



## Executive Director's Recommendation

Commission Meeting: April 4, 2013

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<b>PROJECT</b> <b>Millennium Project</b> <i>Arlington National Cemetery</i> <i>Arlington County, VA</i>	<b>NCPC FILE NUMBER</b> <i>7457</i>
<b>SUBMITTED BY</b> <i>United States Department of Defense,</i> <i>Department of the Army</i>	<b>NCPC MAP FILE NUMBER</b> <i>1.61(38.00)43705</i>
<b>REVIEW AUTHORITY</b> <i>Federal Project in the Environs</i> <i>40 U.S.C. § 8722(b)(1)</i>	<b>APPLICANT'S REQUEST</b> <i>Approval of comments on concept design</i>
	<b>PROPOSED ACTION</b> <i>Approve comments as requested</i>
	<b>ACTION ITEM TYPE</b> <i>Staff Presentation</i>

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### PROJECT SUMMARY

The Army is proposing the development of the 26-acre Millennium Project site to increase interment and inurnment space at Arlington National Cemetery (ANC) located in Arlington County, Virginia. Construction would include casket burial sections, in-ground sites for cremated remains, and both columbarium niche courts and walls. The site would include two assembly areas for service participants, including Committal Service Shelters. The Army specified that building and site element construction should be suitable for the environment and complement the architectural theme and historical considerations of the National Cemetery at Arlington. Supporting facilities include restrooms, storage areas, water features, waterlines, sanitary sewer, storm drainage, stream restoration, landscaping, retaining walls, perimeter fencing, vehicle and pedestrian access roads and walks.

### KEY INFORMATION

- Site includes an 8.58-acre wooded parcel of land that is a contributing element of the 24-acre historic setting for Arlington House, as well as a portion of land what was then known as Fort Myer. These parcels were transferred to Arlington National Cemetery as part of the National Defense Authorization Act of 2002 (Public Law 107-107).
- Arlington House Woods are part of the historic setting for the Robert E. Lee Mansion, which is on the National Register of Historic Places.
- The Woods include stands of trees that vary in age from 145 to 235 years old. The current proposal will result in the loss of trees in the 145-year area, but will preserve 237 trees in the same area that would have been lost under an earlier design proposed in 2009. No trees on land under the jurisdiction of NPS will be removed.
- The National Park Service (NPS) retains jurisdictional control over a 12-acre, 235 year old tree stand which is closest to Arlington House. No trees in this area will be affected.

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- The current proposal also includes restoration of a stream through the Woods that was not part of the 2009 design as well as a stormwater detention facility that will treat and store stormwater from a nearby surface parking lot.
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## RECOMMENDATION

The Commission notes that:

- Arlington National Cemetery is projected to reach full capacity in 2023.
- In recognition of this fact, Congress directed the Secretary of the Interior to transfer a portion of the Arlington House Woods, then under the jurisdiction of the National Park Service, to the Secretary of the Army for the expansion of Arlington National Cemetery, under Public Law 107-107.
- Arlington House Woods are part of the historic setting for the Robert E. Lee Mansion, which is on the National Register of Historic Places.
- Section 106 of the National Historic Preservation Act directs federal agency officials to take into account the effect of the undertaking on any resources listed or eligible to be listed in the National Register of Historic Places.
- The Federal Environment Element of the Comprehensive Plan for the National Capital states that when tree removal is necessary, trees should be replaced to prevent a net tree loss.
- The creation of new burial sites in this area cannot be accomplished without substantial tree loss, including adverse effects to the Arlington House Woods.

The Commission also notes that the current proposal:

- Reflects the result of ongoing efforts to reduce adverse effects to the Arlington House Woods.
- Includes mitigation measures including stream restoration within the Woods.

The Commission therefore comments favorably on the concept design and directs the Department of the Army, in subsequent submissions, to:

- Continue to refine the design to minimize harm and provide appropriate mitigation through consultation as required by the National Historic Preservation Act.
- Continue to refine the Visual Impact Survey in ways that are responsive to consulting parties, including the National Trust for Historic Preservation and members of the community.
- Explore decreasing the width of the road bed in the area of the Arlington House Woods as a way of further reducing tree loss.
- Prevent a net tree loss by exploring the possibility of planting trees at Joint Base Myer Henderson Hall or on National Park Service property.

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**PROJECT REVIEW TIMELINE**

<b>Previous actions</b>	<b>No action</b>
<b>Remaining actions</b> <i>(anticipated)</i>	<i>– Preliminary and Final approval of site and building plans, June/July 2013</i>

*Prepared by Carlton E. Hart  
04/03/13*

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## I. PROJECT DESCRIPTION

### Site

Arlington National Cemetery (ANC) is located in Arlington County, Virginia, at the western terminus of Memorial Drive, directly across the Potomac River from the Lincoln Memorial. It is approximately 624 acres in size. Directly west of ANC is Joint Base Myer Henderson Hall, which was formerly two military installations: the former Fort Myer and the former Henderson Hall. Southeast of ANC is the Pentagon Reservation and the George Washington Memorial Parkway (GWMP) is on the eastern edge. GWMP is a National Park Service managed property. South of the site is the former Navy Annex Site, which is in the process of being transferred to ANC. On the grounds of the cemetery are several National Park Service managed properties: Arlington House and grounds and Memorial Avenue.



Figure 1: Site Context

The Millennium Project is located on a 26-acre site that is west and northwest of Arlington House. This site was created by using land transferred from Joint Base Myer-Henderson Hall, a part of the Arlington House woods and the existing maintenance yard for the cemetery. The moderately-sloping site includes existing trees in a park like setting, a portion of the Arlington House woods, a perennial stream and a historic boundary wall. There is also on-site evidence of prior stormwater damage from off-site drainage coming from what is now referred to as Joint Base Myer Henderson Hall. This damage is in the form of a drainage ditch that runs west to

east. The Army notes that this drainage problem was corrected several years ago with the construction of on-site detention at JBM-HH.

### **Background**

Mary Custis Lee was the owner of the Arlington House estate in 1861 when the United States seized it. It was not until 1864 that the United States began using the grounds as a cemetery. In June 1864, ANC was designated as a military cemetery by Secretary of War Edwin M. Stanton. In 1882, the Supreme Court overturned the government taking of the property and the government was required to officially purchase the estate.

ANC has grown in size since then and has become a revered place where deceased service members from every war since the American Revolution rest. It is also the final resting place for many statesmen, including former President John F. Kennedy. Today, ANC hosts major memorial events and ceremonies and has become a significant attraction for visitors of the Washington D.C. area. Its ongoing mission is:

*“On behalf of the American people, lay to rest those who have served our nation with dignity and honor, treating their families with respect and compassion, and connecting guests to the rich tapestry of the cemetery’s living history, while maintaining these hallowed grounds befitting the sacrifice of all those who rest here in quiet repose.”*

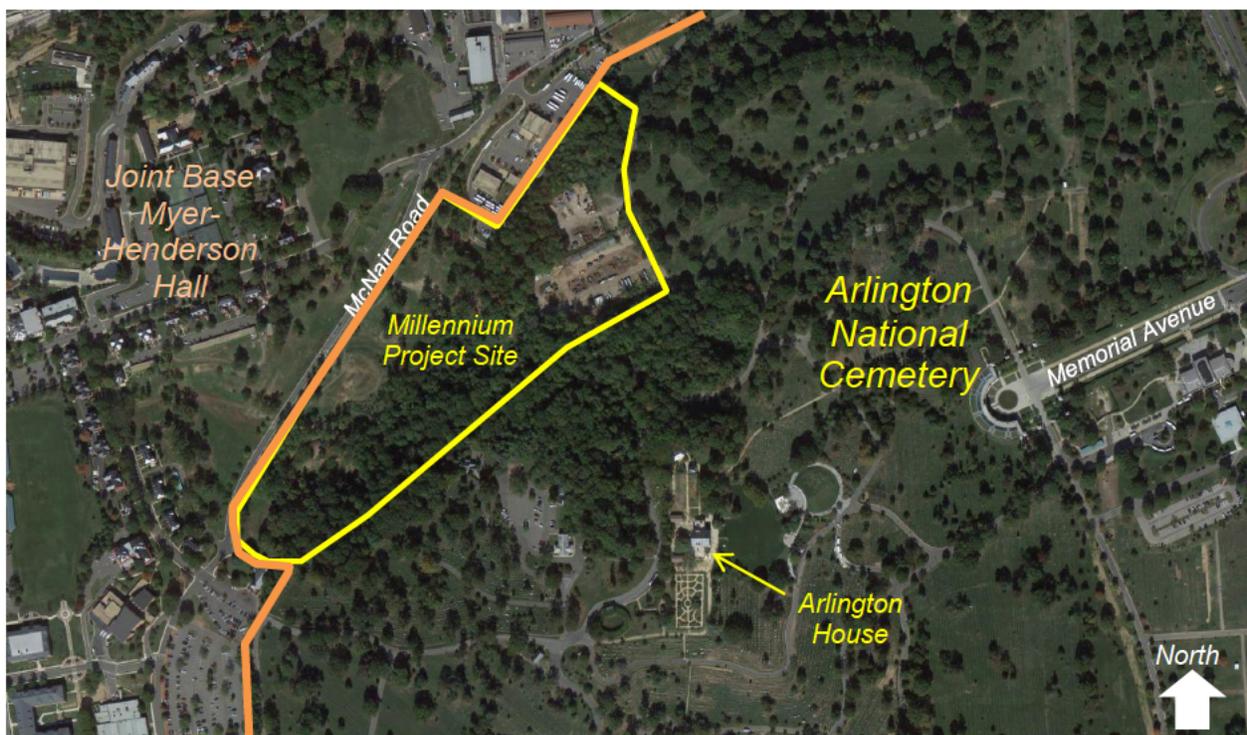


Figure 2: Arlington National Cemetery with Millennium Site

*Burials at ANC*

ANC is an active cemetery that is projected to reach full capacity in 2025. The Millennium Project, according to the Army, would extend the capacity for first-time interments by approximately seven to twelve years. Current trends show a distribution of approximately 40% for columbaria burials, 37% for casket in-ground burials, and 23% for cremated in-ground burials. Another cemetery expansion project at the former Navy Annex on the southern portion of ANC will further expand the ability of the cemetery to remain active.

In addition to in-ground burial, ANC has one of the larger columbaria for cremated remains in the country. Eight courts and a niche wall are currently in use in the southeastern portion of ANC, with 53,661 niches for cremated remains. In 2013 with the completion of Columbarium 9, another 20,292 niches will be available for use, raising the total available niche capacity to approximately 73,953 niches. The Commission reviewed all of the columbarium and most recently gave final approval for Columbarium 9 at its November 2008 meeting.

*Land Transfer*

In the 1990s, Congress recognized that ANC was nearing capacity. As expansion areas were limited the Millennium site was identified, to be composed of several different parcels including land owned by Joint Base Myer Henderson Hall, the National Park Service and the Army itself.

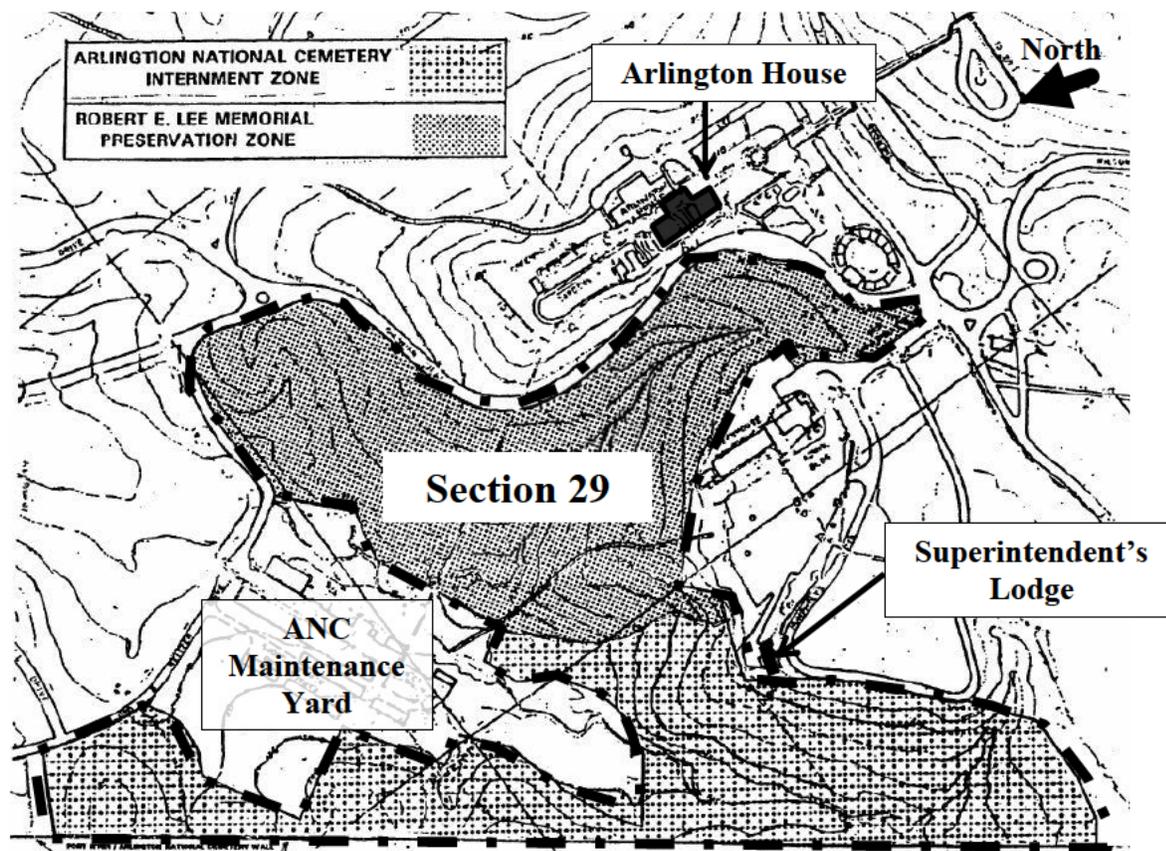


Figure 3: Section 29 map from Interagency Agreement dated 2/27/95



## Proposal

The Army is proposing the development of the Millennium Project site to increase interment and inurnment space at ANC. Construction would include casket burial sections, in-ground sites for cremated remains, and both columbarium niche courts and niche walls. The site would include two assembly areas for service participants, including Committal Service Shelters. The Army states that building and site element construction should be suitable for the environment and complement the architectural theme and historical considerations of the Arlington National Cemetery. Supporting facilities would include restrooms, storage areas, water features, waterlines, sanitary sewer, storm drainage, underground electrical and communications/information systems, stream restoration, landscaping, retaining walls, perimeter fencing, vehicle and pedestrian access roads and walks, and security systems.

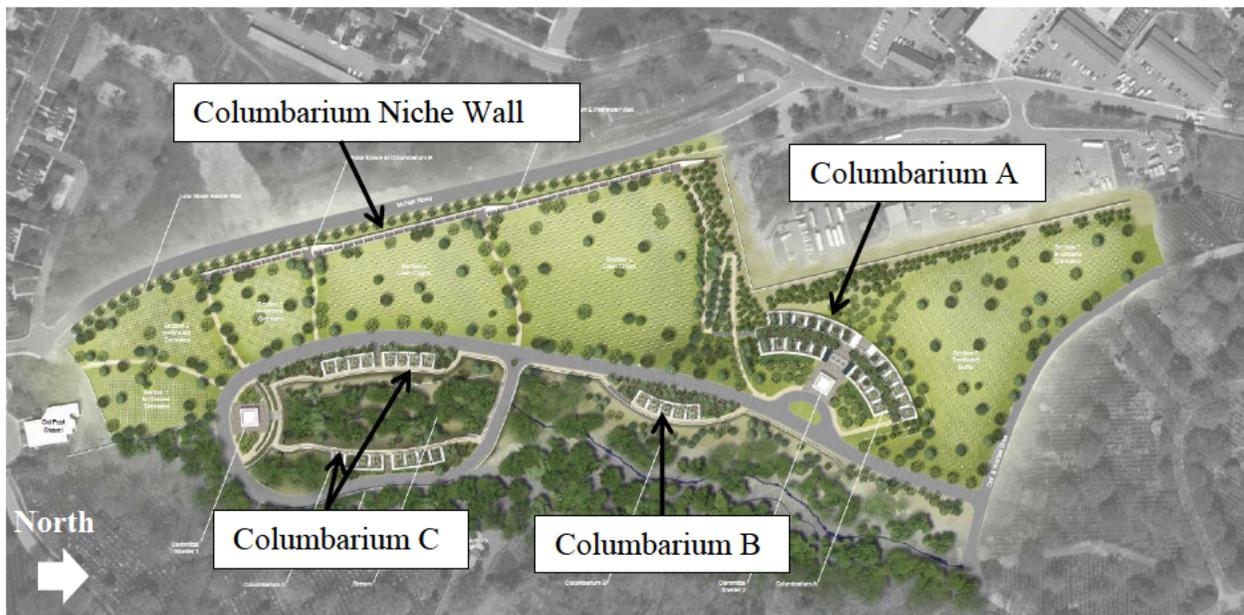


Figure 5: Millennium Site Plan

### *In-ground burials*

The Millennium site generally slopes down from McNair Road on Joint Base Myer Henderson Hall to the stream located on the site, a 60 foot drop. The Army proposes to install an area of preplaced concrete crypts on the downward slope on the western portion of this site for in-ground, full casket burials. These preplaced crypts are constructed on a three-foot by eight-foot grid which allows the in-ground burials to be placed closer together than the current gravesites located elsewhere in the cemetery. This also reduces the amount of spoils, or soil, to be removed for each grave as these crypts are typically only 24 inches below grade. Drainage is built into this system to allow for much of the stormwater to be handled on site.

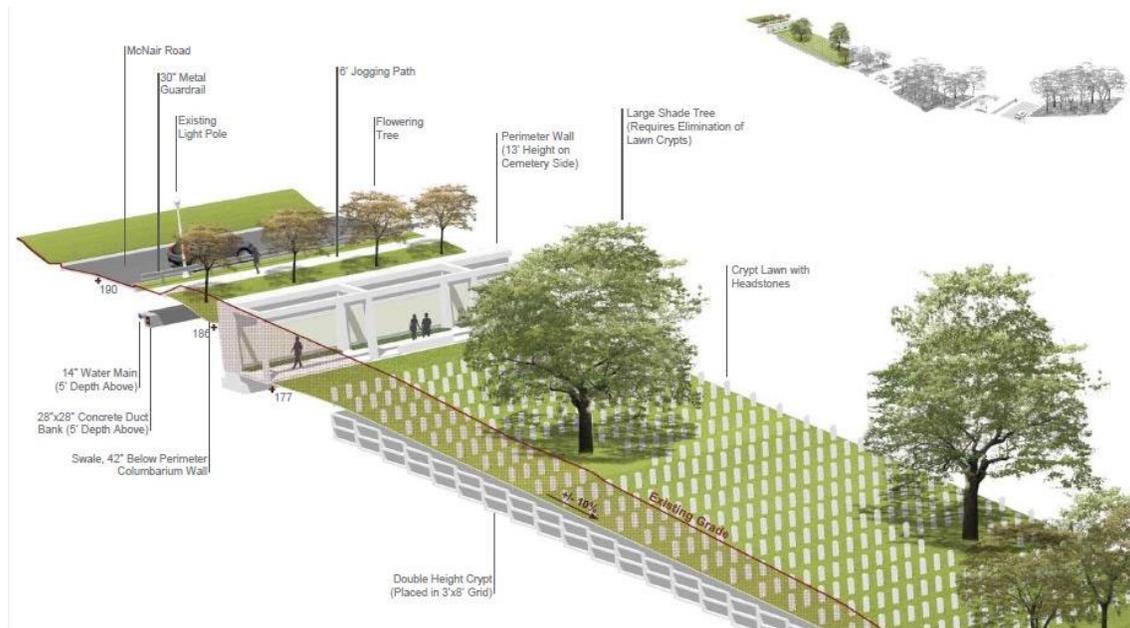


Figure 6: Site Section Detail – In-ground burials and Columbarium Niche Wall

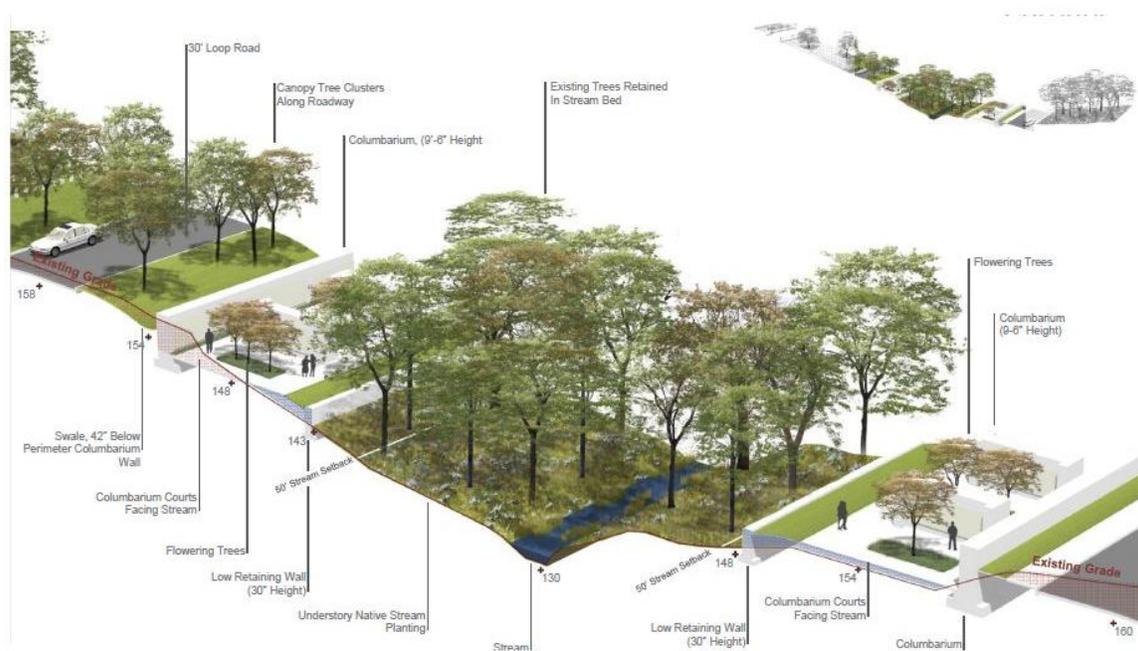


Figure 7: Site Section Detail – Stream restoration area and Columbarium Courts

Constructing the preplaced crypts will require the removal of 275 of the existing trees west of the existing boundary wall location as the grade will need to be changed. In addition, the existing historic wall separating the military installation from the cemetery will need to be removed. The Army notes that most of the land in this portion of the site is either a park-like setting or disturbed area. There is a section of land on the eastern side of the stream that was part of Arlington House woods, earlier referred to as Section 29. The Army notes that it will need to

remove approximately 96 trees in this area to accommodate the Columbarium courts and roadway. Overall, the Army states it will need to remove a total of 882 trees, and will replant 600 new native trees and 500 shrubs to replace a portion of the trees that were lost.

The Army is also proposing in-ground cremation gravesites. These would not need to be in preplaced crypts, but the urns would be placed directly in the ground, on a five-foot by five-foot grid. Both the in-ground crypts and in-ground cremation gravesites would incorporate traditional engraved, white marble memorial stones that are currently used at ANC.

*Columbarium and Niche walls*

Columbarium spaces are provided by pre-cast concrete niches, each 12” wide x 15” high x 20” deep. Each columbarium niche will be enclosed with the traditional ANC engraved marble shield. Two columbarium types are proposed: Inward-Facing Columbarium Courts and the Perimeter Columbarium Wall. The Columbarium Perimeter Wall will be located at the far west of the site along the ANC border with Joint Base Myer Henderson Hall.



Figure 8: Perimeter Columbarium Wall - perspective rendering



Figure 9: Existing ANC Columbarium

*Project Components*

Components	Current Space Layout (Alternative E1)
In-ground spaces (including traditional, crypt and oversized)	8,270
In-ground for cremation remains	3,822
Columbarium niches	17,830
<b>TOTAL</b>	<b>29,922</b>

*Stream Restoration*

There is one main stream in the site area with several intermittent streams either connecting to it or located nearby. One wetland is located just off-site at the northeastern portion of the site and will not be impacted. The Army proposal includes restoration of this stream as it is deeply incised from previous storm events and needs to be stabilized to reduce water velocity and amount of non-point source pollution from the site. The condition that caused the damage to the stream bed and eroded other areas on this site was corrected with the installation of a stormwater detention facility on Joint Base Myer-Henderson Hall several years ago.

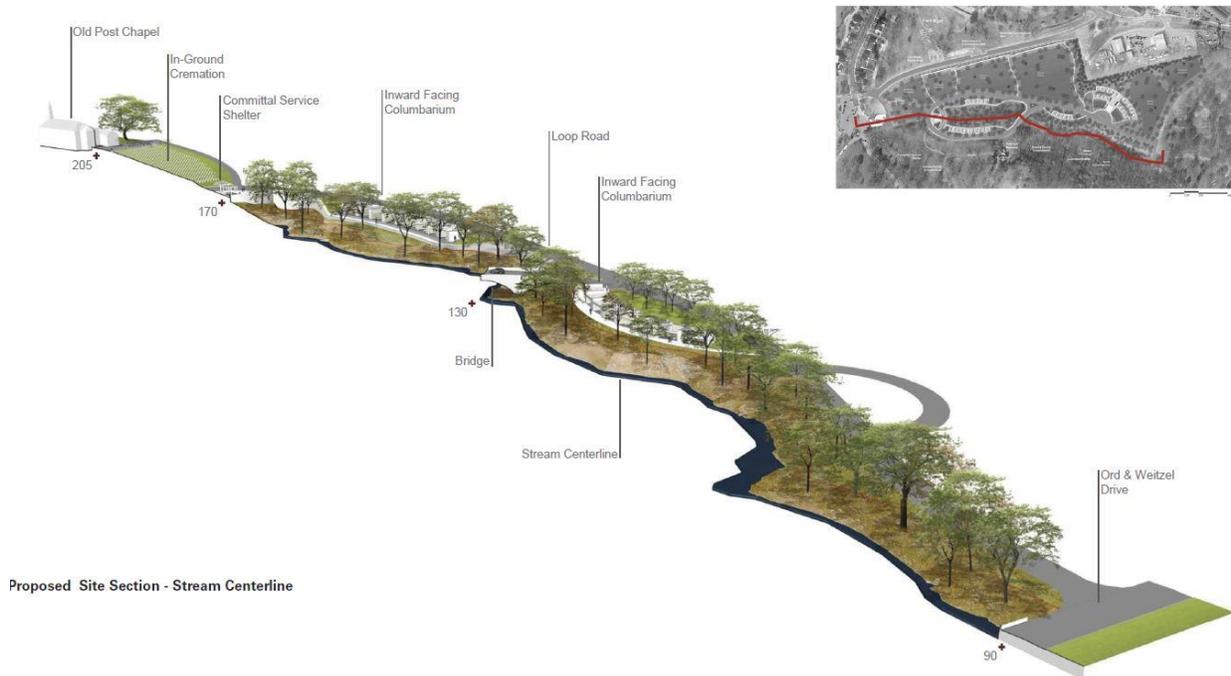


Figure 10: Site Section – Stream Restoration

*Stormwater management*

The Army is also proposing to install a below grade stormwater detention cistern just north of the NPS surface parking lot. Stormwater runoff from the parking lot has caused some erosion damage within a portion of Arlington House Woods. The cistern project is being undertaken now to capture the stormwater that currently drains from the parking lot into one of the perennial streams. In addition to the cistern project, the Army will remove some pavement around several trees in the parking lot in an effort to improve the tree health and reduce runoff.



Figure 11: Stormwater Management – NPS Parking Lot

*Loop Road*

The Army is proposing a loop road to provide access to the burial sites in this section of the cemetery. It also notes that some burials use caissons, or ceremonial horse-drawn funeral carriages, that carry the deceased to their final resting place. As these caissons are teams of horses and only travel forward, it was necessary to include a turnaround, or loop, in the design to allow the caissons to return once their duty was complete.



Figure 12: Caisson at Arlington National Cemetery (photo from Department of Defense Website)

*Committal Shelters*

Also included in the design are two Committal Shelters, which are covered, open-air structures, used for internment ceremonies that are not conducted next to a gravesite. There are several existing Committal Shelters at ANC, and these new structures have been redesigned to not feel as 'heavy'. These structures will be approximately 40 feet by 40 feet in area.



Figure 13: Committal Shelter

## II. PROJECT ANALYSIS/CONFORMANCE

### Executive Summary

Staff has reviewed the Millennium Project, an expansion site on Arlington National Cemetery, and finds that while the design will result in significant tree loss, it ultimately will provide improvements to the existing stream and create a tranquil setting in keeping with the existing cemetery grounds. Staff recommends that the Commission note the following:

- **Arlington National Cemetery is projected to reach full capacity in 2023.**
- **In recognition of this fact, Congress directed the Secretary of the Interior to transfer a portion of the Arlington House Woods, then under the jurisdiction of the National Park Service, to the Secretary of the Army for the expansion of Arlington National Cemetery, under Public Law 107-107.**
- **Arlington House Woods are part of the historic setting for the Robert E. Lee Mansion, which is on the National Register of Historic Places.**
- **Section 106 of the National Historic Preservation Act directs agency officials to take into account the effect of the undertaking on any resources listed or eligible to be listed in the National Register of Historic Places.**
- **The Federal Environment Element of the Comprehensive Plan for the National Capital states that when tree removal is necessary, trees should be replaced to prevent a net tree loss.**
- **The creation of new burial sites in this area cannot be accomplished without substantial tree loss, including adverse effects to the Arlington House Woods.**

This site has its challenges and there are impacts associated with this design. Many of the trees on site will need to be removed to accommodate the new burial locations, including some on a portion of the existing historic Arlington House woods, and a large section of the historic boundary wall between the site and Joint Base Myer-Henderson Hall will need to be removed. Staff notes however that the adverse effects have been significantly reduced since 2009, through consultation and that further consultation is ongoing.

**Staff therefore recommends that the Commission also note that the current proposal:**

- **Reflects the result of ongoing efforts to reduce adverse effects to the Arlington House Woods.**
- **Includes mitigation measures including stream restoration within the Woods**

Consulting parties continue to be concerned about the amount of tree loss in the Arlington House Woods, and in the quality of a Visual Impact Survey currently in draft form. The Army has been meeting with the parties as part of the NHPA consultation process and addressing these concerns. Staff recommends that **the Commission therefore comment favorably on the concept design and directs the Department of the Army, in subsequent submissions, to:**

- **Continue to refine the design to minimize harm and provide appropriate mitigation through consultation as required by the National Historic Preservation Act.**

- Continue to refine the Visual Impact Survey in ways that are responsive to consulting parties, including the National Trust for Historic Preservation and members of the community.
- Explore decreasing the width of the road bed in the area of the Arlington House Woods as a way of further reducing tree loss.
- Prevent a net tree loss by exploring the possibility of planting additional trees at Joint Base Myer Henderson Hall or on adjacent National Park Service property.

**Analysis**

Since the land was transferred to the Army, it has undertaken several design processes to develop this parcel. Of these various alternative designs, the Army states that the one it now proposes is the least impactful environmentally partially because it is one of the few alternatives that did not clear-cut all of the trees from the site. The Army has identified a preferred alternative, Alternative E1, in the draft environmental assessment for this project and has identified the impacts on the trees for each alternative as compared to Alternative A, which was similar to one developed in 2009.

The Army has conducted a tree survey and indicated the trees that would be removed as part of the current proposal which is similar to Alternative and compared this to the ones removed under the other alternatives. In 2009, the Army would have removed all of the trees on the site and has used this as a starting point for its design. The Tree Survey indicates that if Alternative A were the chosen design then 1,088 trees would need to be removed. Similarly if Alternative E1 were to be chosen then 882 trees would need to be removed. Each of the alternatives has been evaluated and can be compared and this comparison is shown in the Tree Removal Comparison table shown on this page.

**Tree Removal Comparison Table**

<b>Alternative</b>	<b>Tree Removed</b>	<b>Change (compared to Alt. A)</b>
Alternative A	1088	
Alternative B	1002	-86
Alternative C	912	-176
Alternative D	976	-112
Alternative E	962	-126
Alternative F	987	-101
<b>Alternative E1 (preferred)</b>	<b>882</b>	<b>-206</b>

While this table indicates that the number of trees to be removed has diminished with each of the design alternatives, it does not describe anything else about the trees. Some of the trees proposed to be removed have an historic value as they are located in Section 29, which is part of Arlington House Woods. As was noted earlier, this forested area was part of the historic setting that was described in the National Register nomination for Arlington House. Arlington House Woods is a

24-acre parcel that is located west of the former Robert E. Lee Mansion in Arlington National Cemetery and contains several tree stands that the Army states range from 145 years old to 235 years old. The Army notes that the 165-year-old trees will remain untouched. NPS manages the stand of trees that are 235 years old and this portion of Arlington House Woods is not included in the project area and will not be affected.

Alternative E1 will impact the 145 year old tree stand. The Army states that it will impact 2.63 acres of the 5.84 acre area where the 145 year old trees are located. The 165-year-old tree stand is approximately 2.74 acres, is included in the project area, but will not be built upon.

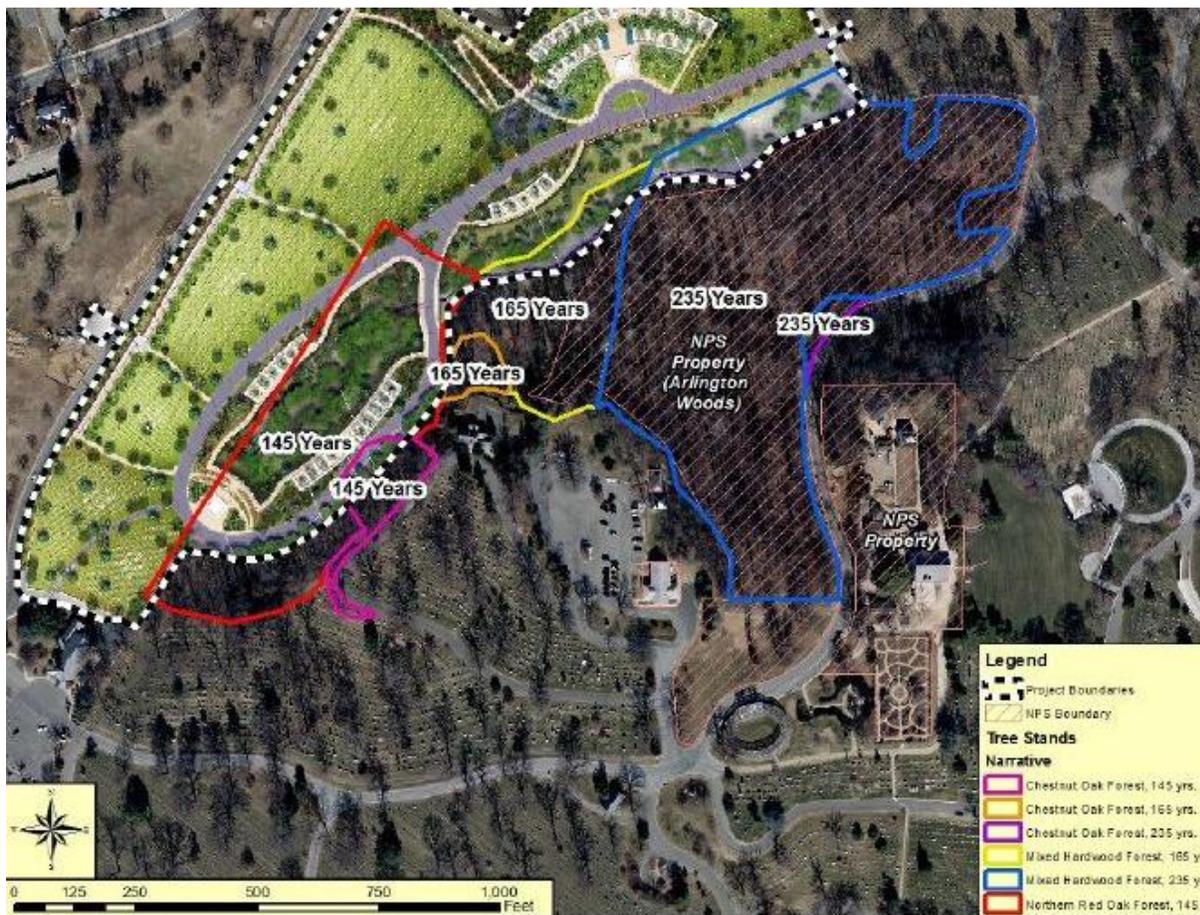


Figure 14: Tree Stand Ages – with Millennium Project overlay

**Approximate Acres of Impact Per Tree Stand Age**

<b>Trees Stand Age</b>	<b>Acreage Existing</b>	<b>Acreage of Physical Impact</b>
Disturbed Forest (105 years or less)	5.58	5.25
145 years or less	5.84	2.63
165 years or less	2.74	0

The Army also notes that the term “old-growth” forest should not be used for the 145-year-old section of forest because it does not have some of the defining characteristics of an old-growth forest. While there is not a universally accepted definition of old-growth, some accepted characteristics include: tree stands that have never been logged, have a myriad of ages and species, include snags at various stages of decomposition, and demonstrate a lack of invasive species and of disturbance.

In a letter sent to the Army dated January 4, 2013, the Virginia Department of Forestry also found that this project would “not have an adverse impact on forest resources of the Commonwealth.” The mission of the Virginia Department of Forestry is to protect and develop health, sustainable forest resources in the Commonwealth of Virginia.

Arlington County and the National Trust for Historic Preservation, on the other hand have provided comments to the Army stating that this project will adversely impact the historic stand of trees that are part of Arlington House setting and have requested that the Army redesign the project so this part of the site is not impacted at all. They also noted: the removal of a large portion of the historic boundary wall, changing the historic setting of the Arlington House through the removal of historic trees, and archeological resources. The Army states that the impact to this part of the Arlington Woods is unavoidable if this area is to be used for burials and circulation and will try to minimize this impact through careful study of the site.

Staff finds that the Army has identified many of the impacts to historic resources and has continued to consult with various agencies on how to minimize these impacts. There still is work to do to minimize these impacts and staff looks forward to working with the Army to minimize these impacts as this design progresses.

**Comprehensive Plan for the National Capital**

This project is in conformance with some of the policies contained within the Comprehensive Plan for the National Capital; however it is not in conformance with the Federal Environment Element policies that encourage agencies to maintain existing tree stands and recommends that agencies replace trees to prevent a net loss of tree cover if tree removal is necessary.

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### **Relevant Federal Facility Master Plan**

The Arlington National Cemetery Master Plan was last updated in 1998 and while the Millennium Site was mentioned and an area was defined it was not included in any detail in the document. The Army is in the process of updating the facility master plan which should be submitted to the Commission by the fall of 2013. The Millennium site will likely be submitted to the Commission for preliminary and final review by July 2013.

### **National Environmental Policy Act (NEPA)**

The Army has a draft Environmental Assessment currently out for public comment, and it is scheduled to close on April 14, 2013. This draft EA analyses impacts of this design related to soils, topography and floodplains, hydrology and water quality, groundwater, wetlands, vegetation, wildlife, cultural/historic resources, hazardous waste, transportation, storm water, utilities, noise, air quality, aesthetics, visitor use and experience and unique ecosystems. The Army developed several alternatives, but only included the preferred alternative, and the no action alternative in the draft EA. As Arlington National Cemetery is in the environs, the Commission does not have a responsibility under the National Environmental Policy Act.

### **National Historic Preservation Act (NHPA)**

The Section 106 consulting party process for this project has begun, but is not completed yet. As Arlington National Cemetery is in the environs, the Commission does not have a responsibility under the National Historic Preservation Act, but staff is participating as a consulting party.

## **III. CONSULTATION**

### **U.S. Commission of Fine Arts**

The Commission of Fine Arts approved the concept design at its October 2012 meeting and asked for further refinements on the design including: simplifying the proposed architectural elements to be in keeping with the modern elements at ANC; stepping and straightening the niche wall that is the boundary with Joint Base Myer-Henderson Hall; narrowing roadways for one way traffic, and developing the niche courts, including developing the design of the back of the walls which would face outward.

### **Coordination with local agencies**

As this project was not described with any detail in the Commission approved installation master plan, staff referred this project out to state, regional and local agencies in Northern Virginia for comment in December 2012 pursuant to NCPC guidelines.

The Army has held many meetings with various federal, regional, state and local agencies since the most recent planning for this project began in 2011 and will continue to hold meetings to address concerns raised during this planning process.