

**SUPERINTENDENT'S LODGE #1  
RADON MITIGATION SYSTEM**  
Arlington National Cemetery  
Arlington, Virginia

**PROJECT DESCRIPTION, AREA OF POTENTIAL  
EFFECTS, and ASSESSMENT OF EFFECTS**

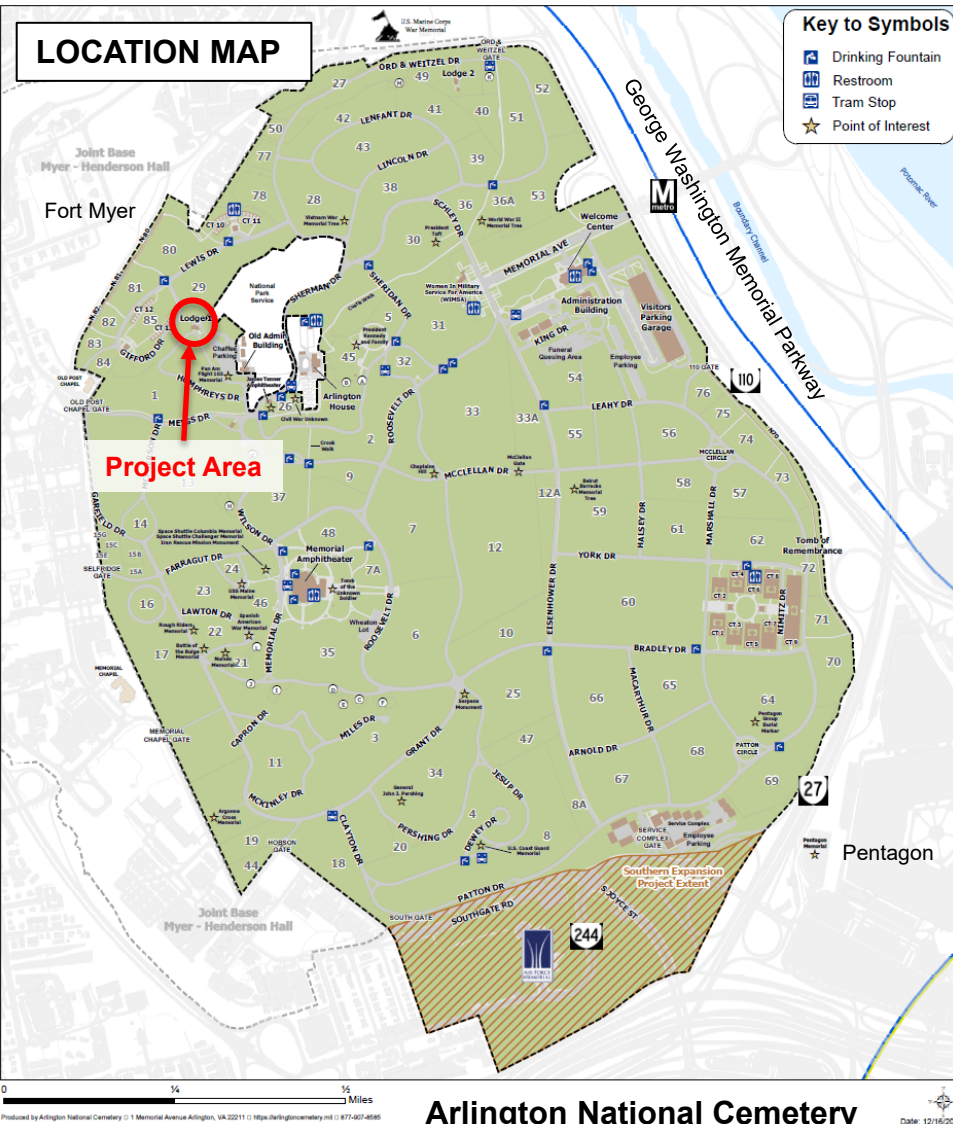
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Arlington National Cemetery

## PROJECT DESCRIPTION

Arlington National Cemetery (ANC), ANC proposes installing a radon mitigation system in the basement of the Superintendent's Lodge #1. The system will vent out the rear of the building, by cutting a hole through the basement-level garage wall. To mitigate the impact of a new ventilation pipe extending up the exterior wall, a copper pipe will be utilized on the exterior of the building. This will be designed to match the existing copper gutters and leaders/downspouts.

The intent of the radon mitigation system is to reduce indoor radon levels as low as possible in the Lodge basement. The system must reduce radon below the EPA action level of 4 pCi/L (picocuries of radon per liter of air). Since Lodge #1 is a historic structure, all components and locations shall be approved by ANC prior to installation. All exterior piping shall match the existing leaders/downspouts and be placed in a location agreed upon with ANMC's CRM. The size of the pipe shall be in accordance with local, state and federal regulations for radon ventilation systems. The contractor shall provide active notification monitor, radon fan, radon mitigation tag, u-tube manometer and sealing penetration points in the foundation, with materials compatible with the historic building. The contractor shall use extreme caution when penetrating walls in the historic property. The walls vary in thickness from 8" - 18". All walls are masonry construction, primarily stone and concrete. All penetrations shall be sealed back up with like materials. The contractor shall repaint the walls as necessary, the paint shall match the existing coatings.

### Area of Potential Effects:

The Area of Potential Effects (APE) for the proposed project is shown on the map to the left as a yellow oval. The APE includes locations where the project may be visible and/or audible. The project does not involve ground disturbing activities.

The project area is located in Arlington National Cemetery Historic District (Virginia Department of Historic Resources [VDHR] #000-0042).

### Historic Properties Located Within the APE:

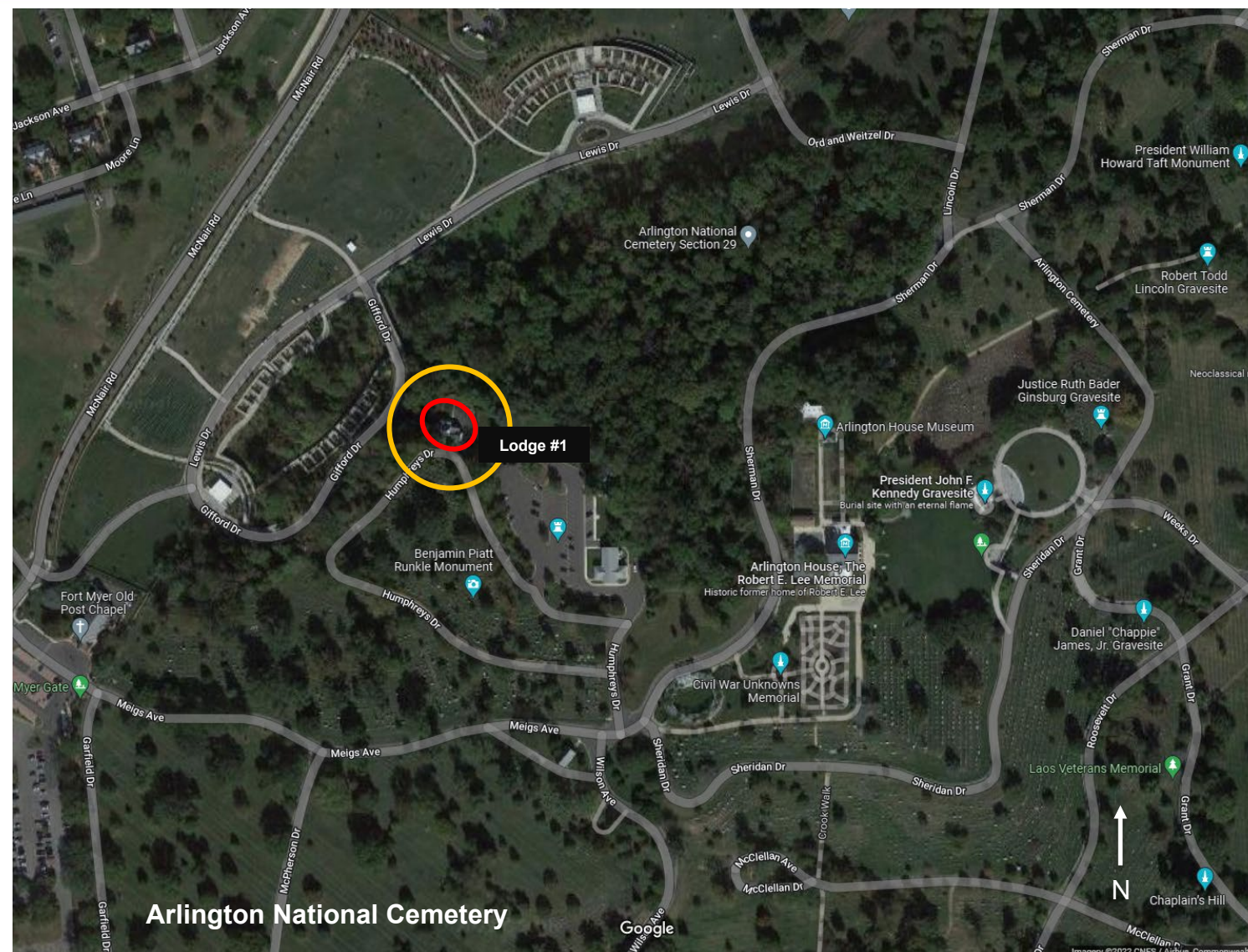
Following is a list of historic structures and features contributing to Arlington National Cemetery's and Arlington House's historic districts, which are located within/adjacent to the APE.

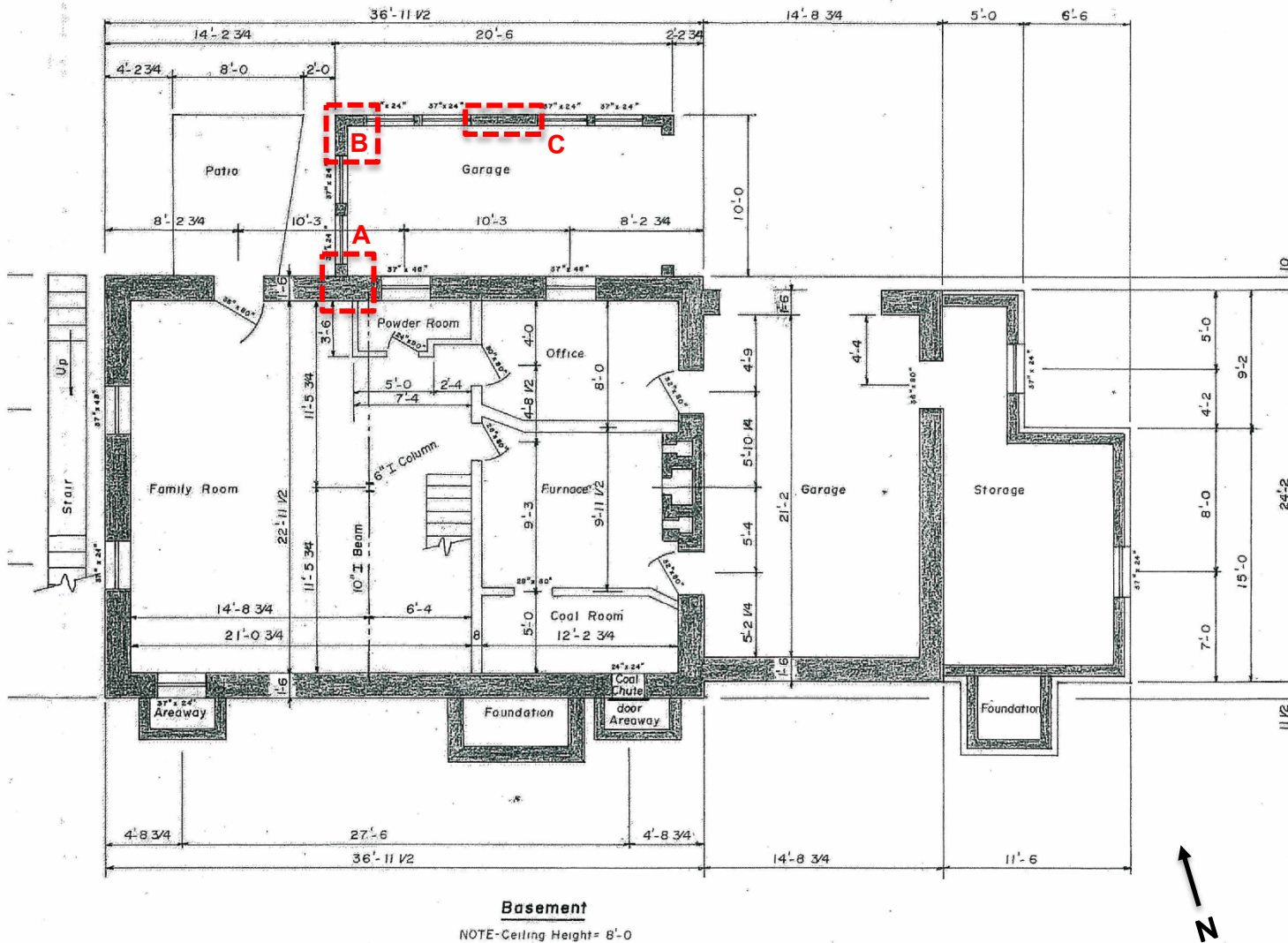
- Arlington National Cemetery Historic District (DHR #000-0042)
- Arlington House Cultural Landscape (CLI #600049)
- Headstones and Grave Markers (DHR #000-0042-0021)
- Burial Section 1

*Satellite View of Project Area.*

*APE outlined in yellow.*

*Proposed project location in red.*



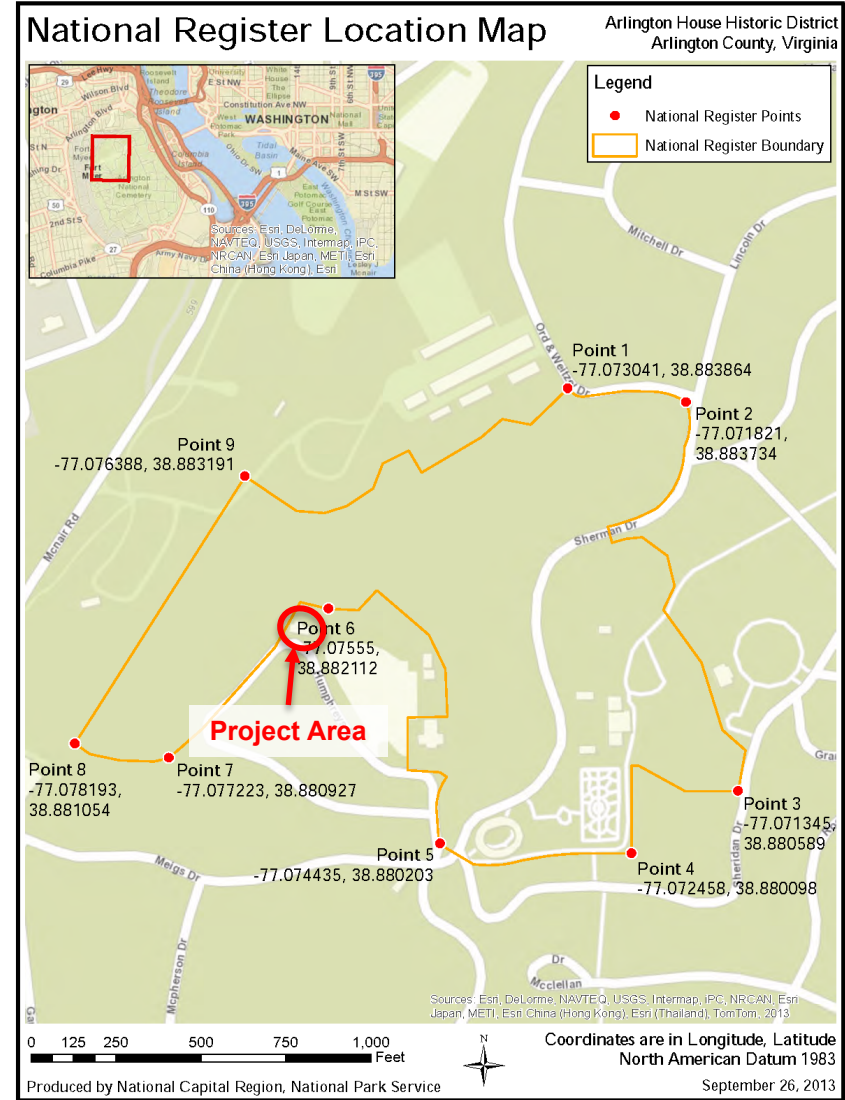
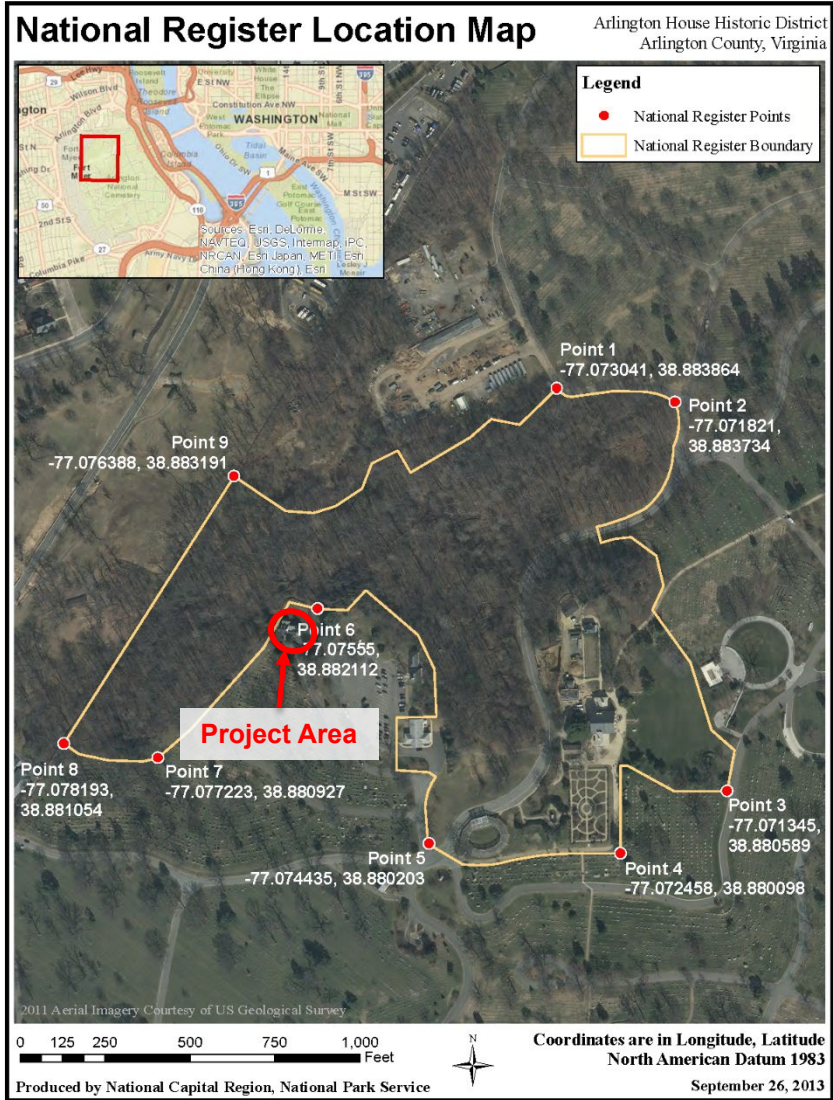


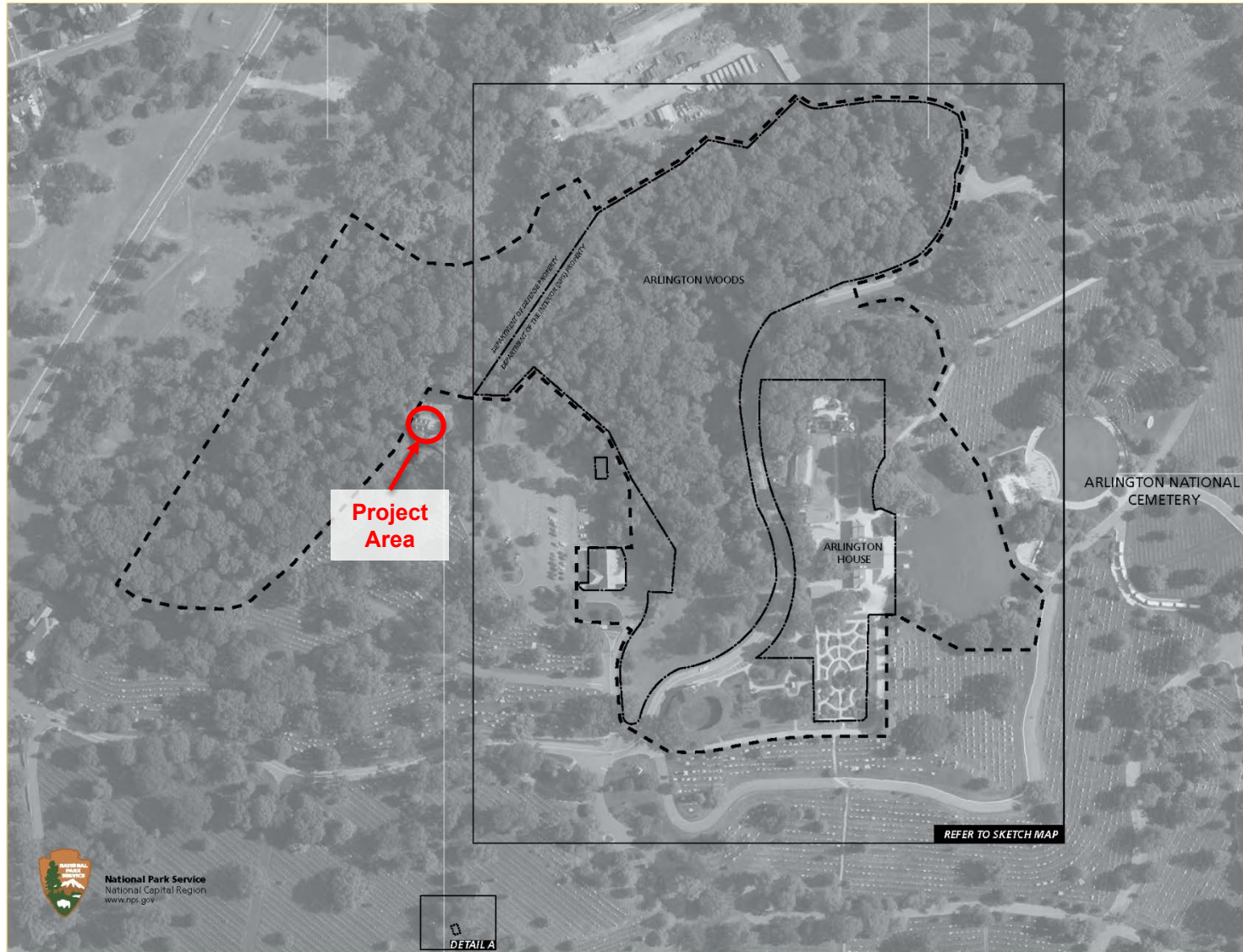
### Project Narrative:

The radon mitigation system is designed to ventilate the basement, where tests of radon indicated levels above the EPA action levels. ANC intends to have pick-up points (locations where air is pulled from under the foundation) installed in various locations within the basement. Interior piping will run along the ceiling, and as few penetrations will be made into the structure as possible. The system will vent to the exterior through the northeastern or northwestern wall of the garage, which faces the historic Arlington Woods, which Army National Military Cemeteries and the National Park Service each manage a portion (see maps on subsequent slides).

**Fan to Vent Out Garage Wall  
Proposed / Likely Locations  
Marked A, B, or C on the  
Basement Plan Drawing**







#### LEGEND

-  National Register District Boundary
-  Park Boundary

#### NOTES

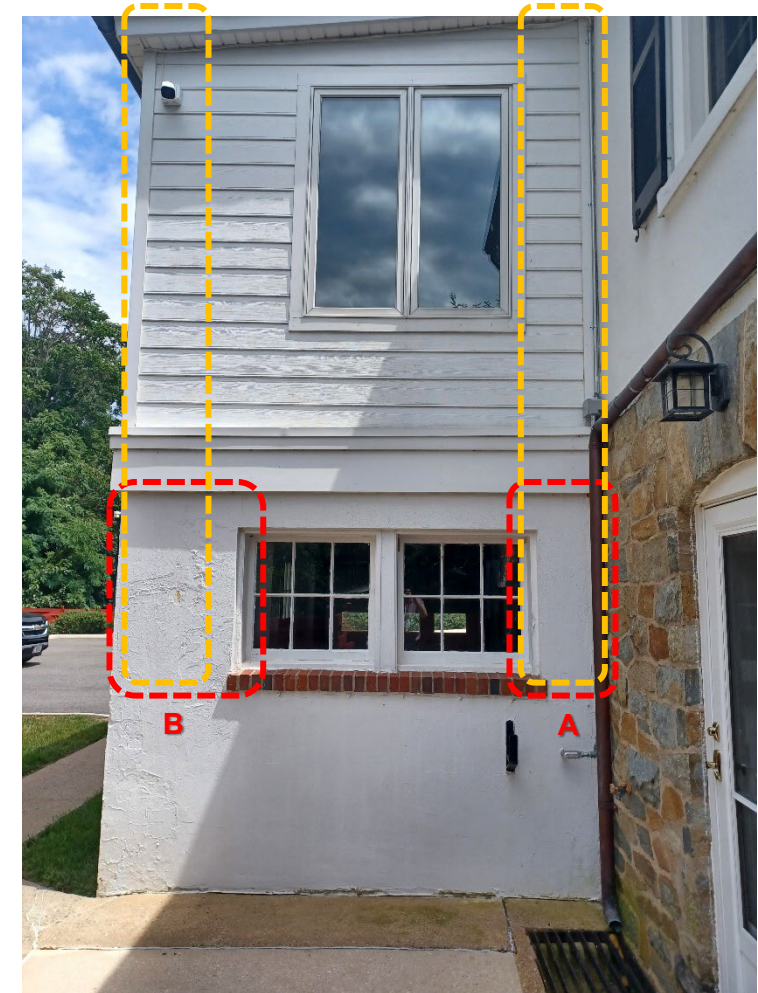
1. Plan shows conditions in 2012.
2. All features shown in approximate scale and location.
3. All land outside of the indicated NP5 park boundary is owned by the U.S. Department of Defense (DOD) and is managed as part of Arlington National Cemetery (ANQ) by the Department of the Army, National Cemeteries Program\*

National Register Boundary Map

#### Arlington House Historic District

Arlington House, The Robert E. Lee Memorial  
George Washington Memorial Parkway  
Arlington, Virginia





Superintendent's Lodge #1: Rear addition & garage looking northwest (left), southwest (center), and southeast (right). Shows elevations where fan/ventilation pipe may be located. The proposed ventilation system will penetrate through the garage wall. The proposed locations for the penetration are outlined in **red**. The proposed locations for the copper pipe to extend up the facade are outlined in **yellow**. The copper ventilation pipe must extend above the roofline. (U.S. Army photos by Jeremy Jordan / ANMC)



## DETERMINATION OF EFFECTS

I assessed the effects of the proposed project. Applying the criteria of adverse effects (36 C.F.R. § 800.5[a][1]), I determined the undertaking will have **no adverse effect** on the characteristics which qualify the Arlington National Cemetery or Arlington House historic districts for inclusion on the National Register of Historic Places.

ANC retains the historic views and vistas within the cemetery after construction of the proposed project. The historic location and elements within the districts are maintained. There are no irreversible changes to historic properties. Headstones and circulation patterns remain unchanged. The cemetery continues to convey its historic significance as a military cemetery, and for its landscape architecture and architecture. There are no changes to the integrity of location, workmanship, feeling or associations of Arlington National Cemetery's or Arlington House's National Register districts.

The proposed ventilation system is required by current regulations and safety standards to keep building occupations safe. The majority of the radon mitigation system will be located within the basement of Superintendent's Lodge #1. The system will only be visible on the exterior of one elevation. The ventilation pipe will be designed to match existing copper leaders / downspouts. The copper pipe will only be visible within 50' of the garage, as views of the house are otherwise obscured by trees in the surrounding Arlington Woods. The ventilation pipe may be more apparent during winter months, when leaves fall from surrounding trees and other plants are not in bloom. However, this change has no effect on the character of the historic districts.

The proposed undertaking would have **no adverse effect to archaeological resources**. No ground-disturbing activities are planned, other than the installation of the pick-up points in the Lodge #1 basement foundation. All construction would be in areas of the APE that have been severely disturbed through prior development of the cemetery or adjacent infrastructure (reference "Archaeological Potential & Past Ground Disturbance Map from Attachment D, Application of National Register of Historic Places Criteria"). It is not expected that undiscovered cultural resources would be found during implementation of the undertaking. However, in the event of an unanticipated discovery during ground-disturbing activities, all work would cease, and the ANC Cultural Resources Manager (CRM) would be contacted. The CRM would immediately notify the Virginia Department of Historic Resources and other appropriate agencies, and standard procedures would be followed to protect the artifacts and determine their significance.

All work adheres to the Secretary of the Interior's Standards for the Treatment of Historic Properties. The project team selected materials and sited the utilities in a manner to avoid and minimize effects. I find the design avoids and/ or minimizes the direct, indirect, and cumulative effects to above- and below-ground historic properties and contributing elements in the Arlington National Cemetery and Arlington House districts.

Caitlin Smith, AIC PA  
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Arlington National Cemetery