Table 1
Total Average Visitation by Day of Week (2009 & 2010)
Source: NPS

Monday	44
Tuesday	41
Wednesday	39
Thursday	47
Friday	46
Saturday	70
Sunday	82

c. *Future Visitation*

The rehabilitation of the Weir House and Studios and opening of the buildings to the public may cause an increase in annual visitation. One method of understanding the potential increase in visitation is by considering the experiences that comparable parks have had using data before and after a major opening or re-opening of a site. Martin van Buren NHS in New York and Hampton NHS in Maryland are two examples with recent re-openings[*]; the re-opening of Lindenwald at

[*] Comparable sites have been suggested by Tim Layton, Historical Landscape Architect, Olmsted Center for Landscape Preservation, Boston, MA.

Martin van Buren NHS after rehabilitation in 2006 and the Hampton Mansion re-opening at Hampton NHS in 2007.

Figure 7 and Table 2 show annual visitation at both Martin van Buren NHS and Hampton NHS between 2000 and 2010 and the resulting increase in visitation following significant re-opening of visitor facilities in 2006 and 2007, respectively. At Martin van Buren NHS, there was a 59% increase in average annual visitation, while at Hampton NHS there was a 29% increase in average annual visitation after significant sites were re-opened. (However, at both sites, visitation later decreased and/or leveled off.)

The implication of this analysis for Weir Farm NHS is that the park may expect an increase in visitation after the Weir House opens to the public. However, one should recognize that each site is unique, and other significant factors, such as seasonal closures, may limit the expected increase in visitation at Weir Farm NHS.

Figure 7
Annual Visitation at Martin van Buren NHS and Hampton NHS (2000-2010)
Source: NPS

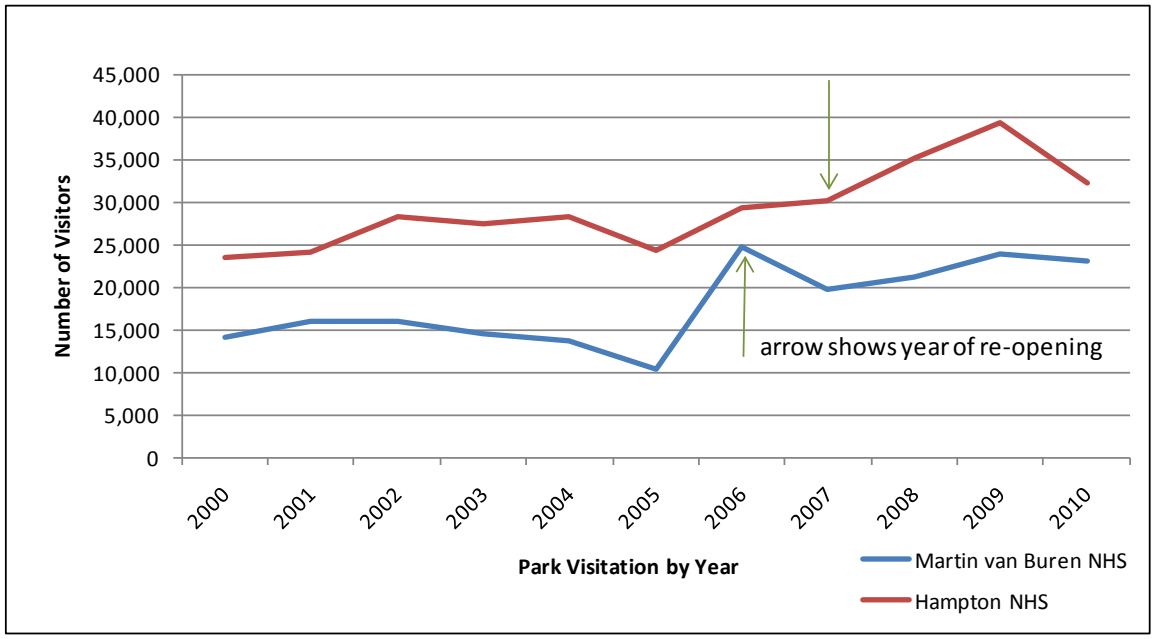


Table 2
Change in Average Annual Visitation at Martin van Buren NHS and Hampton NHS (2000-2010)
Source: NPS

	Average Annual Visitation		
	Before re-opening	After re-opening	% change
Martin van Buren NHS	14,130	22,513	59%
Hampton NHS	26,448	34,202	29%

In 2010, visitation at Weir Farm NHS was 19,313. If Weir Farm NHS experiences significant growth comparable to Martin van Buren NHS or Hampton NHS, visitation may increase to between 25,000 and 31,000 per annum.

d. Special Events

Special events over the course of the year require a different park transportation system. The largest event is Jazz in the Garden, which the park hosts in the fall. This event can attract hundreds of visitors. The park also regularly hosts large groups (between 12 and 45 people), including schools, youth, and nature groups. Table 3 lists the number of special events by category in 2010.

Table 3
Special Events by Type, 2010
Source: NPS

Event Type	**#**
Junior Ranger Day/Ranger Retreat	5
Walk/Tour	16
School/Youth/other Group	25
Art	6
Reading Ranger	6
Artist Reception	4
Town/other event	5
Jazz in the Garden	1
Off site event	7

e. Site Circulation

Weir Farm NHS is on the border of two towns in Fairfield County, Ridgefield and Wilton. The town line runs approximately along Pelham Lane, separating the northern and southern portion of the Weir Farm NHS. Local access to Weir Farm NHS is available via Nod Hill Road. Regional access is available by U.S. 7 and Connecticut Route 102 (CT-102). U.S. 7 runs generally north-south through Fairfield County between Norwalk to the south where it links up with Interstate 95 and CT-15, and Danbury to the north, where it links up with Interstate 84. CT-102 operates east-west between U.S. 7 in Georgetown to CT-33 in Ridgefield (see Figure 8).

Figure 9 shows the Weir Preserve and its trail network. The main entrance to the Weir Preserve is about ¼ - mile south of the Weir Farm NHS site; however, many visitors to the Preserve and Nod Hill Refuge park at the NHS parking area and access the Preserve and Nod Hill Refuge on foot.

Figure 10 shows the main buildings and trails at Weir Farm NHS, including the visitor center, Weir House, and the various studios and barns that make up NPS property.

Due to both the small site, and the need to preserve the integrity of the landscape, there are limitations on vehicles with regard to internal site circulation. There are no paved roadways on NPS property at Weir Farm NHS. The park does maintain some dirt paths that provide access to park facilities. These roads are not for general purpose use.

Figure 8
Area Map
Source: NPS

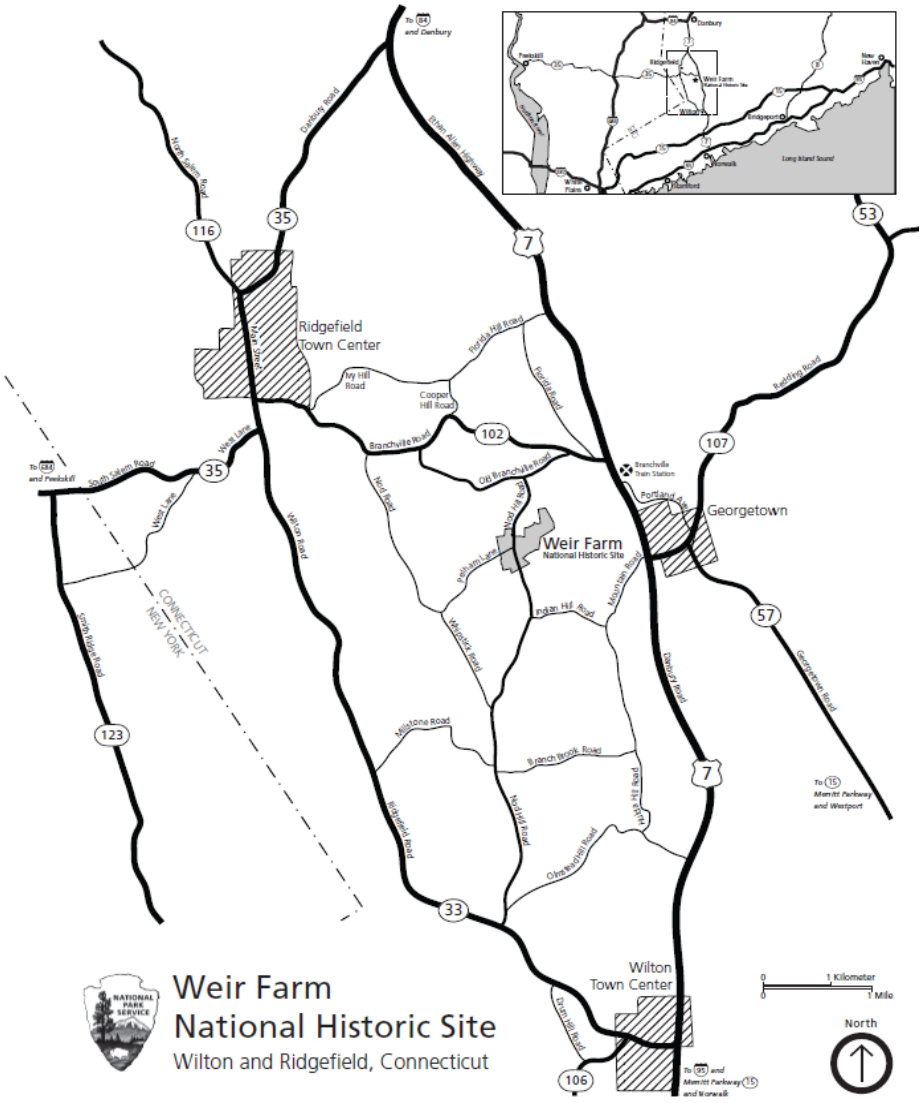


Figure 9
Weir Preserve
Source: NPS

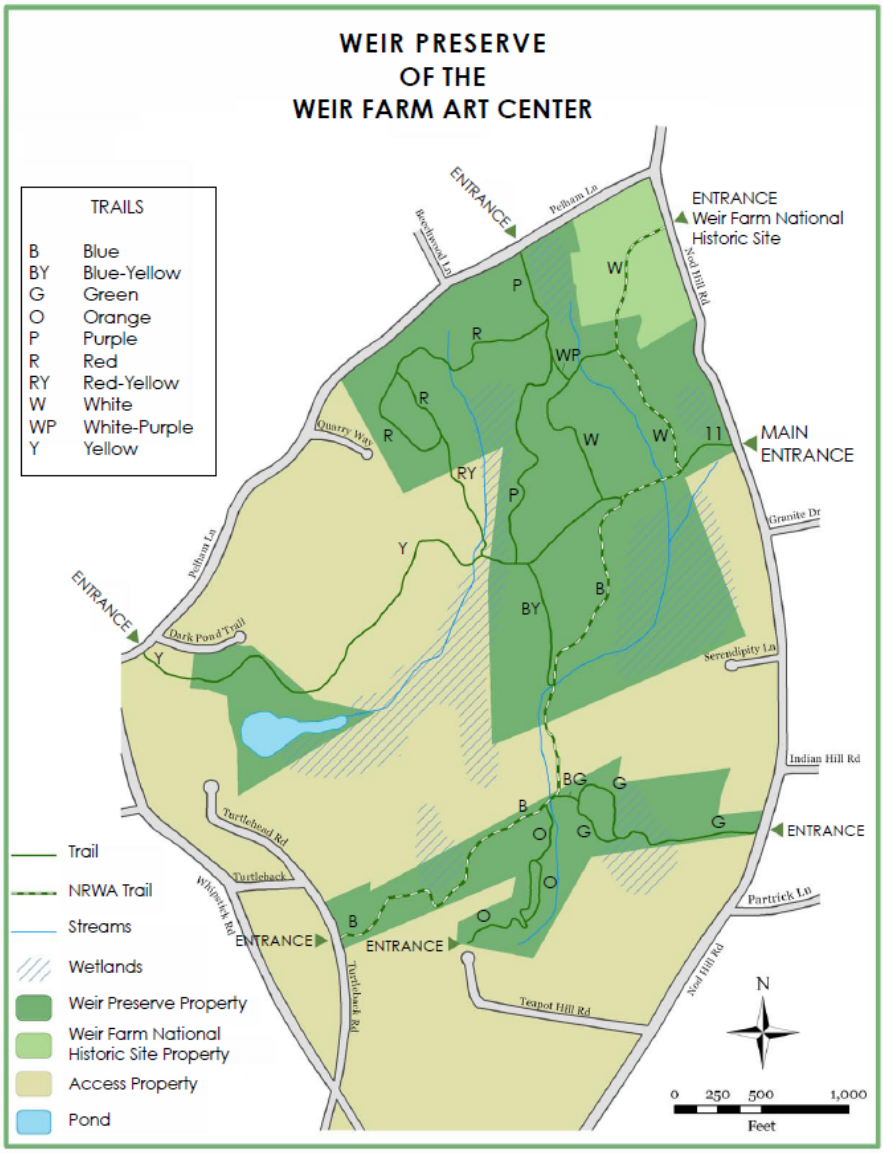
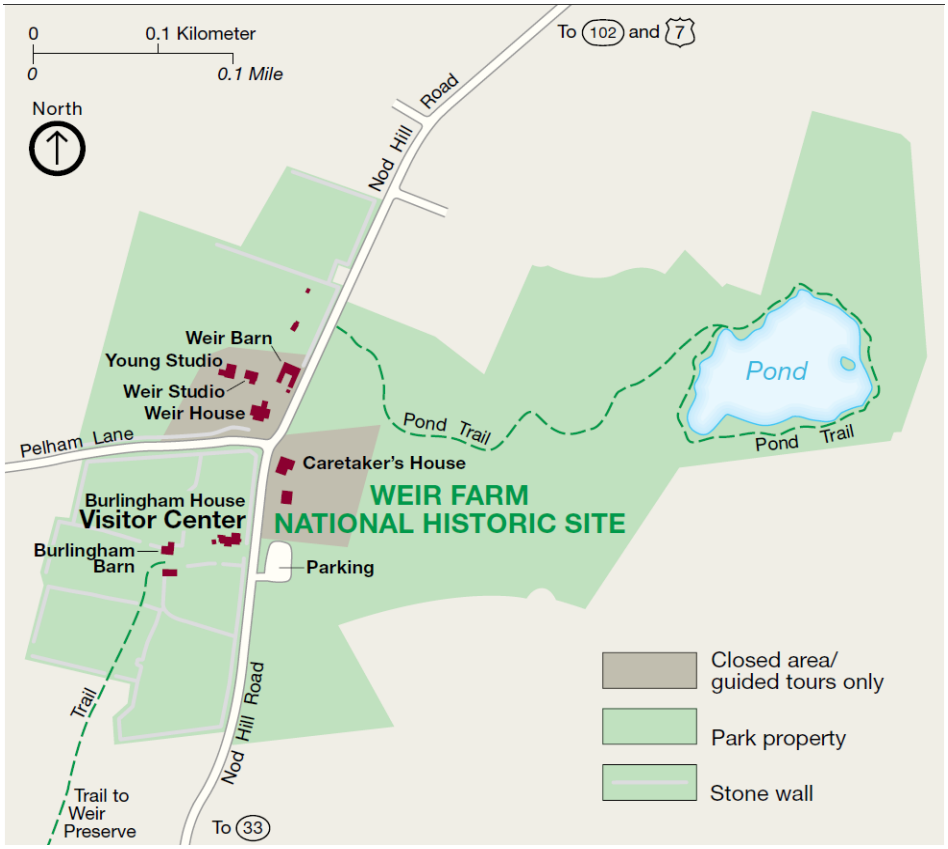


Figure 10
Weir Farm NHS
Source: NPS



f. Visitor Vehicular Access

Vehicle access to Weir Farm NHS is from Nod Hill Road. This section describes the existing condition of the local roadways surrounding the park: Nod Hill Road and Pelham Lane.

i. Nod Hill Road

Nod Hill Road is a two-lane, bi-directional roadway that is owned by Wilton south of Pelham Lane and Ridgefield north of Pelham Lane. It is a designated scenic road, with legal protection to preserve its historic, rural character. Lanes are narrow (less than 10 feet). Historic stone walls abut the vegetated road margin at multiple segments of the road. The speed limit is 25 mph in the vicinity of Weir Farm NHS; however, the park indicates that speeding presents a safety problem. The park worked with local police to install a stop sign at the intersection of Nod Hill Road (northbound) and Pelham Lane Road where there had previously been none. The park also maintains a crosswalk across the roadway between the park's parking lot and the NHS site. Figure 11 shows Nod Hill Road.

There are no sidewalks or shoulders along Nod Hill Road, creating hazardous conditions for pedestrians and bicyclists*. Visitors are directed to use the path on park property and not to walk on the road.

Figure 11
Nod Hill Road
Source: U.S. DOT Volpe Center

At junction with Pelham Lane looking south (left) and further north on Nod Hill Road also looking south (right)

ii. Pelham Lane

Pelham Lane is similar in characteristic to Nod Hill Road, bi-directional and two-lanes wide. Lanes are extremely narrow (less than 10 feet). The speed limit is also 25 mph, and there are no sidewalks or shoulders on the roadway (see Figure 12).

* Nod Hill Road has legal designation as a historic, scenic road and no change to the roadway cross section is possible, including the addition of shoulders or sidewalks.

Figure 12
Pelham Lane
Source: U.S. DOT Volpe Center

Pelham Lane at Nod Hill Road intersection looking west

g. Regional Transit Connections

There are two transit providers near Weir Farm NHS: Metro-North Railroad (Metro-North) and Housatonic Area Regional Transit (HART). Both services are available in Ridgefield at Branchville Station, about 1.5 miles away. There is transit service between Weir Farm NHS and Branchville Station. This section describes both MTA's and HART's service at Branchville Station.

i. Metro-North Railroad

Metro-North operates between Danbury and Grand Central Terminal in Manhattan, 54 miles away from Branchville Station; the nearest station to Weir Farm NHS (see Figure 8). Metro-North serves the Branchville Station seven days a week. There are 11 trains daily in each direction between Danbury and Grand Central Terminal. On weekends, there are six trains daily between Danbury and Grand Central Terminal. The travel time to Grand Central Terminal is about 1.5 hours.

ii. Housatonic Area Regional Transit

HART's Norwalk Link serves the Branchville Station along U.S. 7 (Route 7), operating between Danbury and Norwalk, including the towns of Wilton, Redding and Ridgefield. HART operates eight trips in each direction, generally hourly around peak travel times.

iii. Branchville Station

Branchville Station has approximately 150 parking spaces (see Figure 13). The Town of Ridgefield manages the parking space allocation, and allots 140 permits in tiers. Tier 1 allocation goes to drivers who can prove they've ridden the train daily for three consecutive months. Tier 2 includes those who can prove they've ridden daily for three of the past twelve months, and Tier 3 is everyone else. There are 10 spaces for daily use.[*] All spaces are open and free on Saturdays and Sundays.[†]

Figure 13
Branchville Station
Source: U.S. DOT Volpe Center

Parking lot (left) and train at station (right)

h. Pedestrian Access

Pedestrian facilities at Weir Farm NHS consist primarily of trails and paths between the key buildings on the site (see Figure 9 and Figure 10). None of the roadways leading to the park have sidewalks. The park has built a new pathway between the visitor center and Caretaker's House at the intersection of Pelham Lane and Nod Hill Road (see Figure 14). The park also maintains the crosswalk across Nod Hill Road between the parking lot and the Burlingham House/visitor center driveway/walkway (see Figure 15).

The park is interested in developing a pedestrian trail spur from the park to the Norwalk River Valley Trail (NRVT). The park encourages bicycle and pedestrian access.

[*] Katz, S., Branchville Station Fees Slated for November, Ridgefield Patch, August 6, 2010. http://ridgefield.patch.com/articles/branchville-station-fees-slated-for-november. Accessed June 17, 2011.
[†] Town of Ridgefield, Connecticut, Directions to Branchville Station. http://www.ridgefieldct.org/content/62/703.aspx, accessed June 17, 2011.

Figure 14
New pedestrian path at Weir Farm NHS
Source: U.S. DOT Volpe Center

New pedestrian path looking towards visitor center (left) and at Nod Hill Road and Pelham Lane (right)

Figure 15
Nod Hill Road Crosswalk
Source: U.S. DOT Volpe Center

Crosswalk between parking lot and visitor center driveway/walkway across Nod Hill Road

i. Bicycle Access

Bicycle access to Weir Farm NHS is available via Nod Hill Road and Pelham Lane. There are no separate bicycle facilities for riding to the park. The park does provide a bicycle rack in the parking lot for those who ride, but the park does not permit bicycles on trails. Groups of bicyclists do travel Nod Hill Road despite the grade and narrow cross-section.

j. Parking

The park has one general parking lot with additional parking available for special events both on-site and off-site. This section includes information for both on-site and off-site parking facilities.

i. On Site

There are 18 unmarked parking spaces available to the public defined by marking whiskers to encourage efficient parking behavior and efficient use of the space. The park indicates that on most days, the available parking is sufficient to meet demand; however, on certain Saturdays and Sundays demand can exceed supply, especially when special programs are held. The park does have

the ability to open up a portion of the property behind Weir House (along Nod Hill Road) as well as behind the Burlingham Barn for overflow parking capacity (see Figure 16); however, this requires active management by park staff, and is an intrusion on the historic landscape. These parking areas can accommodate ~50 cars with close staff supervision.

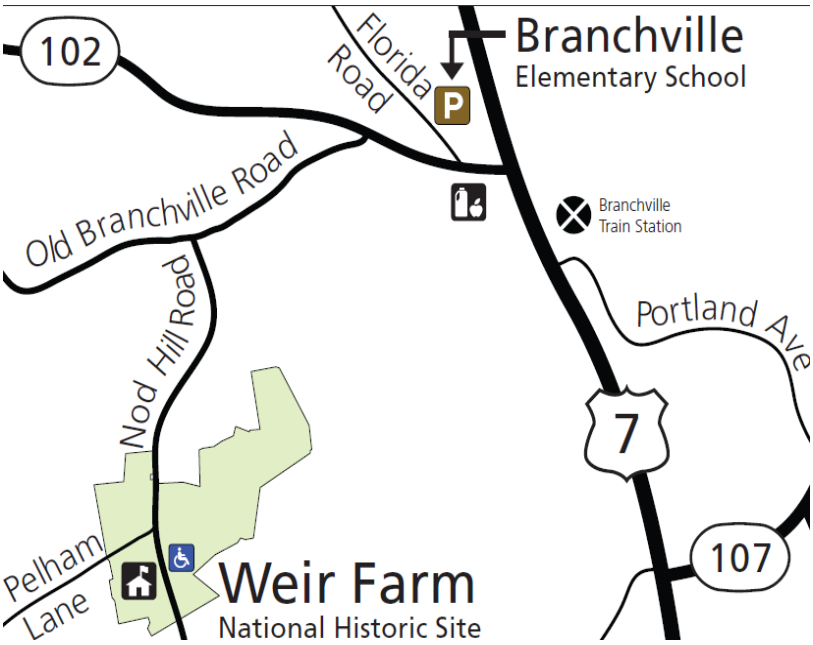
Figure 16
On-Site Overflow Parking Areas
Source: NPS

Not to scale

ii. Off Site

The park also occasionally directs visitors to park at the Branchville School during special events, such as the Jazz in the Garden. The Branchville School is along Florida Road and Rt. 102 (Old Branchville Road), 1.5 miles from the park (see Figure 17 and Figure 18). To shuttle visitors between the school and the park, Weir Farm NHS owns and operates a cutaway Ford E-450 passenger van (see Figure 18). The bus has 15 seats for passengers and space for one wheelchair and one personal care attendant (PCA).

Figure 17
Branchville School Location
Source: U.S. DOT Volpe Center



Not to scale

Figure 18
Branchville School Parking Lot and NPS Shuttle
Source: U.S. DOT Volpe Center

iii. Branchville School Parking Shuttle

Weir Farm NHS operates the shuttle bus with NPS staff on days when they use the Branchville School as an overflow parking lot. This operation requires active management by park staff, and including the driver, requires two employees, significant for a small park, to be on duty directing visitors while the parking/shuttle system is operating. The park estimates that the operation of the shuttle has an annual operating cost of $3000 (gas and maintenance), and the park uses general funds for this operation. Visitors who park at the Branchville School do not pay a fare.

There are some operational issues with the shuttle service. Some visitors first arrive at the park in their private vehicles and are informed by park staff that the overflow lot at the Branchville School is the only available option. Many choose to unload their occupants and supplies (picnics, art supplies, etc.), sending the driver and vehicle to the Branchville School to park and then ride the shuttle. This operation increases congestion on area roads, effectively doubling the number of trips to the park by those who the park requires to ride the shuttle. The unloading of passengers and materials at Weir Farm NHS also creates congestion on Nod Hill Road and in the parking area.

k. Signage and Wayfinding

Wayfinding is an important aspect of the transportation system to and within any destination. This section considers both physical signage and wayfinding services available to visitors.

i. Signage

There are six signs along roadways leading up to the park and Figure 19 shows and describes each of these signs. These signs direct visitors to the site from Route 7 in Norwalk along Rt. 102 and Old Branchville Road. There are no signs directing visitors coming from Ridgefield until they are already on Rt. 102 eastbound. An opportunity exists to improve physical signage along these and other routes leading to the park. There may also be an opportunity for signage when the park is operating the shuttle when directing visitors to park off site at the Branchville School or other site.

ii. Wayfinding

Wayfinding includes not only signage, but other means of navigating ones' way to any particular destination, including web sites and mobile services. Weir Farm NHS currently provides directions to the park on its website (http://www.nps.gov/wefa/planyourvisit/directions.htm). The site informs visitors that "there are a limited number of parking spaces available in the parking lot. **Once these spaces are filled, the parking lot will be closed."** Also, it informs visitors that the parking lot cannot accommodate buses and recreational vehicles (RVs). (NPS, 2010) The park requires large groups and parties of more than three vehicles to call ahead, so they can plan accordingly, and schedule a time to visit.

The park does provide transit information on its website for both HART and Metro-North; however, they do not recommend visitors walk from Branchville Station due to the lack of sidewalks. There are private taxis available for those that arrive by transit, but taxi information is not available on the website.

Figure 19
Signage directing visitors to Weir Farm NHS
Source: NPS

l. Bus Groups

The park does accommodate groups (mostly school groups), and over the course of the year hosts 20-25 large groups (greater than 10 visitors). While there is no parking for large vehicles on-site, the park informs bus drivers to park at the Branchville School.

m. On-going Planning Activities

This section details the on-going activities at Weir Farm NHS, including recent developments on the site, such as the recent pedestrian path addition discussed above per the GMP. The park has also built a new staff parking lot behind the Burlingham Barn. This lot will accommodate 15 vehicles.

Weir Farm NHS is also rehabilitating the Weir House and studios, and is planning to open the house for tours in late 2013. Once the house is publicly open, the park anticipates operating tours set to a schedule.

i. Super 7 and Trail

Planning for a "Super 7" highway between Danbury and Norwalk, as a bypass to Route 7, has been underway for a number of decades. Connecticut owns the right-of-way in Wilton for a "Super 7" highway; however, it appears this project is inactive.

ii. Norwalk River Valley Trail

Using the Super 7 corridor, most of which is owned by the Connecticut Department of Transportation (ConnDOT), the planned Norwalk River Valley Trail (NRVT) will include 27 miles of cycling, hiking and walking trails from the Long Island Sound (Norwalk) to Danbury, through Wilton and Ridgefield. So far, two miles of the trail are complete in Norwalk and Wilton, with the remainder in various stages of planning. The NRVT Advisory Committee issued a contract for a routing study in May 2011 using funds received from the State of Connecticut Recreational Trust Grant. The National Park Service Rivers, Trails and Conservation Assistance Program provided planning assistance. The trail, once construction is complete, will pass in between Route 7 and Weir Farm NHS, presenting an opportunity for a multi-use, non-motorized link to the park.

iii. Local Plans

A number of local plans have helped inform this study, providing both useful context and data. An example is that as part of a comprehensive municipal improvement plan for the Branchville Village section of Ridgefield, the Ridgefield Planning and Zoning Commission developed a concept plan to enhance the parking facilities at Branchville Station. In its draft 2002 Branchville Village Plan, the Commission suggested the construction of a decked parking structure, designed with an attractive facade reminiscent of an historic mill building, to augment parking supply at Branchville Station.

As part of this plan, the two access points off of Route 7 to the current Branchville Station would be relocated slightly. In addition, the upper level of a parking deck structure could have access directly from West Branchville Road. Due to environmental concerns associated with siting a decked parking facility within the flood plain zone of the Norwalk River (which runs between Route 7 and the station), other adjacent sites beyond the immediate Branchville Station surface lot are being considered, including the southwest corner of the junction of Route 7 with Route 102[*].

Other local plans providing both context and data include:

[*] HVEO, (2010*) Route 7 Land Use and Transportation Study*, Draft Concept Plan for Branchville Station Area (Option 2).

- The Wilton and Ridgefield Plans for Conservation and Development[*]
- Town of Ridgefield Branchville Village Plan[†]
- Housatonic Valley Council of Elected Officials (HVCEO) Regional Transportation Plan, and Route 7 Transportation and Land Use Study[‡]
- HVCEO Transit Oriented Development Study[§]
- ConnDOT's Danbury Branch Passenger Rail Improvement Program: FTA Alternatives Analysis/EIS Study[**]
- Housatonic Area Regional Transit (HART) Bus Service Plan[††]

n. Opportunities and Issues

This section summarizes the opportunities and issues that Weir Farm NHS has in relation to transportation planning and development that the above sections outline.

i. Off-site parking/shuttle

The park currently uses the Wire Mill site to store the shuttle van that it uses to carry visitors between the overflow parking lot at the Branchville School and Weir Farm NHS. The future of both properties is unclear. In the short and long term, the park needs to consider the possibility that either or both sites are unavailable as well as the possibility of having to search for other locations.

ii. Alternative off-site parking/shuttle sites

Weir Farm NHS has identified several sites in the vicinity that could accommodate the overflow parking/shuttle system. These sites include:

- School site. The Georgetown and Bennett School is near the Wire Mill site off of Route 107, about 2.5 miles from the park. The site may have adequate space for Weir Farm NHS's overflow parking needs, with about 58 spaces. This study examines parking capacity needed to support a shuttle operation. This site is near the potential train station at the Wire Mill site, if the transit-oriented development (TOD) plan is implemented.
- Branchville Station has extra capacity on weekends, but has parking restrictions during weekdays. There are about 150 parking spaces, and contact with Metro-North and the Town of Ridgefield is necessary to determine whether these spaces are available on weekends. This site has ample parking and is adjacent to the existing Metro-North service. Also, it is the historic station that J. Alden Weir and his artist friends used when traveling to Ridgefield. The opportunity to make this interpretation would be unique for visitors to Weir Farm NHS.

Subsequent sections in this study will evaluate the feasibility of the above options.

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[*] Town of Wilton (2009), *Plan for Conservation and Development*; Town of Ridgefield (2010), *Plan for Conservation and Development.*
[†] Town of Ridgefield (2002), Branchville Village Plan.
[‡] Housatonic Valley Council of Elected Officials (HVCEO), *Regional Transportation Plan, Adopted 5/19/2011;* HVCEO (2011), *Route 7 Transportation and Land Use Study.*
[§] HVCEO (2010), *Transit Oriented Development Study.*
[**] ConnDOT (2011), *Danbury Branch Phase II Alternatives Analysis/EIS.*
[††] Housatonic Area Regional Transit (HART, *Bus Service Plan 2010.*

iii. Issues

The park has always anticipated the need to expand its parking needs off site. The opening of the Weir House and Studios presents new opportunities and issues for the park. Weir Farm NHS has the opportunity to create a unique interpretive experience, through tours, to bring visitors to the park. This study tests the hypothesis that expansion of off-site parking and shuttle operations is the likely solution.

Another potential solution to accommodating visitors is the development of the Norwalk River Valley Trail (NVRT). The trail, while still under development, presents a unique opportunity for the park and the towns of Ridgefield and Wilton to boost recreational and alternative transportation. The NVRT project will help to develop spur trails that connect the NVRT corridor to the regional network of open space, including Weir Farm NHS and Weir Preserve.

The arrangement with the Branchville School is not a permanent solution and is only available when school is not in session. The park wishes to explore a permanent solution. The above sections identify several options for the permanent location of both overflow parking and the shuttle service. This study will consider those sites, including their availability, operational characteristics of shuttle service to each, and site amenities.

Signage is also another area where Weir Farm NHS could make improvements. While there are six existing signs directing visitors to the park, there is opportunity to increase signage, particularly between Ridgefield and the park. This is an area for future collaboration between the towns and the park to develop a wayfinding master plan that would be mutually beneficial to both local businesses and attractions and the park.

Signage on interstates (e.g., I-84 and I-95) is a possibility, but great care and further study (beyond the scope of this report) is needed so as not to induce more visitation than the site can handle (i.e., not to exceed the carrying capacity of either grounds or buildings).

3. Case Study: Philip Johnson Glass House*

Comparables provide a way to better understand what similar sites to Weir Farm NHS do to accommodate their visitors. A good comparable is one that operates in a similar environment, with similar constraints. One such comparable for Weir Farm NHS is the Philip Johnson Glass House, in New Canaan, Connecticut.

> *The mission of the Philip Johnson Glass House is for the 47-acre campus to become a center-point and catalyst for the preservation of modern architecture, landscape, and art, and a canvas for inspiration, experimentation and cultivation honoring the legacy of Philip Johnson (1906–2005) and David Whitney (1939–2005). In addition to guided tours, the Glass House will launch programs and provide national leadership in the preservation of the Modern.* (Philip Johnson Glass House, 2011)

The Glass House itself is in a residential neighborhood, and prior to 2007 was the private residence of Philip Johnson and David Whitney. Since the middle of 2007, the site has been functioning as a museum, one of the Historic Sites owned by the National Trust for Historic Preservation (NTHP). The operation of the museum falls under an Operating Permit issued by the Town of New Canaan. The Operating Permit allows for parking only for residents, service personnel, and two accessible vehicles. All other parking is at the visitor center in the New Canaan town center, where there is also a series of peripheral public parking facilities proximate to the train station at New Canaan and to the Visitor's Center/Shuttle staging area that can also serve visitors to the Glass House Museum (see Figure 20).

* Personal communications with Glass Museum staff, particularly Hunter Palmer/NTHP and Rena Zurofsky/NTHP; see Appendix A, e-mail communications.

Figure 20
Map of Parking and Transit at Philip Johnson Glass House Visitor Center
Source: http://philipjohnsonglasshouse.org/visit/planyourvisit/#transportation, accessed June 17, 2011

The result of the parking restriction is that the Glass House operates a mandatory shuttle between the visitor center and the Glass House museum. The NTHP identifies a number of benefits that result from the parking requirement in the Operating Permit. One of those benefits is that the landscape, which is integral to the Glass House Museum, lacks the impact a large parking lot would have. Another benefit is that a shuttle is compatible with the existing community by helping to maintain low traffic volumes. For example, there is an elementary school within 500 feet of the museum, which is also adjacent to a day-care/summer camp – both large generators of traffic. Finally, the downtown visitor center "facilitates access to those who would travel by train, primarily New York City residents, and international visitors. A secondary benefit arising from the use of the downtown visitor center and shuttle is that Visitors can take advantage of the many attractions that downtown New Canaan has to offer, including dining, shopping, and other activities." [*]

The NTHP considered several alternatives to the shuttle and downtown visitor center, including on-site parking and alternate locations for the visitor center, but decided that the proximity to the railroad station and shorter shuttle route made the downtown site the best choice.

[*] Personal communication with Glass House Museum staff, March 2011.

The Glass House shuttle is a Starcraft Starquest body on a Ford truck chassis with 14 seats (no wheelchair capability), similar to the vehicle Weir Farm NHS operates for its shuttle. The museum employs one full-time driver who performs site maintenance in the off-season. Visitors must purchase a ticket (through a reservation) in order to visit the Glass House and open seats on the shuttle are available on a first-come, first-served basis. The travel time on the shuttle is about six minutes for the 2.32 mile one-way ride.[*]

The Glass House charges $30 for a site tour. This is the lowest available tour ticket for a visit to the museum, and the ticket price includes a round-trip ride on the shuttle.

The Glass House experience provides a very useful comparable for Weir Farm NHS. They are physically similar, although the ways visitors experience the sites are at times different. For example, many of Weir Farm NHS's visitors use the site for recreation, such as hiking and dog-walking; however, with the renovation and opening of the main house and studios for tours, tour-type visits will be expanded. At both sites, the primacy of the landscape is a core value.

Weir Farm NHS also has larger parking facilities and has expanded on-site parking for staff and volunteers. Due to the visitation patterns, relatively low during much of the year, and open-nature of the site (visitors come-and-go even when the visitor center is not open), Weir Farm NHS has always planned to maintain parking on site per the GMP, and augment parking needs off-site as required.

[*] Ibid.

4. Transportation Options

The remaining part of this study focuses on the articulation of three options to manage the flow of visitors and vehicles to and at Weir Farm NHS, including traffic management and control and parking-related issues. The options have been deliberately designed to differ substantially in the range of impacts (positive and negative) affecting the site and its resources (historic, cultural and natural), Weir Farm NHS staff and park operations, and visitors and the visitor experience.

The three options are the following:

- Option 1 - Baseline ('Do-Nothing' or status quo)
- Option 2 - Parking Reservation Management System
- Option 3 – Visitor Transportation Shuttle system with Off-Site Staging and Parking Hub

a. Option 1: Baseline

Under Option 1, there are no controls on visitor access (mode of access and time of arrival). The vast majority of visitors arrive via private vehicle. They would continue to use the small 18-parking space lot adjacent to Nod Hill Road, and opposite the visitor center at the Burlingham House. On peak season days – primarily weekend days – the small visitor lot would fill to capacity. Overflow parking procedures would then be instituted by Weir Farm NHS staff. At least two staff would be necessary to manage the traffic and parking operation on the area reserved for overflow parking (Figure 21). To minimize the incident of instituting overflow procedures, the park does encourage visitor car pools. The park also designates Wednesdays for group tour events.

A single overflow 'lot' on the landscape is now used for overflow parking. Formerly there was a second overflow lot which has now been preempted for use as employee parking. A staff person directing traffic on Nod Hill Road would redirect visitor traffic to the opening in the stone wall north of the Weir House to access the overflow 'lot'. A second staff person would manage parking maneuvers and operations there. A third person may be necessary to assist in managing the exit of vehicles from the overflow 'lot'. This level of staffing is not always available based on current staffing levels and other critical duties assigned.

i. Visual Analysis

Using both a site plan and aerial imagery of Weir Farm NHS, a visual analysis was conducted to provide a visualization of what the landscape looks like and how visitors experience the landscape when the overflow parking area is in use, and to see whether the view sheds painted by J. Alden Weir intersect with and could be disturbed by parking of vehicles within the overflow area currently designated as such. The perimeter boundary for **the** overflow parking area used at the site is illustrated in Figure 21, which shows the full extent of area coverage of the landscape. Also, a numbered vantage point on the aerial image where J. Alden Weir painted the landscape is marked. The numbers correspond to the Weir Farm NHS painting trail markers. For each point, two lines at an appropriate subtended angle are drawn illustrating the field of view.

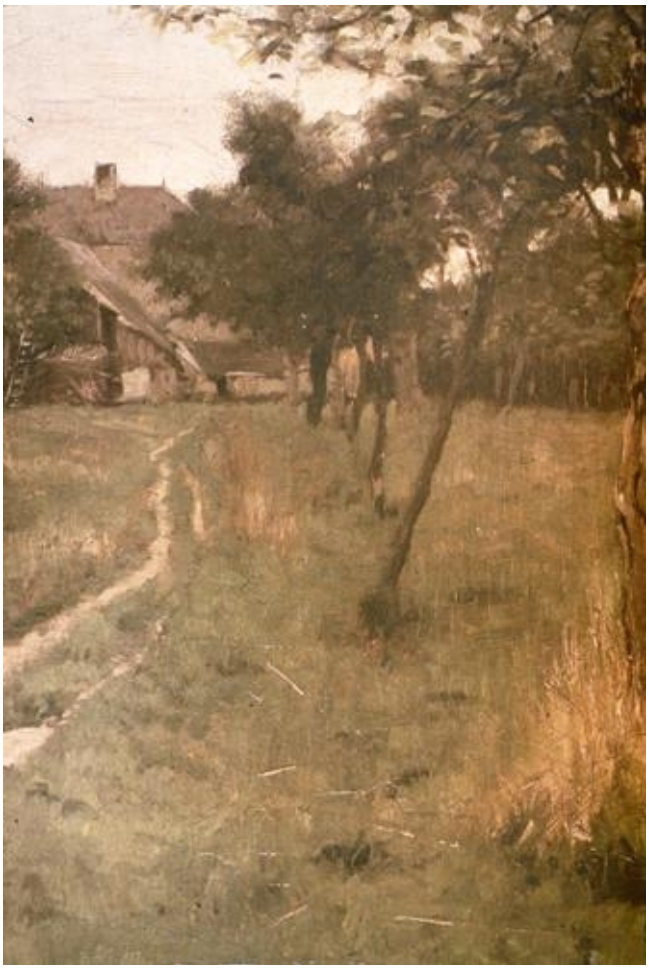
Several visual impacts are readily apparent:

- The former overflow parking 'lot' 1 which has now been pre-empted for use by park staff is screened by the Burlingham Barn from Nod Hill Road (views of Weir Farm NHS and the landscape by visitors and neighborhood residents traversing Nod Hill Road) but overflow parking 'lot' 2 is not. The adjacency of overflow parking 'lot' 2 when in full use scars the view from the road.

Figure 21
Weir Farm NHS Aerial Image Illustrating Overflow Parking 'lot' and employee parking
Source: Google Earth, modified by U.S. DOT Staff with Weir Farm NHS staff input

- Visitors desiring to paint en plein air and recreate the same view shed painted by J. Alden Weir at markers 4 and 5 would have difficult access when overflow parking 'lot' 2 is in use. Also Marker 4 may encompass part of the area that would be used for overflow parking in 'lot' 2 (see Figure 21 and Figure 22).

Figure 22
Painted View Shed by J. Alden Weir from Marker 4
Source: Dolores Tirri, Curator 'Path in the Orchard', AP601



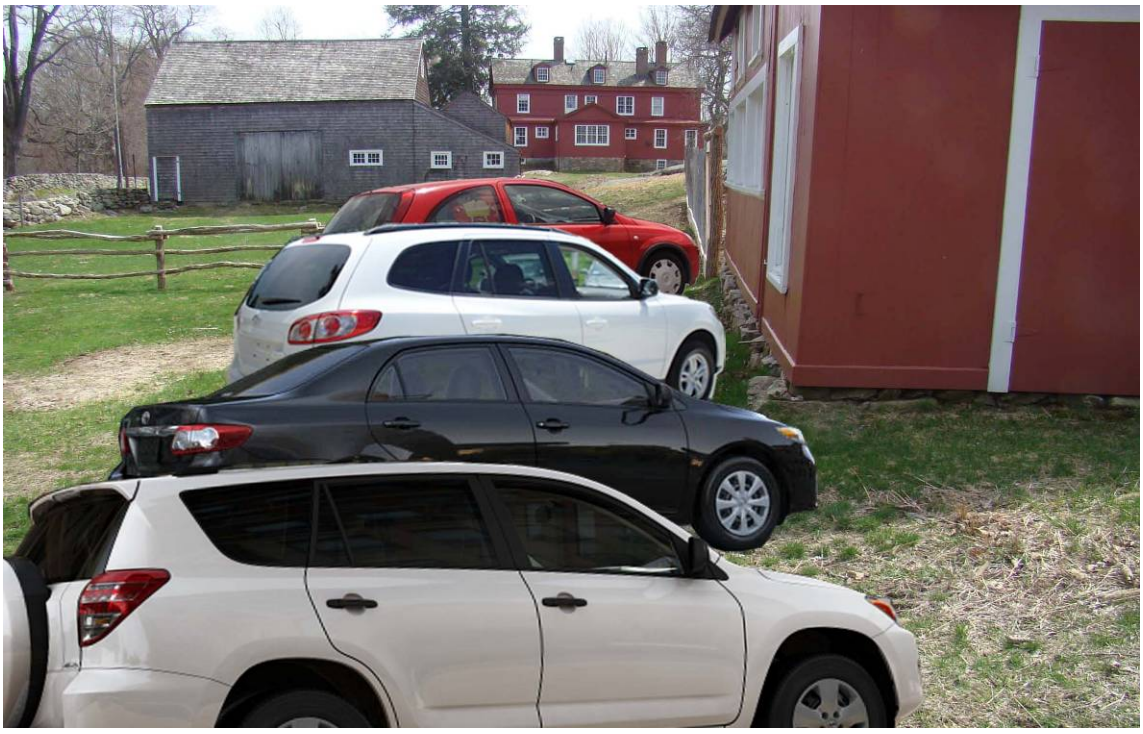
Marker 2, representing a specific view shed painted by J. Alden Weir (see Figure 23), is disturbed and marred by the parking of vehicles within the former overflow parking 'lot' 1, now the employee staff parking lot. Under either Option 2 (Parking Reservation Management System), or Option 3 (Visitor Transportation Shuttle System with off-site staging and parking hub), the view shed represented by marker 2 will be impacted.

Figure 23
View of Barn as Weir saw it, with no parking. Visitors can see the detail of the barn and stone fence
Source: Dolores Tirri, Weir Farm NHS Curator, 'The Webb Farm', AP74

The 'before' and 'after' visualizations with the overflow parking 'lot' brought into service are illustrated in Figure 24 and Figure 25.

Figure 24
View 4 as seen by Weir
Source: U.S. DOT staff

Figure 25
View 4 with overflow parking
Source: U.S. DOT staff



Park staff indicated additional parking on the other side of the wooden fence; however, it is unclear how cars would access this location. Further analysis and discussion are needed to determine the extent of overflow parking, although, at a minimum, the cars shown here clearly obstruct the historic view shed.

For the visitor overflow parking 'lot' area, the use of the landscape to hold vehicles destroys the scenic, tranquil and pastoral qualities experienced by Weir and his colleagues, and the inspiration for their art.

The pedestrian trail system at Weir Farm NHS – including the loop trail to Weir Pond – is a popular recreational feature at the site. Figure 26 illustrates the view, as seen by J. Alden Weir, as visitors approach Nod Hill Road to cross to the Weir Farm House and the Weir and Young studios.

Figure 26
View of Chicken House from the walking path across Nod Hill Road, unobstructed as Weir saw it
Source: U.S. DOT staff

When overflow conditions hold, and the overflow parking 'lot' is brought into service, the view as seen by a visitor crossing Nod Hill Road to explore the other side of Weir Farm NHS is that illustrated below (at partial capacity and at full 'overflow' parking capacity, Figure 27 and Figure 28 respectively).

Figure 27
View 1 of Chicken House from path with parked cars
Source: U.S. DOT staff

Overflow parking 'lot' partially filled.

Figure 28
View 2 of Chicken House from path with parked cars
Source: U.S. DOT staff

Overflow parking 'lot' at maximum capacity. To the extent possible, the park attempts to concentrate cars on the north end of the field towards the buildings, out of the direct sightline.

ii. Option Impacts

This section articulates the positive and negative impacts affecting the site's resources, Weir Farm NHS staff and park operations, and visitors and the visitor experience.

Option 1 is a continuation of the baseline or 'status quo' so there are no additional financial costs incurred by the park. There are no constraints on visitor mode of access or time of arrival. Similarly, visitors have the freedom to come or go as they wish.

The negative impacts, however, are substantial and dominant. They include:

Weir Farm NHS Resources:

- Obstruction of historic views, including those painted by J. Alden Weir and his colleagues
- Parking within the overflow parking 'lots' leads to compaction of soils and contaminant runoff to adjacent wetland areas and streams (a third of the site consists of wetlands)
- Rutting during wet weather
- Increase in ambient noise level that would impact tours given within the historic structures (i.e., workshops within the Burlingham Barn, and tours of the Weir and Young studios, and the Weir House)

- Vibrations that could have a deleterious impact on the structural integrity of adjacent dry stone walls[*] (where the structural integrity is secured by interlocking stones rather than mortar)
- Increase in the potential for stone wall damage by cars during parking maneuvers.

Weir Farm NHS Staff and Park Operations:

- Option 1 is not in keeping with the Enabling Legislation mandate to 'maintain the integrity of a setting that inspired artistic expression'
- Option 1 is not in keeping with the preferred alternative under the formally adopted General Management Plan to 'reunite the historic property, *presented as it appeared historically* (emphasis added), with the art it inspired.'
- Option 1 contravenes the Cultural Landscape Report treatment plan and strategy which seeks to preserve the landscape's historic character within the context of other park management goals such as public access (addressed to the person rather than the mode of conveyance), natural resource conservation, recreation and interpretation.
- Staff resources to implement overflow parking operations are intensive (at least two, probably three staff persons)
- Staff may be placed at safety risk, requiring at least one staff person to stand within the right-of-way of Nod Hill Road to direct and control visitor vehicular traffic at the two access points to the overflow areas
- Staff is tied up in controlling traffic and parking operations rather than in providing interpretative and visitor services, or focused on the conservation of site resources (i.e., there is an opportunity cost)

Visitors and Visitor Experience:

- Disruption to traffic flow along Nod Hill Road due to turning movements at the access point to the overflow parking 'lot'
- Marring of the visual character of Nod Hill Road and the obstruction of views from the road of the rural landscape due to vehicles parked within the overflow parking 'lot'
- Visual marring of the view sheds across the historic landscape, and the specific vantage points from which J. Alden Weir created several of his well known works
- Nod Hill traffic (including visitor traffic) placed at potential safety risk from unexpected turning movements
- Obstruction of the path on the western edge of Nod Hill Road that traverses the overflow parking 'lot' and connects via a crossing of Nod Hill Road to the Weir Pond loop trail
- Disturbance to visitors who are painting en plein air (including obstruction of access to trail markers 4 and 5 when vehicles are parked within the overflow parking 'lot'), and to visitors on group tours within the historic structures and/or within the secret and sunken gardens

[*] J.H. Rainer, *Effect of Vibration on Historic Buildings: An Overview*, The Association for Preservation Technology Bulletin, Volume XIV, No. 1, 1982; also "Roadside walls, fosses and banques", http://www.gov.je/Planning/ListedBuildingPlaces/Pages/RoadsideWallsFossesBanques, accessed April 17, 2012.

b. Option 2: Parking Management Reservation System

The implementation of a parking management reservation system would help the park ease parking lot congestion by regulating the flow of vehicles, restricting parking at Weir Farm NHS to those with a reservation only. The section presents an introduction to this concept and provides a brief concept-of-operations. This option is one way to manage visitor flow (and associated vehicular flow) to the site so as not to exceed the parking capacity of the existing parking lot adjacent to Nod Hill Road. This option avoids use of the overflow areas and consequent visual degradation of the landscape (as in Option 1: Baseline).

i. Required Infrastructure

This section includes a high-level functional requirement list for the software to assist the park in identifying the appropriate technology. This section also identifies commercial, off-the-shelf software (COTS) that the park could use for the parking management reservation system. Finally, this section details other necessary actions, such as changes to the website and brochures or other media from which visitors obtain information about Weir Farm NHS.

A reservation system should feature a set number of daily time slots that reflects the average time a visitor spends at Weir Farm NHS, and what follows is a calculation of the total number of slots the system should manage. The parking management system analysis will use the following assumptions:

- The system would only activate on the busiest days: primarily weekends, between the hours of 10:00AM and 4:00PM, when the visitor center is open, for a total of six hours.
- Of the fifteen available existing parking spaces, three should be set aside for use on a first-come, first-serve basis and for those unable or unwilling to make a prior reservation.
- According to the GMP/EIS (1995), 36% of visitors spend on average of between two and three hours at Weir Farm NHS, while 20% spend more than three hours. The final 44% of visitors spend an average of less than two hours. Considering that the GMP/EIS data is relatively old, and that the Weir House rehabilitation is likely to increase the average duration of stay, this analysis assumes that 25% of visitors will stay an average of four hours (occupying three parking spaces), 50% of visitors will stay an average of two to three hours (six parking spaces), and 25% will stay less than two hours (three parking spaces). This presents a more conservative assessment than if the GMP/EIS visitor data holds.
- A 'cushion' for visitors who overstay their reservation is also desirable, and this analysis assumes 10 minutes of cushion per reservation. If the park desires greater slack time, there are even greater capacity constraints – limiting further the number of vehicles able to park in the lot over the course of the day.

Using these assumptions, the reservation system would need to allot for a total of 30 vehicle slots when operational.

One possible pitfall of a reservation system is that potential visitors may reserve a slot only to not show up. To help avoid this, Weir Farm NHS could charge a reservation fee, which the visitor would pay in advance by credit or debit card. For those unable or unwilling to pre-pay for their reservation, the park could provide a pay-and-display machine in the parking lot for the first-come, first-serve spaces.

Another consideration the park should consider is enforcement. The park could install parking space occupancy sensors able to detect the presence of a vehicle in a particular space. In lieu of this, park staff may need to periodically check if every vehicle in the parking lot has a reservation, and issue fines if they do not. An automatic system, with sensors, could send an alert to park staff in the event of a violation, reducing the need for random checks.

ii. Software requirements

The following are potential software requirements for a parking management system at Weir Farm NHS.

- Accessibility for disabled users (i.e., compliance with Section 508 of the U.S. Rehabilitation Act)
- On-line and telephone interface capability
- Ability to accept payments
- Integration with pay-and-display kiosk in the parking lot
- Graphical interface on-line and on-site for visitors to identify the location of their parking space
- Computer terminal and functionality for park staff to monitor parking activity, archive data and produce reports
- Parking space occupancy sensor integration

iii. Signage and other infrastructure

Weir Farm NHS will have to communicate the new parking reservation system with visitors through a variety of channels, including the Weir Farm NHS website, brochures, and other publicity formats. Signage leading up to Weir Farm NHS will likely need updating to reflect the parking limitation.

A parking management system may also require the installation of additional infrastructure. For example, a pay-and-display station may be necessary for visitors who are unable or unwilling to pay in advance online or by telephone. Additionally, in lieu of an honor system or staff enforcement of time limits, the installation of parking space occupancy sensors for each space may be necessary to ensure that visitors adhere to parking space reservations time limits.

Finally, in order to attain maximum efficiency in parking space use, Weir Farm NHS should delineate each parking space using low-impact technology, not conventional pavement and markings.[*]

iv. Option Impacts

The advantages of a parking management system are that it manages the limited parking resources at and visitation to Weir Farm NHS and maintains the historic viewshed, while decreasing the potential for long visitor waits, demands on parking and traffic congestion. The disadvantages of such a system are that it may deter visitors from visiting if their preferred time is unavailable. It may also require significant staff time and investment to initiate and administer.

A parking management system has the following advantages:

- Reduces the chance that the park will have to turn visitors away on short notice. Currently, if visitors arrive and parking is full, they must wait for a space to become available, increasing visitor frustration.
- Reduces the need for a shuttle service (except for special events).
- Relatively low cost solution. Once up and running, the reservation system should have relatively low maintenance costs. If the park decides to charge a fee per reserved parking slot, the fee could help offset these costs. Further, this option reduces the need for staff to manage overflow parking, freeing up staff resources for other purposes. This option is also much less costly to maintain and operate relative to a shuttle service.

[*] See CLR, Volume 2 Treatment Plans

- Reduces the need for overflow parking lots. Currently, the use of historic park grounds to park excess vehicles causes disturbances to both the physical environment as well as the visual scenery so important to Weir Farm NHS.

A parking management system has the following disadvantages:

Decreases visitor satisfaction:

- May lead to an increase in visitor complaints. A careful implementation plan is necessary in order to ensure visitor satisfaction. Regardless, any attempt to put a cap on the capacity of the park due to parking limitations and the unavailability of alternative transportation (i.e. shuttle, sidewalks) will likely lead to complaints from those who travel greater distances.
- System malfunctions may create confusion and burden on park staff. The park will need a back-up plan in the event the reservation system goes down. This back-up plan may tax park resources; however, the system the park selects should be robust and thoroughly tested prior to implementation.
- May not be "friendly" to the local community, many of whom visit Weir Farm NHS to access the grounds for recreational purposes. Locals park at the Weir Farm NHS lot to not only access Weir Farm NHS but also the Weir Preserve, to go on hikes and walk their pets. Parking restrictions, even if only during peak days (such as Saturdays and Sundays), will require extensive outreach with the community.
- Requires outreach to educate visitors on the new parking policy. Visitor education of the new parking reservation system is a critical success factor the may help alleviate and limit the public's negative reaction to the new system.
- Does not address large vehicle parking issues. The implementation of this option would still require large vehicles to park off-site. The drivers of large vehicles will still need transportation back to Weir Farm NHS, creating another logistical problem.
- In itself, provides no greater accessibility or visitor-experience opportunities to underserved audiences, including those who are unable to drive, although doing so is both a goal of both the park and NPS.

Decreases capacity:

- Artificially reduces park capacity at a time when the park is opening its principal visitor opportunities. This option limits the number of vehicles and thus visitors, since there are few alternatives to reaching Weir Farm NHS other than private car. Simultaneously limiting the number of visitors by implementing parking restrictions and eliminating the overflow parking and shuttle service is antithetical to the need for visitor amenities that is part of visiting a national park site.
- Many visitors stay for a much longer period of time (greater than four hours) painting, etc., leading to little parking turnover, furthering the capacity constraint. The capacity constraint analysis indicates that the park may need to reserve at least three of the parking spaces for at least four hours, constraining supply and limiting the ability of the park to accommodate all of those who wish to visit.

  The creation of a parking management system would limit capacity to 30 vehicles per day.

Effects on park staff:

- May require park staff to administer a new system. Regardless of whether the park owns and maintains a system or utilizes a contractor, the park will need to use its staff resources to, at the least, monitor the status of reservations and the parking lot.

- Need for enforcement of overstays. The park will need a mechanism to deal with the situation when a vehicle is occupying a space when a new visitor with a reservation arrives. One method of enforcing the reservation-only policy is by issuing fines. The park can accomplish this using either park staff, who would regularly monitor parking space occupancy and issuing tickets, or by installing parking space occupancy sensors that would alert staff when a vehicle is in a space that should be empty. The reservation system should be built with a grace period window, perhaps 10 minutes, allowing for the turnover of the parking space to occur. As such, all reservation slots should have 10 minutes between each other (i.e. one slot ends at 10:00AM and the next begins at 10:10 AM). The capacity analysis in this section includes such a turnover window.

Operations and Costs:

- A free reservation service will likely lead to many visitors reserving parking spaces and then not showing up. Weir Farm NHS will likely need to charge a fee for reserving/using a parking space in order to insure that potential visitors do not reserve a space and then not show up. By charging a fee, potential visitors have a vested interest in completing their trip, and not holding a parking space, preventing someone else from visiting. Further, charging a variable fee based on the length of visit time, the park can make sure that visitors are only reserving the space for the amount of time they intend to occupy the parking space instead of the maximum amount of time.
- Need for on-site pay-and-display for first-come, first-serve parking spaces. Some visitors may be unaware of the new reservation-only policy or may not be willing or able to use a credit or debit card to hold a reservation. As a result, this option requires some portion of the existing parking lot for use on a first-come, first-serve basis and a mechanism for those visitors to pay once they arrive. The park could either manually accept payments and maintain a log of the first-come, first-serve spaces or install a pay-and-display kiosk in the parking lot that would have a direct link to the overall parking reservation system. This analysis reserves three parking spaces for first-come, first-serve visitors.
- Increasingly complex systems (e.g. integration with sensor systems, pay-and-display kiosks, overstay penalty enforcement mechanisms) will have a correspondingly higher cost. The cost of a parking reservation system will vary depending on the level of functionality the park requires.
- Advance reservations require a credit/debit card, which may restrict use by some visitors who may be unwilling or unable to use a credit/debit card. For these visitors and those unaware of the requirement to reserve a parking space in advance, the park should set aside some parking spaces for use on a first-come, first-served basis.
- May require a custom-built system dependent on park specifications. NPS and other federal public lands agencies use the recreation.gov website enabling potential visitors to reserve campgrounds and other sites that require a permit.

c. Option 3: Visitor Transportation Shuttle (VTS) System

Under Option 3, a Visitor Transportation Shuttle (VTS) would be implemented with an off-site staging area and parking hub to facilitate visitor transfer to the shuttle. The proposed VTS would operate during peak season weekends only, when there is a high probability of overflow parking conditions at Weir Farm NHS in the absence of the system. A small window of opportunity would allow visitors to access Weir Farm NHS and use the limited visitor parking lot until either the lot is filled to capacity, or 10:00 AM on peak season weekend days – whichever event happens first[*]. When the lot is full, staff would direct visitors to the off-site staging and parking hub for use of the VTS.

i. Transit Demand Model

This section develops a Transit Demand Model and Operational Plan based on limited information that is known and documented by Weir Farm NHS staff. The model has also been informed by a site reconnaissance visit[†]. Parking accumulation is also calculated, and a set of evaluation criteria for assessing the merits of potential land parcels for 'staging' areas for a transit shuttle operation are set forth. A preliminary assessment based on this criteria set is then made.

Weir Farm NHS staff have indicated based on experience that 150 visitors per day is the threshold beyond which overflow parking issues arise. This leads to difficulty in managing the level of vehicles needing to park, the use of undesirable site locations on–site to park vehicles, and intensive staffing to manage the flow of vehicles to/from these additional 'overflow' grass surface lots on the landscape. Potential conflicts with pedestrian movements across the landscape and to/from the studios and visitor 'center' also arise when there is a need to use these overflow 'lots'.

It is important to design a visitor transit system (VTS) that manages the flow of private vehicles so as not to exceed the small (18-space) parking lot that can accommodate a limited number of visitors. Avoidance of overflow parking on the landscape should be a primary goal. Accordingly, two policies would be adopted during peak season. Weir Farm NHS staff have indicated that peak season runs between Memorial Day and November 1. Overflow events occur during weekend days (Saturday and Sunday).

1. Visitors can access the site via private vehicle up to the earlier of two events: 10:00 AM or until the small lot is fully occupied.

2. Visitors will be directed to use a mandatory VTS at a 'staging' area between 10:00 AM – 4:00 PM on peak season, weekend days.

3. If the on-site parking lot is fully occupied prior to 10:00 AM (peak season, weekend days), visitors who arrive on-site will be directed to the staging area to use the shuttle system.

The VTS will be designed to accommodate transit demand at a level that is approximately twice the threshold level (i.e., ~ 2 x threshold or 2 x 150 visitors per day ~ 300 visitors), corresponding to ~ 2 standard deviations of the threshold, assuming that 150 visitors per day represents the 'mean' of a distribution whose standard deviation approximates one-half of the mean. Since only 'overflow' events are of concern, designing the VTS to accommodate 2 standard deviations from the mean implies that only 2.5 percent (one-tail of the distribution) of the time the number of visitors will

[*] Personal communication with Weir Farm NHS staff indicate that only with very low probability do the parking lots fill before 10:00 AM during the peak season. See also Appendix B.

[†] February 17-18, 2011

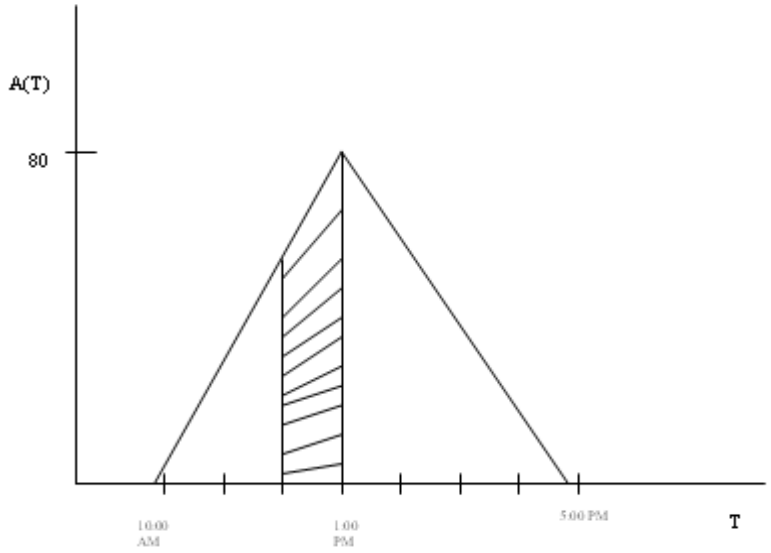
exceed the flow capacity of the system. It is important to note, based on comparable historic sites that underwent historic structure rehabilitation, that future visitation may rise. Thus, the development of the transit demand model to accommodate twice the threshold level also implicitly accounts for future growth in visitation based on the opening of visitor opportunities at the site. It should be noted, however, that visitation may vary.

Weir Farm NHS staff have also indicated that the peak arrival rates occur between 11:00 AM – 3:00 PM. Our Transit Demand Model will take the mid-point (i.e., 1:00 PM) as the maximum arrival rate. For simplicity, we will assume that visitor arrivals grow linearly in time to the maximum arrival rate, and then dissipate linearly in time until the end of the operating day (i.e., 4:00 PM).

Combining all of the known limited information characterizing visitation patterns, and simplifying assumptions, we have a Transit Demand Model that models the arrival distribution as an asymmetric triangular distribution with the following properties (see Figure 29):

- Higher arrival rate between 10:00 AM – 1:00 PM
- Lower arrival rate between 1:00 PM – 4:00 PM
- Total visitor arrival accumulation (represented by the area under the arrival distribution function) approximates ~ 2 x Threshold or 300 visitors per day (For easy computation, this number will be 280 visitors per day - = ½[A(T_{max}) x T] = ½ (80) x 7)

Figure 29
Visitor Arrival Rate versus Time
Source: U.S. DOT Volpe Center



From the arrival distribution, it is possible to now calculate the hourly transit demand (calculated as the area under the distribution between each hour of operation = ½[A (T_i) x T_i] – ½ [A (T_{i-1}) x T_{i-1}]) (see Table 4).

Table 4
Hourly Transit Demand
Source: U.S. DOT Volpe Center

Hour	Transit Demand (visitors per hour)
10:00 AM – 11:00 AM	13.3 ~ 13
11:00 AM – 12:00 PM	40
12:00 PM – 1:00 PM	67.8 ~ 68 (shaded area in Figure)
1:00 PM – 2:00 PM	70
2:00 PM – 3:00 PM	50
3:00 PM – 4:00 PM	30
4:00 PM – 5:00 PM	10
Total	~ 281 visitors

ii. Derived Parking Demand for VTS Staging Area

With a few fundamental assumptions, a rough estimate of the time-dependent demand for parking at the staging area for the VTS can be derived. The key assumptions are:

- Vehicle occupancy ~ 2.1 visitors per vehicle
- Visitation duration ~ 2 hours (consisting of ~ 15 minutes shuttle in-vehicle time, and 1 hour 45 minutes on-site at Weir Farm NHS)

The visitation duration of ~ 2 hours implies that the parking space occupancy is also ~ 2 hours. Using Table 1 for transit demand per hour, the equivalent parking demand per unit time (assuming 2.1 visitors for average vehicle occupancy) is illustrated below in Table 5:

Table 5
Hourly Parking Demand
Source: U.S. DOT Volpe Center

Hour	Parking Demand (vehicles arriving per hour)
10:00 AM - 11:00 AM	~ 7
11:00 AM – 12:00 PM	~ 20
12:00 PM – 1:00 PM	~33
1:00 PM – 2:00 PM	~34
2:00 PM – 3:00 PM	~ 24
3:00 PM – 4:00 PM	~15
4:00 PM – 5:00 PM	~5
Total	~ 138

In order to size the staging area, however, the fundamental parameter is the maximum parking accumulation based on average parking space occupancy. The fundamental relationship is:

1. $N_t = N_{t-1} + A_t - D_t$

Where N_t and N_{t-1} are the number of vehicles parked at time t and t-1 respectively, and A_t and D_t are the number of new vehicle arrivals and departures respectively in time t.

Maximum parking accumulation is the maximum over all time units t of the recursive equation in (1):

2. Max $[N_{t-1} + A_t - D_t]$

Table 6 illustrates the time-dependent computations (based on the data in Table 5, and the two key assumptions). Maximum parking accumulation within the staging area is bolded in the Table.

Table 6
Hourly and Maximum Parking Accumulation
Source: U.S. DOT Volpe Center

Hour	Parking Accumulation (number of parked vehicles at end of each hour)
10:00 AM – 11:00 AM	$N_1 = N_0 + A_1 - D_1$ $= 0 + 7 - 0 = 7$
11:00 AM – 12 :00 PM	$N_2 = N_1 + A_2 - D_2$ $= 7 + 20 - 0 = 27$
12:00 PM – 1:00 PM	$N_3 = N_2 + A_3 - D_3$ $= 27 + 33 - 7 = 53$
1:00 PM – 2:00 PM	**$N_4 = N_3 + A_4 - D_4$** **$= 53 + 34 - 20 = 67$**
2:00 PM – 3:00 PM	$N_5 = N_4 + A_5 - D_5$ $= 67 + 24 - 33 = 58$
3:00 PM – 4:00 PM	$N_6 = N_5 + A_6 - D_6$ $= 58 + 15 - 34 = 39$
4:00 PM – 5:00 PM	$N_7 = N_6 + A_7 - D_7$ $= 39 + 5 - 24 = 20$
5:00 PM – 6:00 PM	$N_8 = N_7 + A_8 - D_8$ $= 20 + 0 - 20 = 0$
Maximum Parking Accumulation	(2) $\max_t [N_{t-1} + A_t - D_t] = 67 \sim 70$ spaces

Accordingly, for the staging area a minimum threshold of approximately ~ 70 parking spaces is needed.

iii. Evaluation Criteria for Assessment of Land Parcels for the VTS Staging Area

At the site reconnaissance field visit, Weir Farm NHS staff accompanied project staff to examine four land parcels that could potentially serve as staging areas for a VTS system. The four sites examined are:

- Branchville School
- Gilbert and Bennett School
- Georgetown Wire Mill
- Branchville Station

As a screening tool, a useful set of evaluation criteria to assess each parcel (as well as other parcels that might be assessed) is the following:

- Proximity to Weir Farm NHS (i.e., < 2 miles)
- Existence of minimum threshold for number of parking spaces (~ 70 spaces; yes, no)
- Acquisition and development costs (high, medium, low)
- Pedestrian access to adjacent compatible land use, activity and visitor amenities (yes, no)
- Safe and efficient access/egress from site by VTS vehicles (yes, no)

Figure 30 through Figure 33 are aerial images showing each of the five parcels, including size and configuration, land use context, and road and pedestrian infrastructure for access.

Figure 30
Branchville School Parcel Map
Source: U.S. DOT Volpe Center, Google Maps (2011)

Figure 31
Gilbert and Bennett School Parcel Map
Source: U.S. DOT Volpe Center, Google Maps (2011)

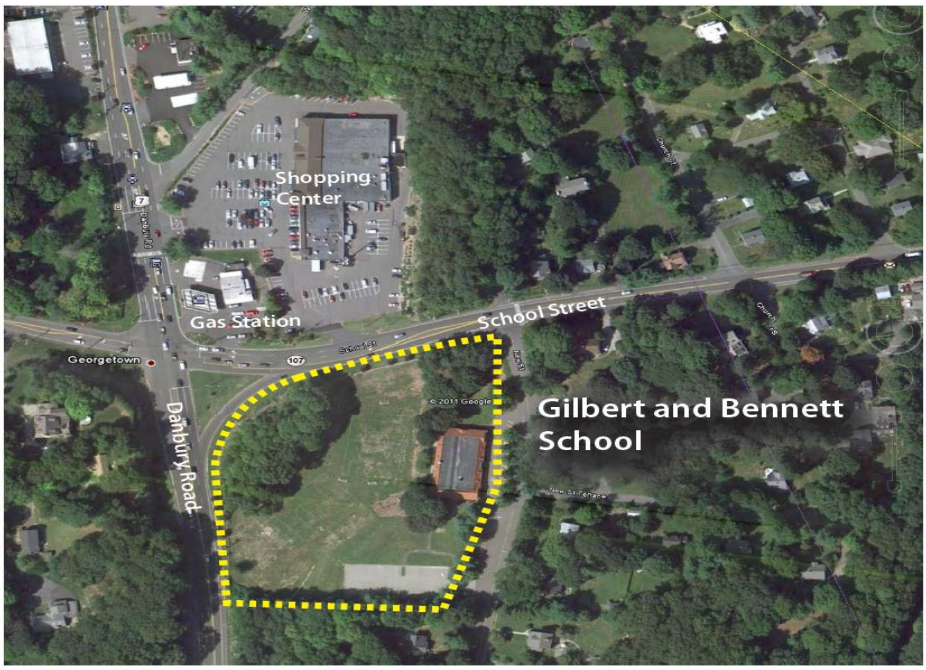


Figure 32
Wire Mill Site Parcel Map
Source: U.S. DOT Volpe Center, Google Maps (2011)

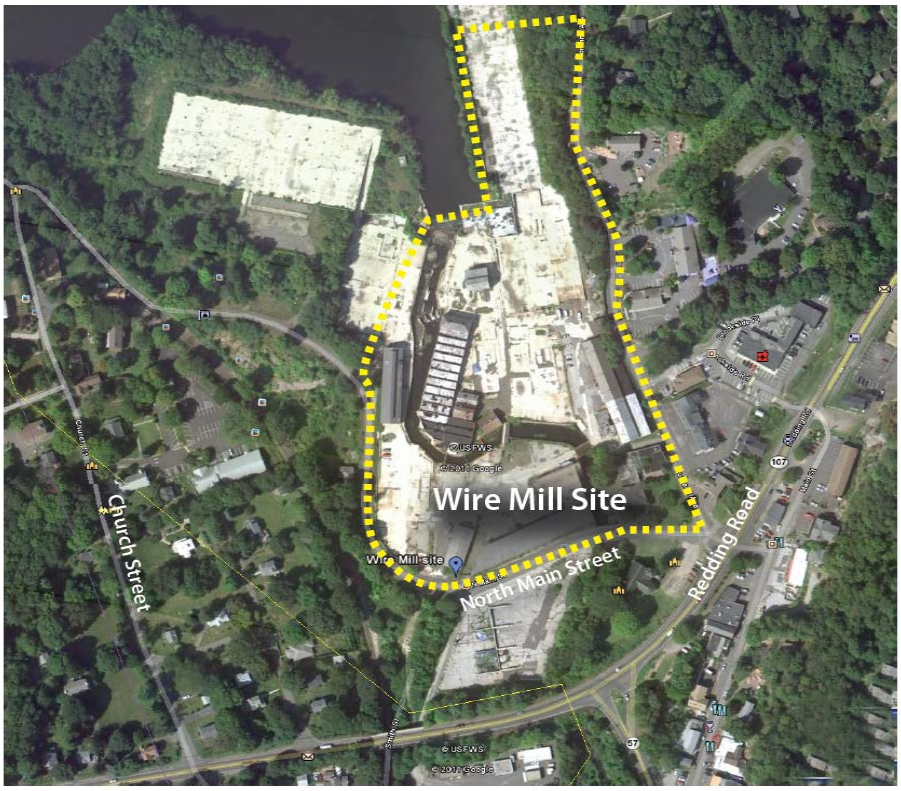


Figure 33
Branchville Station Site Parcel Map
Source: U.S. DOT Volpe Center, Google Maps (2011)

The four potential staging areas differ in a number of characteristics:

- Size and configuration, which affects access, internal circulation and the ability to develop the site for a staging area and parking hub
- Adjacent land use that could support visitor amenities and enhance activity patterns
- Highway versus pedestrian scale access and road infrastructure
- Suitability of the site for efficient shuttle operations

A preliminary assessment of the five land parcels observed at the site reconnaissance field visit against the above set of evaluation criteria is presented in Table 7.

Table 7
Assessment of VTS Staging Areas
Source: U.S. DOT Volpe Center

Evaluation Criteria	Branchville School	Gilbert and Bennett School	Georgetown Wire Mill	Branchville Station
Proximity to Weir Farm NHS (< 2 miles)	Yes	Yes	Yes	Yes
Minimum threshold for number of parking spaces exists (~ 70 spaces)	Yes	No	No	Yes
Acquisition and development costs	High	High	High	Low (Phase I- short-term) High (Phase II – long-term)
Pedestrian access to adjacent compatible land use, activity and visitor amenities (yes, no)	Yes	No	Yes	Yes
Safe and efficient access/egress from site by VTS vehicles	Yes	No (narrow access road)	Yes	Yes

The preliminary assessment indicates that the Branchville Station shows the most promise for the staging area for a VTS system. Furthermore, communication with one of the station workers indicated that the parking lot is almost solely used for commuter travel during the weekday. On weekends, the lot is 'mostly' empty, and no permit is required to park there on weekends[*]. This has been confirmed (anecdotally) by Town of Ridgefield officials and staff who manage the parking lot at the Branchville Station[†]. No parking occupancy data are available for weekends to positively determine the status of the lot on weekends. Such data, even if available now, would not be representative since the Danbury Branch Railroad line is undergoing maintenance operations and the number of weekend train runs is below the normal service level[‡].

Some inference as to the occupancy of the surface lot on weekends can be made assuming the normal weekend service level for train runs. During weekday service, there are currently 11 train runs inbound (to Norwalk, NYC) from Branchville Station in the AM period and 11 train runs outbound (from NYC) to Branchville Station in the PM period. At this train service level, the surface lot is at or near capacity. On weekends, the normal train service level falls to 6 train runs each direction (with generally lower boarding rates for each train run on weekends than during weekday commuter runs[§]). Thus it is reasonable to assume that the parking lot occupancy is less than half (i.e., < 50 percent) due to half the train service level, combined with lower passenger loading per train run operated on weekends.

[*] Personal communications with Station Market employee, 2/18/11.

[†] Personal communications with Laurie Scholl, staff, and Rudi Marconi, First selectman, Town of Ridgefield, 6/9/11.

[‡] Ibid.

[§] 2007 data show eight passengers (on/off) inbound on Saturday, 27 passengers (on/off) outbound; Sunday data are 41 passengers (on/off) inbound, and 26 passengers (on/off) outbound; see Conn DOT, *Danbury Branch Improvement Program AA/DEIS*, January 2009.

iv. Transit Supply, Flow Capacity and Operational Plan at the Branchville Station

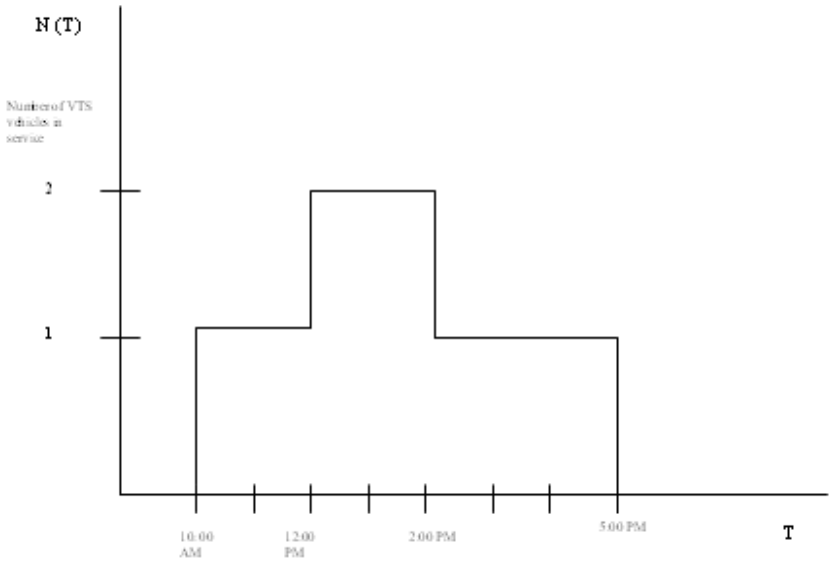
The project team timed the travel time under prevailing traffic conditions between the Branchville Station and Weir Farm NHS. In-vehicle travel time (one-way) was 5 minutes 30 seconds. The total cycle time for a single vehicle between these two termini (factoring in passenger loading and unloading time) is therefore on the order of ~ 15 minutes.

The existing vehicle owned by Weir Farm NHS is an E-450 heavy duty 15-passenger shuttle van (chassis on body). This vehicle or a similar type in its class is a suitable vehicle given the duty cycle, road geometrics and parking lot configuration on-site for access to Weir Farm NHS.

A single vehicle can make four trips in an hour, so the passenger flow capacity is 60 visitors per hour.

Using the time-dependent estimates for transit demand for a mandatory VTS, an Operational Plan has been developed illustrating the number of VTS vehicles in service over the span of the operating day (see Figure 34).

Figure 34
Number of Transit Shuttle Vehicles in Operation versus Time
Source: U.S. DOT Volpe Center



As the figure illustrates, one vehicle has sufficient flow capacity to service expected demand with the exception of the time period between 12:00 PM and 2:00 PM, in which case a second vehicle needs to operate to service all of the expected mobility needs.

v. Transportation Development Program for the Branchville Station

The project team developed extensive photographic evidence for the Branchville Station site and adjacent area. Based on this analysis, a transportation development program is sketched below.

- Negotiation of partnership agreement to identify and make available a contiguous section of surface parking lot to provide a compact space for the minimum threshold number of parking spaces as a staging area for the VTS system (peak season, weekend days only)
- Small capital investment to develop and site signage and banners (attached to poles) to delineate the staging area parking space
- Small capital investment to develop large waiting apron and benches, and canopy for VTS vehicle passenger loading/off-loading zone

vi. Financial Sustainability of VTS System

This section develops a simplified cost/revenue model based on the parameters for the VTS system operating at the Branchville Station. Only order-of-magnitude costs and revenues are estimated. The purpose is to determine to what extent user charges (a fee for the service) can financially sustain the system on an on-going basis, including if and whether capital charges associated with the replacement of the buses at the end of their service life is possible. An estimate of any financial gap, i.e., subsidy, per season is also estimated.

Assumptions and Parameters of VTS[*]

- Visitors per day – 280
- Peak Season – Memorial Day through Columbus Day (May 25 – October 12)
- Number of peak season weekend days – 43
- Span of operating service – 10:00 AM – 4:00 PM
- Vehicle-hours per peak season day – 9
- Maximum number of vehicles in service – 2

Cost Model

The cost model is a simple single factor model which calculates the operating and maintenance cost per season as the product of a fully-burdened operating and maintenance cost per vehicle revenue hour, and the number of vehicle revenue hours run during the season based on the operational plan and the capacity rate needed to meet maximum visitor loads. Figure 34, derived from the transit demand model, indicates that the maximum number of vehicles simultaneously in service during the day is two. The duration of peak service load runs for two hours. Accordingly, transit service supplied during a peak season weekend day is 9. The total number of vehicle revenue hours is 9 x 43 days per season = 387 vehicle revenue hours.

A maximum bound on the unit operating and maintenance cost per vehicle revenue hour is derived from the local data[†] for the Housatonic Area Regional Transit System (HART). This unit cost is $75.34. However, issuance of a performance-based contract is likely to achieve cost savings on the order of 20-40%, in line with the costs of non-transit agency shuttle service operations. This would imply a unit cost for operational and maintenance expenses (fully burdened to include benefits, fixed charges such as marketing and outreach, and administrative costs) ranging between $45 and $60. As a benchmark, the unit cost developed for a proposed bus shuttle system at Cumberland Islands National Seashore[‡] is $50.

[*] Assumptions and parameters derived from the models articulated under Option 3, page 47.
[†] Federal Transit Administration, National Transit Database, 2009.
[‡] U.S. DOT/Volpe Center, Cumberland Island National Seashore: Transportation Service Plan and feasibility Assessment, November 2009.

Operational and maintenance costs are therefore estimated to range between $17,415 and $23,220[*] annually.

Capital costs for a Ford E-350 15-passenger van or for a class of minibuses such as the Starcraft, Elkhart Coach EC-II, Startrans, or El Dorado typically range from $35,000 - $70,000[†]. The estimate herein assumes a capital cost at the high end at $60,000 for each of the two required vehicles, for a total capital cost of $120,000. Because of very low mileage accumulation[‡] from the operational service plan articulated under option 3, the service life of the shuttle vehicles should be at least 10 years, probably ~ 12 years (light-duty vehicles, appropriate for this application, normally have a nominal life of seven years). The equivalent annualized cost[§] ranges from $12,000 - $14,040.

Total Annualized Cost (including capital and operating and maintenance) therefore ranges from $29,415 - $37,260.

Revenue Model

The Transit Demand Model assumes an average level of visitation on a peak season weekend day is 280 visitors (the actual number will vary). Each of these visitors would be taking the shuttle throughout the day. This could translate to 560 one-way visitor trips during the day. Based on the number of peak season weekend days that the shuttle would operate, and the average level of visitation for each day, the revenue generated at three levels of one-way fares is illustrated in Table 8. Also shown is the gap (or surplus) relative to operating and maintenance costs, and total costs (including capital).

Table 8
Assessment of VTS Staging Areas
Source: U.S. DOT Volpe Center

One-way VTS Shuttle Fare	*Revenue (per season)*	*Gap 1 (Operating and Maintenance Costs) (deficit)*	*Gap 2 (Total Costs) (deficit)*
$1.00	$24,080	$860 / $6,665	($5,335) / ($13,180)
$1.50	$36,120	$12,900 / $18,705	($1,140) / $6,705
$2.00	$48,160	$24,940 / $30,745	$10,900 / $18,745

vii. Partnership Opportunities

Should Option 3 – a Visitor Transportation Shuttle (VTS) system with off-site staging and parking hub – move forward, Weir Farm NHS would need to develop a cooperative agreement and work with partners.

[*] C = $45 x 387; C = $60 x 387.

[†] See U.S. DOT/Volpe Center, Cumberland Island National Seashore: Transportation Service Plan and feasibility Assessment, November 2009; also see catalogue of used prices for recent models at http://www.bargainbusnews.com/classified.html

[‡] Bus VMT is estimated as: [3 miles per round trip x 28 round trips for Vehicle 1 + 3 miles per round trip x 8 round trips for Vehicle 2] x 43 operating days per season = 4644 miles

[§] Capital recovery factor (CRF) = CRF (i, N) where I = interest rate, N = service life; at 10 years, CRF (0.03, 10) = 0.117, and CRF (0.03, 12) = 0.10; see http://www.ajdesigner.com/phpdiscountfactors/capital_recovery_equation.php

Because the VTS system would be integral to the purpose and functioning of the park as a way to accommodate peak season visitation without overwhelming the site with vehicles, this study highly recommends that control remain vested with the NPS. This does not necessarily mean that park staff need to operate and maintain the service. A performance based contract issued by Weir Farm NHS would provide adequate safeguards that the service is controlled and tailored to meet the precise needs and requirements of the park. A performance-based contract for peak season weekend service may be more cost effective than using the local transit operator (HART – Housatonic Area Transit System) to provide the service.

By agreement with Connecticut DOT, Ridgefield leases, manages and maintains the parking lot associated with Branchville Station[*]. The lease commenced in 1995 for twenty years (to September 30, 2015); the town has by right the ability to exercise two 5-year options before the arrangements need to be re-negotiated[†]. Discussion with Ridgefield[‡] indicates a desire for a potential partnership agreement (at compensation mutually agreed) with the NPS to secure the following (actual terms to be negotiated, but the list that follows is suggestive):

- A special permit to use the Branchville Station during peak season weekend days as a staging and parking hub for the VTS
- Designation of a compact, contiguous subarea of the lot for the staging area and parking for the VTS (sized appropriately per our estimates, see Derived Parking Demand for VTS Staging Area, page 49)
- Minor modifications to the configuration to improve internal use and circulation, and to provide safe movement of visitors from their vehicles (now pedestrians) to the VTS passenger loading/offloading zone (provided there is no decrement to the overall capacity of the lot for commuter train operations during the week)
- Signage (including the use of banners) and marking of the compact area as the VTS staging and parking hub
- Information kiosk, shelter and canopies, and benches at appropriate locations within the designated space.

viii. Option Impacts

This section articulates the positive and negative impacts affecting the site's resources, Weir Farm NHS staff and park operations, and visitors and the visitor experience.

The negative impacts of Option 3 are few, but include:

- Capital cost to develop the auxiliary infrastructure at the staging area and parking hub, including modest reconfiguration of the subarea space within the lot designated for exclusive use by the VTS and the park's visitors, signage and marking, benches and canopy shelter, bus pad
- Capital and operating costs to operate the VTS, although financial self-sustainability is within reach by the imposition of modest usage charges or fares (see Financial Sustainability of VTS System, page 57)
- Minor limitations on the freedom of action of park visitors to arrive and leave Weir Farm NHS at will, although this is mitigated by the design of the VTS which operates with a high frequency service and with reliable in-vehicle time because the route is short and without intermediate stops (point-to-point between the staging area and Weir Farm NHS). Maximum wait time is held to 15 minutes, with the expected or average wait time equal to half this level or 7.5 minutes.

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[*] Personal communication with Laurie Scholl, Town of Ridgefield 6/3/11 and http://www.ridgefieldct.org/content/62/703.aspx, Accessed July 11, 2011
[†] personal communication with Laurie Scholl, Town of Ridgefield 6/3/11
[‡] Personal communications, First Selectman Rudy Marconi, Town of Ridgefield, 6/6/11

The positive impacts are substantial, and include:

Economic Development

- A VTS will have a very positive economic development impact as visitors at the staging area patronize local businesses proximate to the Branchville Station hub.

Weir Farm NHS Resources

- Avoidance of the obstruction of historic views, including those painted by J. Alden Weir and his colleagues, when cars park on the landscape
- Avoidance of soil compaction, rutting and contaminant runoff within the overflow 'lots' on the landscape of Weir Farm NHS
- Reduction in ambient noise levels to the benefit of visitors leading to greater enjoyment on site and on tours within the historic structures
- Reduction in vibrations that could affect historic stone walls, or artifacts within the historic structures*

Weir Farm NHS Staff and Park Operations

- Option 3 is consistent with the enabling legislation mandate to 'maintain the integrity of a setting that inspired artistic expression'
- Option 3 is consistent with the preferred alternative under the formally adopted General Management Plan to 'Reunite the historic property, presented as it appeared historically (emphasis added), with the art it inspired'. Use of the Branchville Station is historically consistent with the method by which J. Alden Weir reached his farm from New York City
- Option 3 is consistent with the Cultural Landscape Report treatment plan and strategy which seeks to preserve the landscape's historic character within the context of other park management goals such as public access (addressed to the person rather than the mode of conveyance), natural resource conservation, recreation and interpretation.
- Staff resources are not used to manage traffic flow and parking operations (often at increased safety risk to staff and visitor), but can be used to best advantage to preserve the site and provide interpretative and educational opportunities to visitors
- Option 3 reduces the volume of vehicles arriving on-site, and elevates the pedestrian realm and pedestrian scale for circulation on-site, consistent with the historic use of the site as a working farm.

Visitors and Visitor Experience

- Option 3 avoids conflicts with pedestrian traffic along the Burlingham driveway (serving as the access driveway to overflow parking 'lot' 1)
- Option 3 avoids disruption to traffic flow along Nod Hill Road due to turning movements at the two access points to the overflow parking 'lots'
- Option 3 reduces the potential marring of the visual character of Nod Hill Road and the obstruction of views from the road of the rural landscape due to vehicles parked within the overflow parking 'lot'

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* J.H. Rainer, *Effect of Vibration on Historic Buildings: An Overview*, The Association for Preservation Technology Bulletin, Volume XIV, No. 1, 1982; also "Roadside walls, fosses and banques", http://www.gov.je/Planning/ListedBuildingPlaces/Pages/RoadsideWallsFossesBanques, accessed April 17, 2012.

- Option 3 avoids the visual marring of the view sheds across the historic landscape, and from the specific vantage points from which J. Alden Weir created several of his well known art pieces
- Nod Hill traffic (including visitor traffic) is not placed at potential safety risk from unexpected turning movements
- Option 3 avoids obstruction of the path on the western edge of Nod Hill Road that traverses overflow parking 'lot' 2 and connects via a crossing of Nod Hill Road to the Weir Pond loop trail
- Option 3 avoids disturbance to visitors who are painting en plein air (including the avoidance of the obstruction of access to trail markers 4 and 5 when vehicles are parked within overflow parking 'lot' 2), and to visitors on group tours within the historic structures and/or within the secret and sunken gardens

d. Elements Common to All Options

This section describes current (baseline) special event planning (e.g., Jazz in the Garden), and makes suggested improvements. This is considered an 'overlay' plan to each of the three options under consideration.

i. Special Events Management: Current Procedures

Currently, Weir Farm NHS manages special events by operating a shuttle and/or recommending that visitors carpool to the site to reduce the impact on congestion and parking. This section discusses the procedure the park undertakes to manage these events and inform visitors.

Shuttles and Carpooling for Events

Weir Farm NHS has three special events where they anticipate more than 200 visitors per event each year. Weir Farm NHS does not have parking capacity to accommodate all visitors to these events. For events with over 200 visitors within a small window of time (2-3 hours), Weir Farm NHS instructs visitors to park at the Branchville Elementary School, and board a free shuttle bus to Weir Farm NHS. For events with a smaller number of attendees, or day-long events, Weir Farm NHS does not operate a shuttle bus, but encourages visitors to carpool. There is no parking allowed on site when the shuttle is running, except for handicapped parking. During these events, Weir Farm NHS rangers stand at the parking lot and direct visitors to the special events parking lot because it is the staff experience that visitors will ignore "No Parking" signs at the site.[*]

Visitors have complained about the inconvenience of riding the shuttle for special events, because it is out of the norm for visitation.

Wayfinding and visitor information

Weir Farm NHS posts special event parking information on their website, and in all communication related to the event (press releases, flyers, emails, letters, invitations). Weir Farm NHS also posts signage on nearby roads directing visitors to the special events parking and shuttle pick up area. Weir Farm NHS staff also convey this information via phone, regularly.

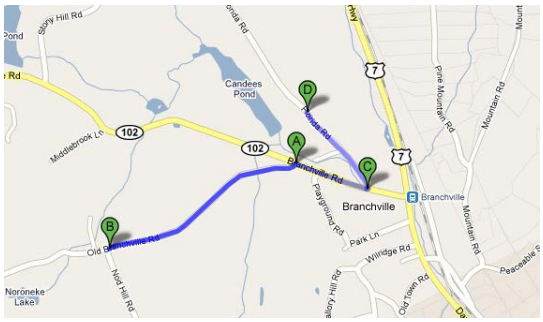
Weir Farm NHS posts signage at the following locations (see Figure 35):

- Old Branchville Road and Route 102 (A): white sign with "Weir Farm NHS Shuttle Parking" and an arrow

[*] Email correspondence with Weir Farm staff, June 10, 2011

- Nod Hill Road and Old Branchville Road (B): white sign with "Weir Farm NHS Shuttle Parking" and an arrow
- Florida Road intersection with Route 102 (C): white sign with "Weir Farm NHS Shuttle Parking" and an arrow (double sided)
- Sign in front of the Branchville School parking lot (D): small brown sign with a "P"

Figure 35
Special Event Parking Signage
Source: U.S. DOT Volpe Center, Google Maps (2011)



ii. Special Events Management: Suggested Improvements

There are several improvements Weir Farm NHS could implement toward more efficient management of special events, relating to the operation of the shuttle, information dissemination to visitors, and visitor amenities.

Shuttle Schedule

The shuttle does not currently follow a schedule, making it difficult for visitors to plan their visit. Weir Farm NHS should develop and post a shuttle schedule (for example, 15 minutes for short events, 30 minutes for long events) to allow visitors to plan their trip. The shuttle could run more frequently to accommodate large rushes of visitors; however, it should otherwise maintain a regular schedule to reduce visitor confusion on when the next shuttle will arrive. Weir Farm NHS should post the schedule on the website, on a sign at the staging area, and at the pick-up location on Weir Farm NHS.

For many events, visitors may arrive in a staggered pattern throughout the day, but there may be more of a rush to leave at the end. Weir Farm NHS should consider this visitation pattern and plan for more frequent trips and/or the addition of a second vehicle for the final hours of an event.

The lack of information on how long the wait for a shuttle may be adding to visitor frustration, or creating a sense that the service is inconvenient. A predictable schedule and short wait time can help improve visitor adjustment to a mandatory shuttle service.

The park also notes that shuttle service could also be improved with updated signage, since the current signs are different sizes and colors, which could be confusing to visitors. Although a full signage study was outside the scope of this analysis, the park believes that updating all signage to and for the site could improve the visitor experience.

Visitor Amenities and Staging Area

The visitor experience begins at the point that the visitor waits for the shuttle and Weir Farm NHS has an interest in creating a positive visitor experience. Currently, visitors can stand in a parking lot or sit in their cars as they wait for the Weir Farm NHS shuttle. All of Weir Farm NHS's visitors would especially benefit from shade and seating that a bus shelter would provide.

An additional consideration is that park staff directs visitors to park in one section of the parking lot and reserve a safe walking area to the staging area for the shuttle, ensuring there are no vehicle-pedestrian conflicts.

Signage and Wayfinding

The current special events signs say: "Weir Farm NHS Shuttle Parking", with a directional arrow. However, this does not indicate to visitors that the shuttle is mandatory and may be why many visitors drive to the park rather than the shuttle parking location. Park staff can be more proactive in informing visitors about the shuttle for special events by alerting visitors to the parking restrictions and shuttle service at all times, not just when an event occurs. Additionally, signage to the shuttle staging area could say: "No Parking at Weir Farm NHS. Free Shuttle Service from Branchville School", with a directional arrow.

Weir Farm NHS should also post a sign at the Branchville School indicating that there is special events parking, and post another directional sign on Nod Hill Road south of the park for visitors who head north on Nod Hill Road to access the park.

Nearby attractions

The shuttle staging area at Branchville School is within walking distance of Branchville Station; however, there are not adequate pedestrian facilities to encourage visitors to walk from the station to the shuttle staging area. Weir Farm NHS could work with Ridgefield to develop pedestrian improvements between the station and the school, thereby creating a safer route for visitors to access Weir Farm NHS without a car.

Regular Shuttle Coordination

If the park decides to run a regular shuttle between Weir Farm NHS and the VTS staging area during special events the shuttle must also serve the special events parking area. If there is enough parking capacity at the VTS staging area, the special event shuttle can run between that location and Weir Farm NHS. Staging a staff member or volunteer at each location will help inform the shuttle operator of the number of waiting passengers to ensure that the shuttle runs frequently enough not to leave visitors waiting for multiple shuttles.

e. Options Considered but Rejected

Housatonic Area Regional Transit (HART) operates the Route 7 'Link' from Danbury to Norwalk. The service stops at the Branchville Station, and could in theory be modified to include a route deviation that incorporates a loop to and from Weir Farm NHS. This option was rejected for the following reasons:

- The service serves a distinctly different market, namely the commuter market, and operates only Monday-Friday.
- The service operates hourly only during the AM and PM commuter rush and this is unsuitable for a visitor/tourist pattern of arrivals.

- The loop deviation would impose a 15-minute delay to an already long commute for many who use the service.

5. Next Steps

This Alternative Transportation Feasibility Study is the requisite planning effort that serves as a prelude to one logical next step, which is for the park to communicate with local towns and Branchville businesses to determine the feasibility of future off-site parking. The park can then decide on designating and implementing a preferred alternative, ensuring compliance with applicable agency and statutory requirements, such as those of the National Environmental Policy Act (NEPA). Funding sources to underwrite this effort could include Park Roads and Parkway (PRP) Category III, TRIP, and other NPS funding.

References

Balloffet and Associates (1995), *Weir Farm National Historic Site Traffic Counting Operations Report*

ConnDOT (2009), *Danbury Branch Improvement Program AA/DEIS*

ConnDOT (2011), *Danbury Branch Phase II Alternatives Analysis/EIS*

Federal Transit Administration (2009), National Transit Database

Housatonic Area Regional Transit (HART) (2010), *Bus Service Plan 2010*

Housatonic Valley Council of Elected Officials (HVCEO) (2009), *Housatonic Valley Regional Plan of Conservation and Development*, Chapter 11 – Transit Oriented Development

HVCEO (2010), *Transit Oriented Development Study*.

HVCEO (2011), *Route 7 Transportation and Land Use Study*

HVCEO (2011), *Regional Transportation Plan*

N. Cikovsky, E. Milroy, H. Spencer, and H. Cummings (2000), A Connecticut Place: WEIR FARM, An American Painter's Rural Retreat

National Park Service (1990), *Weir Farm Suitability/Feasibility Study*

National Park Service (1991), *Ecological Survey of Weir Farm*

National Park Service (1992), *Workshop Findings and Recommendations, Painting and Sculpture Theme Study Workshop*

National Park Service (1992a), *Weir Farm NHS Survey of Comparable Sites*

National Park Service (1992b), *White-tailed Deer Issues and Concerns*

National Park Service (1993), *Scope of Collection Statement*

National Park Service (1993a), *Weir Farm NHS Dam Assessment*

National Park Service (1994), *Archeological Investigation at the Weir Garden, Weir Farm National Historic Site*

National Park Service (1994a), *Historic Landscape Assessment for the Weir Garden, Weir Farm National Historic Site*

National Park Service (1994b), *Historic Furnishings Report*

National Park Service (1994c), *Identification and Documentation of Original Painting Sites at Weir Farm NHS*

National Park Service (1994d), *Landscape Management Plan for Weir Farm National Historic Site*

National Park Service (1995), *Historic Structure Report*

National Park Service (1995), *Weir Farm National Historic Site General Management Plan / Environmental Impact Statement*

National Park Service (undated), Weir Farm National Historic Site, *The Stone Walls*

National Park Service (undated), Weir Farm National Historic Site, *The Gardens*

National Park Service (2011), *Cultural Landscape Report for Weir Farm National Historic Site, Volume 2: Treatment 2011 and Record of Treatment*

S. Katz, "Branchville Station Fees Slated for November", Ridgefield Patch, August 6, 2010. http://ridgefield.patch.com/articles/branchville-station-fees-slated-for-november, accessed June 17, 2011.

Town of Ridgefield, Connecticut, "Directions to Branchville Station", http://www.ridgefieldct.org/content/62/703.aspx, accessed June 17, 2011

Town of Ridgefield (2002), *Branchville Village Plan*

Town of Ridgefield (2010), *Plan for Conservation and Development*

Town of Wilton (2009), *Plan for Conservation and Development*

U.S. DOT/Volpe Center (2009), *Cumberland Island National Seashore: Transportation Service Plan and Feasibility Assessment*

'Weir Farm National Historic Site Establishment Act of 1990', (Public Law 101-485)

Appendix A

Public Law 101-485
101st Congress

An Act

To establish the Weir Farm National Historic Site in the State of Connecticut.

Oct. 31, 1990
[S. 2099]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

Weir Farm National Historic Site Establishment Act of 1990. National parks Act.

SECTION 1. SHORT TITLE.

This Act may be cited as the "Weir Farm National Historic Site Establishment Act of 1990".

SEC. 2. DEFINITIONS.

As used in this Act—

(1) The term "Secretary" means the Secretary of the Interior.

(2) The term "historic site" means the Weir Farm National Historic Site established in section 4.

SEC. 3. FINDINGS AND PURPOSES.

(a) FINDINGS.—The Congress finds that—

(1) the Weir Farm in Connecticut is listed on the National Register of Historic Places as a historic site associated with major American artists and several artistic developments;

(2) the Weir Farm, acquired in 1882 by J. Alden Weir, a founder and principal exponent of American Impressionism, has been continuously occupied by working artists and their families who have maintained its significance and integrity as a historic site; and

J. Alden Weir.

(3) the Weir Farm, including the house, barns, studios, pond, field, and woods thereon, and the approximately 113 acres of adjacent natural areas owned by the Nature Conservancy and the Town of Ridgefield, Connecticut, provide opportunities for illustrating and interpreting cultural themes of our Nation's heritage and provide opportunities for public use and enjoyment.

(b) PURPOSES.—The purposes of this Act are—

(1) to preserve a significant site of the tradition of American Impressionism;

(2) to maintain the integrity of a setting that inspired artistic expression and encourages public enjoyment; and

(3) to offer opportunities for the inspirational benefit and education of the American people.

SEC. 4. ESTABLISHMENT OF WEIR FARM NATIONAL HISTORIC SITE.

16 USC 461 note.

(a) IN GENERAL.—There is established, as a unit of the National Park System, the Weir Farm National Historic Site in the State of Connecticut.

(b) DESCRIPTION.—The historic site shall consist of—

(1) the approximately 2-acre core parcel containing the Weir house, studio, and barn; and

(2) the approximately 60 acres and improvements thereon owned by the State of Connecticut;

both as generally depicted on a map entitled "Land Ownership Map, Weir Farm Historic Site", Figure 5, dated October 1989, as contained in the National Park Service Weir Farm Suitability/Feasibility Study, February, 1990. Such map shall be on file and available for public inspection in the appropriate offices of the National Park Service.

SEC. 4. ACQUISITION OF REAL AND PERSONAL PROPERTY AND SERVICES.

(a) REAL AND PERSONAL PROPERTY.—The Secretary is authorized to acquire by donation, exchange, or purchase with donated or appropriated funds, the lands and improvements within the boundaries of the historic site, except that any such lands and improvements owned by the State of Connecticut may be acquired only by donation. The Secretary may also acquire by the same methods personal property associated with, and appropriate for, the interpretation of the historic site: *Provided*, That the Secretary may acquire works of art associated with the Weir family, J. Alden Weir, and other artists who lived at or visited the site only by donation or purchase with donated funds.

(b) OTHER PROPERTY, FUNDS, AND SERVICES.—The Secretary is authorized to accept and use donated funds, property, and services to carry out this Act.

SEC. 5. ADMINISTRATION OF HISTORIC SITE.

(a) IN GENERAL.—The Secretary shall administer the historic site in accordance with this Act and the laws generally applicable to units of the National Park System, including the Act entitled "An Act to establish a National Park Service, and for other purposes", approved August 25, 1916 (16 U.S.C. 1 et seq.), and the Act entitled "An Act to provide for the preservation of historic American sites, buildings, objects, and antiquities of national historic significance, and for other purposes", approved August 21, 1935 (16 U.S.C. 461 et seq.), except that the Secretary shall take no action with respect to the 60 acres owned by the State of Connecticut within the boundaries of the historic site until such time as the State has transferred all right, title, and interests therein to the Secretary.

(b) COOPERATIVE AGREEMENTS.—(1) The Secretary may consult and enter into cooperative agreements with the Weir Farm Heritage Trust, the State of Connecticut, the American Academy of Arts and Letters, and other organizations and groups in the development, presentation and funding of art exhibits, resident artist programs, and other appropriate activities related to the preservation, development, and use of the historic site.

(2) The Secretary may consult and enter into cooperative agreements with the Nature Conservancy and the towns of Ridgefield and Wilton for the purpose of coordinating activities on the historic site with activities on the Nature Conservancy's Weir Preserve and lands adjoining the historic site owned by the towns.

(c) EXHIBITS.—The Secretary may display, and accept for the purpose of display, works of art associated with J. Alden Weir, the Weir Farm, and the American Impressionist movement, as may be necessary for the interpretation of the historic site.

(d) GENERAL MANAGEMENT PLAN.—Within 2 complete fiscal years after the date of the enactment of this Act, the Secretary shall submit to the Committee on Interior and Insular Affairs of the United States House of Representatives and to the Committee on Energy and Natural Resources of the United States Senate a gen-

eral management plan for the historic site. The plan shall be prepared in accordance with section 12(b) of the Act of August 18, 1970 (16 U.S.C. 1a-1 through 1a-7) and other applicable law.

SEC. 7. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act, except that not more than $1,500,000 may be appropriated for the acquisition of real and personal property.

Approved October 31, 1990.

LEGISLATIVE HISTORY—S. 2533:

HOUSE REPORTS: No. 101-732 (Comm. on Interior and Insular Affairs).
SENATE REPORTS: No. 101-318 (Comm. on Energy and Natural Resources).
CONGRESSIONAL RECORD, Vol. 136 (1990):
June 14, considered and passed Senate.
Oct. 16, considered and passed House, amended.
Oct. 17, Senate concurred in House amendment.

Weir Farm National Historic Site Expansion Act of 1994. 16 USC 461 note.

TITLE II—WEIR FARM NATIONAL HISTORIC SITE ADDITIONS

SEC. 201. SHORT TITLE.

This title may be cited as the "Weir Farm National Historic Site Expansion Act of 1994".

SEC. 202. PURPOSE.

The purpose of this title is to preserve the last remaining undeveloped parcels of the historic Weir Farm that remain in private ownership by including the parcels within the boundary of the Weir Farm National Historic Site.

SEC. 203. BOUNDARY ADJUSTMENT.

(a) ADJUSTMENT.—Section 4(b) of the Weir Farm National Historic Site Establishment Act of 1990 (Public Law 101-485; 104 Stat. 1171) is amended—

(1) by striking out "and" at the end of paragraph (1);

(2) by striking out the flush material below paragraph (2); and

(3) by adding at the end the following:

"(3) the approximately 2-acre parcel of land situated in the town of Wilton, Connecticut, designated as lot 18 on a map entitled 'Revised Map of Section I, Thunder Lake at Wilton, Connecticut, Scale 1"=100', October 27, 1978, Ryan and Faulds Land Surveyors, Wilton, Connecticut', that is on file in the office of the town clerk of the town of Wilton, and therein numbered 3673; and

"(4) the approximately 0.9-acre western portion of a parcel of land situated in the town of Wilton, Connecticut, designated as Tall Oaks Road on the map referred to in paragraph (3).".

(b) GENERAL DEPICTION.—Section 4 of such Act, as amended by subsection (a), is further amended by adding at the end the following:

"(c) GENERAL DEPICTION.—The parcels referred to in paragraphs (1) through (4) of subsection (b) are all as generally depicted on a map entitled 'Boundary Map, Weir Farm National Historic Site, Fairfield County Connecticut', dated June 1994. Such map shall be on file and available for public inspection in the appropriate offices of the National Park Service.".

Appendix B – Key E-mail Communications

Hi Hunter:

Thanks for suggesting in our conversation this morning that I pose a series of questions re: The Glass House Visitor Transit Shuttle. As context to you and your colleagues to whom you circulate this e-mail, Luis and I (both federal employees, U.S. Department of Transportation/Volpe Center) are working with our National Park Service colleagues at Weir Farm National Historic Site (NHS) to develop a feasibility study for a Visitor Transportation System in support of visitation at Weir Farm NHS. The Glass House Visitor Transit Shuttle is a 'model' that we are interested in studying. Below are a set of questions that we have:

Planning

1. Were visitors ever allowed direct access via private vehicle to the 47 acre site?
2. Was there ever parking for private vehicles at the site? If so, how many spaces/acreage?
3. What was the motivation/thinking behind having visitors arrive at an off-site aggregation point (i.e., Visitors Center) for transfer to a mandatory shuttle to the site? Were other options considered?
4. Was there a 'formal' planning study? If so, could you forward a copy to us?

Design of The Glass House Visitor Transit Shuttle

1. Was there a deliberate decision in site selection for the visitor center to site it in very close proximity to the Metro North train station in New Canaan? Was it just pure luck that this site was available to develop the off-site visitor center? How many of you visitors (numbers, and percent of overall visitation) arrive via the Metro North train?
2. Is there a formal partnership agreement with New Canaan to use the five peripheral municipal parking lots for visitors to park and then access at the visitor center The Glass House Visitor Transit Shuttle?
3. What is the distance and walking time between each of the five peripheral parking lots and the visitor center?
4. Is it first come- first served for use of the municipal parking lots by your visitors, or are some spaces reserved in each lot for your visitors?
5. What is the distribution of use by your visitors of the five municipal parking lots (i.e., Railroad Lot is used by 50 percent, then Railroad/Lumberyard lot by 40 percent, etc.)?
6. How many parking spaces are available at the visitor center? Are these solely used for persons with disabilities?
7. Is there a passenger loading/unloading zone designated at both the visitor center and The Glass Museum (i.e., the two termini of the shuttle route)? Is it 'sheltered'? Is there a turnaround space at either or both termini?

System Characteristics

1. What type of van is used (make/model)? Is there more than one van?
2. What is the van's passenger capacity? Is it wheelchair accessible?
3. Who maintains the van?
4. How many drivers are used? Do they have or need a commercial driver's license (CDL)?
5. How many round trips per day are operated?
6. How many days per season is the system operating? Does it operate seven (7) days per week? How many hours per day does the van operate?
7. Is the van full on most runs? What is the average passenger load per run? What is the annual number of visitors who use the system?
8. Are all visitors required to reserve a 'space' on the shuttle (i.e., by reserving a space on a tour of the site)?
9. Are there any 'walk-ins' who arrive to take the shuttle and purchase a ticket for a tour of The Glass Museum and site when they arrive at the site?
10. What is the one-way transit time between the visitor center and The Glass Museum?

Finance and Costs

1. What is the operating cost per season?

2. What is the maintenance cost per season?
3. Is a portion of the tour or entrance fee to The Glass Museum used to underwrite the cost of the mandatory Visitor Transit Shuttle?

Evaluation of The Glass House Visitor Transit Shuttle

1. Do you monitor operations of the system?
2. Have you made adjustments to the operation of the system? What kind of modifications?
3. Are visitors satisfied with the mandatory shuttle system? Are there complaints of the system? Are there complaints of not being able to drive to the site?
4. Is there any formal evaluation of the system? If so, could you forward a copy?

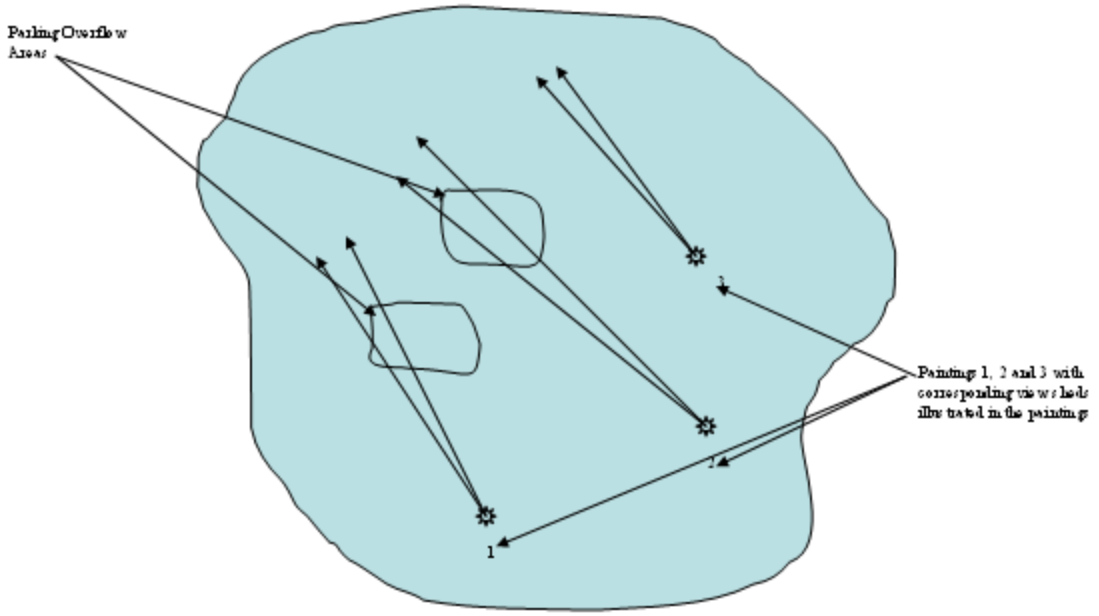
Thanks for your assistance!

Best regards,
David Spiller, MS. Trans. Eng.
Community Planner
U.S. DOT/RITA/Volpe Center RVT-23
55 Broadway
Cambridge, MA 02142
(617)494-2252
Fax (617)494-3260

Giles:
Thanks for continuing to work on items # 3 and #4 (see below). To summarize our conversation today, we would also appreciate the following:
#6. On the best site plan that you have for Weir Farm NHS, please mark the following (in color, preferably):

(a) The perimeter boundary for **each** overflow parking area used at the site. (Showing the full extent of area coverage of the landscape)
(b) A numbered point on the site plan where J. Alden Weir painted the landscape. For each point, draw two lines at an appropriate subtended angle illustrating the field of view. (See example below). Also, indicate the title of the painting so we can find an image of the painting. We plan on using this as part of a visual analysis to (a) provide a visualization of what the landscape looks like and how visitors experience the landscape when the overflow parking areas are in use; (b) to also see whether the view sheds painted by J. Alden Weir intersect with and could be disturbed by parking of vehicles within the overflow areas currently designated as such.

Thanks for all your help! (Note: Send the scanned marked up site plan to us.)



Best regards,
David

From: Spiller, David J (VOLPE)
Sent: Monday, March 14, 2011 4:08 PM
To: 'Giles_Parker@nps.gov'
Cc: Spiller, David J (VOLPE)
Subject: RE: Weir Farm Visitor Transportation System (VTS) project

Giles. Thanks!

David

From: Giles_Parker@nps.gov [mailto:Giles_Parker@nps.gov]
Sent: Monday, March 14, 2011 3:24 PM
To: Spiller, David J (VOLPE)
Cc: Giles_Parker@nps.gov; Linda_Cook@nps.gov; Mejias, Luis (VOLPE); Spiller, David J (VOLPE)
Subject: Re: Weir Farm Visitor Transportation System (VTS) project

David,
My apologies for the delay in responding, but I have been out of the park for several days. Several of your questions will need additional input from and will send as soon as possible -
#1 - No apparent reason, but will discuss further with park staff.

#2 - A key for the abbreviations was included in the packet of material that we provided. If you need another copy, we can also send that to you?

#3 - We have been pulling together some ideas, but have not identified a good comparable. Some historic sites have closed for a short period, but this is a fairly unique situation. The park will continue to work on this (for how it may effect visitor services), but I don't think that this should be a factor to wait on for your analysis. We can discuss if you would like.

#4 - I've asked park staff to consider and will forward as soon as possible.

#5 - Greg Waters (WEFA Horticulturist) is the park POC for the Norwalk River Valley Trail (NRVT) and is available at 203-544-9829 x11.

Thanks for your patience.

GILES PARKER
Acting Superintendent
Weir Farm National Historic Site
203-834-1896 x23 (work)
617-839-7984 (cell)

-----<David.Spiller@dot.gov> wrote: -----

To: <Giles_Parker@nps.gov>
From: <David.Spiller@dot.gov>
Date: 03/09/2011 11:31AM
cc: <Linda_Cook@nps.gov>, <Luis.Mejias@dot.gov>, <David.Spiller@dot.gov>
Subject: Weir Farm Visitor Transportation System (VTS) project

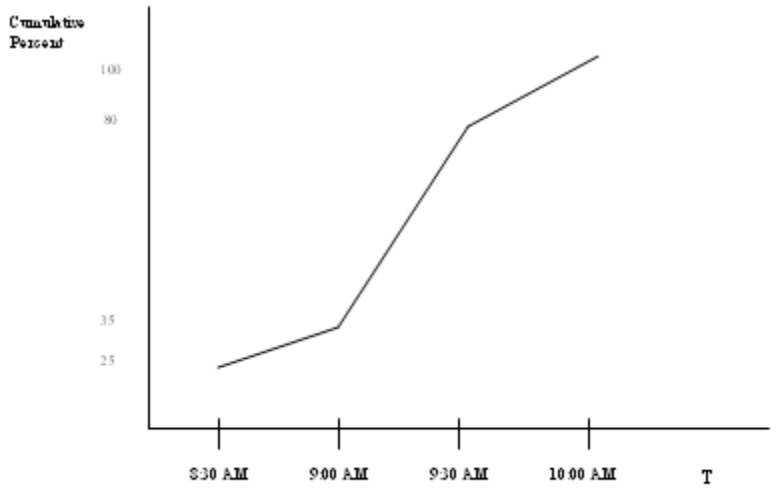
Hi Giles:

We started to analyze the data that you and your staff provided to us at the site field reconnaissance visit. We have some questions:

1. We noticed a dip in annual visitation from 2004-2007. Do you have a hypothesis as to why that might be the case?
2. The spreadsheet had a number of acronyms. Could you tell us what these are: GO, TPIA, CP, CPP, DA DAP EP, EPP, SE SEP, and JRP.
3. At our visit, we discussed the utility of providing a set of 'comparable' parks that underwent a rehabilitation program to bring on-line new structures or attractions that provide additional opportunities for visitors to experience. This would be used to 'benchmark' the magnitude of growth in visitation induced by the expansion of attractions at the park. Could you provide us with the set of 'comparable' parks and contact folks so we can get a handle on the effect the rehabilitation program had on the level of visitation pre and post rehabilitation?
4. Can you provide us with quantitative or qualitative data indicating the cumulative frequency distribution of when the small on-site parking lot (~17 spaces) **fills to capacity for the first time** on peak season weekend days – Saturday and Sunday (e.g., 25 percent of the time by 8:30 AM, 50 percent of the time by 9:00 AM, 100 percent of the time by 10:00 AM)?

Example:

Cumulative Frequency Distribution for the Time when Weir Farm Parking Lot Fills for the First Time: Peak Season Weekend Days



I also need to talk with Greg Watson. Could you give me his telephone number? Thanks!

Best regards

David Spiller, MS. Trans. Eng.

Community Planner

U.S. DOT/RITA/Volpe Center RVT-23

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REPORT DOCUMENTATION PAGE

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6. AUTHOR(S)

David Spiller
Luis Mejias
Catherine Duffy

5d. PROJECT NUMBER

PMIS 89654A / NP77

5e. TASK NUMBER

5f. WORK UNIT NUMBER

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Cambridge, MA 02142

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14. ABSTRACT

This report provides an assessment of the feasibility of alternative transportation options to accommodate visitation at Weir Farm National Historic Site in Ridgefield, Connecticut. Weir Farm, the historic home of artist J. Alden Weir, faces numerous challenges, particularly parking constraints in a residential neighborhood. Accommodating more visitors in private cars will come at a high cost with regard to the landscape and its viewshed, in addition to the strain on narrow, local roads. This feasibility study considers alternatives to parking expansion, namely a parking reservation system and transit. Transit emerges as the transportation alternative most suitable at Weir Farm.

15. SUBJECT TERMS

national park service; alternative transportation; transit; parking management

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Reset

As the nation's principal conservation agency, the Department of the Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

413/116329 /July 2012