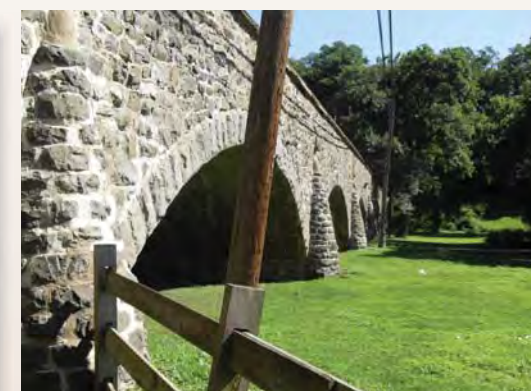
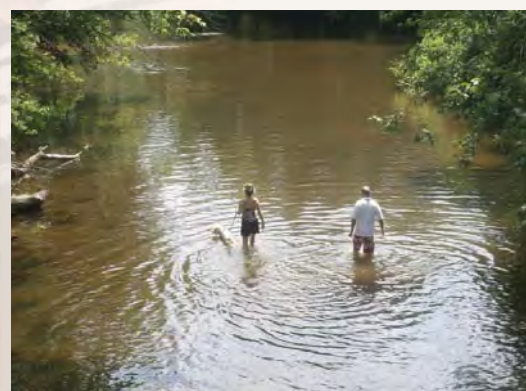


# Brandywine Battlefield Preservation Plan

Revolution in the Peaceful Valley

CHESTER AND DELAWARE COUNTIES, PA



Prepared by  
Chester County  
Planning Commission  
& John Milner Associates, Inc.

Funded by  
The American Battlefield  
Preservation Program  
(ABPP Grant Number  
GA-2255-11-003)



The 7th  
Pennsylvania  
Regiments  
Brandywine Flag





# The Brandywine Battlefield Preservation Plan: *Revolution in the Peaceful Valley* (Map Atlas)

December 2013

Funded by the American Battlefield Preservation Program  
ABPP Grant Number GA-2255-11-003

Prepared by the Chester County Planning Commission  
& John Milner Associates, Inc.

#### **Chester County Board of Commissioners**

Ryan Costello  
Kathi Cozzone  
Terence Farrell

#### **Chester County Planning Commission**

Ronald T. Bailey, Executive Director  
David Ward, Assistant Director  
Carol Stauffer, Director, Planning Services Division  
Christopher Bittle, Graphic Artist, Photographer  
Yvonne Guthrie, Administrative Assistant  
Elizabeth Kolb, Graphic Artists  
Karen Marshall, Historic Preservation Officer  
Jake Michael, Project Manager  
Tyler Semder, GIS Specialist  
Jeannine Speirs, Senior Planner

#### **John Milner and Associates**

Wade Catts, Associate Director  
Tom Scofield, Preservation Planner

#### **Pennsylvania Historical and Museum Commission**

James M. Vaughan, Executive Director  
Barbara Franco, Executive Director\*  
Michael Bertheaud, Interpretation and Placement  
Andrea MacDonald, Preservation Services  
Steve Miller, Director Historic Sites and Museum\*  
Brenda Reigle, Western Division Chief

\*Former

#### **Delaware County Council**

Tom McGarrigle  
Mario J. Civera, Jr.  
John P. McBlain  
Colleen P. Morrone  
David J. White

#### **Delaware County Planning Department**

John E. Pickett, Director of Planning\*  
Yinka Adesubokan, Associate Planner  
Beverly Barnes, Historic Preservation Planner  
Jill Hall, Historic Preservation Planner

#### **Record copies of this document can be obtained from:**

Kristen L. McMasters  
National Park Service  
American Battlefield Protection Program  
1201 Eye Street NW (2287)  
Washington, DC 20005

#### **Disclaimer:**

This material is based upon work assisted by a grant from the Department of the Interior, National Park Service. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the Department of the Interior.

**The project team wishes acknowledge the assistance and contributions to this project from the members of the historic commission members of the following municipalities:**

Chadds Ford Township  
Concord Township  
Birmingham Township  
East Bradford Township  
East Marlborough Township  
Kennett Township  
Kennett Square Borough  
New Garden Township  
Newlin Township  
Pennsbury Township  
Pocopson Township  
Thornbury Township, Chester County  
Thornbury Township, Delaware County  
West Bradford Township  
Westtown Township

**The project team also wishes to thank:**

Staff from the Chester County Historical Society  
Kim Bucklaw, Chester County Archives  
Nina Kelly, Chester County Conference and Visitors Bureau  
Michael Lane, Landscape Architect  
Frank Mahoney, Chadds Ford Historical Society  
John Mikowychok, Friends of Brandywine Battlefield  
Sean Moir, Local Historian  
Andrew Outen, Brandywine Battlefield Park  
Cliff Parker, Chester County Archives  
Ginger Tucker, Chadds Ford Historical Society  
David Shields, Brandywine Conservancy  
Kathy Wandersee, Local Historian

## TABLE OF CONTENTS

---

Table of Contents .....iii

### **Chapter 1 Maps: Introduction and Regional Influences**

2010 ABPP Survey Battlefield Boundary..... Map 1.1  
Landmarks Visible to Marching Troops ..... Map 1.2  
Combat Sites and Troops Movements..... Map 1.3  
Summary of Animated Map Troop Locations ..... Map 1.4  
2010 KOCOBA Battle Summary ..... Map 1.5  
Quaker Cultural Influences in the Brandywine Valley..... Map 1.6  
Soils in the Brandywine Battlefield..... Map 1.7  
Geology of the Brandywine Battlefield ..... Map 1.8  
British Troops Movements 1778 to 1778..... Map 1.9  
Philadelphia Campaign of 1777 Key Troop Movements ..... Map 1.10  
Battle of Brandywine: British and American Areas of Control..... Map 1.11  
Modern Roads and 1777 Troops Movements..... Map 1.12

### **Chapter 2 Maps: Land Conservation Plan**

1883 Land Use Historic Conditions ..... Map 2.1  
1904 Land Use Historic Conditions ..... Map 2.2  
1937 Land Use Historic Conditions ..... Map 2.3  
1958 Land Use Historic Conditions ..... Map 2.4  
1993 Land Use Historic Conditions ..... Map 2.5  
2010 Land Use Historic Conditions ..... Map 2.6  
Inventory of Existing Protected Lands ..... Map 2.7  
Inventory of Engagement Zone and Marching Corridor Parcels ..... Map 2.8  
Inventory of Lands Well Suited for Protection ..... Map 2.9  
Inventory of Land Use by “Anderson Land Cover” ..... Map 2.10  
Inventory of Existing and 1777 Woodlands..... Map 2.11  
Inventory of Floodplains and Water Resources..... Map 2.12  
Inventory of Wetlands and Sensitive Habitats..... Map 2.13

### **Chapter 3 Maps: Historic Resources Plan**

2010 ABPP Project Area..... Map 3.1  
2010 KOCOBA Cultural Topography ..... Map 3.2  
2010 KOCOBA Terrain Analysis..... Map 3.3  
2010 KOCOBA Battle Analysis ..... Map 3.4  
Cartographic Boundaries 1977 to 1992 ..... Map 3.5  
Historic Resources Inventory..... Map 3.6  
Existing “National Register Historic Places” ..... Map 3.7  
1989 National Landmark Archeological Potential..... Map 3.8

### **Chapter 3 Maps: Historic Resources Plan (Continued)**

Preliminary Inventory of Areas with Potential Archeological Sites .....	Map 3.9
Trimbles Ford Site Mapping Evaluation .....	Map 3.10
Anvil Village Site Mapping Evaluation.....	Map 3.11
Defining Features Inventory .....	Map 3.12
Resources within Historic Districts or Complexes .....	Map 3.13
Open Space Preservation and Historic Resources .....	Map 3.14
Battle Conflict Areas.....	Map 3.15
National Historic Landmark Evaluation.....	Map 3.16
Revised Planning Boundary Concept.....	Map 3.17
Topography and KOCOIA Troop Locations .....	Map 3.18
Topography and Strategic Landscapes .....	Map 3.19
Historic Resources and Strategic Landscapes .....	Map 3.20
Open Space and Strategic Landscapes .....	Map 3.21

### **Chapter 4 Maps: Public Access Evaluation**





Inventory of Steep Slopes and Topography .....	Map 4.1
Inventory of Bicycle and Pedestrian Destinations .....	Map 4.2
Roadways in 1777 Historic Conditions .....	Map 4.3
Inventory of Roadway Infrastructure & Conditions .....	Map 4.4
Inventory of Bicycle Coalition of Greater Philadelphia Routes .....	Map 4.5
Inventory of Road Bikeability Conditions .....	Map 4.6
Viable On-road Bicycle Routes .....	Map 4.7
Inventory of Existing and Proposed Trails and Paths.....	Map 4.8
Potential Trail Destination and Links .....	Map 4.9
Approximate Location of 1777 Fords .....	Map 4.10
Inventory of Viable Trails and Paths .....	Map 4.11
Combined Trail and Bikeway Network Concept.....	Map 4.12
“1777 Loop” Concept (Philadelphia Campaign) .....	Map 4.13

### **Chapter 5 Maps: Interpretation, Education, and Tourism**

Interpretation Network Preliminary Concept.....	Map 5.1
Battlefield Heritage Center Concepts .....	Map 5.2
Battlefield Park Visioning Vegetation Evaluation .....	Map 5.3
Battlefield Park Visioning Grounds Concept .....	Map 5.4
Philadelphia Campaign of 1777 Visitor Destinations.....	Map 5.5




### Map Features

-  Battlefield Boundary
-  County Boundary
-  Municipalities
-  Brandywine Creek

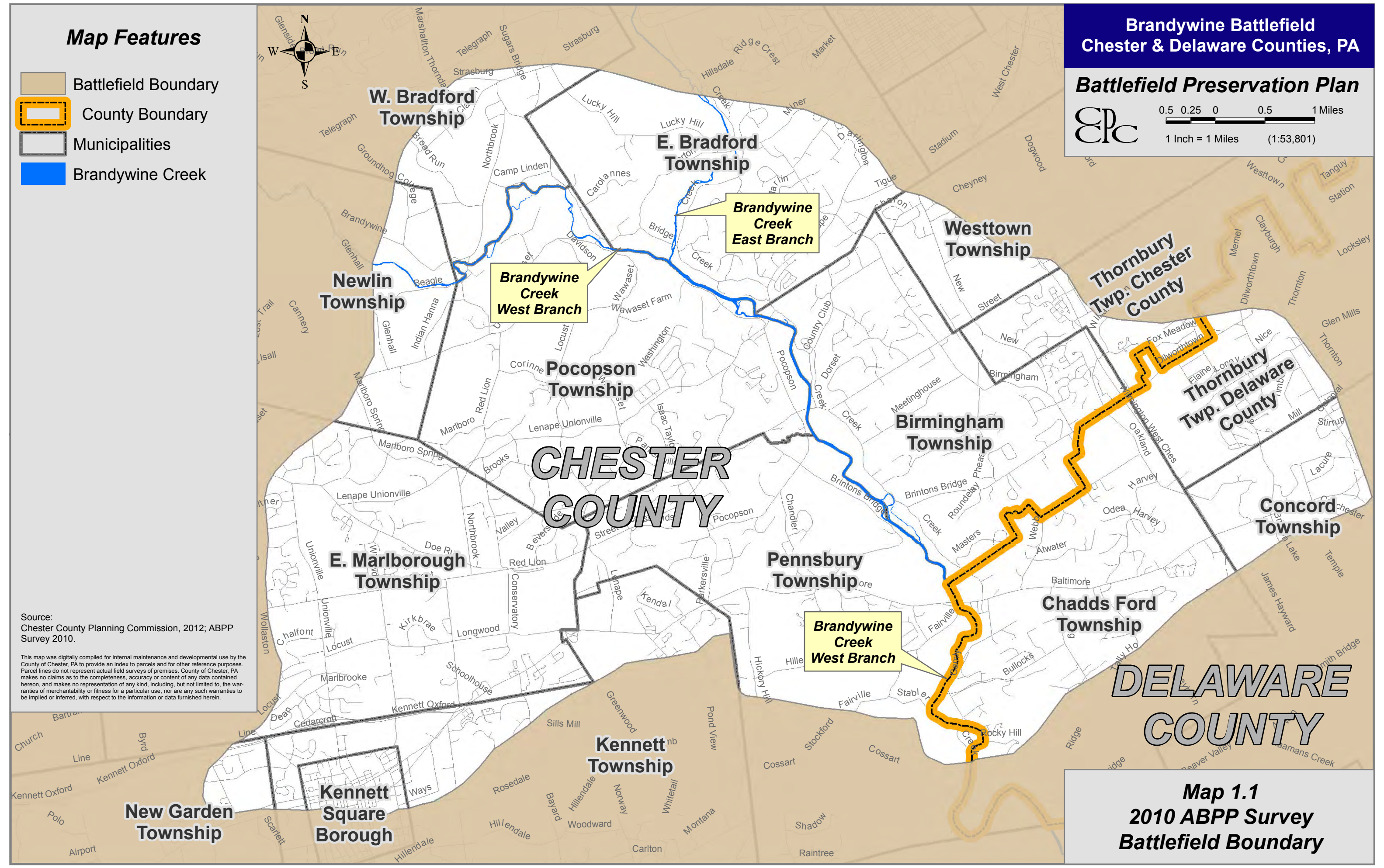


**Brandywine Battlefield  
Chester & Delaware Counties, PA**

**Battlefield Preservation Plan**

 0.5 0.25 0 0.5 1 Miles

1 Inch = 1 Miles (1:53,801)









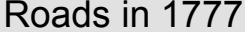

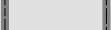
Source:  
Chester County Planning Commission, 2012; ABPP  
Survey 2010.

This map was digitally compiled for internal maintenance and developmental use by the County of Chester, PA to provide an index to parcels and for other reference purposes. Parcel lines do not represent actual field surveys of premises. County of Chester, PA makes no claims as to the completeness, accuracy or content of any data contained hereon, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred, with respect to the information or data furnished herein.

**Map 1.1  
2010 ABPP Survey  
Battlefield Boundary**




### Map Features

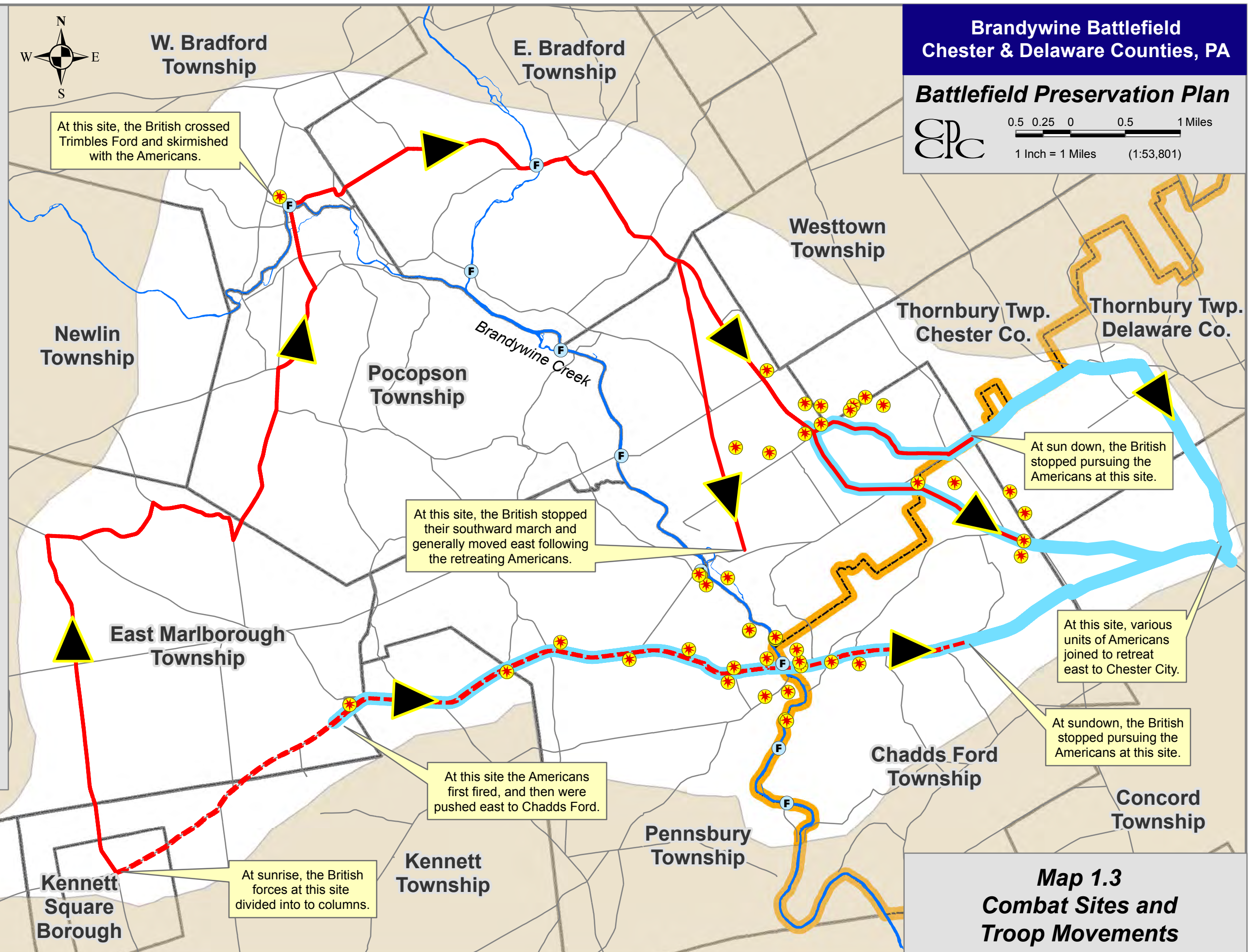
-  Combat Sites
-  Fords in 1777
-  Knyphausen's Troops
-  Cornwallis's Troops
-  Washington's Troops
-  Brandywine Creek
-  Roads in 1777
-  County Boundary
-  Municipalities



**Brandywine Battlefield**  
Chester & Delaware Counties, PA

**Battlefield Preservation Plan**

 0.5 0.25 0 0.5 1 Miles  
1 Inch = 1 Miles (1:53,801)



At this site, the British crossed Trimbles Ford and skirmished with the Americans.

At this site, the British stopped their southward march and generally moved east following the retreating Americans.

At sun down, the British stopped pursuing the Americans at this site.

At this site, various units of Americans joined to retreat east to Chester City.

At sundown, the British stopped pursuing the Americans at this site.

At this site the Americans first fired, and then were pushed east to Chadds Ford.

At sunrise, the British forces at this site divided into to columns.

Source:  
Chester County Planning Commission, 2012; ABPP Survey 2010.

This map was digitally compiled for internal maintenance and developmental use by the County of Chester, PA to provide an index to parcels and for other reference purposes. Parcel lines do not represent actual field surveys of premises. County of Chester, PA makes no claims as to the completeness, accuracy or content of any data contained hereon, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred, with respect to the information or data furnished herein.

**Map 1.3**  
**Combat Sites and Troop Movements**



Brandywine Battlefield  
Chester & Delaware Counties, PA

Map 1.5  
2010 KOCOA Battle Summary

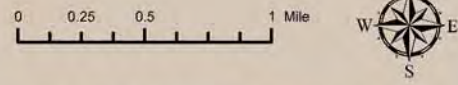
Troop Positions

Brigade / Artillery

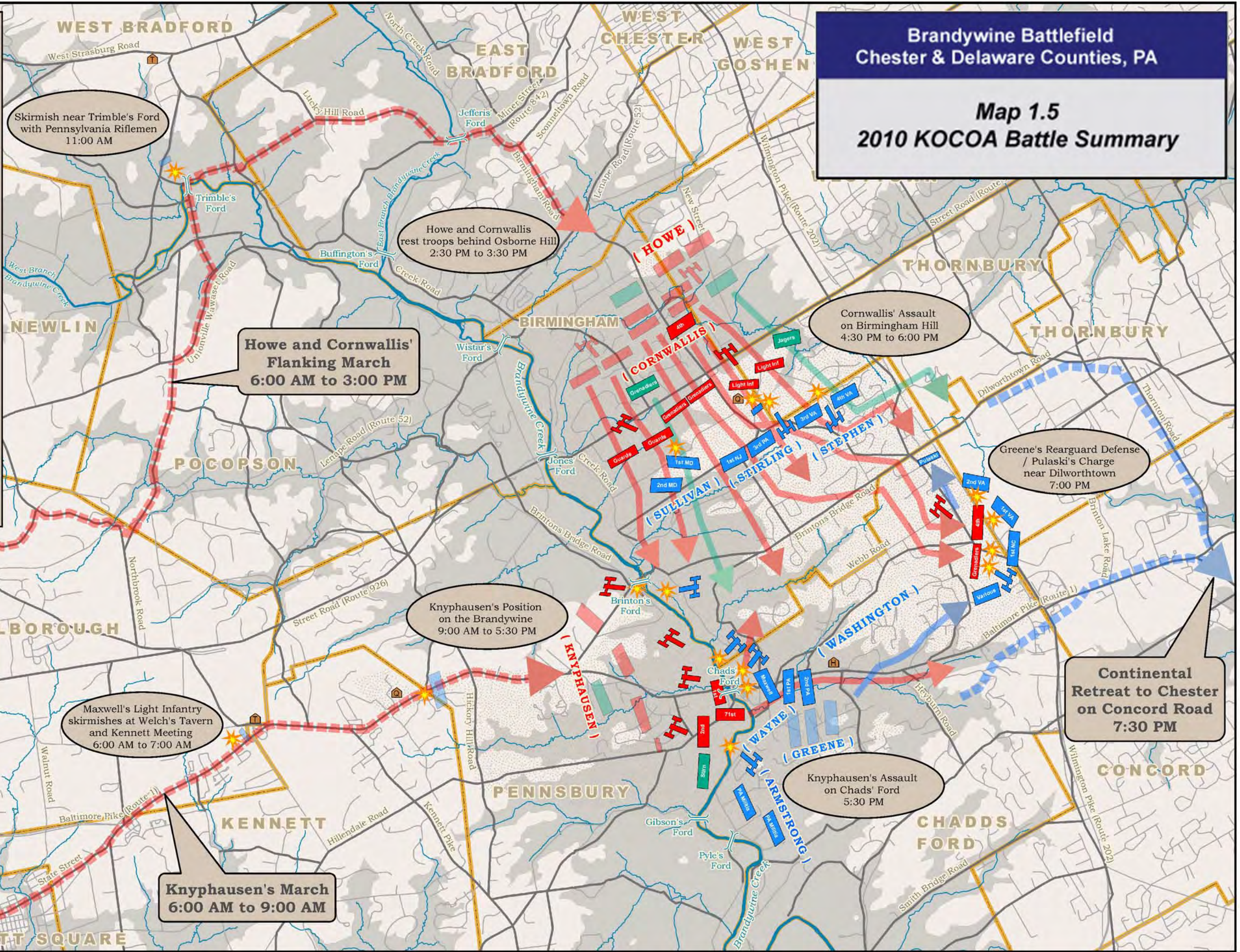
- Continental
- British
- Hessian

Engagement

- 1777 Ford
- Washington's Headquarters
- Quaker Meetinghouse
- Tavern
- 1777 Road
- 21st Century Road
- Hill/Elevated Area | Valley
- National Landmark Area
- 21st Century Municipality







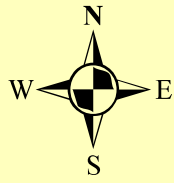
Sources: Archibald Robertson Map, 1777; Brandywine Battlefield Map, 1989; Tom McGuire, 2001, 2007  
Produced by: Chester County DCIS, GIS and Chester County Parks and Recreation with cooperation from the Pennsylvania Historical and Museum Commission  
Copyright (c) October 2010, County of Chester, PA. All Rights Reserved



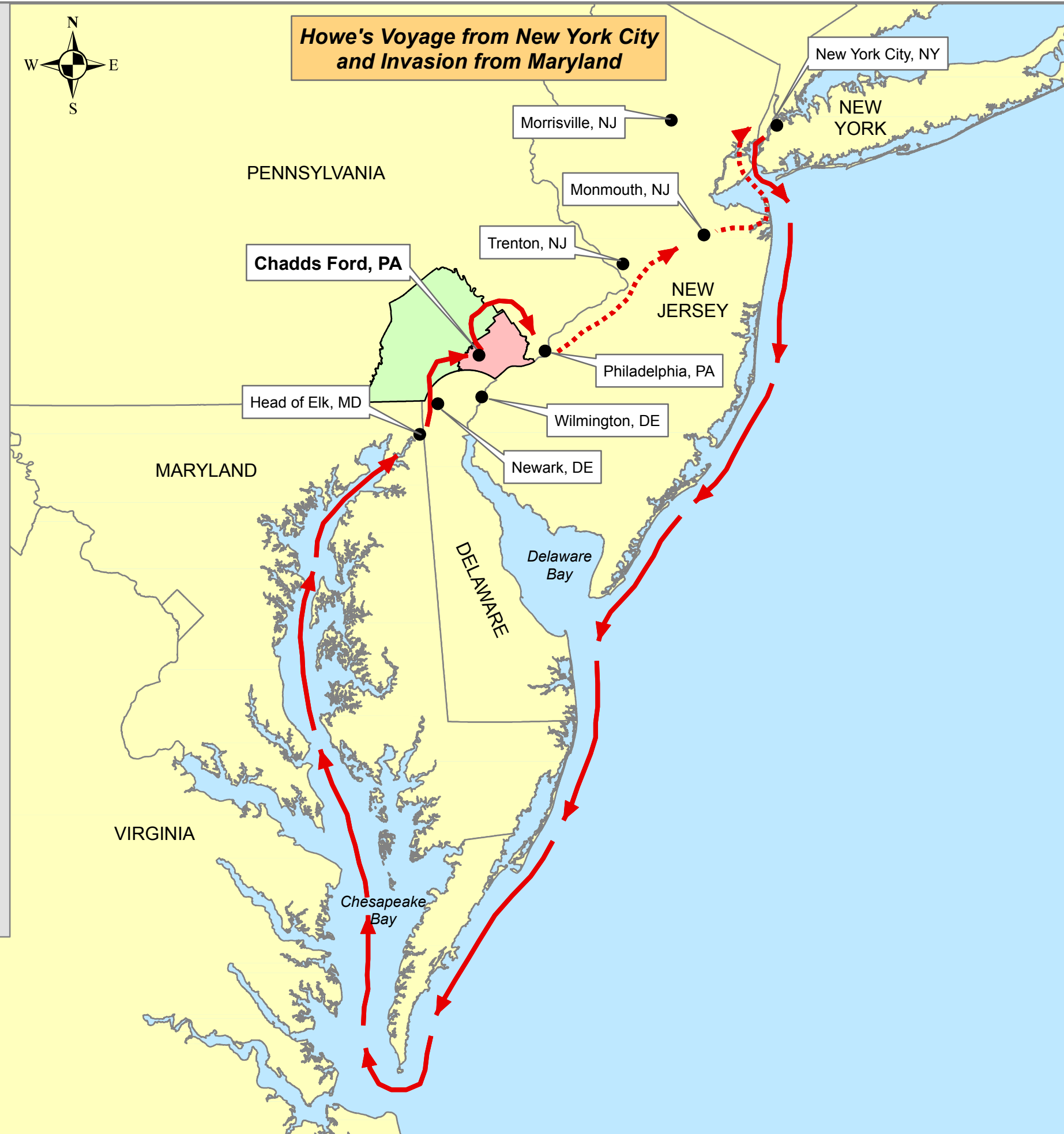


## Map Features

-  British Invasion of 1777
-  British Evacuation of 1778
-  Delaware County, PA
-  Chester County, PA



### Howe's Voyage from New York City and Invasion from Maryland



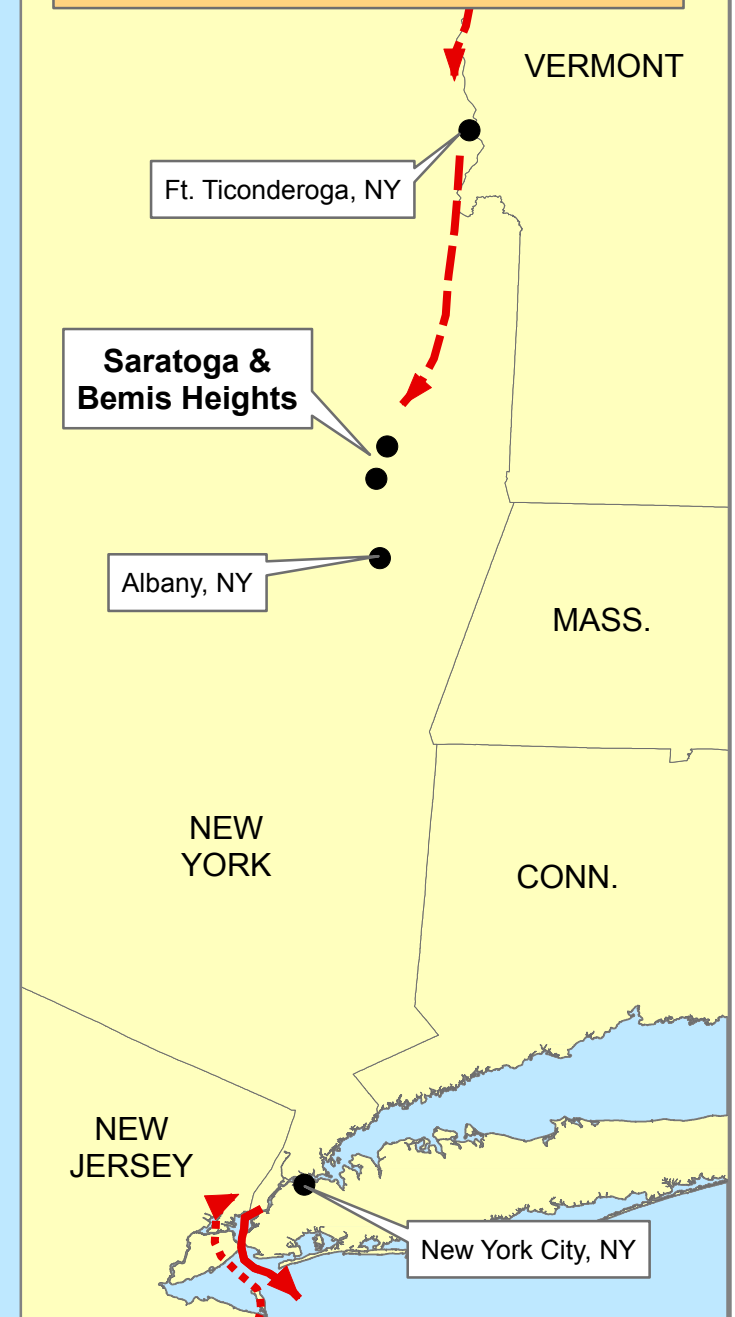
## Brandywine Battlefield Chester & Delaware Counties, PA

### Battlefield Preservation Plan



10 5 0 10 20 Miles  
1 Inch = 30 Miles (1:1,900,800)

### Burgoyne's Invasion from Canada



Sources:  
Chester County Planning Commission, 2011,  
APBB Survey 2010.

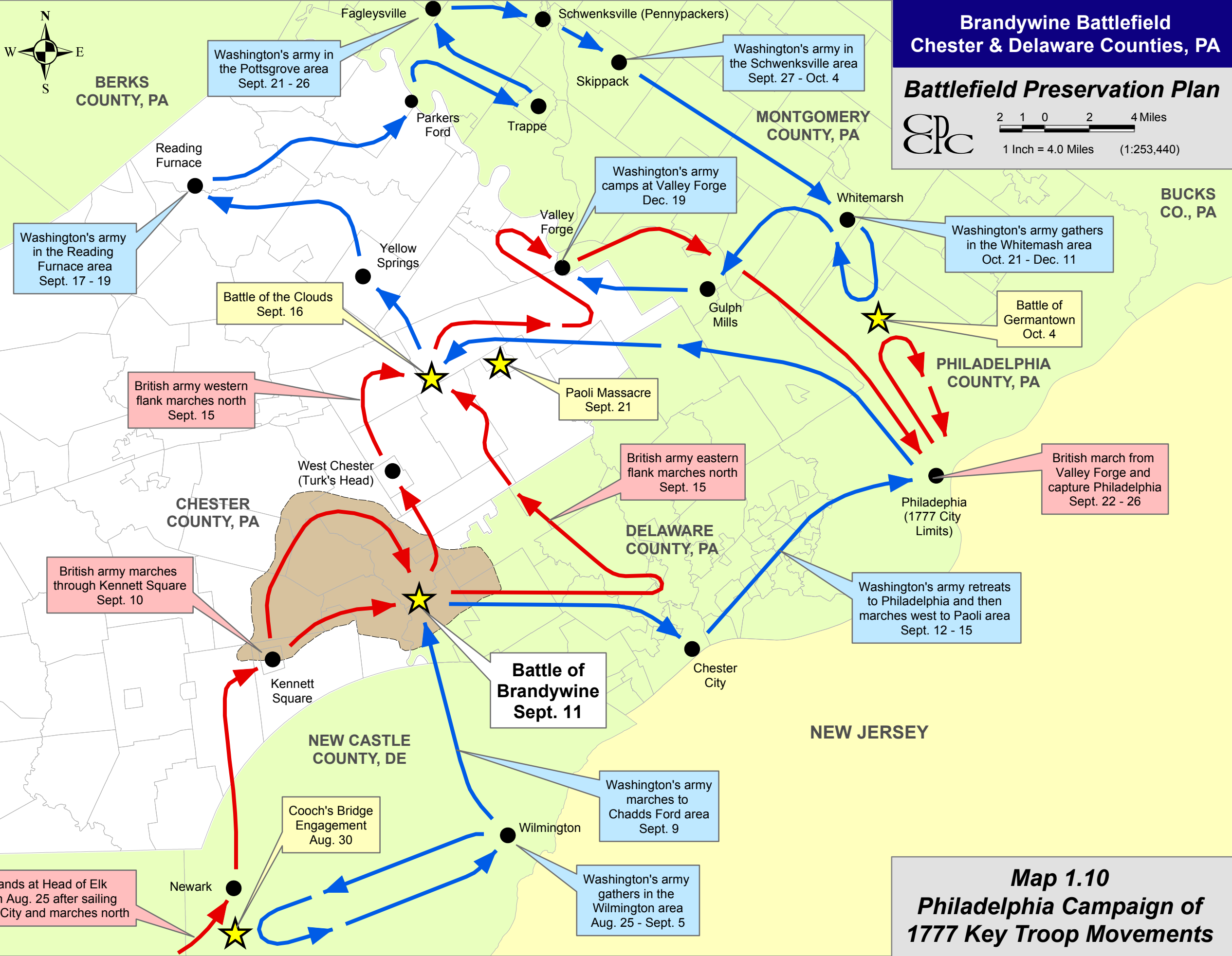
This map was digitally compiled for internal maintenance and developmental use by the County of Chester, PA to provide an index to parcels and for other reference purposes. Parcel lines do not represent actual field surveys of premises. County of Chester, PA makes no claims as to the completeness, accuracy or content of any data contained hereon, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred, with respect to the information or data furnished herein.

**Map 1.9  
British Troop Movements,  
1777 to 1778**



### Map Features

- ➔ Major British Troop Movements
- ➔ Major American Troop Movements
- Brandywine Battlefield
- Municipalities



**Brandywine Battlefield  
Chester & Delaware Counties, PA**

**Battlefield Preservation Plan**

EPC

2 1 0 2 4 Miles  
1 Inch = 4.0 Miles (1:253,440)

**Sources:**  
 William C. Baldwin, ed. *Historic Brandywine Guide Book* (West Chester, PA: Bradford Village, 1961), 19-23; W. Bodle and J. Thibault. *Valley Forge Historical Research Report*. Vol. 3. (Valley Forge, PA: National Park Service, 1980); Douglas R. Harper, *West Chester to 1865: That Elegant and Notorious Place*. (West Chester: Chester County Historical Society, 1999); John W. Jackson, *With the British Army in Philadelphia, 1777-1778*, (San Rafael, CA: Presidio, 1979), 6-8; Catharine Joseph, *The Battle of the Clouds, 16 September, 1777: A Historical Paradox*, (Immaculata, PA: Immaculata, 1945). Wilmer W. MacElree, *Along the Western Brandywine*. (West Chester, PA: FS Hickman, 1909). David G. Martin, *The Philadelphia Campaign. June 1777- July 1778*, (Conshohocken, PA: Combined Books, 1993), 43-98.

This map was digitally compiled for internal maintenance and developmental use by the County of Chester, PA to provide an index to parcels and for other reference purposes. Parcel lines do not represent actual field surveys of premises. County of Chester, PA makes no claims as to the completeness, accuracy or content of any data contained herein, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred, with respect to the information or data furnished herein.

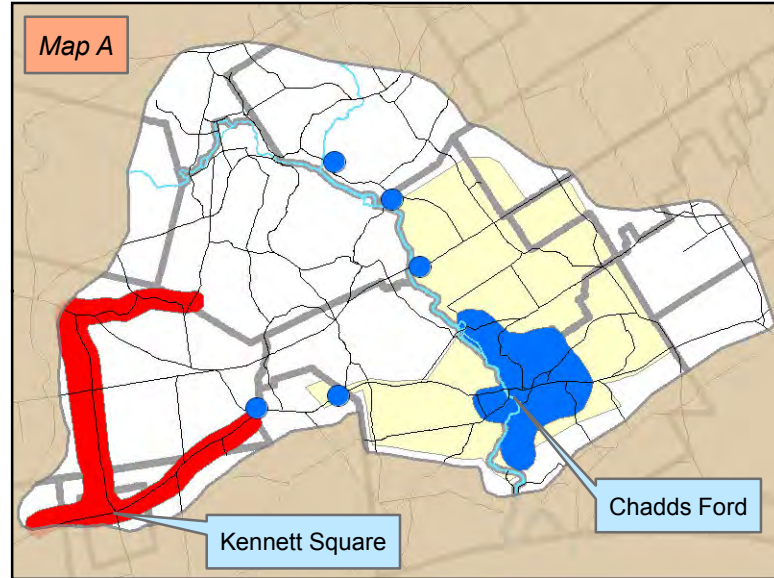
**Map 1.10  
Philadelphia Campaign of  
1777 Key Troop Movements**



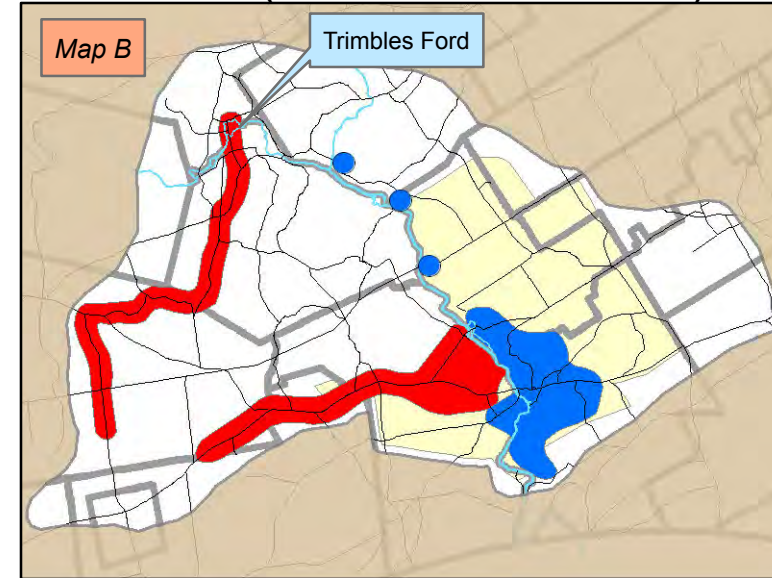
# Map Features

-  Roads in 1777
-  British Area of Control
-  American Area of Control
-  National Historic Landmark
-  Municipalities

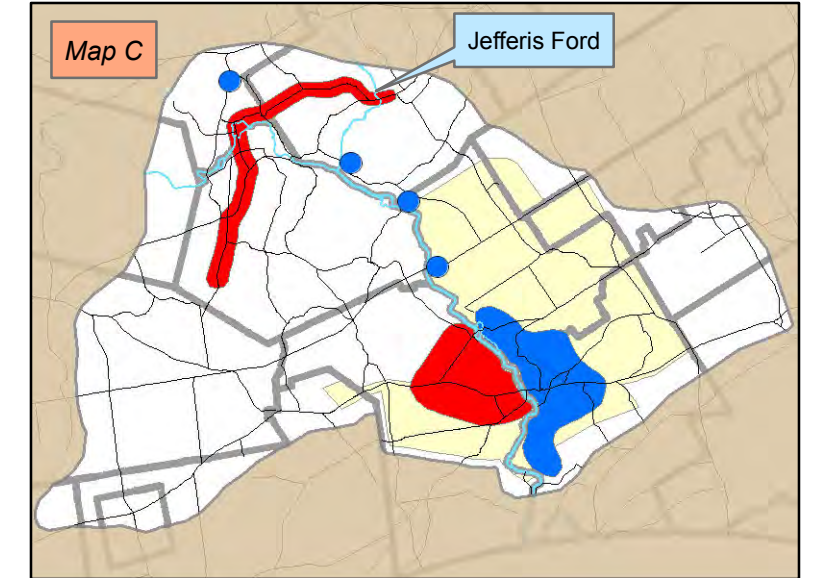
**5:00 to 6:45 AM (British Begin to March)**



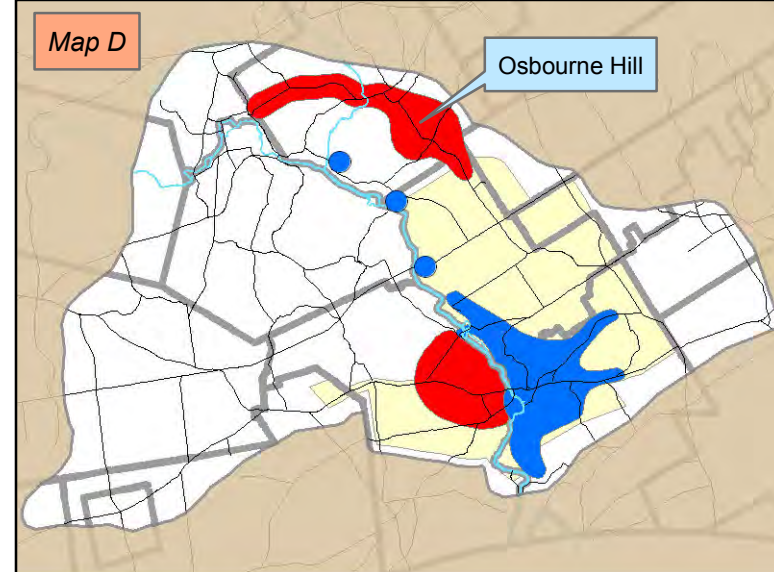
**7:00 to 9:15 AM (British Cross Trimbles Ford)**



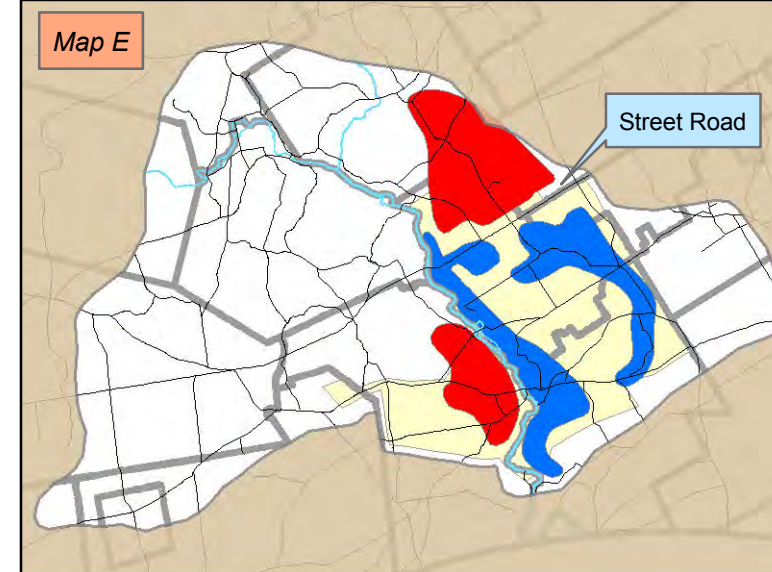
**9:30 to 11:45 AM (British Cross Jefferis Ford)**



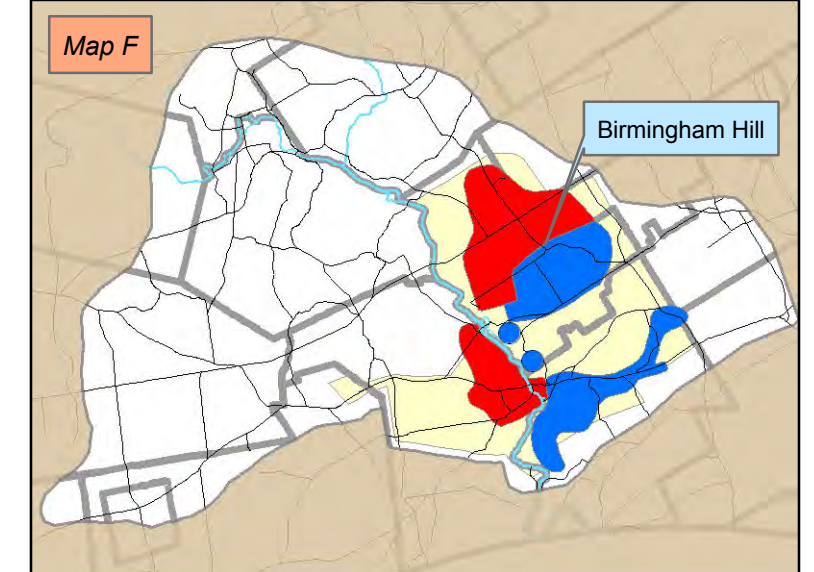
**Noon to 2:15 PM (British Form Lines)**



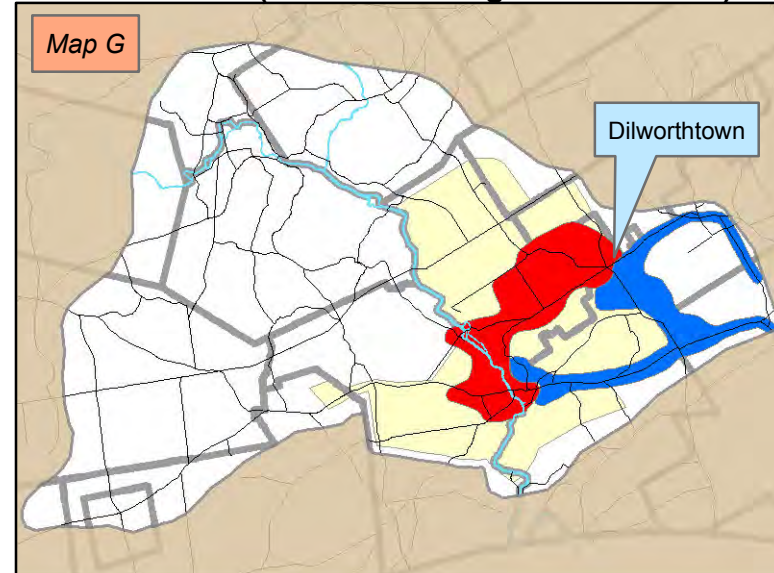
**2:30 to 4:45 PM (British Attack)**



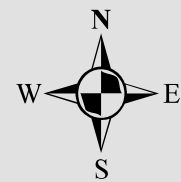
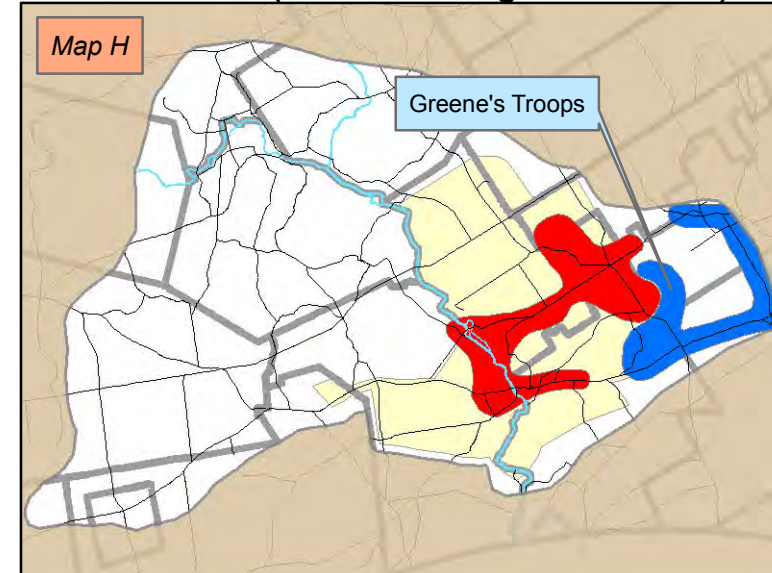
**5:00 to 5:45 (British Advance)**



**6:00 to 6:45 PM (American's Organized Retreat)**



**7:00 to 7:30 PM (Greene's Rearguard Defense)**



Source:  
Chester County Planning Commission, 2012; ABPP  
Survey 2010.

This map was digitally compiled for internal maintenance and developmental use by the County of Chester, PA to provide an index to parcels and for other reference purposes. Parcel lines do not represent actual field surveys of premises. County of Chester, PA makes no claims as to the completeness, accuracy or content of any data contained herein, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred, with respect to the information or data furnished herein.

**Brandywine Battlefield  
Chester & Delaware Counties, PA**

***Battlefield Preservation Plan***









1.5 0.75 0 1.5 3 Miles

1 Inch = 3 Miles (1:190,080)

**Map 1.11  
Battle of Brandywine: British  
and American Areas of Control**



# Map Features

-  Engagements
-  Brandywine Creek
-  Battlefield Boundary
-  Municipalities
-  1777 Marching Corridors
-  County Boundary

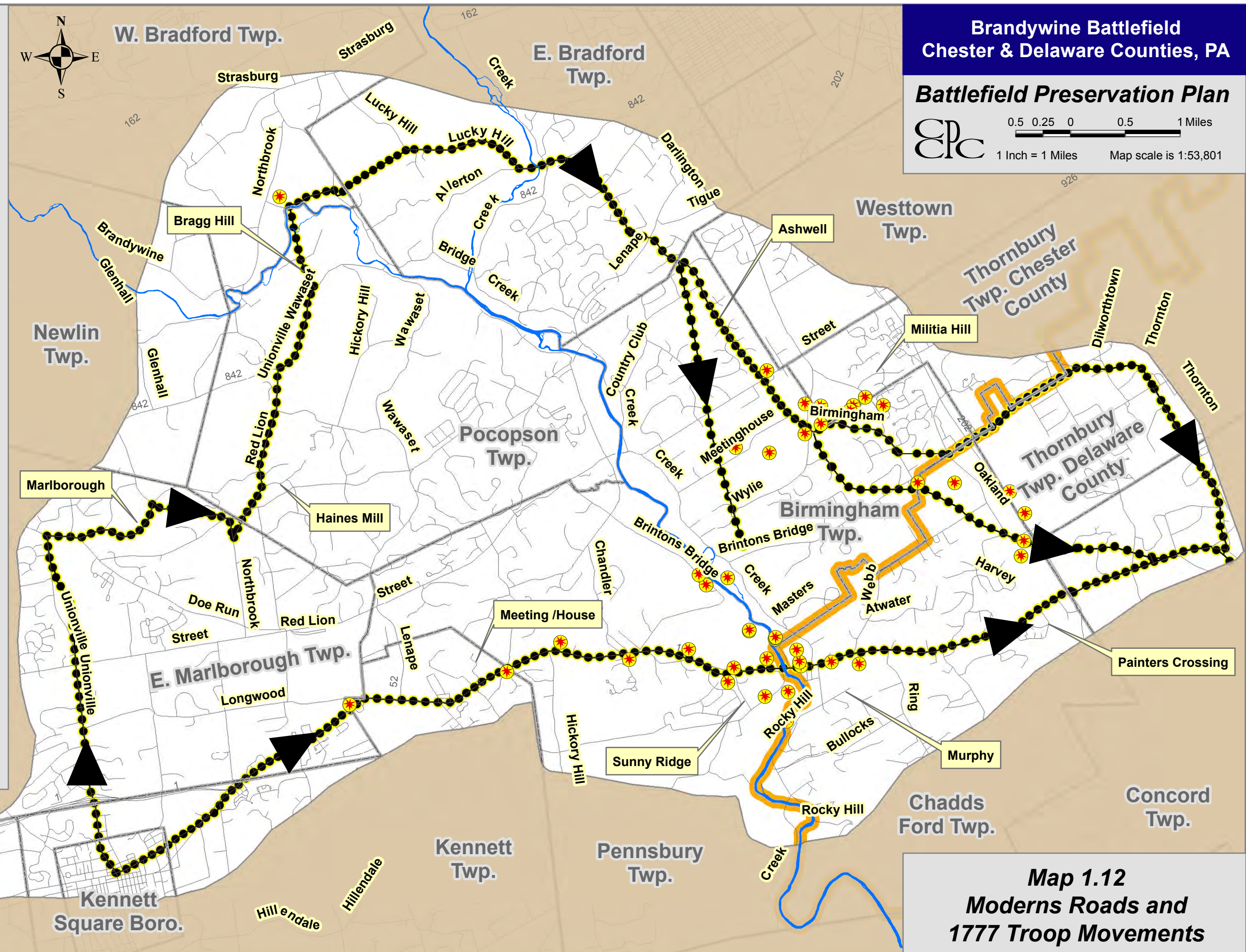
## Brandywine Battlefield Chester & Delaware Counties, PA

### Battlefield Preservation Plan



0.5 0.25 0 0.5 1 Miles

1 Inch = 1 Miles Map scale is 1:53,801



Source:  
Chester County Planning Commission, 2012; ABPP  
Survey 2010.

This map was digitally compiled for internal maintenance and developmental use by the County of Chester, PA to provide an index to parcels and for other reference purposes. Parcel lines do not represent actual field surveys of premises. County of Chester, PA makes no claims as to the completeness, accuracy or content of any data contained hereon, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred, with respect to the information or data furnished herein.

**Map 1.12  
Moderns Roads and  
1777 Troop Movements**

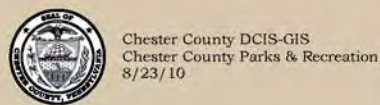
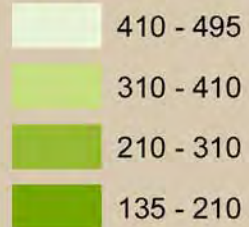


**Brandywine Battlefield  
Chester & Delaware Counties, PA**

**Map 3.4  
2010 KOCOBA Battle Analysis**



**Elevation in Feet**



**06:00-15:00  
Howe and Cornwallis'  
Flanking March**

**06:00  
British  
Army  
Camped  
at  
Kennett  
Square**

**06:00-09:00  
Knyphausen's  
March**

**09:00-11:00  
Howe and Cornwallis' Crossing of  
West Branch of Brandywine Creek  
at Trimble's Ford**

**11:15-14:00  
Howe and Cornwallis' Crossing of  
East Branch of Brandywine Creek  
at Jefferis' Ford**

**14:30-15:30  
Howe and Cornwallis  
rest and conceal troops  
behind Osbourne Hill**

**15:30-17:00  
Sullivan positions/partially conceals troops  
on wooded ridge of Birmingham Hill**

**16:30-18:00  
Cornwallis' Assault  
on Birmingham Hill**

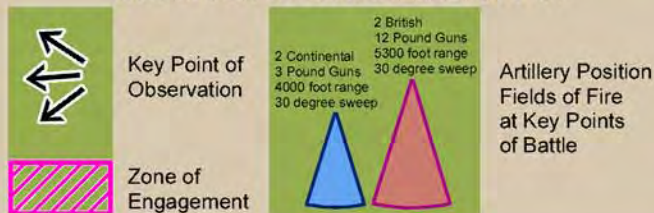
**17:30-19:00  
Greene conceals troops in woods  
south of Dilworthtown for  
rearguard defense**

**19:00-19:30  
Greene's  
Rearguard Defense  
near Dilworthtown**

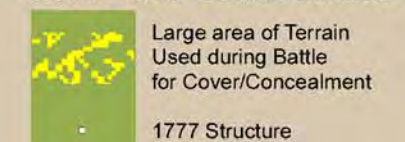
**19:30  
Continental  
Retreat  
to Chester**

**17:30-18:30  
Knyphausen's Assault on Chads' Ford/  
Crossing of Brandywine Creek**

**Observation and Fields of Fire**



**Cover and Concealment**



The five village clusters have an approximated number of structures. All other structures based upon the 2009-2010 Historic Resource Atlas Project.

**Obstacles**



**Avenues of Approach and Retreat**






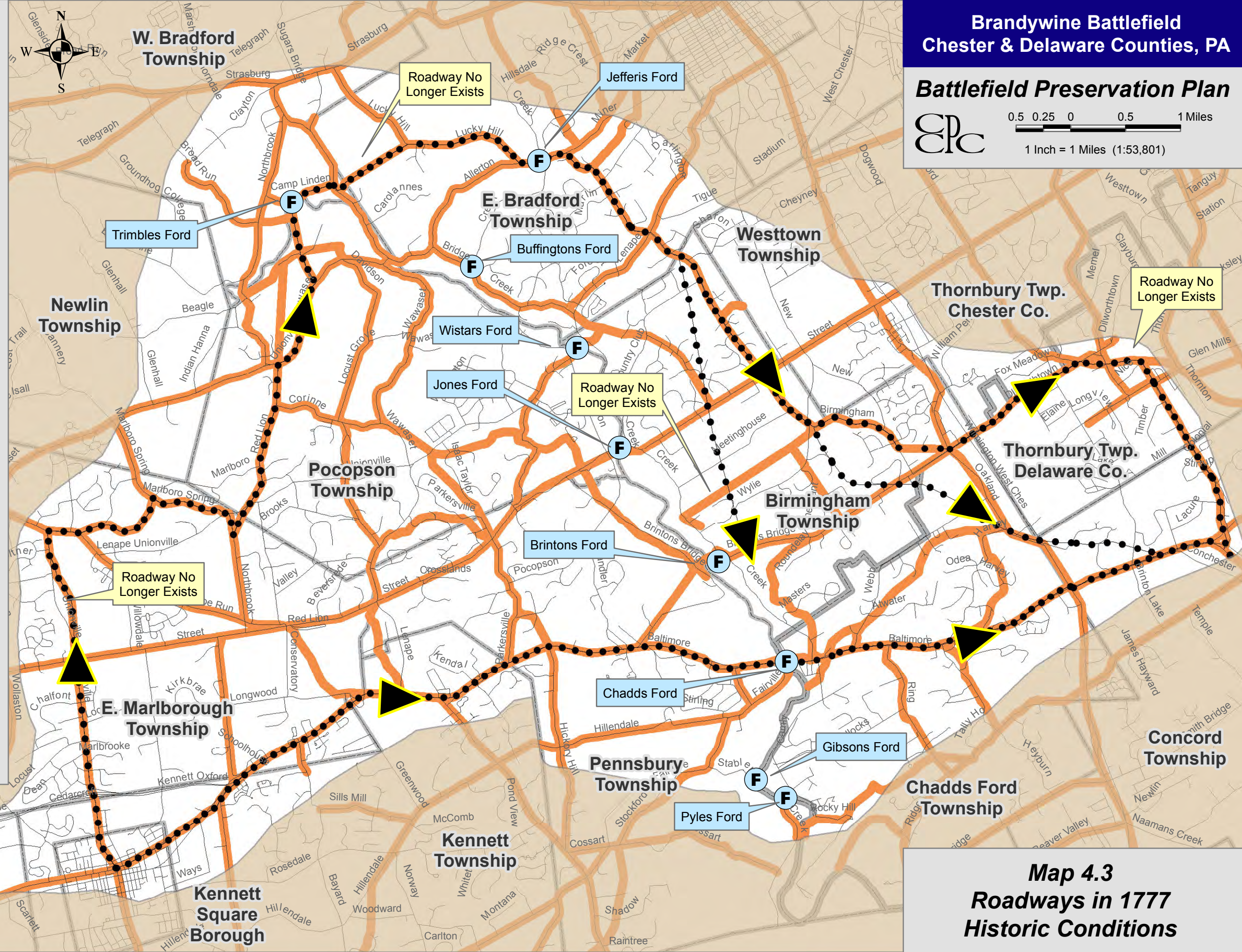
# Map Features

- F** Fords in 1777
- 1777 Marching Corridors
- Roads Existing in 1777
- Current Roads
- ▭ Municipalities

**Brandywine Battlefield**  
Chester & Delaware Counties, PA

**Battlefield Preservation Plan**


0.5 0.25 0 0.5 1 Miles  
1 Inch = 1 Miles (1:53,801)



Sources:  
Chester County Planning Commission, 2012; Chester County Parks and Recreation, Battle of Brandywine: Historic Resource Survey and Animated Map, 2010.

This map was digitally compiled for internal maintenance and developmental use by the County of Chester, PA to provide an index to parcels and for other reference purposes. Parcel lines do not represent actual field surveys of premises. County of Chester, PA makes no claims as to the completeness, accuracy or content of any data contained hereon, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred, with respect to the information or data furnished herein.

**Map 4.3**  
**Roadways in 1777**  
**Historic Conditions**