

2. Hidden Histories of America's Front Lawn: *mobile.mallhistory.us*

A. Overview

Each year, over 25,000,000 people come to the National Mall. Many of those visitors—parents with school-aged children, students and teachers, senior citizens, travelers from other nations—make their visit to the green expanses wandering between the Lincoln Memorial and the US Capitol prepared to learn about the nation's past and the many people and events commemorated within that space. Unfortunately, they are unlikely to find much in the way of interpretive content as they wander from monument to museum. If they do find content, it is basic visitor information, not stories that bring to life the hidden history of this public place. *Hidden Histories of America's Front Lawn: mobile.mallhistory.us* intends to make visible the rich past of the National Mall for its millions of on-site visitors through a website easily accessible by mobile phones that provides content and interpretation far superior to static guidebooks and existing mobile tours and applications.

The Roy Rosenzweig Center for History and New Media (CHNM) at George Mason University is requesting \$304,564 from the National Endowment for the Humanities (NEH), Division of Public Programs over three years to create a mobile-optimized website that provides visitors with access to a rigorous interpretation of the history and culture of the National Mall as a space where national identity is built, negotiated, celebrated, protested, and remembered. Using geospatial and thematic points of entry, this project will be an "Interpreting America's Historic Places" grant. Governmental entities that might be positioned to benefit from doing this kind of work such as the Smithsonian Institution or the National Park Service, simply do not have the resources to address the core investigative questions that underlie the changing history of the National Mall and to deliver the resultant content using the most appropriate and pervasive format and technology. CHNM is uniquely positioned to do this work, because of its long history of creating outstanding and award-winning humanities content for the web, together with its status as a leader in building and using digital tools for accessing historical materials.

B. Project Introduction

I. Description of Subject

Most visitors to the Mall see what appears to be a finished product—a deliberately planned public space symbolizing the history and values of the United States—but they do not know or see the unregulated zone of muddy grounds, with vegetable gardens, grazing cattle, or the slave pens that existed before the completion of the Washington or Lincoln Memorials. *Mobile.mallhistory.us* will highlight some of these stories and resources throughout the Mall's hidden history. Designed at George Washington's behest by Pierre L'Enfant in 1790, the Mall's varied history included the presence of slave pens on the corner of Seventh Street prior to the Civil War. In 1855, the construction of the Smithsonian Institution, now known as the Castle, changed the character of the Mall forever, fulfilling James Smithson's vision that his estate be used by the US government to found "an establishment for the increase and diffusion of knowledge among men." This landscape included the Washington Canal until 1872 when the waterway was filled and transformed into what is now Constitution Avenue. Shortly thereafter, the Mall's role as a site for memorialization began to take shape with the completion of the Washington Monument in 1884. The tradition of coming to the National Mall to protest and petition the federal government began most notably with the arrival of Jacob Coxey and his army in 1894. In the decades since those citizens protested about the crushing conditions of economic recession, other Americans have been drawn to the space to exercise their First Amendment rights to free speech and to making claims upon their government. Despite these marked displays of political activism and protest, the National Mall has also been a site for learning and celebration, ranging from the annual Smithsonian Folklife Festival, to concerts marking national holidays, to recent presidential inaugurations.

Thus, from its earliest days as a place of commerce and trade, to its development as a place for commemoration and memorialization, the landscapes of the Mall have been contested grounds. While known now as a place of protest and political expression, the Mall also has a long tradition as a public park and place of leisure and learning for Washingtonians and tourists who strolled along winding pathways in Victorian

gardens and learned from collections of insects and stamps in the galleries of the National Museum, now the Smithsonian Institution. Today, the Mall comprises 1,000 acres of landscaped parkland in the center of Washington containing 60 statues and scores of memorials. Four points define its parameters: two miles separate the United States Capitol building to the east and the Lincoln Memorial on the west; on a nearly-perpendicular axis, the White House lies to the north and the Jefferson Memorial to the south. At the center, the Washington Monument serves as a hub, a symbol of the nation's origins and a unifying focal point. Few people, outside of a handful of historians, know the history of this important public space because these stories are not visible or available on the Mall itself.

II. Interpretative Approach

With support from the NEH, CHNM plans to share the hidden history of the National Mall with visitors by delivering rich content and historical interpretation of that space to their mobile devices. The fundamental interpretive approach of *Hidden Histories* is to introduce the popular Mall visitor to the history of the space and its development, together with the social, cultural, and political events that have transpired there by presenting this material using geospatial and thematic modes of access. Unlike a traditional linear narrative guidebook, this website will allow users to engage in a self-guided exploration.

Our key strategy for making the history of the National Mall engaging for a visitor is to populate the website with intriguing, surprising, and compelling stories and sources that together build a rich historical context for the space and the ways that it has changed over time. Drawing on the extensive range of primary sources available at surrounding cultural heritage institutions, we will assemble a rich documentary record of the many historical facets of the National Mall. Moreover, we will add a layer of rigorous historical interpretation to that archive, raising provocative questions about the space, its role in national life, and the expressions of American ideals that have taken place there, that have engaged scholars for decades. (*For an example of this interpretation see Appendix C, "The Unseen Spectacular."*)

The user interface of *mobile.mallhistory.us* is integral to communicating the humanities themes and learning goals of the website. Centered on the two primary modes of access—the geospatial (Maps) and the thematic (Investigations)—the design interface communicates both the importance of place and change over time. These two points of entry will be supplemented by tags, a chronological browse, a powerful keyword search, and the ability for users to share content that they find engaging with others. All of these approaches will allow visitors to discover the hidden histories of the National Mall, and also will demonstrate that the Mall is a site for changing understandings of our national identity, political expression, and memorialization. (*See Section 3 Exhibition Walkthrough and Section 4 Design Documents.*)

III. Humanities Themes

The mobile-optimized website will provide content that addresses several significant humanities themes embodied in the history of the National Mall. *Hidden Histories* will engage the visitor in an active consideration of humanities themes that emphasize who we are as a nation and how individuals and groups have defined, changed, and memorialized that identity over time.

These themes include:

A. Historicizing Public Spaces: Despite the fact that most visitors are unaware of the National Mall's storied past, the space has an intricate history that has developed in conjunction with its local and national context over the course of the past two hundred and twenty years. From its earliest days, the National Mall has been a contested place where government officials, civic groups, and local residents have fought over how to use the space set aside by Pierre L'Enfant in his plan for Washington. Conflicts have arisen when government-sponsored architects and commissions changed the physical landscape, and the Mall lost some of its identity as a local park space for Washingtonians as it evolved into the monumental core for the nation by the early twentieth century. As a landscape, it is an historic document that tells multiple stories about the evolution of American identity and national consciousness. The Mall's geography, design, and structures reflect the influences of architects, urban planners, politicians, and citizens throughout its history who, in turn, reflect the issues and concerns of the times in which they lived.

The history of a public space goes beyond its landscape, buildings, monuments, and boundaries; it is a narrative encompassing cultural, social, and political history whose geography and meaning is intertwined with the history of the people who create it and use it. The National Mall serves as a space of inclusion and exclusion, reflecting shifts in balances of power within America from a privileged few to a more inclusive

body of public voices. These voices bridge categories of class, race, ethnicity, gender, and nationality, and they have negotiated and claimed niches in the national dialogue on the site of the Mall.

What Visitors will Learn: The National Mall is a changing space that has rich history, and has developed and accrued meaning over time.

Relevant Scholarship: Scholarship examining the contentious processes of building and using specific parks, monuments, and memorials began to evolve with works such as *The Park and the People*. Until then, histories of public parks and memorials focused on the landscaping or design imagined by famous architects or artists. Roy Rosenzweig and Elizabeth Blackmar saw the park as a social institution, with a complex history as a “democratic public space.”¹ Other works using a similar approach followed, including Kirk Savage’s analysis of Civil War monuments. These monuments acted as unifying symbols across the US that screened out discussions of slavery and post-war Jim Crow laws, in favor of interpretations that focused on the losses of primarily white soldiers. Kristen Hass offers an in-depth analysis of the conflicts that arose from the building of the Vietnam Veterans Memorial and how people decided to use the Wall as a memorial. Through each work, we see scholars trying to better understand how citizens imagine nation and their place in it.² Also, historian Carl Abbott observes that the social and political construction of Washington as place has been a very public process, and the history of the Mall is tied into that process. Richard Longstreth explores the Mall as a space in a constant state of transition and revision. In a series of chronologically arranged essays, *The Mall In Washington, 1791-1991*, he analyzes and places developmental phases of the space and its relationship to the city over time, emphasizing that the Mall is a living place “where diversity of function is as essential to its wholeness as is the diversity of its physical parts.”³

B. Defining and Articulating Civic Nationalism: The Mall’s physical landscape and its sites form a psychological space that brings together the imagined community of Americans in one place to say that we all share in the same principles of equality, justice, and liberty. Toward the end of the nineteenth century, the Mall developed into a locus of civic nationalism with citizens expressing opinions in the effort to change public policy. Marching on Washington has a long history as individuals gathered to fight for full citizenship rights and social equality, and debated the efficacy and morality of war. Once physically transformed to include wide open vistas, the Mall’s landscape became more conducive to gatherings and protests. Despite the 1882 law prohibiting the use of Capitol grounds for public demonstrations, Jacob Coxey and Carl Browne in 1894 began what would evolve into a tradition of using the space of the Capitol, Pennsylvania Avenue, and eventually the National Mall as we know it today as a stage for making claims on the public interest. In the intervening century, many of the nation’s most fraught public issues have been presented for consideration on that stage: women’s suffrage, the nation’s obligation to veterans, the struggle over white supremacy, African American civil rights, issues of war and peace, and countless others. Public spaces can be both static venues for historical memory and living sites where historical perspectives are constantly recreated and revised.

Monuments and memorials tell us what Americans thought was important to commemorate about particular people and events at particular points in time. They are selective representations of our collective national past. They are also places where meaning is transformed by the perspective and culture of the present. On the National Mall, monuments to individuals and groups, memorials of wars past, reminders of political events, and geographical markers define milestones in American history. They can prompt visitors to ask questions about who narrates history, and who is included and excluded, and thus consider broader issues about how we identify and shape our national heritage.

What Visitors will Learn: The National Mall and its sites for memorialization and commemoration serve as places where Americans gather to articulate their understandings of our national values, rights, and obligations, thus making the Mall a place of ongoing conversations about what it means to be American.

Relevant Scholarship: As the capital city and home to many symbolic monuments that glorify values of liberty and justice, Washington is a popular place for organized political expression. Historians Michael Ignatieff, Gary Gerstle, and others have defined civic nationalism as a core of political ideals based on fundamental human equality, individual rights, and democratic government. These shared political ideals have influenced the ways that Americans define and advocate for their rights and responsibilities as citizens, and they have influenced the history of the Mall. Lucy Barber explores the tradition of marching on Washington and the Mall beginning in the late nineteenth century. These protests reveal the increasing ways

that Americans used political action to create a national public space. And thus, activists from women's Suffragists, to the Bonus Marchers, to anti-war protesters in the Vietnam era integrated the Mall and its environs into their political expressions as they petitioned the government and the American people for change based on their rights as citizens.⁴

Until the 1980s, few works focused on the history of public spaces and their complex cultural roles in American society. New ideas about how personal and national narratives conflict emerged in the scholarship of memory and public history. One of the most influential contributors to the field of memory is Pierre Nora, who saw that societies create "lieux de memoire," or memory sites, such as archives, museums, and celebrations that have the power to be nation-building tools through asserting an authoritative narrative that simultaneously works to erase a personal, experiential memory of the past.⁵ Building on Nora's theory, some scholars have examined this process as a conflict and entanglement of official histories and personal memories. Michael Kammen and John Bodnar examine how commemorations offer conflicting interpretations of historical events. Official histories tend to emphasize unity and feelings of national pride, while personal memories tend to reflect a diversity of experiences of individuals or groups with first-hand knowledge of particular events, particularly wars. These conflicts appear through commemorations at memorials, as well as in popular culture, public art, and literature, as demonstrated by Marita Sturken.⁶

C. Tension between Local and National History: In its beginnings, Washington was the consummate federal city. It was conceived as a geographic and symbolic focal point articulating a national consciousness and situating the relatively new nation among other national capitals and centers of power. But Washington, DC grew as a city in its own right as well as the nation's capital—a municipal anomaly controlled by national lawmakers with no provision for local government and local franchise, a city founded on principles of participatory democracy in which racism and classism ran rampant. The addition of residential, recreational, and commercial districts, the creation of transportation networks, and the need to provide services to an increasing local population, challenged the viability of an idealized federal city dedicated to the business of national government. The changing landscapes and functions of the Mall reflected this jurisdictional tension.

What Visitors will Learn: While a central place for articulation of and struggles over national identity, the Mall is also a part of the vibrant everyday life for the residents of and workers in this federal city.

Relevant Scholarship: An important new work by Kirk Savage will figure prominently in our content interpretation. *Monument Wars* contextualizes the history, development, and cultural construction of the National Mall that asks readers to question their assumptions about how the Mall became the monumental core that it is today by weaving together the history of Washington's urban development with that of the Mall. Interests of the local and the federal often clashed over the grounds of the Mall. Savage's work tries to understand Washington a place in its own right that often is obscured when discussing the city's federal core and functions. Additionally, the history of the Mall cannot be explored without incorporating scholarship and sources that examine urban planning, and the contentious relationship between federal and local entities. Constance Green's two-volume Pulitzer Prize-winning work, *Washington, A Village and a Capital, 1800-1878* and *Washington, Capital City, 1879-1950* focuses on the history of the city of Washington, DC and remains unequalled in scope and coverage of DC's history.⁷ While Green's work remains the most comprehensive narration of the history of Washington, DC, the journal *Washington History* published by the Historical Society of Washington, DC since 1894 is a consistent source of secondary works. Finally, Zachary Schrag's *The Great Society Subway: a History of the Washington Metro* provides a comprehensive look at policy, principles of urban planning, and the political and socio-economic relationship of the city's core to its suburban areas and of the federal government to local jurisdictions—relationships which, at the end of the twentieth century, were extraordinarily more complex and tangled than those of earlier urban development in Washington, DC.⁸

Woven together, these works show how the Mall and its structures continue to shape notions of nation, patriotism, war, race, gender, and citizenship, while very little of this research makes its way back to on-site interpretation of these public places. Unfortunately, visitors may see individual monuments and read plaques attached to those structures, but more complicated and interesting stories behind their origins and subjects are missing. To correct this lack of interpretation, the project team and advisory board will present **Hidden**

Histories to the Mall's visitors with surprising and meaningful investigation topics, and carefully selected sources accompanied by rich historical interpretation. Their expertise in each of the thematic areas will inform these key content decisions. (See also Section 5, *Bibliography*.)

IV. History of Project to Date

Since the beginning of the twenty-first century, CHNM has worked to improve the way that scholars, students and teachers, and members of the general public use the web to access and work with archival materials (See *Organizational Profile* below). In doing so, our own work and our collaboration with partners in a variety of libraries, archives, and museums convinced us that we needed a generalized tool for cultural heritage web publishing. Based on these experiences and others with creating database-driven archival websites, we applied for and received a grant in September 2007 from the Institute for Museum and Library Services for three years to build and distribute a standards-based, open source web publishing software for cultural heritage institutions called *Omeka*. *mobile.mallhistory.us* will be built using *Omeka* as its core web publishing engine. *Omeka* has been downloaded over 10,000 times and is widely adopted by cultural heritage institutions, internationally, of all sizes and missions.

Meanwhile, CHNM's other projects fed back into *Omeka*'s development, including NEH-funded collaborative projects, *Gulag: Many Days, Many Lives* <gulaghistory.org>, *Bracero History Archive* <braceroarchive.org>, and *Children and Youth in History* <chnm.gmu.edu/cyh>, and the IMLS-funded *Object of History: Behind the Scenes with the Curators of the National Museum of American History* <objectofhistory.org>. Each of these projects showcases CHNM's expertise in the realm of digital public history: as historians with subject-matter knowledge and as technologists with expertise in writing and designing for the web and in developing software appropriate to manage and present historical content online. The *Omeka* software currently provides the robust and flexible infrastructure that we will need to produce *Hidden Histories*.

To further extend the capabilities of *Omeka* beyond its core, in 2009 the Samuel H. Kress Foundation awarded CHNM with development money to build additional plugins and to research and experiment with mobile formats. Our research led us to create *Mobile for Museums* <chnm.gmu.edu/labs/mobile-for-museums> where we published an overview of how museums were using mobile technology to engage with users and offered suggestions, based on this research, for what might constitute as best practices for cultural heritage institutions developing with mobile technology. While we developed a prototype for a mobile-optimized cultural heritage website called *Art in the City* <dev.omeka.org/artinthecity>, and a set of *Omeka* plugins for increased mobile access, our work was merely a proof-of-concept. The scope of the Kress project was limited to research. With additional resources from the NEH through this grant, we will implement a fully-functioning, content-rich mobile website that will serve as a replicable example for other cultural heritage institutions.

V. Relationship to Other Projects

With respect to mobile work, in addition to CHNM's *Art in the City* mobile website prototype, the *Omeka* software is running the award-winning *Cleveland Historical* <clevelandhistorical.org> mobile website (also available as iPhone and Android web apps). *Cleveland Historical* is an excellent example of how to present historical materials and offer a deep interpretative layer that works to uncover stories from Cleveland's neighborhoods, and its industrial and commercial roots. Other place-based mobile applications offer different experiences. Apps such as *PhilaPlace* <philaplace.org> and *HistoryPin*, <historypin.com> allow users in specific locations to use the camera view on their phones to display historical images overlaid onto the modern view to create an historical comparison (sometimes referred to as Augmented Reality). Both sites rely on user-generated images and stories, while *PhilaPlace* offers more consistent historical content than *HistoryPin*.

Currently, there is very little available for the mobile user standing on the Mall seeking historical information about the space or its sites. The National Park Service has recently released a free iPhone app that provides users with excellent orienting information, brief introductions, and an album of materials for each of the seventy NPS sites on the Mall. While this app addresses existing physical structures, there are no larger themes or intellectual connections made among the sites. On the Mall, the NPS reaches other visitors by offering free cell phone tours recorded by Park Rangers. While very informative, their offerings are limited to the Lincoln Memorial, the First Amendment, and the Cherry Blossom Festival. The Smithsonian Institution, in partnership with commercial developers, began offering mobile applications for iPhone and

Android-enabled devices. The *goSmithsonian Trek* takes users into nine different museums to answer questions on a scavenger hunt, and asks them to perform tasks such as writing haikus and photographing sunbursts. The National Museum of Natural History released exhibition-related applications, *MEanderthal* (free), *It's Tyrannosaurus Rex* (\$2.99), *Leaf Snap* (free), while the Hirshhorn Museum created *Yves Klein*, (\$1.99), and the National Museum of the American Indian launched a bilingual app, *Infinity of Nations* (free). Some of these apps require strong wireless and plenty of drive space on a device, because the applications force users to download large amounts of data in order to access exhibition content (69.3mb for *Infinity of Nations*, for example). Finally, Android and iPhone owners will find two paid applications to download for touring the Mall that provide basic descriptive information of each point of interest that is then plotted on map, but lacks historical background.

Wireless is now available on the Mall for all visitors, but its strength favors visitors using the mobile web, not downloading heavy apps. There are very few mobile-optimized websites discovered when Googling for information about the Smithsonian or National Mall and Memorial Park. One notable exception is the National Air and Space Museum that recently launched a mobile-optimized website <mobile.nasm.si.edu>.

C. Description

CHNM will create a mobile-optimized website that will provide users with historical interpretation of their surroundings and access to a deep collection of primary sources that illuminate the Mall's rich past. Thus, as visitors traverse the Mall's extensive acreage on foot, they will be able to freely access ***mobile.mallhistory.us*** by using their phone's web browser. Our decision to design for the mobile web is based on our goal to reach the largest percentage of potential visitors to the Mall, and most mobile devices come with a mobile web browser. Since the website will be designed for mobile web browsers, it will not be constrained by the quickly evolving world of mobile application development protocols and will be accessible to the broadest audience of users and mobile devices, including international visitors because of the availability of free wifi in most areas of the Mall. This approach provides us with other advantages as well. Primarily, we will be able to produce the main mobile-optimized website to serve on-site visitors, as well as an extended version of the website for off-site users who may be accessing the content from a personal computer with a full-sized monitor and a fully-featured operating system. ***Hidden Histories*** will be a completely free resource, available to all user without restriction. Additionally, since we are building the website using open-source software, we will release all code from the project and will create a guide for other cultural heritage professionals to use the same software to create place-based interpretive experiences for their visitors. (See Appendix B for a detailed discussion of the technical infrastructure.)

I. Mobile-Optimized Website

a. Primary Navigation:

1. Maps (geospatial): Users will have the capacity to interact with layers of content arrayed on a series of seven historical maps. In the words of Abby Smith Rumsey, Director of the Scholarly Communications Institute, "As cultural artifacts, maps become interpretive objects that themselves play roles in events, decision-making, propaganda and persuasion, and inspiration and appreciation, among other things."⁹ The selection of the maps and the associated content creates an implicit interpretive environment that shapes the users engagement with historical questions. We will use maps from key historical moments to situate users on the Mall within the environment of an historic period, such as L'Enfant's plan as articulated by Ellicott in 1792, or the 1929 National Capital Park Planning Commission Scheme. (See Section 6, Object List for examples.) The maps will be geo-rectified and cropped to focus on the National Mall as we have defined it above. Then, we will geo-locate the primary sources that make up the core content of the site, including not only important monuments, statues, memorials on the Mall, but also the location of particular events and a full range of historical primary sources. Users will be able to click on individual items on the map, which will then push them to a detailed page that functions like a museum object label. In addition to the seven historical maps, we will include one contemporary map for wayfinding that will include current landmarks and museums, as well as bathrooms and restaurants.

2. Investigations (thematic): Users will be able to explore dozens of investigations organized under four historical themes (Commerce and Trade; Designs and Monuments; Politics and Protest; Work and Play), which will be framed for the user by a short contextualizing introductory video. This thematic approach will

allow users to deeply engage key questions about the history of the National Mall as a whole, across a range of places and time periods. Each investigation will be centered on a question, and will provide users with a brief introduction to the issue. That will be followed by a set of 4-6 primary sources, each with carefully crafted historical context that works together to help the user form an answer to the question. When browsing the investigations and their accompanying sources, users will connect the histories across different sites, rather than viewing individual sites as independent entities. This integrated approach demonstrates how the Mall has evolved as a public space with different structures and events influencing one another, and with various groups and individuals shaping the meaning and interpretation of that space. Finally, as a supplement to the investigations, each thematic grouping will also include a more directed scavenger hunt targeted at a secondary school-age audience. The scavenger hunts will be designed to encourage young adults to closely examine the built environment while learning about the past. (See Section 3, *Exhibition Walkthrough* and Section 7, *Sample Text and Illustrations for examples*.)

b. Website Items: All of the sources that constitute the heart of *mobile.mallhistory.us*'s content will be served from an *Omeka* archive and accessible from the **Items** tab. Each item in this archive will be geo-located and accompanied by a standardized set of Dublin Core metadata. Each source, accessed either through Maps, Investigations, or directly from Items will include a thumbnail image, basic source information (drawn from the metadata) that will include a historical interpretive annotation, citation information, links to related investigations and links to tags that provide access to associated materials.

The project team will research, identify, and choose items from the extensive range of primary sources available at surrounding cultural heritage institutions such as the Smithsonian Institution, the National Archives and Records Agency, the Library of Congress, the DC Public Library, and the archives and special collections of local universities. Examples will range from L'Enfant's original plan for the space to the debates over the World War II memorial placement. (See Section 6, *Object List for examples*.) Our choices will be guided by the latest scholarship and will draw on the broad experience of our primary team of historians. The corpus of sources will continue to grow throughout the duration of the grant. We will draw heavily on sources in the public domain, particularly sources that are not digitized or are not easily located with a standard Google search. We will work with institutions to secure proper copyright permissions for use on *Hidden Histories*. Upon completion of the grant period, the archive will include more than 400 historical items, comprised of at least: 75 places; 30 events; 20 people; 200 images; 50 documents; and 25 multimedia sources (ie, audio and video clips).

c. Secondary Navigation: In addition to the primary points of access offered through the Maps and Investigations, users will be able to engage in less structured exploration of the content using the following means:

1. Tags: Each item of content on the website will be assigned a series of keyword tags by the content team. Users then will be able to pursue their own interests and explore content cross-linking using keyword tags and subject associations. A tag such as "concert" might turn up sources on the first Memorial Day celebration, the Marion Anderson concert at the Lincoln Memorial, and Earth Day.

2. Timeline: For users who would like to take a chronological approach to content, we will provide a list of items sorted by date or era to browse.

3. Search: Users will be able to access a powerful keyword search engine from the footer of every page in the website to query the website, giving users access to every element of the content.

d. User Feedback and Sharing:

1. Talkback: As part of the project's audience evaluation, there will be a feedback feature in which users can answer a set of questions on the website either by filling out a form or by placing the call from their mobile phone. A Skype <skype.com> account will be set up to accept voicemail messages, and the users will be prompted to answer questions, such as: What did you learn today? or Were there any technical problems? If so, tell us.

2. Share: Since users are increasingly expecting connectivity between social media websites and their mobile devices, the *mobile.mallhistory.us* website will incorporate a **Share** function, allowing users to send items to social networking websites or via email by choosing an icon appearing at the bottom of every page. This allows the user to send content to friends or to themselves to access from any device (mobile or PC) later. From a standard personal computer, the user would be able access a website that differs from the

mobile site in three key ways. Given the larger screen available to such devices, we will provide access to high resolution, full-sized images and full transcriptions of documents. Similarly, we will serve the full complement of available Dublin Core Metadata for each item, rather than limited description and citation available to mobile users. Moreover, we will provide users with a way to browse the entire archive based on item type (map, place, event, person, still image, document, or multimedia), in addition to the standard ways of browsing chronologically or by tags. Finally, off-site visitors will have access to a faceted search of the archive powered by the Solr engine. This search engine will allow for more finely-honed queries than are possible with the keyword search available to the mobile website.

II. Resources for the Public History Community

We will use this combination of technologies not simply to build this mobile-optimized interpretive website, but also to produce a national model for cultural heritage institutions that want to capitalize on the ubiquity of mobile devices as a way to deliver rich humanities content to visitors.

a. Guide to Creating Interpretive Mobile-Optimized Websites for Cultural Heritage Sites: We will also create a guide to producing interpretive mobile-optimized websites for cultural heritage sites and make it available electronically in the CHNM Essays on New Media database and the *Omeka* website.

b. Omeka Plugins: We will release all of the code, for free, so that anyone running an *Omeka*-based website will be able to replicate this model for creating a history-based mobile websites. In building the infrastructure for the website, we will create an *Omeka* mobile plugin that will allow for the website to serve different versions of the individual item page based on the kind of computing device, either smart phone or standard personal computer. We will release this plugin as open source software through the *Omeka* add-ons directory.

D. Audience

I. Visitors to the Mall

The National Mall sees 25 million visitors each year and is the biggest attraction in Washington, DC. In fact, in 2009, the National Mall was one of only a few American tourist attractions where visitor traffic increased during the financial downturn, despite decreases in the number of visitors to Washington, DC as a whole. Nearly all of those 25 million people visit one or more of the Smithsonian museums lining the Mall. Visitor figures from the National Park Service for individual memorials on the National Mall are equally impressive and range from approximately 2.5 million to the Franklin Delano Roosevelt and Jefferson Memorials to 5.2 million and 4.4 million to the Lincoln Memorial and Vietnam Memorial.¹⁰

Included among these visitors are individual and groups of tourists who travel to Washington from across the US and the world: large numbers of middle and high school students travel to Washington, DC on school-sponsored field trip; small and large multi-generational family groups; veterans making pilgrimages to war memorials or commemorative events; and Washington DC area residents come to the Mall to exercise, visit museums, and participate in festivals. Together these visitors form the core audience for *Hidden Histories*.

These millions of visitors to the National Mall also represent a population who carries cell phones, smart phones, tablets, and other mobile devices in their backpacks and pockets. The number of people accessing the web with a mobile device is increasing across all groups of users. According to the Pew Internet Research Center's latest report, 83 percent of all American adults own a cell phone, and 42 percent of them own smart phones. Those owners are taking advantage of the wide range of their phones' capabilities, including sending emails, browsing the Internet, texting, taking photographs, and accessing social networks. African Americans and Latinos are more connected to the web through their phones than PCs, as are younger Americans. The mobile web is growing so rapidly that recent estimates by Morgan Stanley project that more users, across all demographics, will connect to the Internet via mobile devices than desktop PCs within 5 years. This ubiquity of mobile devices and their use has made many Americans to expect to find mobile-accessible websites and content when they are visiting new places.¹¹ Wireless access is available on the Mall. Its signal strength, however, is strained by thousands of people simultaneously using it, making mobile web browsing more reliable than applications that require more bandwidth to function well.

II. Off-site Users

Designing *Hidden Histories* for the web means that we can make enhanced and additional content available on a desktop browser that might be too cumbersome to view from a mobile device while walking on the Mall. Prior to visiting the National Mall, individuals and tour group organizers will be able to do preliminary historical research by visiting <http://mobile.mallhistory.us>. Additionally, users arriving at *Hidden Histories* from their mobile devices will be able to access the website from their home computers for in-depth readings or further exploration of the website's content. The website's Share function allows users to email page and item links to their personal accounts, or they can bookmark those same pages using their preferred service. Once at home or back in their hotel rooms, they can more fully explore the site content. Finally, students and teachers doing research about the history of the National Mall will be able to browse the website in their classrooms.

III. Public Historians and Cultural Humanities Professionals

As a secondary goal, we also see a great opportunity to help advance the fields of public history and library-museum-archive technology by offering an open source and replicable example for cultural heritage professionals who want to deliver cost-effective history content to their visitors through the mobile web, rather than by developing expensive, single-use, platform-specific applications.

E. Organizational profile

Since 1994, CHNM <chnm.gmu.edu> has used digital media and computer technology to democratize history—to incorporate multiple voices, reach diverse audiences, and encourage popular participation in presenting and preserving the past. CHNM combines cutting edge digital media with the latest and best historical scholarship to promote an inclusive understanding of the past as well as broad historical literacy. CHNM's work has been recognized with major awards and grants from the National Endowment for the Humanities, the Department of Education, the Library of Congress, the Institute of Museum and Library Services, the National Historic Records and Publication Commission, and the Sloan, Mellon, Hewlett, Rockefeller, Gould, Delmas, and Kellogg foundations. CHNM maintains more than four dozen online history projects directed at diverse audiences, making them available at no cost through its website.

In 2010, CHNM's websites had almost 500 million hits and over 16 million visitors—making it one of the busiest non-commercial history education sites on the Web. CHNM's staff of more than forty people (including thirteen with doctoral degrees) includes those skilled in all aspects of digital history—database architecture, software engineering, web development and design, preservation, and archiving. CHNM has conducted more than \$20 million in grant funded research, boasts an annual budget of nearly \$2 million, and enjoys a nearly \$3 million endowment (achieved with the assistance of two Challenge Grants from NEH), all of which guarantee its long-term stability.

CHNM has been a leader in using digital media to improve the understanding of history by students, in building digital archives, and in mounting online exhibitions—often in partnership with museums and libraries. CHNM maintains several very popular and award-winning educational projects such as *History Matters* <historymatters.gmu.edu>, *Liberty, Equality, Fraternity: Exploring the French Revolution* <chnm.gmu.edu/revolution>, *Historical Thinking Matters* <historicalthinkingmatters.org>, the *National History Education Clearinghouse* <teachinghistory.org>, *Making the History of 1989* <chnm.gmu.edu/1989>, and the *Object of History* <objectofhistory.org>, a partnership with the National Museum of American History. For this work, CHNM has won (or shared) the American Historical Association's James Harvey Robinson Prize four times. CHNM has also assembled and actively maintains several large-scale, and award-winning digital archives, including the *Hurricane Digital Memory Bank* <hurricanearchive.org>, the *September 11 Digital Archive* <911digitalarchive.org>, a partnership with the Library of Congress, and the *Bracero History Archive* <braceroarchive.org>, a partnership with the National Museum of American History, University of Texas at El Paso, and Brown University. CHNM also hosts and edits the *Papers of the War Department, 1784-1800* <wardepartmentpapers.org>, which makes freely available online to scholars, students, and the general public some 55,000 documents of the early War Department that were lost to fire in 1800.

CHNM has also emerged as a leading developer of free tools and software for museum professionals, librarians, scholars, and students. CHNM currently heads two major open source software development projects, one designed to assist the consumers of digital content, the other to help producers of

digital content. For content consumers, CHNM offers *Zotero*, a free, open source, easy-to-use research tool that helps researchers gather and organize resources, and then annotate, organize, and share the results of their research. Funded by major grants from IMLS and the Mellon and Sloan Foundations, *Zotero* has received several awards, including PC Magazine's "Best Free Software" award for two years running. For content producers, CHNM offers *Omeka*, a web publishing tool oriented toward the needs of cultural heritage institutions. *Omeka* has seen tremendous success with over 10,000 downloads and a robust, growing, and active open source development and user communities.

F. Project Team

I. Staff (See Section 8 for Resumes and Letters)

Sharon M. Leon (Primary Investigator) is Director of Public Projects at CHNM and Associate Professor in the Department of History and Art History at GMU, and 20% of her time for 12 months of the three years of the grant will be provided as cost-share by the University. Leon has a PhD in American Studies from the University of Minnesota (2004). At CHNM, she has directed a host of public history archiving, exhibit, and software projects. Leon will provide executive leadership for the project, including the management of the staff and budget resources at CHNM. Leon will oversee all the content development, technological implementation, testing, outreach, and evaluation. Together with Crew, O'Malley, Ghajar, and the Graduate Research Assistant, Leon will develop the investigation questions, and compose the rich annotations that will accompany each item available on the website. Also, Leon will work with Ghajar to draft the *Guide to Creating Interpretive Mobile-Optimized Websites for Cultural Heritage Sites*.

Spencer Crew is Robinson Professor of History at GMU, and 10% of his time for nine months of the three academic years of the grant will be provided as cost-share by the University. Crew has a PhD in History from Rutgers University. He previously served as president of the National Underground Railroad Freedom Center for six years and worked at the Smithsonian Institution's National Museum of American History (NMAH) for 20 years, directing the museum for nine of those years. Crew will collaborate with the other historians on the team in shaping the Investigations, selecting the content items, and writing the item annotation and historical interpretation. His experience writing exhibit labels as a curator will also shape the team's approach to crafting text appropriate for mobile readers. He will work with his students to evaluate and test the website as it is in development. Finally, he will also consult on outreach.

Michael O'Malley is Associate Professor in the Department of History and Art History at GMU, and 15% of his time for nine months of the three years of the grant will be provided as cost-share by the University. O'Malley has a PhD in History from the University of California, Berkeley (1988). As Associate Director of CHNM, he has participated in a host of award-winning education and public history projects. O'Malley will collaborate with the other historians on the team in shaping the Investigations, selecting the content items, and writing the item annotation and historical interpretation. Also, he will create a contextualizing video and will create a scavenger hunt for each of the four investigation categories. Finally, he will work with his students to evaluate and test the website as it is in development.

Lee Ann Ghajar is a Digital History Associate at CHNM and is ABD in History at GMU. Ghajar will serve as Project Manager for the grant, overseeing the acquisition of maps, images, and multimedia content of the website. She will also be responsible for coordinating the project team's work on narrative content and item metadata creation. Thus, she will work closely with the Graduate Research Assistant to research and develop the site content. Second, Ghajar will perform the outreach for the project. Finally, Ghajar and Leon will work together to draft the *Guide to Creating Interpretive Mobile-Optimized Websites for Cultural Heritage Sites*.

Patrick Murray-John is a Senior Web Developer at CHNM and is a Research Assistant Professor. Murray-John has a PhD in Anglo-Saxon Literature from the University of Wisconsin, Madison. He will be responsible for the technical infrastructure necessary to create the mobile-optimized website, including the implementation of the *Neatline* software, and the creation of the *Omeka* plugin that will serve different content to mobile devices than that which is served to a personal computer.

Kim Nguyen is a Web Designer at CHNM. Nguyen has a Bachelors of Fine Arts in Visual Communications Design from Virginia Tech University. She will be responsible for the graphic design of the website, including the implementation of the CSS3 and HTML5 technologies necessary to render the rich audio and visual content of the site across all mobile devices.

Graduate Research Assistant (TBD) will assist with content research and metadata creation. The assigned GRA will be an active student in GMU's History PhD degree program.

II. Advisory Board

We have also assembled an Advisory Board that brings together expert historians (Susan Piedmont-Paladino, Kirk Savage, Zachary Schrag, Mark Tebeau), educators (Sarah Richardson Whalen) and cultural heritages professionals (Nancy Proctor, and Robert Sutton). The Advisory Board will be active through all stages of the project, meeting formally twice a year for large conference calls, but participating in several smaller or individual consultation calls as we develop particular elements of the content. (*See Section 8, Resumes and Letters.*)

G. Work plan

1st Six Months: May 2012-October 2012

Content Development: The content team (Leon, Crew, O'Malley, Ghajar, and GRA) will spend the first six months in an intense period of research and planning. They will survey the preliminary list of source items, and outline ten individual questions for each of the investigation categories, assembling at least five archival sources, people, places, and events for each question. Ghajar and the GRA will also secure high-resolution images of the seven historical maps that will serve to anchor the Maps point of entry. Then they will geo-rectify those maps so that they will work with *Neatline*.

Programming: The web development team will begin the installation and customization of the technical infrastructure for the website. Under the oversight of Leon, Murray-John will create a basic *Omeka* installation. Then, he will do the preparation to run the *Neatline* plugins, including installing Geo-Server to enable the computation of geospatial data. (*See Appendix B for a detailed discussion of the technical infrastructure.*)

Advisory Board: During the first bi-annual Advisory Board conference call, the advisers will review the content team's initially planning and proposed content, offering suggestions and additions.

2nd Six Months: November 2012-April 2013

Content Development: The content team will begin work on materials for the "Commerce and Trade" investigations. They will finalize their content selections, and Ghajar and the GRA will secure high-resolution copies of all digital files, and the requisite usage permissions. Then, Leon, Crew, O'Malley and Ghajar will work together to write the historical annotations that frame each piece of content in relationship to its investigative question. Second, Leon, Ghajar, and the GRA will create a full set of Dublin Core Metadata for each individual item. Finally, O'Malley will create both a video introduction to the "Commerce and Trade" investigations, and a scavenger hunt for the category.

Programming: Murray-John will design and build a mobile versioning plugin for *Omeka* that will enable the website to serve different versions of core pages based on the specifications of the user's computing device.

Advisory Board: During the second bi-annual Advisory Board conference call, the advisers will review the content for the "Commerce and Trade" investigations, and offer suggestions for revision.

3rd Six Months: May 2013-October 2013

Content Development: The content team will begin work on materials for the "Designs and Memorials" investigations. They will finalize their content selections, and Ghajar and the GRA will secure high-resolution copies of all digital files, and the requisite usage permissions. Then, Leon, Crew, O'Malley and Ghajar will work together to write the historical annotations that frame each piece of content in relationship to its investigative question. Second, Leon, Ghajar, and the GRA will create a full set of Dublin Core Metadata for each individual item. Finally, O'Malley will create both a video introduction to the "Designs and Memorials" investigations, and a scavenger hunt for the category.

Design and Testing: Once the infrastructure is in place, Nguyen will design the user interface for the website, including producing wireframes and Photoshop mockups that will be tested with representatives of our core audience. (*See Evaluation and User Testing in Section 3, Exhibition Walkthrough.*)

Advisory Board: During the third bi-annual Advisory Board conference call, the advisers will review the content for the "Designs and Memorials" investigations, and offer suggestions for revision.

4th Six Months: November 2013-April 2014

Content Development: The content team will begin work on materials for the “Politics and Protest” investigations. They will finalize their content selections, and Ghajar and the GRA will secure high-resolution copies of all digital files, and the requisite usage permissions. Then, Leon, Crew, O’Malley and Ghajar will work together to write the historical annotations that frame each piece of content in relationship to its investigative question. Second, Leon, Ghajar, and the GRA will create a full set of Dublin Core Metadata for each individual item. Finally, O’Malley will create both a video introduction to the “Politics and Protest” investigations, and a scavenger hunt for the category.

Testing and Revision: Based on feedback from the initial testing, Nguyen will revise the design and then produce a CSS3 and HTML5 prototype that will undergo further testing and revision. In addition to the user testing, we will conduct functional compatibility testing across a range of devices and browsers. This data will feed into the final design revision, and will culminate in the implementation of the final, functional user interface for the website.

Programming: Murray-John will implement the final design for the *Omeka* site, including the custom programming necessary to support the mobile and standard views, as well as the support of the multimedia content.

Advisory Board: During the fourth bi-annual Advisory Board conference call, the advisers will review the content for the “Politics and Protest” investigations, and offer suggestions for revision.

5th Six Months: May 2014-October 2014

Content Development: The content team will begin work on materials for the “Work and Play” investigations. They will finalize their content selections, and Ghajar and the GRA will secure high-resolution copies of all digital files, and the requisite usage permissions. Then, Leon, Crew, O’Malley and Ghajar will work together to write the historical annotations that frame each piece of content in relationship to its investigative question. Second, Leon, Ghajar, and the GRA will create a full set of Dublin Core Metadata for each individual item. Next, O’Malley will create both a video introduction to the “Work and Play” investigations, and a scavenger hunt for the category. Finally, Leon and Ghajar will write the initial draft of the *Guide to Creating Interpretive Mobile-Optimized Websites for Cultural Heritage Sites*.

Programming: Having completed the specific implementation of the technical infrastructure for *mobile.mallhistory.us*, Murray-John will begin work to generalize the *Omeka* plugins for release to the public through the *Omeka* Add-ons Directory. Finally, he will package the mobile-optimized website as both an iPhone and an Android app, for those users who prefer native applications to websites.

Advisory Board: During the fifth bi-annual Advisory Board conference call, the advisers will review the content for the “Work and Play” investigations, and offer suggestions for revision.

6th Six Months: November 2014-April 2015

Content Development: Based on Advisory Board feedback, Leon and Ghajar will revise the *Guide* and publish it on both the *Omeka* and CHNM websites.

Design and Programming: Based on the results of the evaluation conducted with GMU students, Nguyen and Murray-John will implement any necessary alterations to the design and function of the mobile-optimized website.

Launch: We will conduct a rolling launch of the site by making public five investigations in each of the four categories in December 2014 and another five investigations in March 2014. This schedule will allow for major public use of the site during the high traffic spring and summer seasons.

Outreach and Evaluation: During this period, Ghajar will coordinate our outreach campaign. (*See Marketing Plan in Section 3, Exhibition Walkthrough.*) Also, both Crew and O’Malley’s spring semester classes will work with Leon and Ghajar to test and evaluate the site. (*See Evaluation and User Testing, Section 3.*)

Advisory Board: During the second bi-annual Advisory Board conference call, the advisers will review the *Guide* and offer suggestions for revision before publication on the *Omeka* and CHNM websites.

H. Fundraising plans

The project has already received substantial contributions from GMU, both in the form of cost-sharing and in indirect expenses, which covers facilities and the maintenance of the data center. As a result, no additional fundraising is necessary to meet the project budget or the cost share requirements.