

JAMES R. TANNER AMPHITHEATER
HANDRAILS
Arlington National Cemetery
Arlington, Virginia

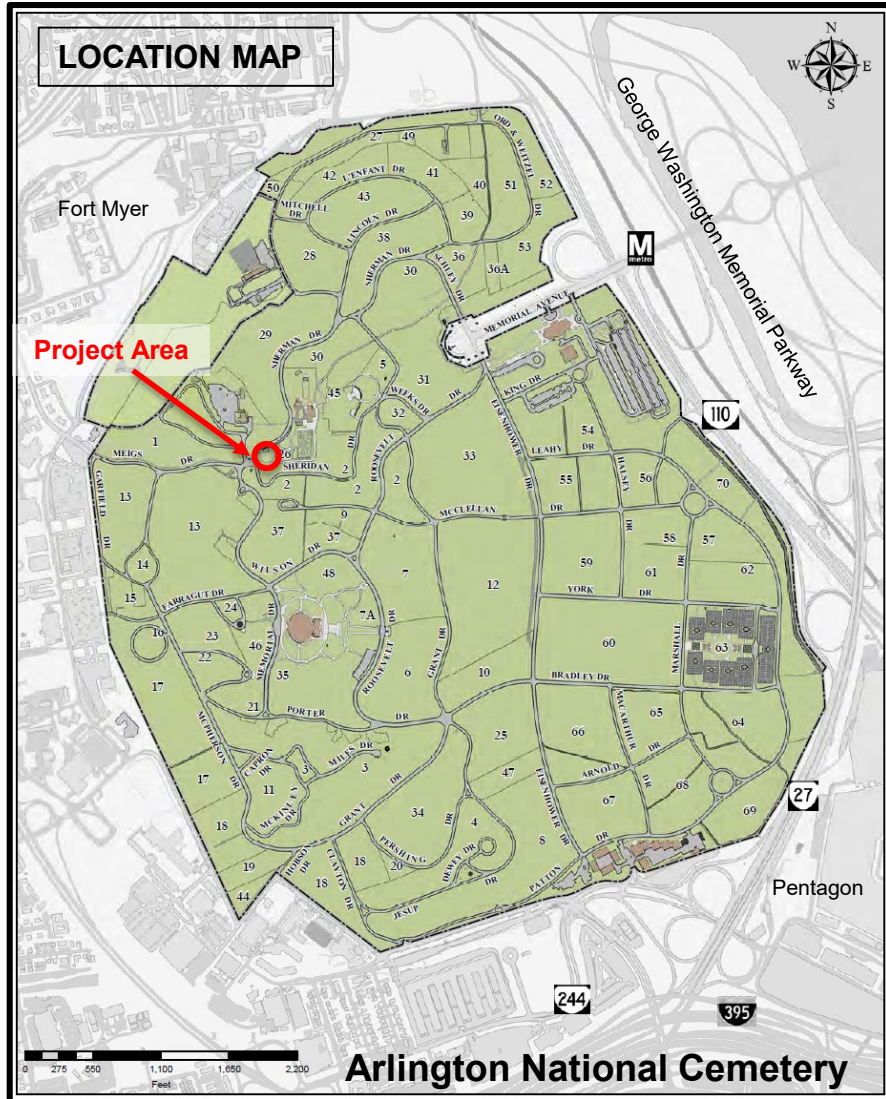
PROJECT DESCRIPTION, AREA OF POTENTIAL
EFFECTS, and ASSESSMENT OF EFFECTS

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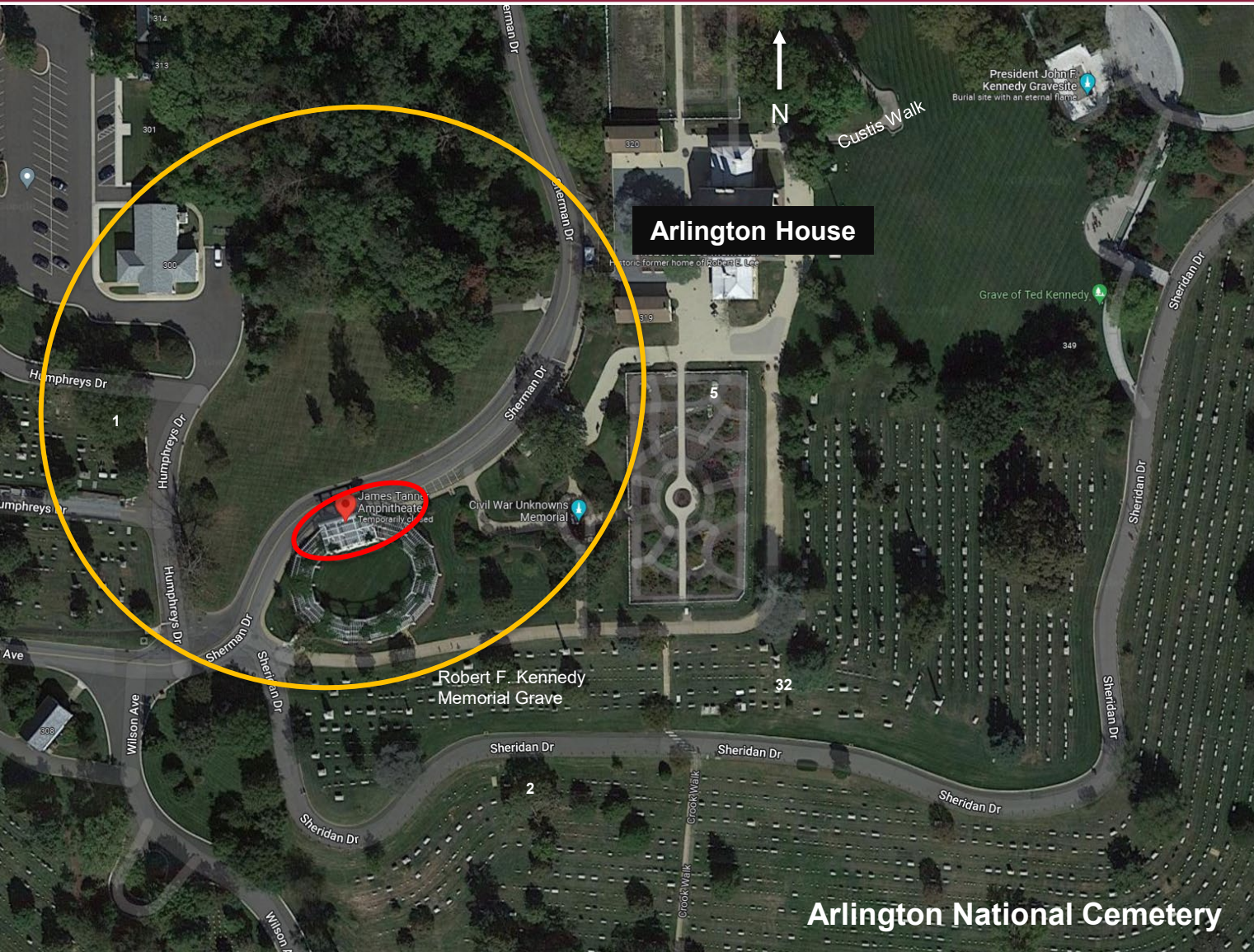
PROJECT DESCRIPTION

To improve safety in Arlington National Cemetery (ANC), ANC proposes the installation of three (3) pairs of handrails at the James R. Tanner Amphitheater (also known as the "Old Amphitheater"). The handrails will be constructed out of metal, using cross-sections and finishes similar to those of existing handrails on the rostrum and along Crook Walk, immediately southeast of the amphitheater.

All three (3) sets of handrails introduce new elements to the amphitheater. All three would be located on the northwest elevation, adjacent to Sherman Drive. One (1) set of handrails would flank the staircase leading from the amphitheater down to the Sherman Drive sidewalk. Two (2) of the handrail sets would flank the stairs on either side of the rostrum. To minimize impacts to the historic structure, the new handrails will be anchored into the ground adjacent to the stairways, with small concrete footers (and trusses, as needed). The project involves ground disturbing activities in previously disturbed areas (currently garden beds and landscaping containing irrigation lines and sprinkler heads).

The handrails will match the color (white) of the existing rostrum handrails, and the style of existing tube railings along Crook Walk. All handrails will be ABA compliant. The new handrails at the rostrum increase safety and accessibility, by preventing falls over previously unprotected edges and providing ABA compliant grips for visitors ascending to and descending from the rostrum.

AREA OF POTENTIAL EFFECTS



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 involves ground disturbing activities in previously disturbed areas.

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:

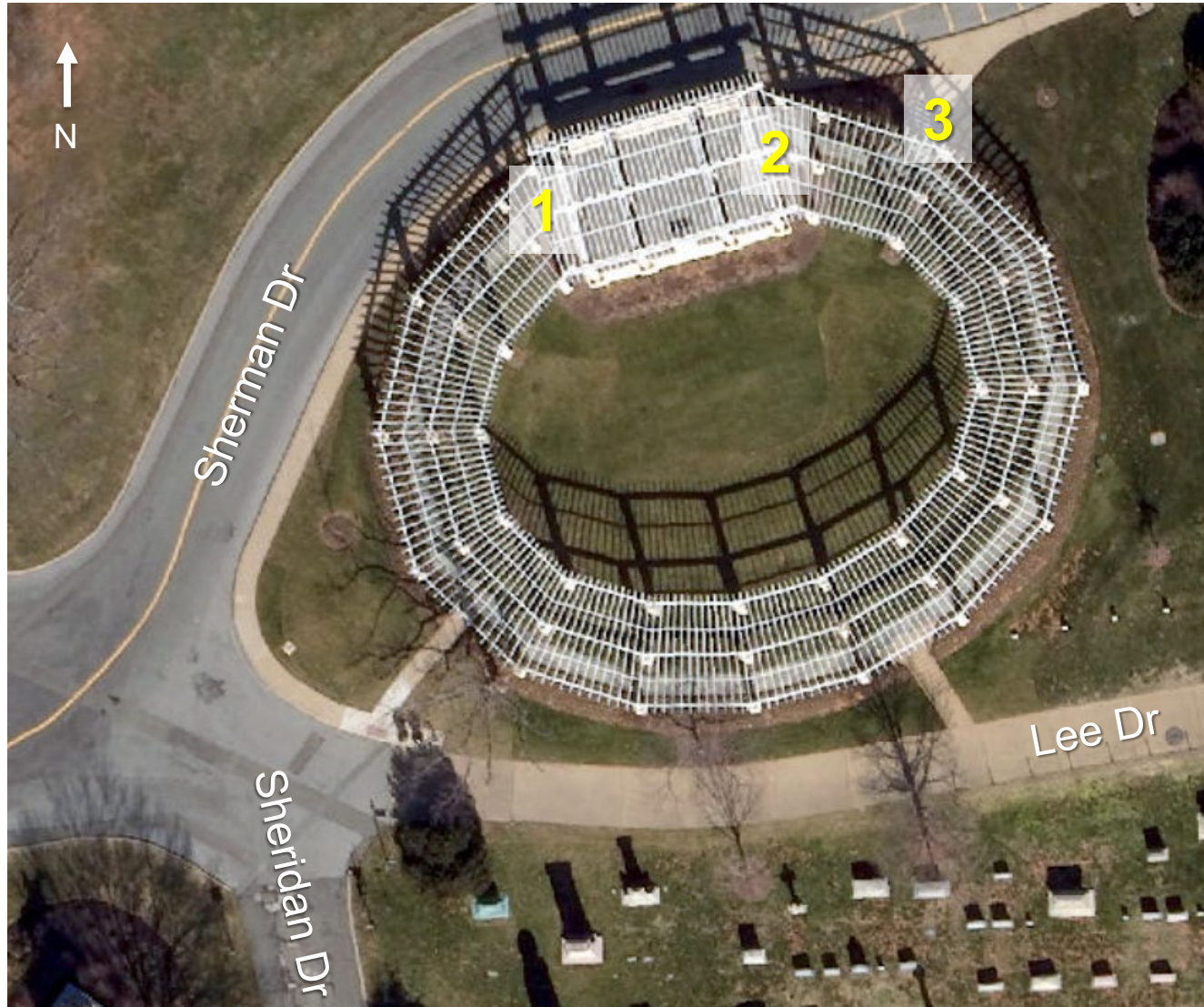
Following is a list of historic structures and features contributing to Arlington National Cemetery's and Arlington House's historic districts, which are located within/adjacent to the APE.

- Arlington National Cemetery Historic District (DHR #000-0042)
- Arlington House (DHR # 000-0001)
- Headstones and Grave Markers (DHR #000-0042-0021)
- Burial Sections 1, 2, and 26

Satellite View of Project Area.

APE outlined in yellow.

Proposed project location in red.



Project Narrative:

A pair of new handrails will be installed at three (3) exterior stairways, each having no existing handrails. Stairways are indicated by numbers 1, 2, and 3 in the image to the left. Each handrail will complement the appearance, design, material, and form of existing handrails on the rostrum and along Crook Walk. The color will be a shade of white, to match the rostrum railings.

During installation, ground disturbance will be minimal. ANC expects to utilize cylindrical, concrete footers to anchor each vertical post. Footers are expected to be about 16" in diameter and 24" deep into the ground. The top of the footers should be at grade level and either flush with or 1"-2" below the ground surface, covered by earth). ANC expects a total of 16 footers, for six (6) handrails.

ANC expects each handrail will have three (3) vertical posts with two (2) returns/extensions. The cross sections of each of the handrails' vertical posts, returns/extensions, upper rails, and lower rails will be cylindrical. All railings will be painted with a protective coating in a color (white) that matches the rostrum railings.

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 Arlington National Cemetery and Arlington House historic district 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 permanent or irreversible changes to the historic amphitheater. 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 ANC's National Register district.

Arlington House (The Robert E. Lee Memorial) National Register Historic District is northeast of the project area. From the house, the proposed handrails are not completely visible. However, the railings are visible from the Old Administration Building. The railings 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 two historic districts.

The proposed undertaking would have **no adverse effect to archaeological resources**. All construction would be located in areas of the APE that have been 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 handrails 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
Cultural Resources Manager
Arlington National Cemetery



Stairway #1

Located at the west side of the rostrum, having no existing handrails and an unprotected edge adjacent to the stairs.



Stairway #2

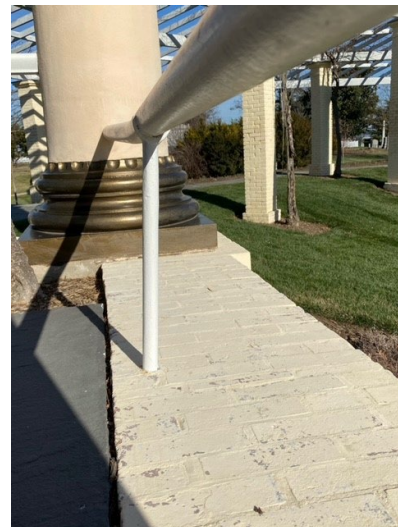
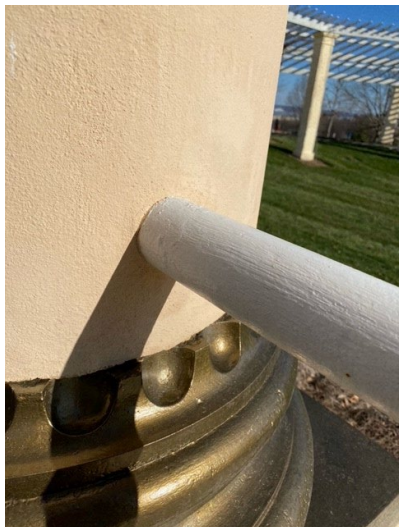
Located at the east side of the rostrum, having no existing handrails and an unprotected edge adjacent to the stairs.



Stairway #3

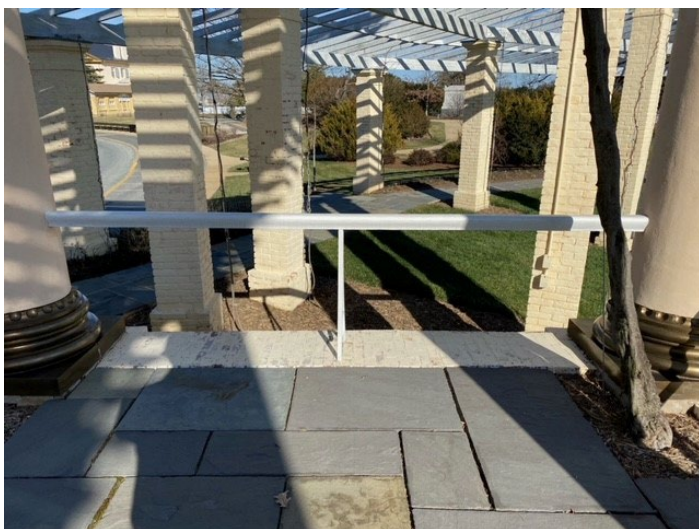
Detached from and located west of the rostrum, adjacent to the sidewalk of Sherman Drive. Also, having no existing handrails.

EXISTING ROSTRUM RAIL & POST DETAILS



Existing Cylindrical Rail & Post:

Located in front (southern end) of the rostrum. It is affixed to the columns. Its vertical post is also cylindrical.



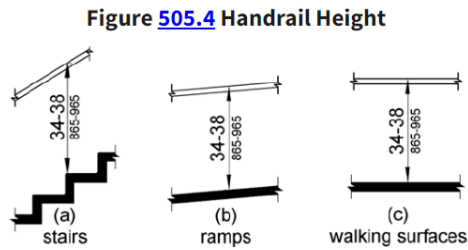
Existing Non-Cylindrical Rail & Post:

Located on three (3) sides of the rostrum (west, north, & east). It is affixed to the columns. Its vertical post is a decorative shape.

505.4 Height

Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.

Advisory 505.4 Height. The requirements for stair and ramp handrails in this document are for adults. When children are the principal users in a building or facility (e.g., elementary schools), a second set of handrails at an appropriate height can assist them and aid in preventing accidents. A maximum height of 28 inches (710 mm) measured to the top of the gripping surface from the ramp surface or stair nosing is recommended for handrails designed for children. Sufficient vertical clearance between upper and lower handrails, 9 inches (230 mm) minimum, should be provided to help prevent entrapment.



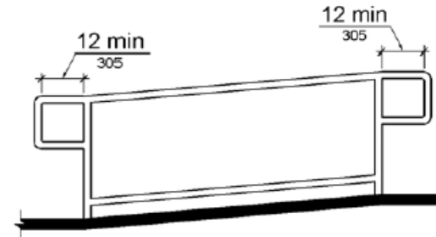
505.7.1 Circular Cross Section [↗](#)

Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1¼ inches (32 mm) minimum and 2 inches (51 mm) maximum.

505.10.1 Top and Bottom Extension at Ramps [↗](#)

Ramp handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent ramp run.

Figure 505.10.1 Top and Bottom Handrail Extension at Ramps



Proposed Cylindrical Rail, Post, and Extension:

The rail, vertical post, and extension of the proposed handrails (3 pairs, 6 total) will be generally identical and in compliance with ABA standards – specifically, its Section 505 Handrails. The difference will be with the height of the vertical posts (to meet the footer), pitch of stairways, and lengths of upper/lower rails.

For illustrative purposes, the following sub-Sections are shown to the left –

- 505.4 Height
- 505.7.1 Circular Cross Section
- 505.10.1 Top and Bottom Handrail Extension at Ramps



Illustration
A



Illustration
B



Illustration
C



Illustration
D

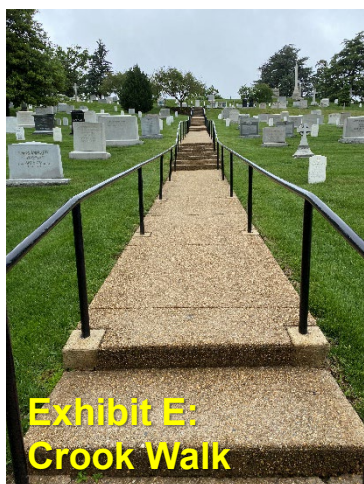
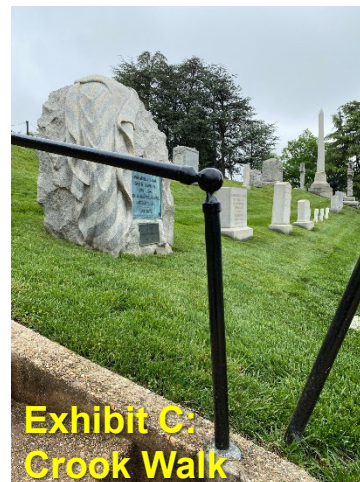


Illustration
E

The photographs above were taken from various railing companies' websites. In particular, illustrations A and C are consistent with existing railings in and around the amphitheater, and inspired the proposed concept design.

The new railings will:

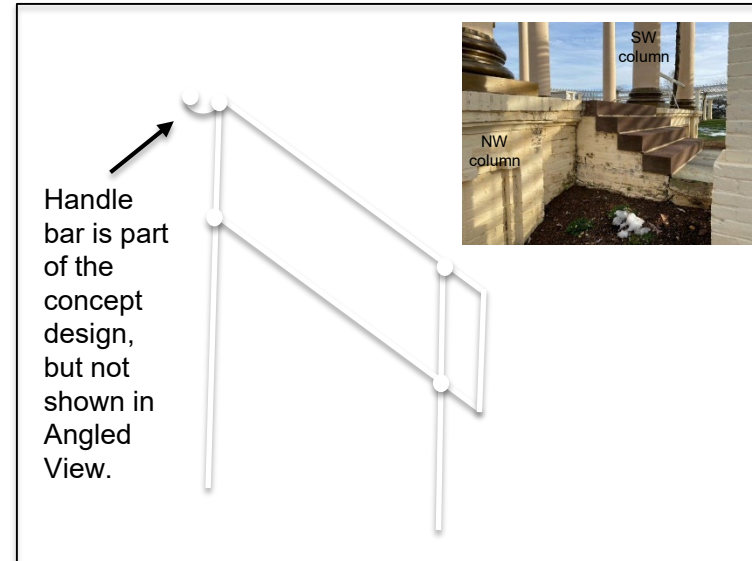
- Have longer returns/extensions that limit the ability of a person to fall off the unprotected rostrum edges or stairs.
- Introduce "ball joints" and a pipe design in keeping with the character of the existing handrails at the amphitheater and Crook Walk, which is in close proximity to the James R. Tanner Amphitheater.



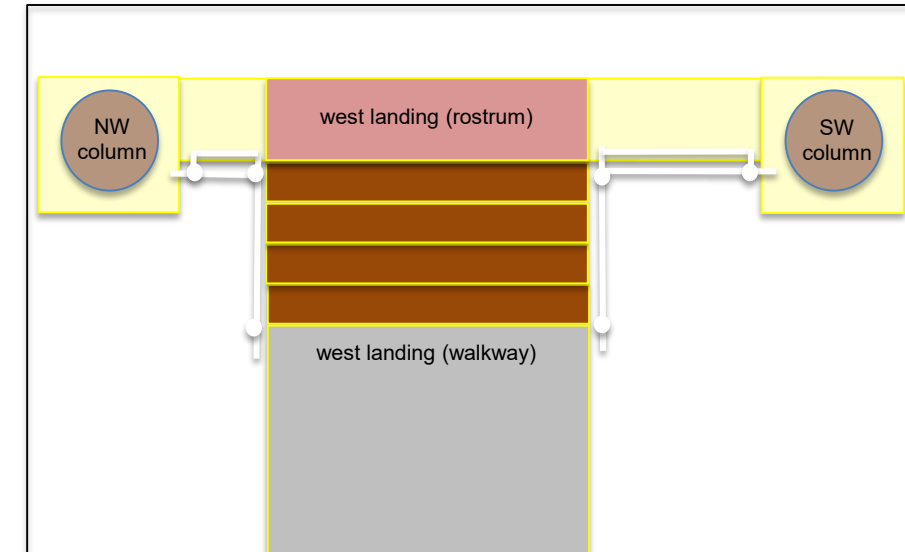
PROPOSED CONCEPT DESIGN FOR STAIRWAY #1



Angled View*



Profile View*



Plan View*

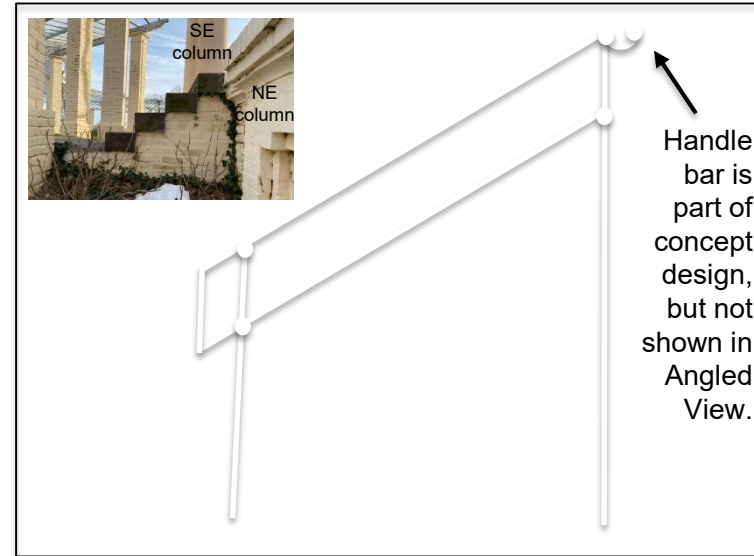
Railings are to match the slope of the stairs, and otherwise be ABA compliant. Aesthetically, the proposed handrail shall be in keeping with the character of existing railings and compatible with the amphitheater's architecture:

- ***Note that images are not to scale, they are for illustrative and conceptual design purposes only.**
- ANC intends for the Stairway #1 handrails to match the design and finish of the Stairway #2 & #3 handrails.
- All of the handrail's outside corners are rounded, with ball joints at the junctions/connection points.
- All of the handrail's bars are metal and cylindrical.

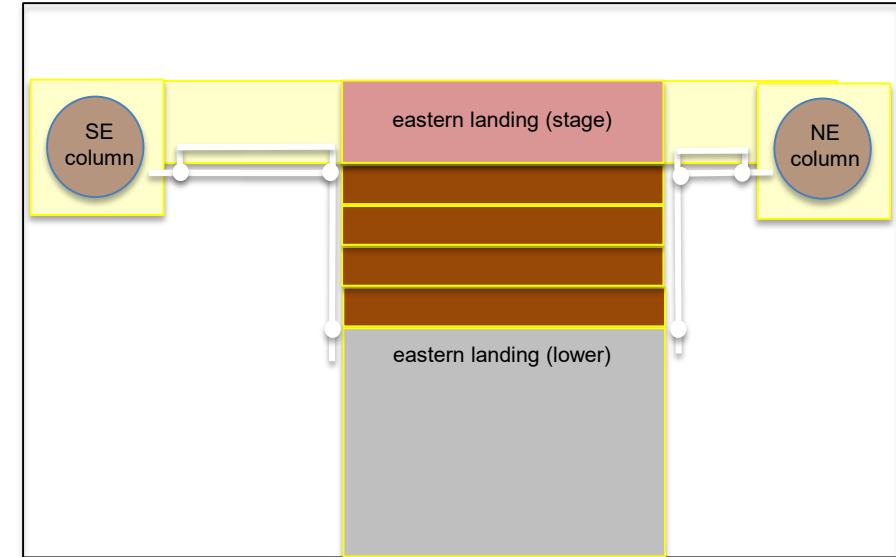
PROPOSED CONCEPT DESIGN FOR STAIRWAY #2



Angled View*



Profile View*



Plan View*

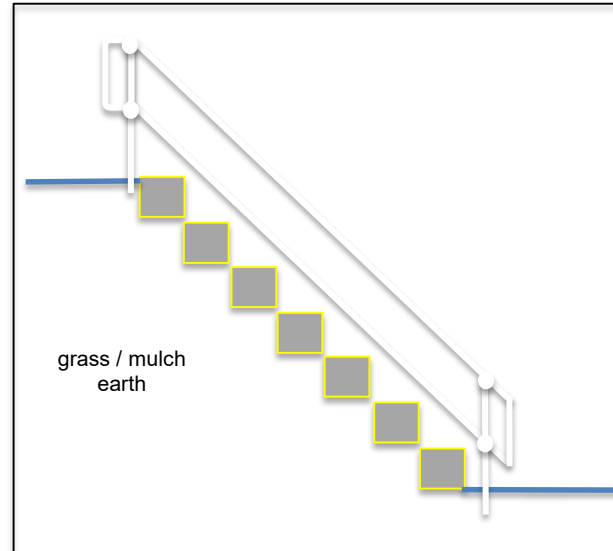
Railings are to match the slope of the stairs, and otherwise be ABA compliant. Aesthetically, the proposed handrail shall be in keeping with the character of existing railings and compatible with the amphitheater's architecture:

- ***Note that images are not to scale, they are for illustrative and conceptual design purposes only.**
- ANC intends for the Stairway #2 handrails to match the design and finish of the Stairway #1 & #3 handrails.
- All of the handrail's outside corners are rounded, with ball joints at the junctions/connection points.
- All of the handrail's bars are metal and cylindrical.

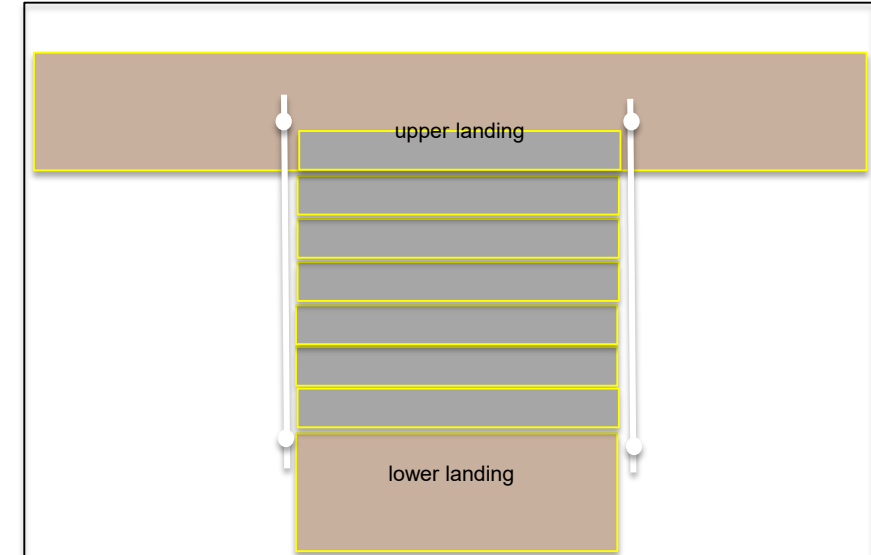
PROPOSED CONCEPT DESIGN FOR STAIRWAY #3



Angled View*



Profile View*



Plan View*

Railings are to match the slope of the stairs, and otherwise be ABA compliant. Aesthetically, the proposed handrail shall be in keeping with the character of existing railings and compatible with the amphitheater's architecture:

- ***Note that images are not to scale, they are for illustrative and conceptual design purposes only.**
- ANC intends for the Stairway #1 handrails to match the design and finish of the Stairway #2 & #3 handrails.
- All of the handrail's outside corners are rounded, with ball joints at the junctions/connection points.
- All of the handrail's bars are metal and cylindrical.

AERIAL VIEWS OF SURROUNDING AREA



Images show aerial views of the James R. Tanner Amphitheater and the surrounding area. These views show the monuments, structures, and landscapes within the immediate vicinity.

Images taken from the ANC public website (Flickr).