

US COMMISSION OF FINE ARTS PRESENTATION | JULY 18, 2019

World War One Memorial

Response to Sculpture and Lighting Comments + Site Security and Final Detailing



Sculptor
SABIN HOWARD

ARCHITECTS



Land
DAVID RUBIN

Collective

PRESENTATION CONTENT

SUMMARY OF PREVIOUS / UPCOMING PRESENTATIONS

- Memorial Vision: Primary and Supporting Commemorative Elements (October 2018)
- Pool & Walkway + Access Improvements + Sculpture Refinements (November 2018)
- Concept Lighting, Furnishing and Finishes (February 2019)
- Response to Walkway, Lighting, & Sculpture Fountain Comments (April 2019)
- Interpretation & Detailing (May 2019)
- **Response to Sculpture and Lighting Comments + Site Security and Final Detailing (July 2019)**
- Design Recap for Final Approval (anticipated September 2019)

PRESENTATION OBJECTIVES (7/18/2019)

Approval of sculpture detailing refinements
Direction and approval of lighting strategy for multi-globe fixtures
Approval of site security measures
Approval of tactile model detailing

PRESENTATION OUTLINE

- Response to Sculpture Comments
- Response to Lighting Comments (Multi-globe Fixtures)
- Site Security Measures
 - Physical Barriers at Corner Entries
 - Camera Locations
- Final Detailing
 - Tactile Model
- Appendix

RESPONSE TO SCULPTURE COMMENTS

APRIL 2019 DETAILING AND DIRECTIVES

SCULPTURE DETAILING CONSIDERATIONS

ALTERNATE STUDIES

SIMPLIFIED PLINTH WITHOUT CANTILEVER

RESPONSE TO SCULPTURE COMMENTS

APRIL 2019 CFA SCULPTURE DETAILING

Directives (April 2019 CFA)

- Raised concern that the base remains unresolved and does not successfully integrate the bronze sculpture with the stone wall
- Citing the simple monolithic quality of the existing granite walls at the Pershing Memorial, recommend eliminating the stone shelf with vaguely classical detailing immediately below the sculpture to simplify the number of design elements into a coherent relationship between only two
- Recommended that the best solution would likely have the water cascading directly below the base of the bronze sculpture rather than being set off by an intermediary stone base beneath the sculpture



RESPONSE TO SCULPTURE COMMENTS

SCULPTURE DETAILING CONSIDERATIONS

Pangolin Foundry Recommendations

- Exposure to treated water from the fountain will cause mineral deposits which eat away at the wax finish and cause oxidation (bronze disease)
- Based on previous project experience, separation between the bronze and the cascading water is advised to prevent / limit the rate at which bronze disease will degrade the sculpture
- NPS maintenance staff expect to maintain the sculpture annually to assist in limiting affects of bronze disease on the sculpture



RESPONSE TO SCULPTURE COMMENTS

ALTERNATE STUDIES

Directives and Responses (April 2019 CFA)

- Raised concern that the base remains unresolved and does not successfully integrate the bronze sculpture with the stone wall
- Studied extending the stone bookends behind the sculpture back to better integrate the two and allowing the bronze to sit proud at the base to create a shadow line (all options)
- Citing the simple monolithic quality of the existing granite walls at the Pershing Memorial, recommend eliminating the stone shelf with vaguely classical detailing immediately below the sculpture to simplify the number of design elements into a coherent relationship between only two
- Studied the removal of the classical detailing (all options) and of the stone shelf (option 1 only)
- Recommended that the best solution would likely have the water cascading directly below the base of the bronze sculpture rather than being set off by an intermediary stone base (shelf) beneath the sculpture
- Concluded from discussions with the foundry that water in direct contact with the bronze is not an ideal condition for the longevity of the sculpture (all options)



RESPONSE TO SCULPTURE COMMENTS

ALTERNATE STUDIES

Recommended Solution Based on Discussions with Project Stakeholders

- Strong desire / preference from all to maintain the east facing cascade
- Removal of the cantilever allows the support to read as a cohesive element in character with the existing Pershing Walls
- Suggested that the sculpture should sit proud of the base support **and** the stone bookends (depicted here)
- Monolithic quality with and without the presence of east cascade



See appendix for faded content

RESPONSE TO SCULPTURE COMMENTS

SIMPLIFIED PLINTH WITHOUT CANTILEVER

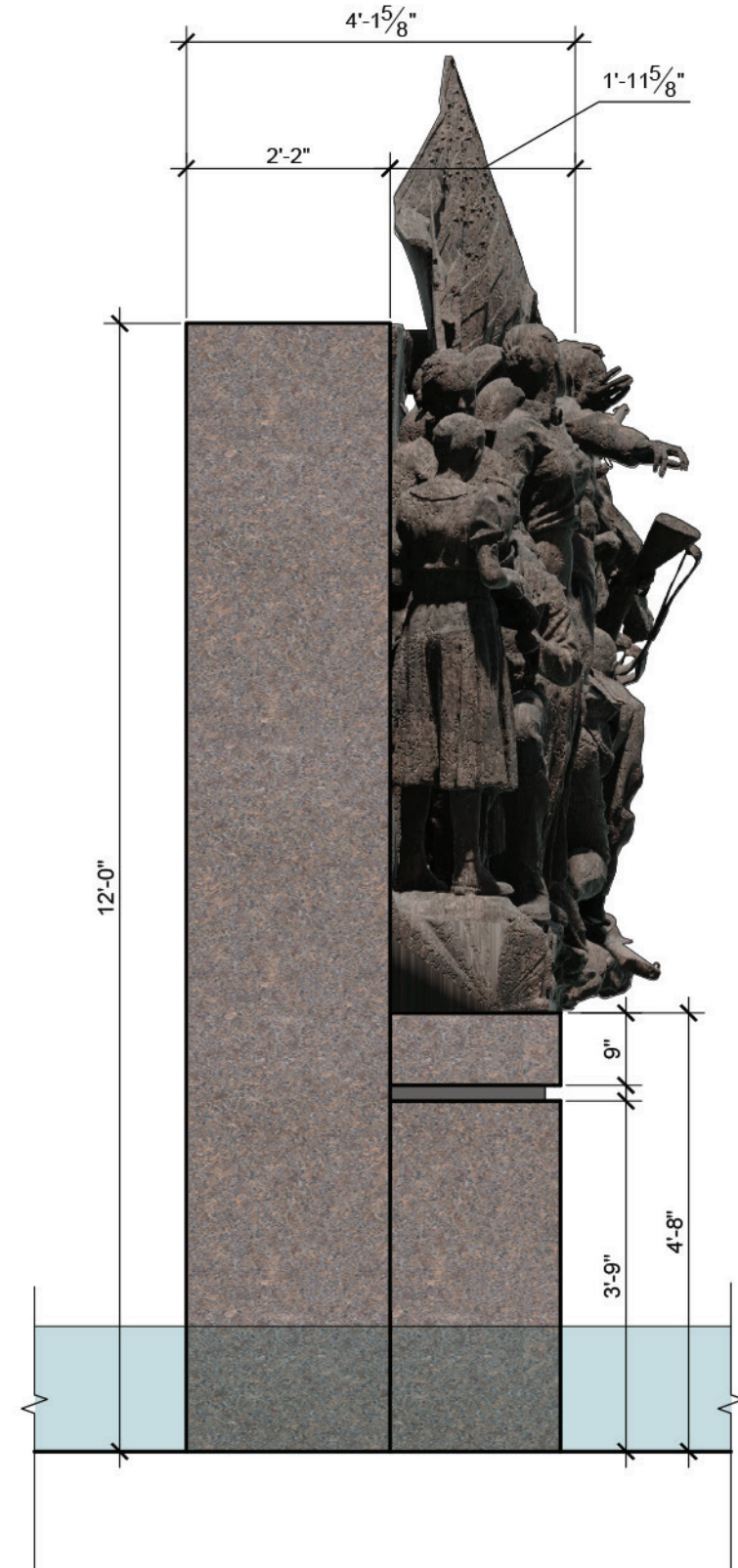
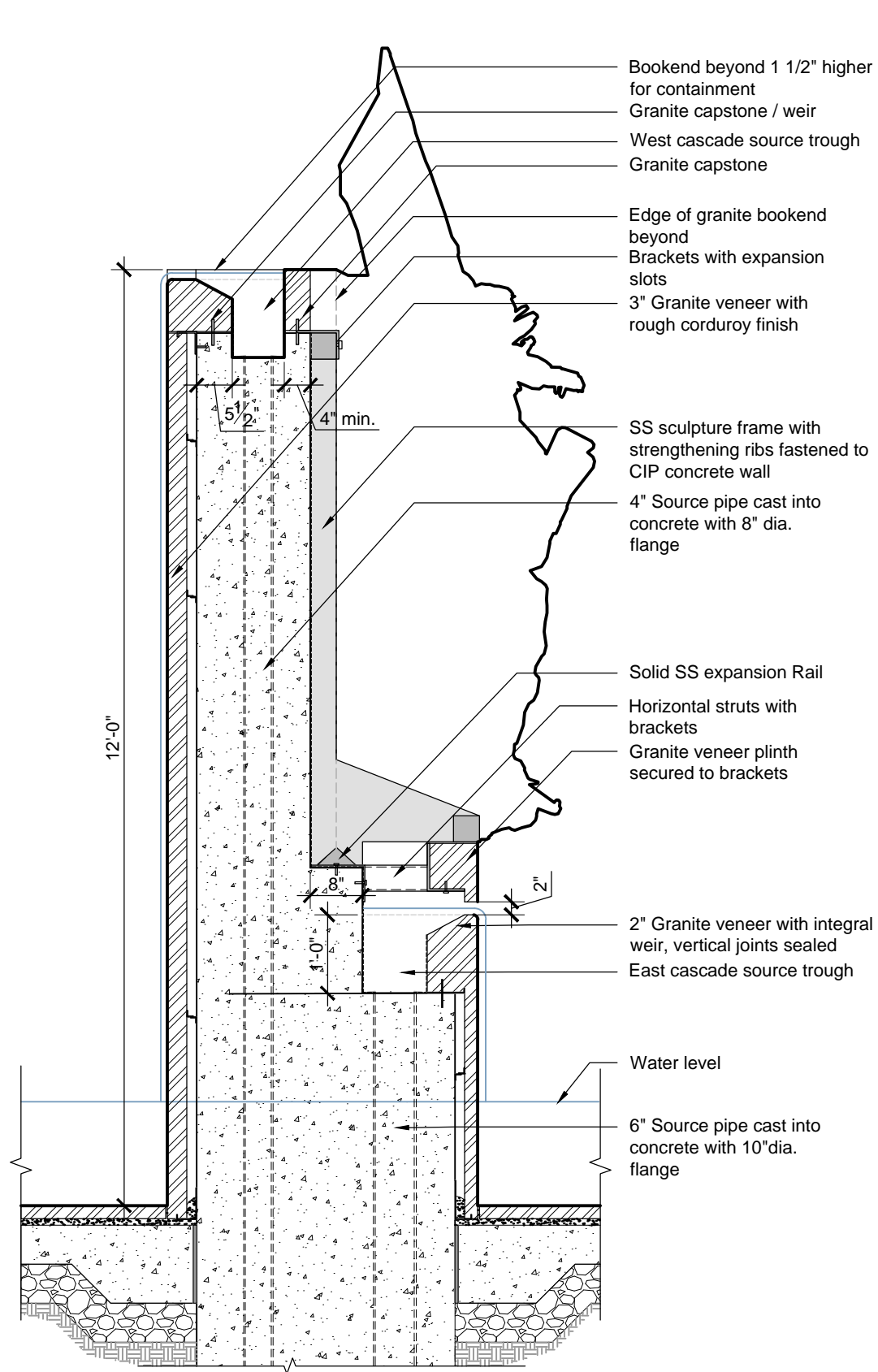
Response

- Plinth remains to provide separation of east cascade to sculpture to deter bronze disease
- Classical detailing is removed
- Cantilever is removed allowing the stone support to read as one element rather than multiple when the cascade is off
- Sculpture sits proud of the stone support and bookends
- Monolithic quality is maintained while the east cascade is on and while off



RESPONSE TO SCULPTURE COMMENTS

SIMPLIFIED PLINTH WITHOUT CANTILEVER



RESPONSE TO LIGHTING COMMENTS

PARK USE

LIGHTING RENDERING DISCLAIMERS

EXISTING FIXTURES AND CONTEXT GLARE

PREVIOUSLY PROPOSED FIXTURES (APRIL 2019 CFA)

DEFINITION OF TERMS

MULTI-GLOBE FIXTURE STUDIES

EXISTING MULTI-GLOBE FIXTURE ADJUSTMENT

PREFERRED OPTIONS

RESPONSE TO LIGHTING COMMENTS

PARK USE - A LANDSCAPE OF CELEBRATION TO A LANDSCAPE OF COMMEMORATION

SPATIAL CONSIDERATIONS

- Multi-globe fixtures are features that ‘play an important role in the shaping of a coherent spatial experience’ and define a rhythm along the upper terrace creating a unique zone within the park

EMOTIVE CONSIDERATIONS

- Conflicting goals of park’s historic use as a space for recreation and respite vs the commemorative landscape of the WWI Memorial

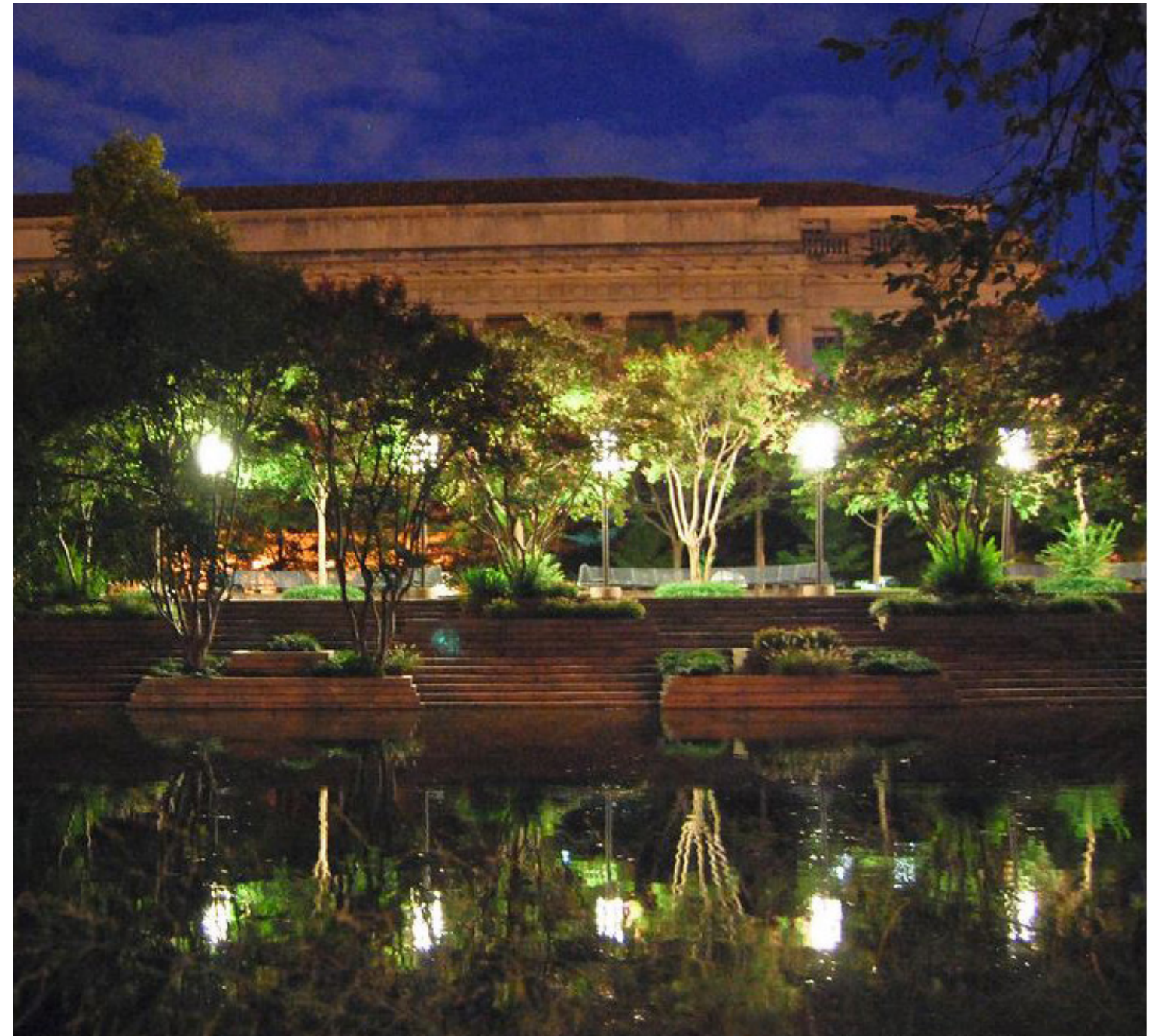
RESPONSE TO LIGHTING COMMENTS

LIGHTING RENDERING DISCLAIMERS

- All lighting renderings were produced with identical shutter speed / exposure settings
- All renderings represent ~1 footcandle of illumination along the walking surfaces (typically considered a safe lighting level for public spaces)
- Actual light output of the original multi-globe fixtures is unknown. The lighting output in the renderings is based on standard illumination levels from circulation fixtures on site and is set per light source (i.e. the greater quantity of globes at the same intensity multiplies the effect of the lighting). The total light output has been compared against site visits and photos for accuracy.
- Understanding that the site is not static, the renderings represent mid-height (15'-0") trees during the winter months. Summer months will allow for lower quantities of light to pass through the trees and affect the sculpture viewing experience differently than shown in each rendering.



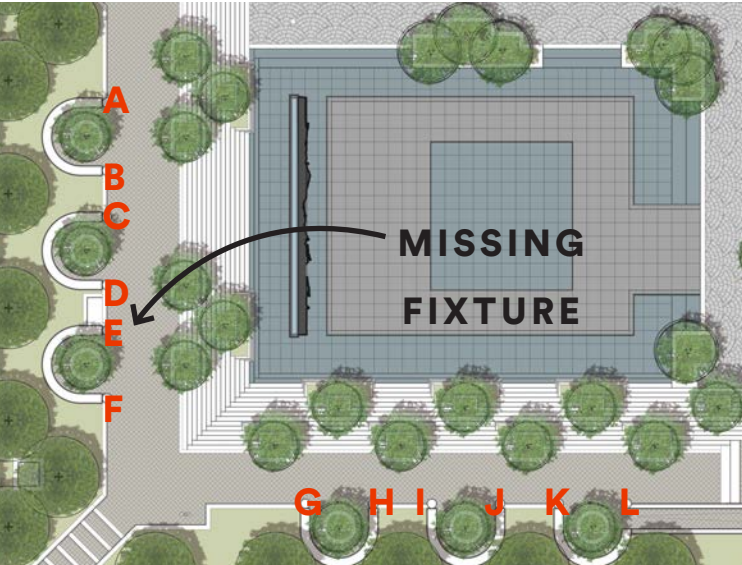
September 2010 - Photo credit BAR Photography



September 2010 - Photo Credit BAR Photography

RESPONSE TO LIGHTING COMMENTS

EXISTING FIXTURES



RESPONSE TO LIGHTING COMMENTS

EXISTING FIXTURES AND CONTEXT GLARE

Directives and Responses April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Questioned whether the glare produced by the historic fixtures would be more problematic than the glare from adjacent fixtures outside of the park
- **Determined that while glare outside of the park boundary is unavoidable, it is preferable to adjust the fixtures that we can control to best accommodate a successful memorial experience**



June 2019



February 2018



June 2019

RESPONSE TO LIGHTING COMMENTS

PREVIOUSLY PROPOSED FIXTURES (APRIL 2019 CFA)

Directives April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Concluded that using a single fixture type for multiple conditions compromises the geometric structure and spatial clarity of the plan, particularly along the upper walkway



RESPONSE TO LIGHTING COMMENTS

DEFINITION OF TERMS

MAINTAIN HISTORIC FIXTURES (CFA)

Existing fixtures designed to play a role in shaping a coherent spatial experience

Existing pole and globes remain as is with some aspect of illumination associated with the fixture

MAINTAIN PARK GEOMETRY (CFA)

Single lighting type compromises the geometric structure and spatial clarity of the plan

Distinctly different light fixtures utilized at the locations occupied by the existing multi-globe fixtures

ILLUMINATION

Provide minimum illumination for safety

A minimum of ~1 foot candle (10.76 lux) will be provided so that the upper terrace is safely illuminated. Lux is the officially recognized SI unit for illumination and is the method by which the rendering software calculates light levels.

BACKDROP WITHIN CONTEXT

Create a gently lit backdrop for viewing the sculpture within the context of the park

Lighting that casts a glow within the west terrace tree canopy to create a soft backdrop for the sculpture to blend seamlessly into its context

MEMORIAL CHARACTER

Provide a contemplative lighting quality within the memorial park

The quality of light produced by architectural fixtures that previously supported the joyful nature of a public open space transition to fixtures that support a contemplative atmosphere, one befitting of a national memorial

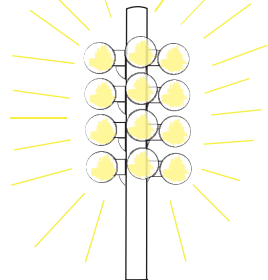
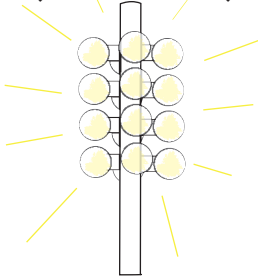
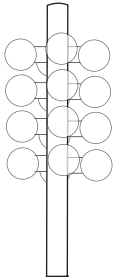
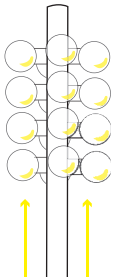
MAINTENANCE (NPS)

Reduce Maintenance Concerns

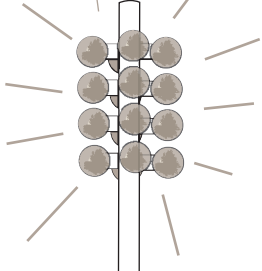
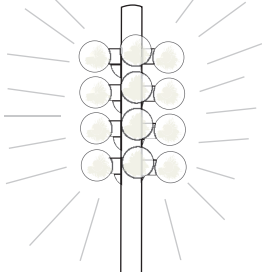
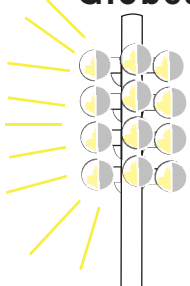
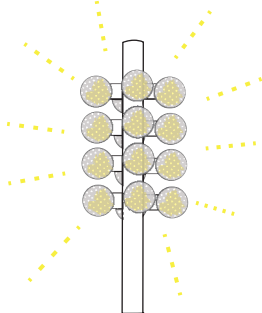
Concerns from NAMA Chief of Maintenance:

- *Sheer quantity of bulbs to maintain (192 globes and 192 bulbs spread across 12 poles)*
- *Fragile nature of the globes*
- *Difficulty in replacing bulbs within the globes*
- *Globes that are not properly sealed fill with water, drainage holes remediate water but allow for accumulation of insect debris*

RESPONSE TO LIGHTING COMMENTS
MULTI-GLOBE FIXTURE STUDIES: WATTAGE MODIFICATIONS

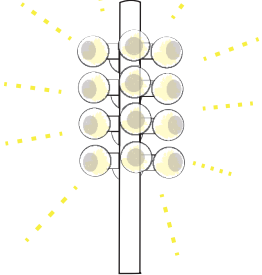
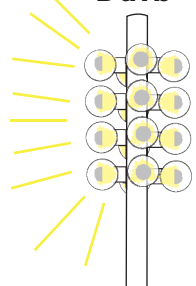
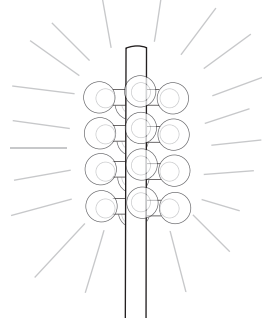
	MAINTAIN HISTORIC FIXTURES (CFA) Existing fixtures designed to play a role in shaping a coherent spatial experience	MAINTAIN PARK GEOMETRY (CFA) Single lighting type compromises the geometric structure and spatial clarity of the plan	ILLUMINATION Provide minimum illumination for safety	BACKDROP WITHIN CONTEXT Create a gently lit backdrop for viewing the sculpture within the context of the park	MEMORIAL CHARACTER Provide a contemplative lighting quality within the memorial park	MAINTENANCE (NPS) Reduce Maintenance Concerns
1) Existing Fixtures - Dimmed to Minimum Wattage 	✓	✓	✓			
*2) Further Reduce Wattage (Dimmable) 	✓	✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	add uplights to upper terrace trees to animate the canopy backdrop behind the sculpture		
*3) Fixture as Sculpture (no wattage) 	during the day only, fade away during evening hours	✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	add uplights to upper terrace trees to animate the canopy backdrop behind the sculpture		partially reduces concerns
*4) Fixture as Sculpture - Illuminated From Below 	✓	✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	add uplights to upper terrace trees to animate the canopy backdrop behind the sculpture		partially reduces concerns

RESPONSE TO LIGHTING COMMENTS
MULTI-GLOBE FIXTURE STUDIES: GLOBE MODIFICATIONS

	MAINTAIN HISTORIC FIXTURES (CFA) Existing fixtures designed to play a role in shaping a coherent spatial experience	MAINTAIN PARK GEOMETRY (CFA) Single lighting type compromises the geometric structure and spatial clarity of the plan	ILLUMINATION Provide minimum illumination for safety	BACKDROP WITHIN CONTEXT Create a gently lit backdrop for viewing the sculpture within the context of the park	MEMORIAL CHARACTER Provide a contemplative lighting quality within the memorial park	MAINTENANCE (NPS) Reduce Maintenance Concerns
5) Decorative Amber Glass Globes 	✓	✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	✓		
6) Decorative Milked Glass Globes 	✓	✓	✓			
7) Half-Silvered or Bronzed Globes 	✓	✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	add uplights to upper terrace trees to animate the canopy backdrop behind the sculpture		
8) Perforated Metal Sphere 		✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	✓		✓

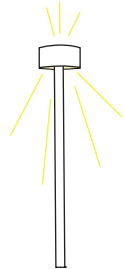
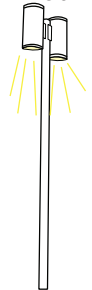
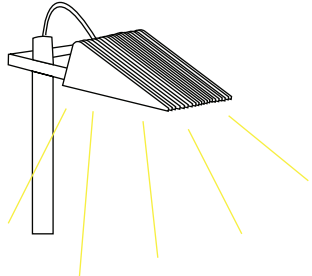
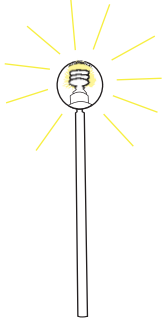
RESPONSE TO LIGHTING COMMENTS

MULTI-GLOBE FIXTURE STUDIES: BULB MODIFICATIONS

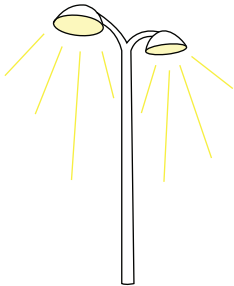
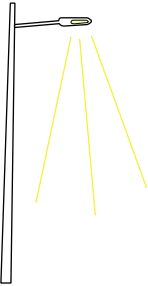
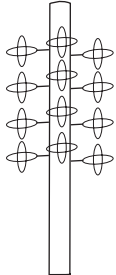
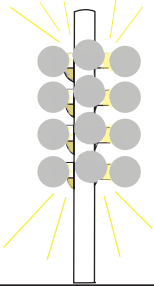
	MAINTAIN HISTORIC FIXTURES (CFA)	MAINTAIN PARK GEOMETRY (CFA)	ILLUMINATION	BACKDROP WITHIN CONTEXT	MEMORIAL CHARACTER	MAINTENANCE (NPS)
	Existing fixtures designed to play a role in shaping a coherent spatial experience	Single lighting type compromises the geometric structure and spatial clarity of the plan	Provide minimum illumination for safety	Create a gently lit backdrop for viewing the sculpture within the context of the park	Provide a contemplative lighting quality within the memorial park	Reduce Maintenance Concerns
9) Add Internal Perforated Baffle 	✓	✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	✓		
10) Half Silvered or Bronzed Bulb 	✓	✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	✓		
11) Frosted Bulb 	✓	✓	✓			

RESPONSE TO LIGHTING COMMENTS

MULTI-GLOBE FIXTURE STUDIES: ALTERNATE FIXTURES

	MAINTAIN HISTORIC FIXTURES (CFA)	MAINTAIN PARK GEOMETRY (CFA)	ILLUMINATION	BACKDROP WITHIN CONTEXT	MEMORIAL CHARACTER	MAINTENANCE (NPS)
	Existing fixtures designed to play a role in shaping a coherent spatial experience	Single lighting type compromises the geometric structure and spatial clarity of the plan	Provide minimum illumination for safety	Create a gently lit backdrop for viewing the sculpture within the context of the park	Provide a contemplative lighting quality within the memorial park	Reduce Maintenance Concerns
12) Existing Park Circulation Fixture 			✓	✓	✓	✓
*13) Simes Double Slot Pole Fixture 		✓	✓	✓	✓	✓
14) Hess Novara Fixture 		✓	✓	✓	✓	✓
15) Metro Standard Fixture 		✓	✓			✓

RESPONSE TO LIGHTING COMMENTS
MULTI-GLOBE FIXTURE STUDIES: ALTERNATE FIXTURES

	MAINTAIN HISTORIC FIXTURES (CFA) Existing fixtures designed to play a role in shaping a coherent spatial experience	MAINTAIN PARK GEOMETRY (CFA) Single lighting type compromises the geometric structure and spatial clarity of the plan	ILLUMINATION Provide minimum illumination for safety	BACKDROP WITHIN CONTEXT Create a gently lit backdrop for viewing the sculpture within the context of the park	MEMORIAL CHARACTER Provide a contemplative lighting quality within the memorial park	MAINTENANCE (NPS) Reduce Maintenance Concerns
*16) 12' Tall PADC Pole 			✓	✓	✓	✓
*17) Similar to Lincoln Memorial Fixture 		✓	✓	✓	✓	✓
18) Metal Hoops 		✓	add subtle fixtures on terrace side of walkway to meet minimum pathway lighting levels	add uplights to upper terrace trees to animate the canopy backdrop behind the sculpture		✓
19) Metal Masking Light Source from Memorial 		✓	✓			partially reduces concerns

RESPONSE TO LIGHTING COMMENTS

EXISTING FIXTURES: DIMMED TO MINIMUM WATTAGE FOR SAFE LIGHT LEVELS

Directives + Responses April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Concluded that using a single fixture type for multiple conditions compromises the geometric structure and spatial clarity of the plan, particularly along the upper walkway
- Reduce the wattage of the existing fixtures to meet the minimum lighting needs of the upper walkway



RESPONSE TO LIGHTING COMMENTS

PREFERRED OPTIONS: PADC FIXTURE

Directives + Responses April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Concluded that using a single fixture type for multiple conditions compromises the geometric structure and spatial clarity of the plan, particularly along the upper walkway
- Replace the existing multi-globe fixtures with the PADC double headed fixture from PA Ave and the Grove



PADC Light Fixture

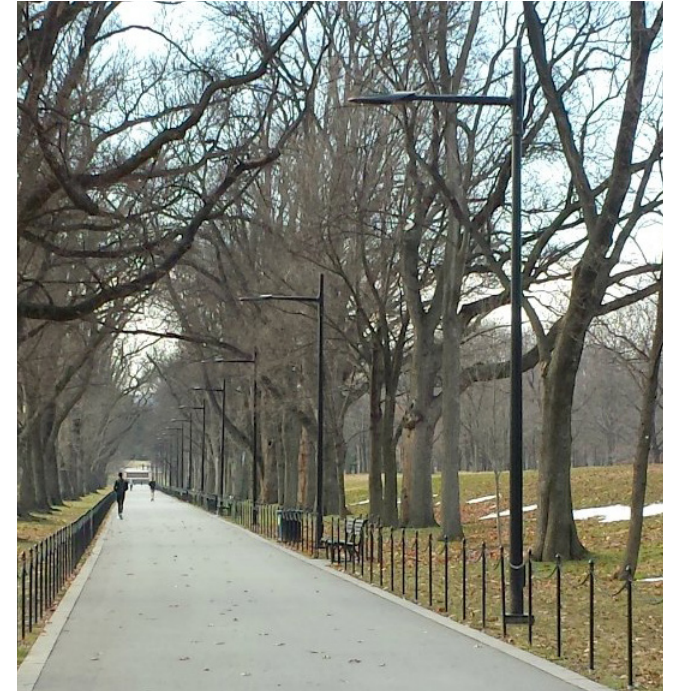


RESPONSE TO LIGHTING COMMENTS

PREFERRED OPTIONS: LINCOLN MEMORIAL FIXTURE

Directives + Responses April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Concluded that using a single fixture type for multiple conditions compromises the geometric structure and spatial clarity of the plan, particularly along the upper walkway
- **Replace the existing multi-globe fixtures with a fixture similar to the fixtures used at the Lincoln Memorial - distinctly different and fades into the background**



Lincoln Memorial Light Fixture



RESPONSE TO LIGHTING COMMENTS

PREFERRED OPTIONS: SIMES DOUBLE SLOT POLE FIXTURE

Directives + Responses April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Concluded that using a single fixture type for multiple conditions compromises the geometric structure and spatial clarity of the plan, particularly along the upper walkway
- **Replace the existing multi-globe fixtures with a distinctly different fixture that picks up on the strong geometric qualities of the existing park**



Simes Pole Light Fixture



RESPONSE TO LIGHTING COMMENTS
PREFERRED OPTIONS: SPECIALTY FIXTURE COMPARISON



PADC Fixture



Lincoln Memorial Fixture



Simes Double Slot Pole Fixture

SITE SECURITY MEASURES

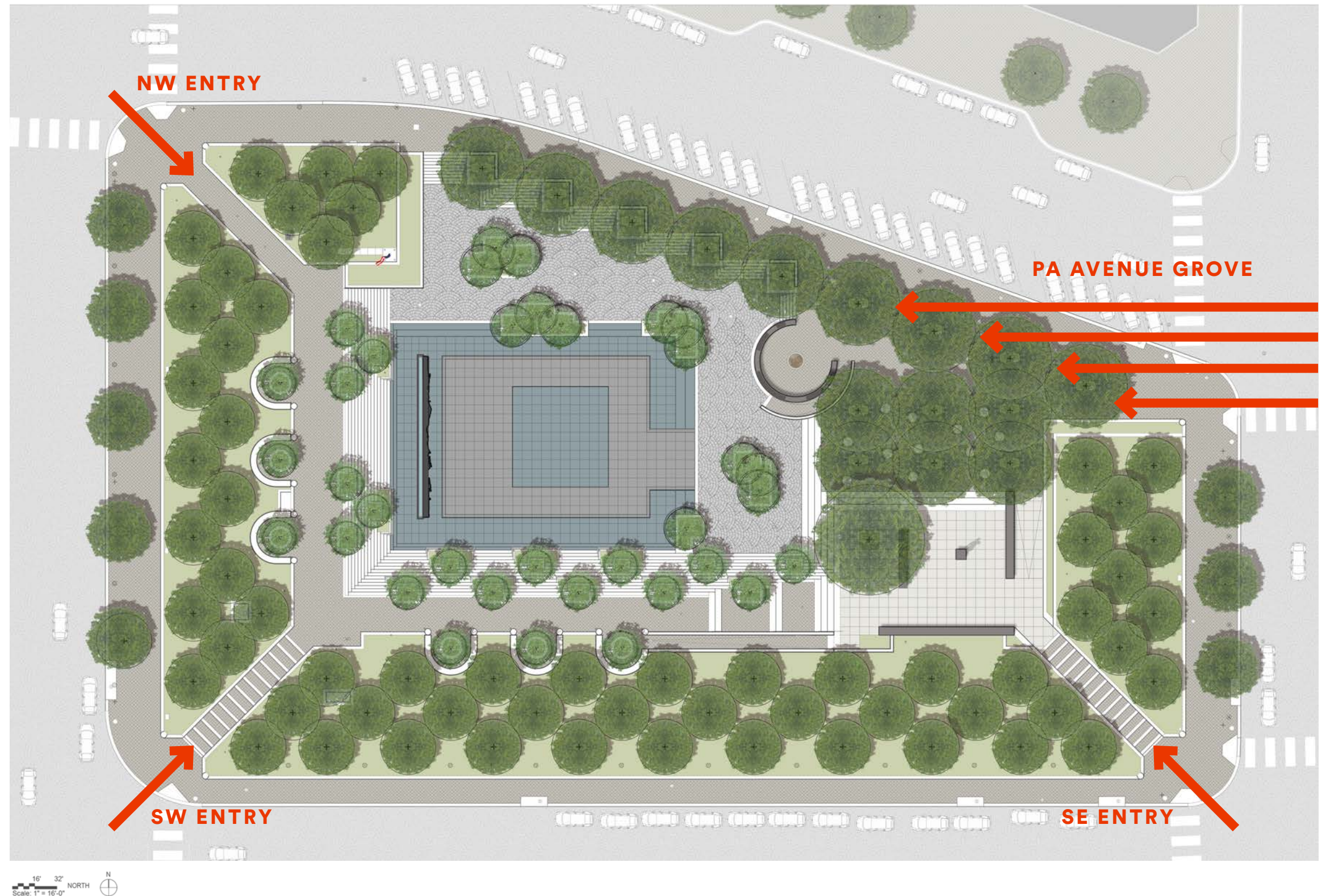
PHYSICAL BARRIERS

CAMERA LOCATIONS

SITE SECURITY MEASURES - PHYSICAL BARRIERS

RISK MANAGEMENT

- Protect major gathering areas, park will have a change of use with greater volumes of visitors and events
- Protect from errant vehicles, accidental / intentional
- US Park Police have identified errant vehicle threats to nearby locations in the past few years and recommend designing protective measures into the refurbishment of the park
- Northeast entry: Most significant area of concern for a vehicular threat
- Northwest, southwest, and southeast entries: Some concern for vehicular threat; treatment can be similar at these corners



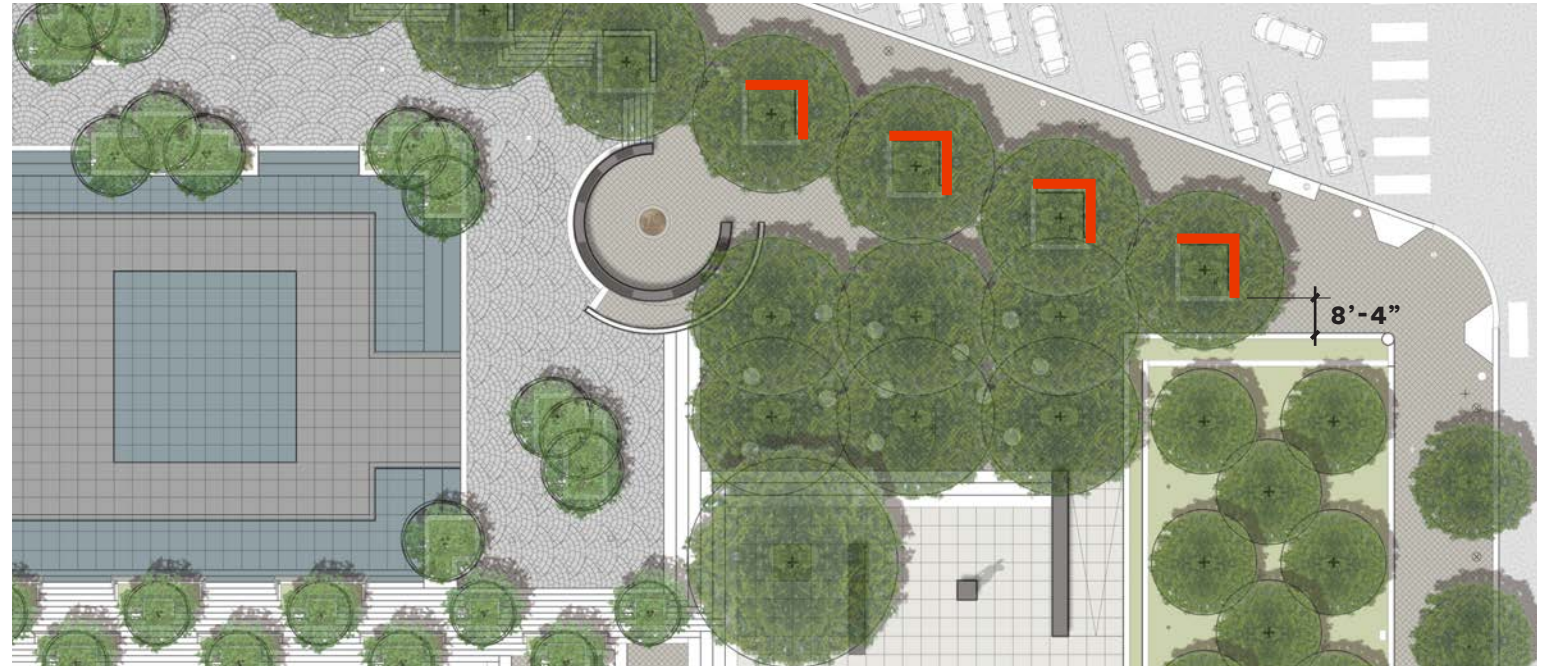
SITE SECURITY MEASURES - PHYSICAL BARRIERS
EXISTING CONDITIONS



SITE SECURITY MEASURES - PHYSICAL BARRIERS

NE CORNER - CONTINUATION OF PA AVE PLANTER BENCHES

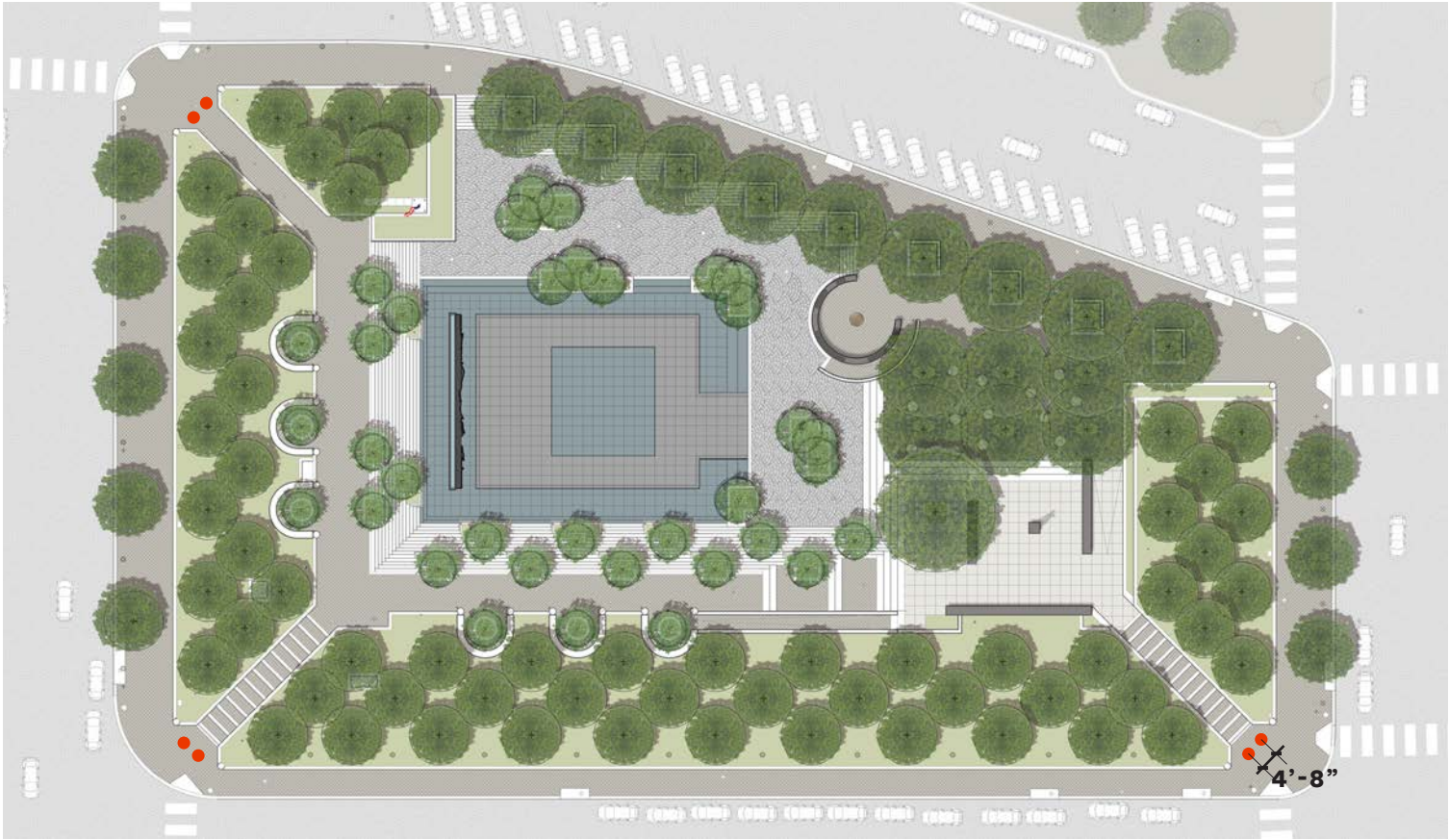
- Continuation of the existing PA Avenue benches and planters
- Chevron form adds strength and can be designed with a deep footer to deter vehicles
- Works from a security standpoint to protect the grove from errant vehicles
- In character with the existing park
- Means of differentiating new planters requested by SHPO at June 11th meeting; stone texture has been roughened to accommodate this request



SITE SECURITY MEASURES - PHYSICAL BARRIERS
NE CORNER - CONTINUATION OF PA AVE PLANTER BENCHES



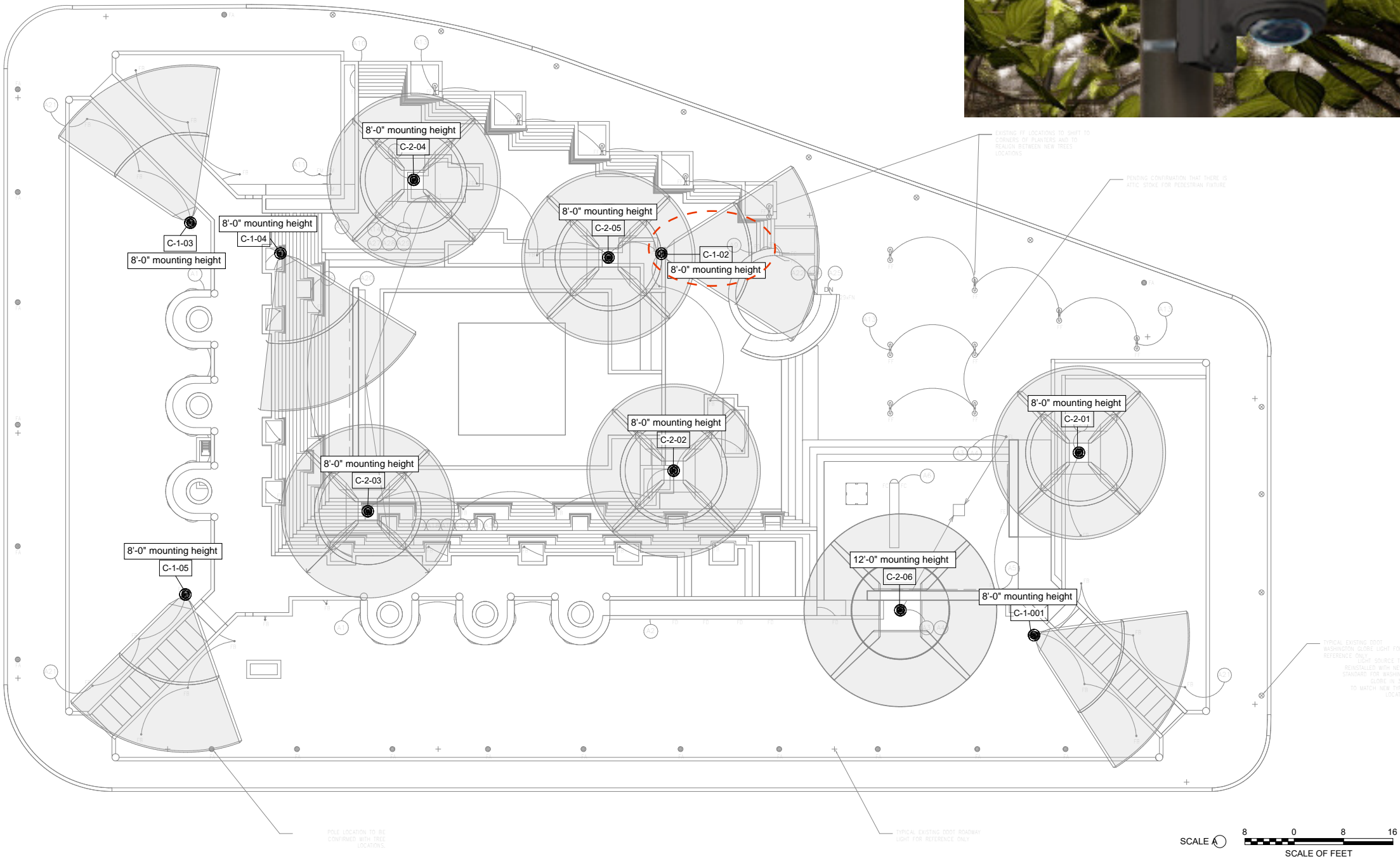
SITE SECURITY MEASURES - PHYSICAL BARRIERS
NW, SW, SE CORNERS - TWO METAL BOLLARDS



SITE SECURITY MEASURES - CAMERA LOCATIONS

TENTATIVE CAMERA LAYOUT

- Cameras to be located on existing light poles
- USPP have requested 11 cameras within the park for optimal surveillance



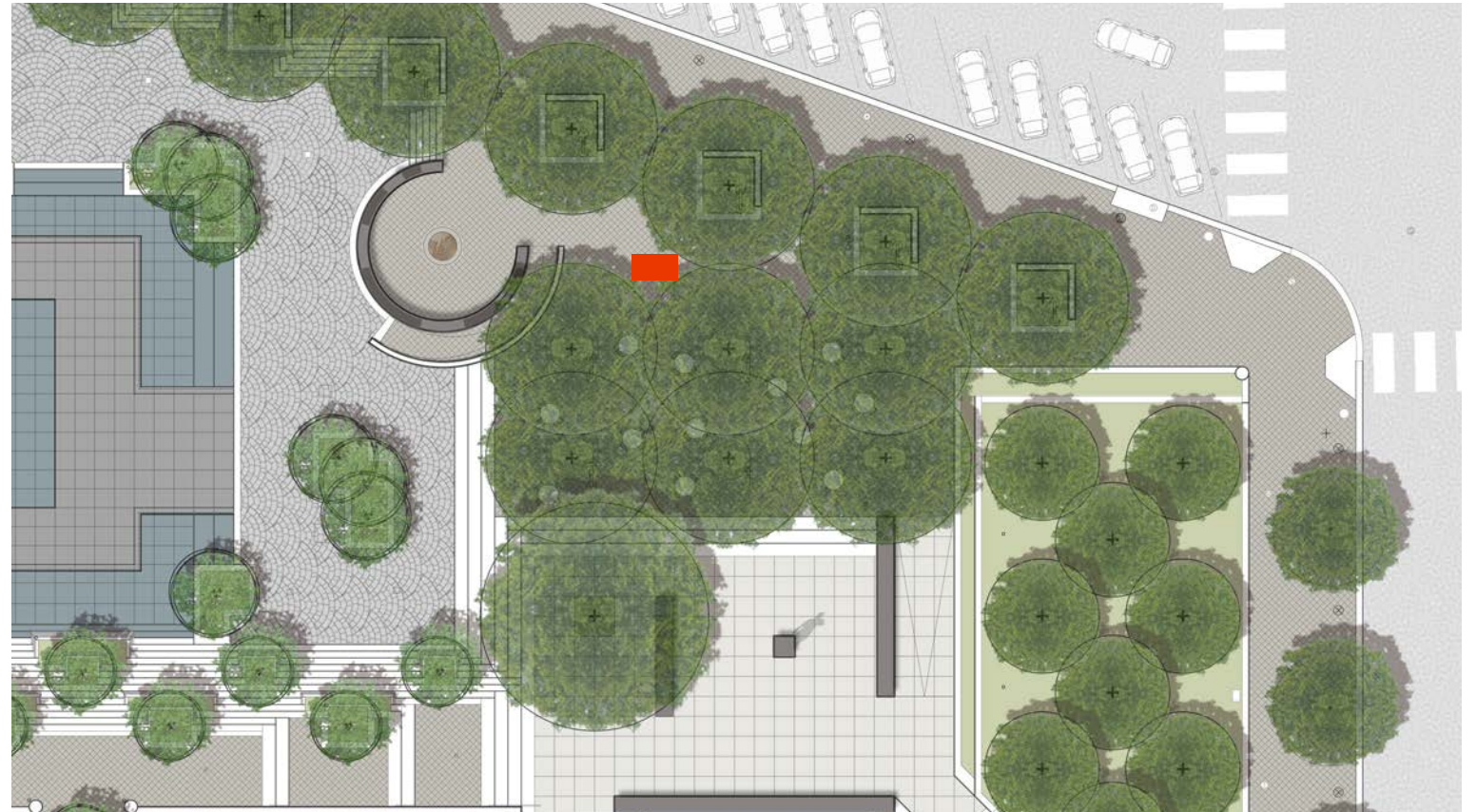
FINAL DETAILING

TACTILE SITE MODEL

FINAL DETAILING - TACTILE MODEL

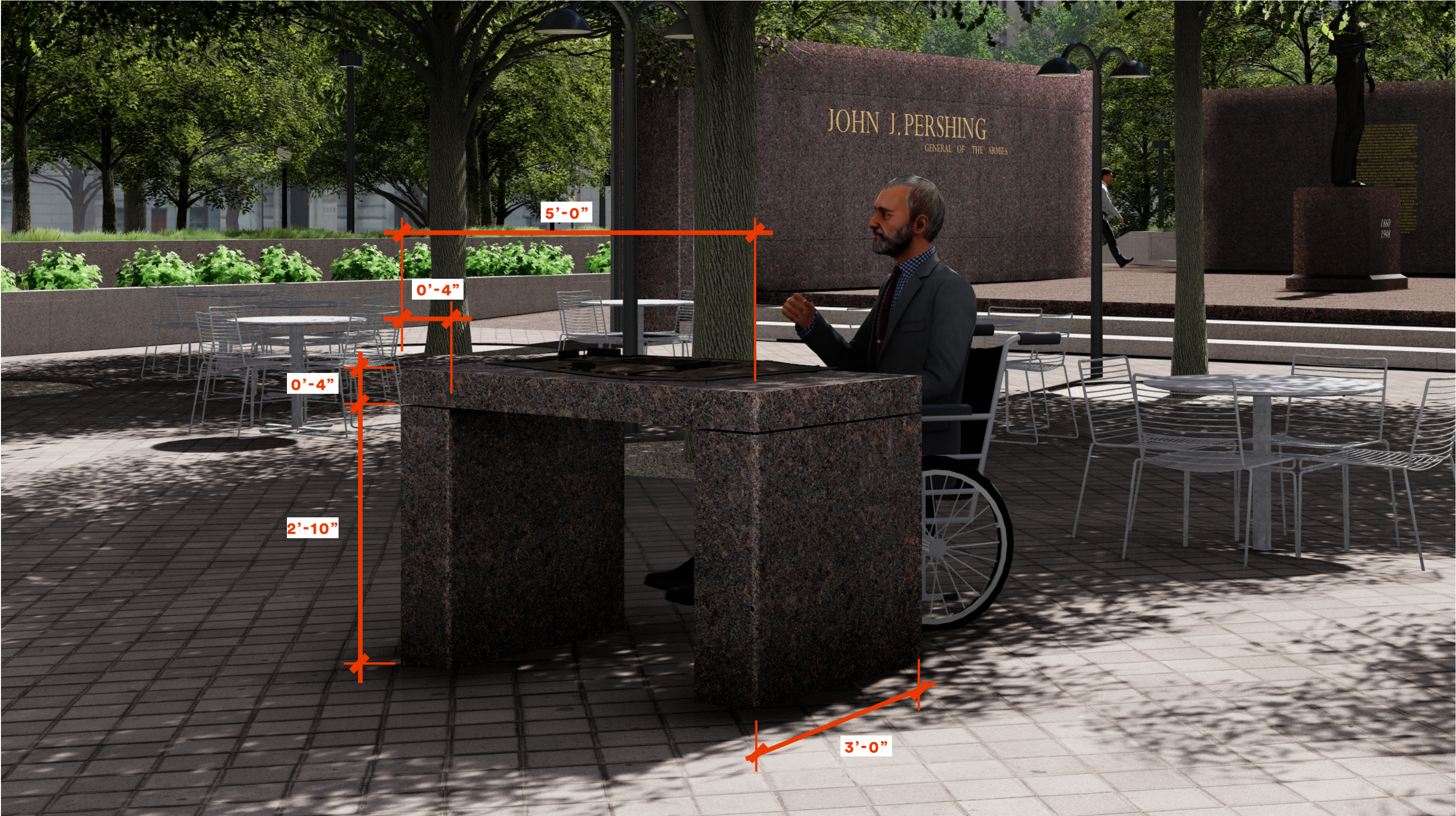
FREESTANDING IN GROVE

- Grove location approved by CFA during April 2019 presentation
- Detailing inspired by Pershing and Belvedere walls
- Carnelian honed granite with bronze scale model aligned in the same orientation as the park



FINAL DETAILING - TACTILE MODEL

FREESTANDING IN GROVE



APPENDIX

RESPONSE TO SCULPTURE COMMENTS - OPTIONS STUDIED AND DISMISSED

RESPONSE TO LIGHTING COMMENTS - STUDIES NOT PREFERRED BY WWI CENTENNIAL COMMISSION

LIGHT LEVEL DIAGRAMMS

SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

APPENDIX: RESPONSE TO SCULPTURE COMMENTS - OPTIONS STUDIED AND DISMISSED

REMOVED PLINTH - NO EAST CASCADE

Response

- Plinth removed
- The foundry has informed the team that the bronze sculpture requires separation from the east cascade to prevent / delay the impacts of bronze disease from the spray of the treated cascade fountain
- East cascade must be removed for this option to function



APPENDIX: RESPONSE TO SCULPTURE COMMENTS - OPTIONS STUDIED AND DISMISSED

SIMPLIFIED PLINTH WITH CANTILEVER

Response

- Plinth remains to provide separation and allow the east cascade to remain without accelerating bronze disease
- Classical detailing is removed
- Cantilever remains per previous approved detailing studies



APPENDIX: RESPONSE TO SCULPTURE COMMENTS - OPTIONS STUDIED AND DISMISSED

PARSONS TABLE

Response

- Plinth remains to provide separation and allow the east cascade to remain without accelerating bronze disease
- Classical detailing is removed
- Stone support takes on a modernist “Parsons Table” style with square bookends at the cascade below the plinth

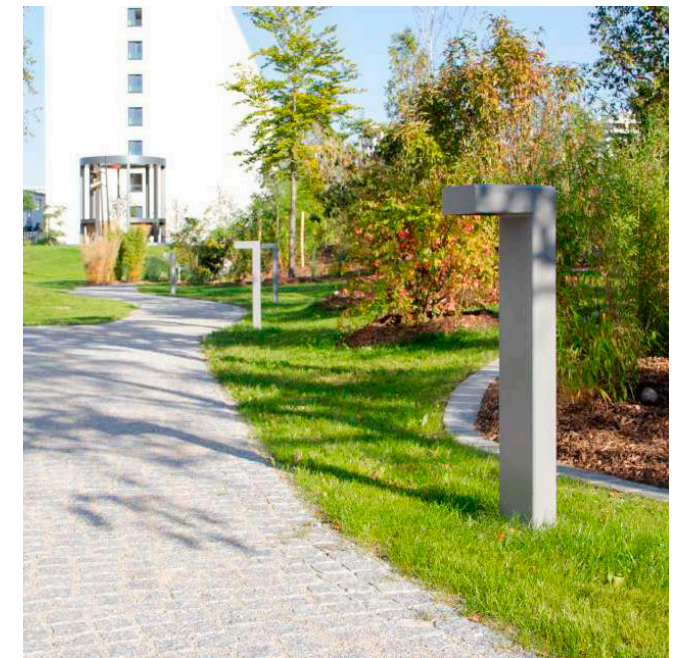


APPENDIX: RESPONSE TO LIGHTING COMMENTS -STUDIES NOT PREFERRED BY WWICC

OTHER STUDIES: REDUCE WATTAGE (DIMMABLE)

Directives + Responses April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Concluded that using a single fixture type for multiple conditions compromises the geometric structure and spatial clarity of the plan, particularly along the upper walkway
- Studied the use of a dimmable fixture that could be field adjusted to a reduced wattage to minimize impacts on the memorial experience at night
- Additional pathway lights and tree uplights required to meet the minimum lighting levels and design goals



Hess Linea Bollard

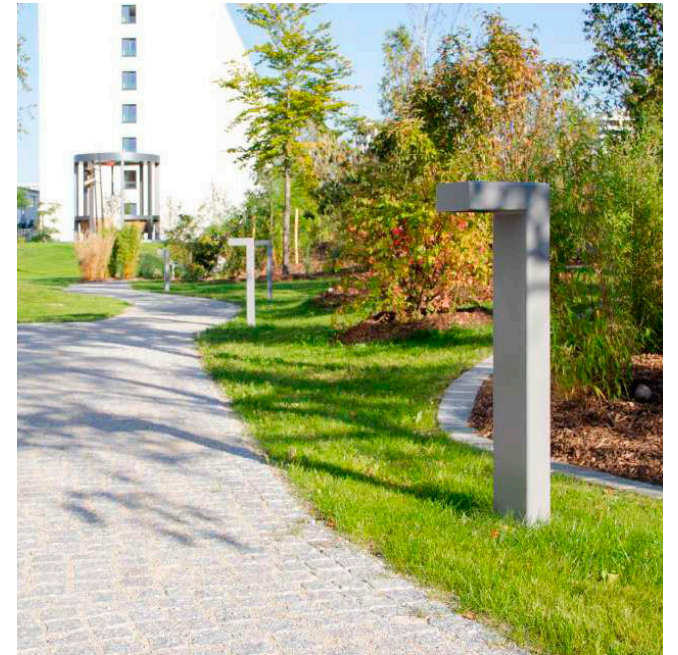


APPENDIX: RESPONSE TO LIGHTING COMMENTS -STUDIES NOT PREFERRED BY WWICC

OTHER STUDIES: FIXTURES AS SCULPTURE - NO WATTAGE

Directives + Responses April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Concluded that using a single fixture type for multiple conditions compromises the geometric structure and spatial clarity of the plan, particularly along the upper walkway
- **Maintain the existing light fixtures but remove the light sources so the fixtures remain as a sculptural element but do not provide illumination**
- **Additional pathway lights and tree uplights required to meet the minimum lighting levels and design goals**



Hess Linea Bollard

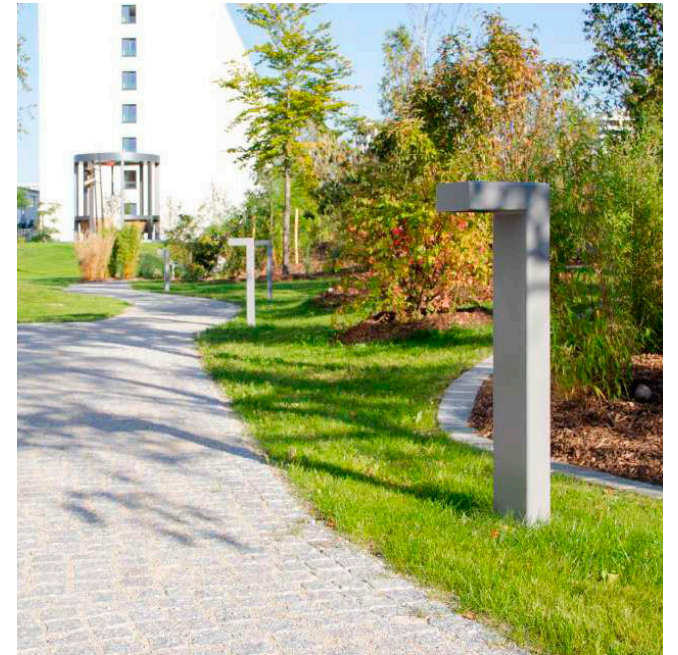


APPENDIX: RESPONSE TO LIGHTING COMMENTS -STUDIES NOT PREFERRED BY WWICC

OTHER STUDIES: FIXTURES AS SCULPTURE - ILLUMINATED FROM BELOW

Directives + Responses April 2019 CFA

- Questioned the removal of the 12 historic multi-globe fixtures along the upper walkway, emphasizing their important role in the shaping of a coherent spatial experience
- Concluded that using a single fixture type for multiple conditions compromises the geometric structure and spatial clarity of the plan, particularly along the upper walkway
- **Maintain the existing light fixtures but remove the light sources so the fixtures remain as a sculptural element but do not provide illumination**
- **Illuminate the fixtures via uplights mounted at the base of the poles**
- **Additional pathway lights and tree uplights required to meet the minimum lighting levels and design goals**

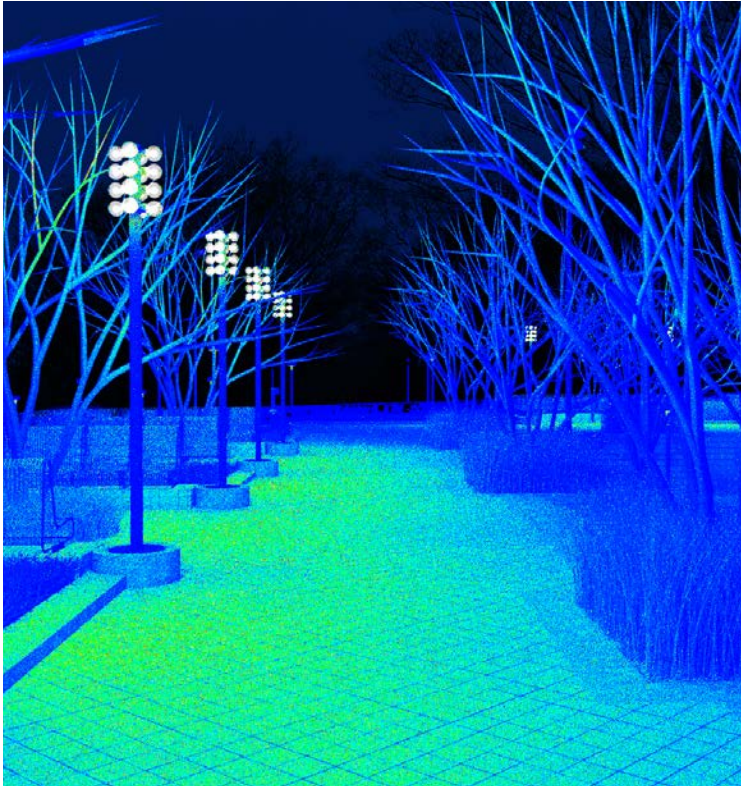


Hess Linea Bollard

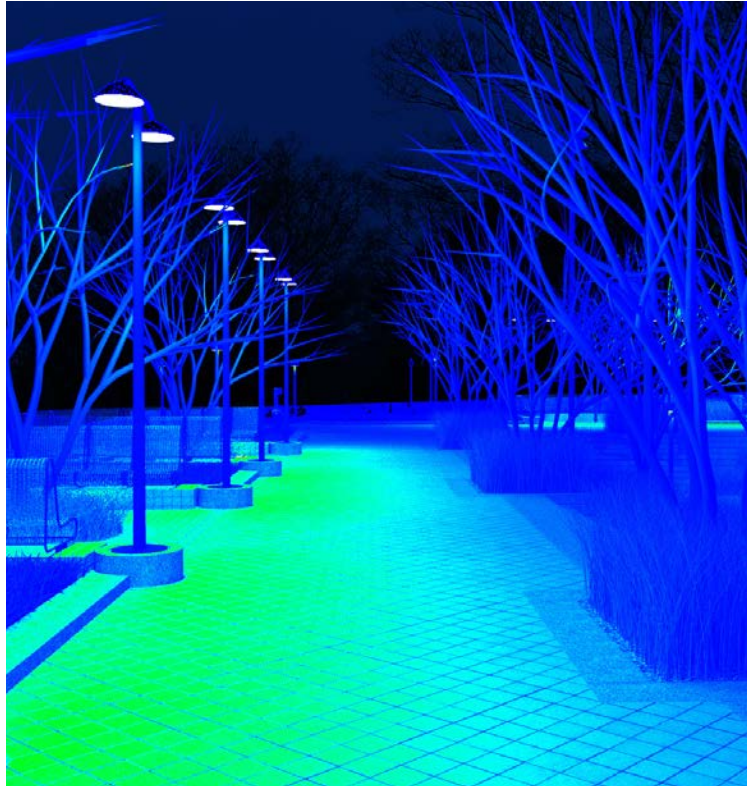


APPENDIX: LIGHT LEVEL DIAGRAM

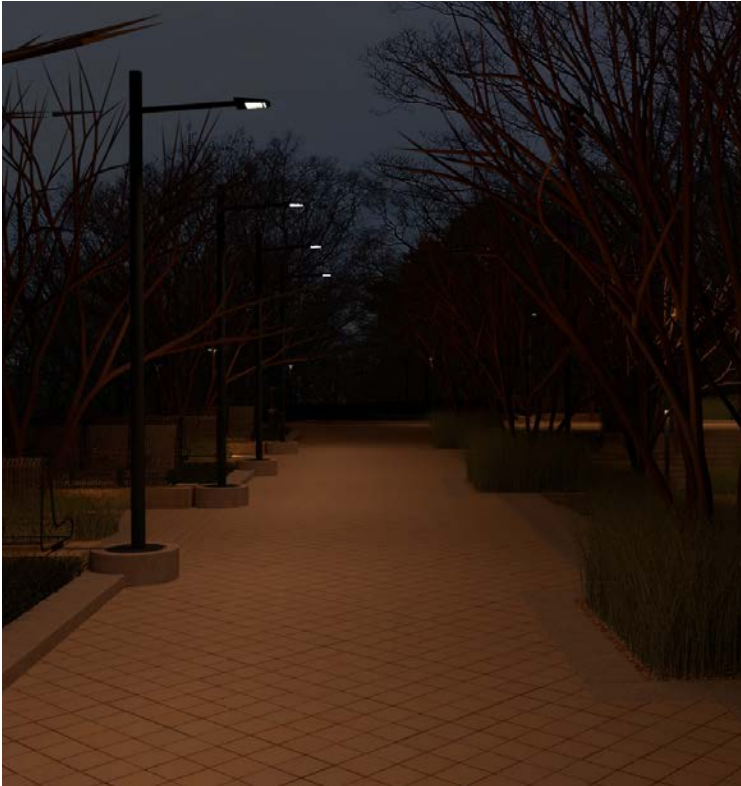
EXISTING FIXTURE DIMMED AND PREFERRED FIXTURES



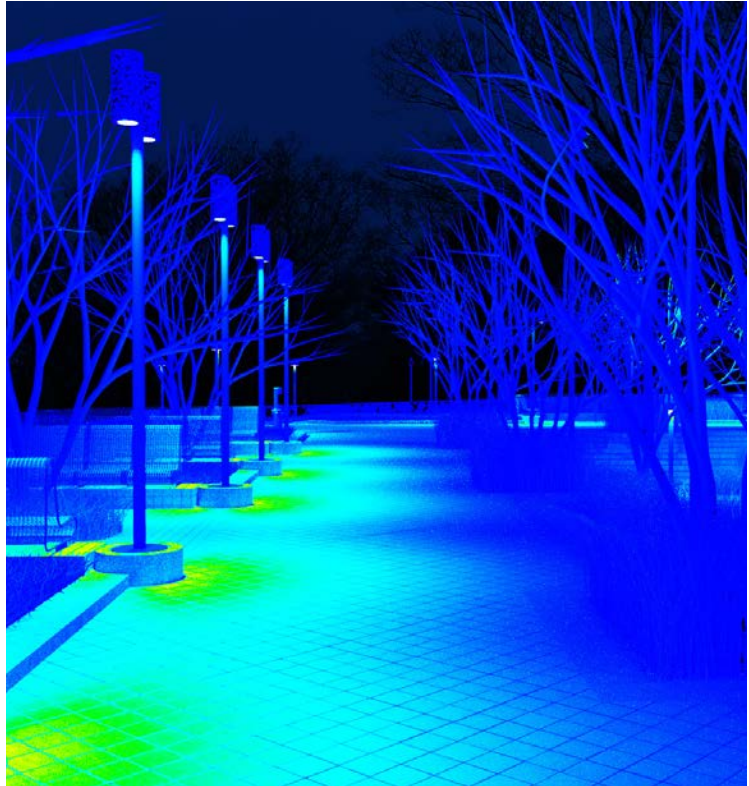
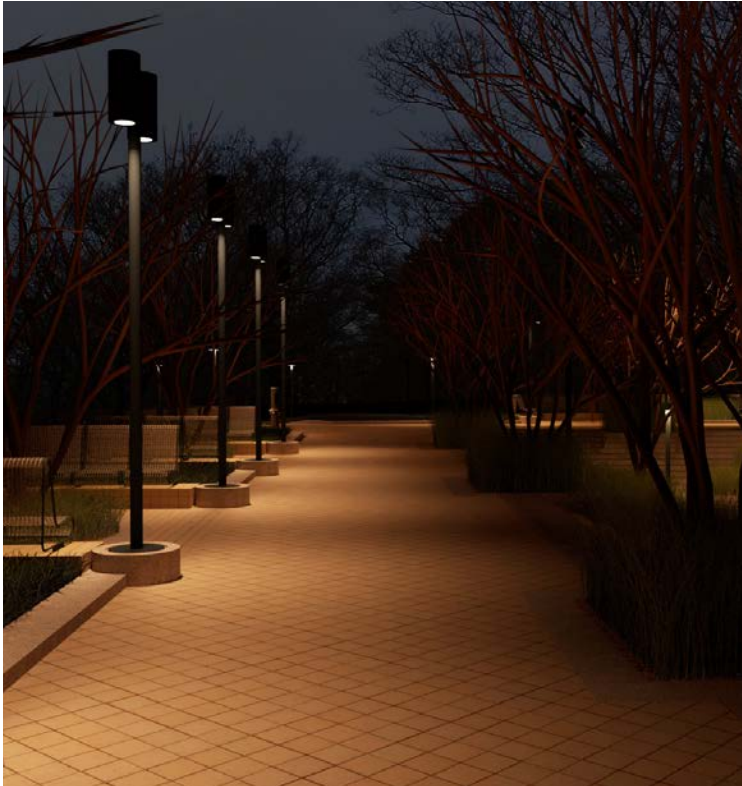
Existing Fixtures: Dimmed to minimum wattage for safe light levels



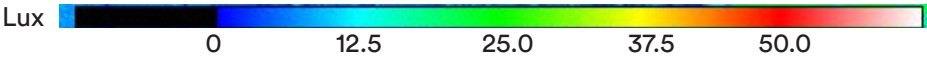
Preferred Options: PADC Fixture



Preferred Options: Lincoln Memorial Fixture

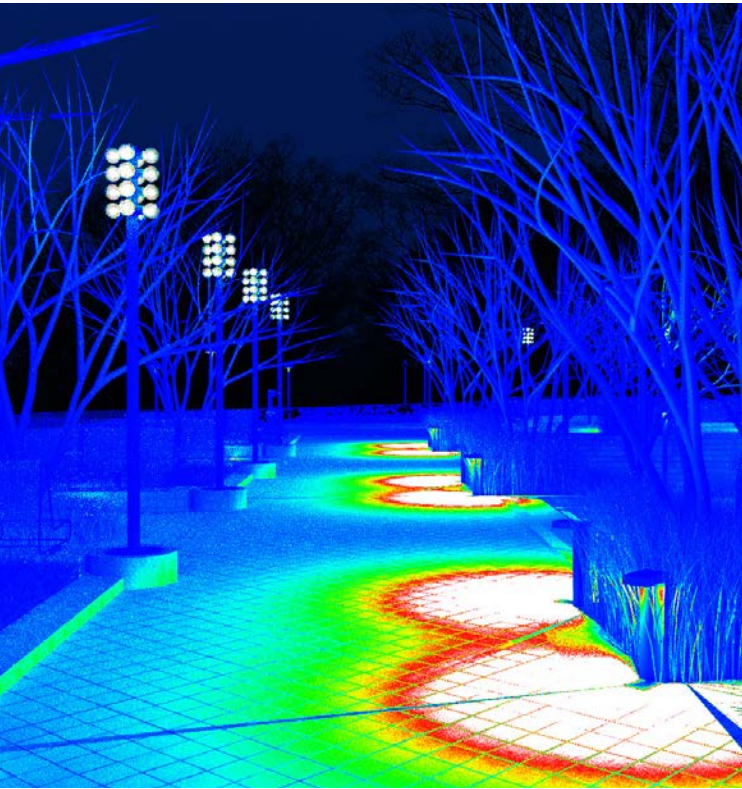


Preferred Options: Simes Double Slot Pole Fixture

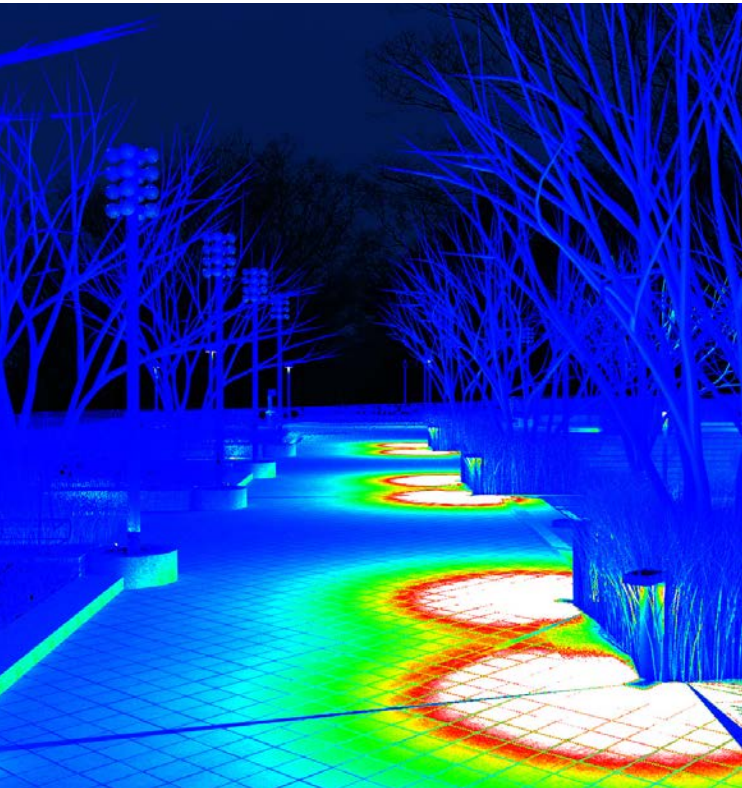


APPENDIX: LIGHT LEVEL DIAGRAM

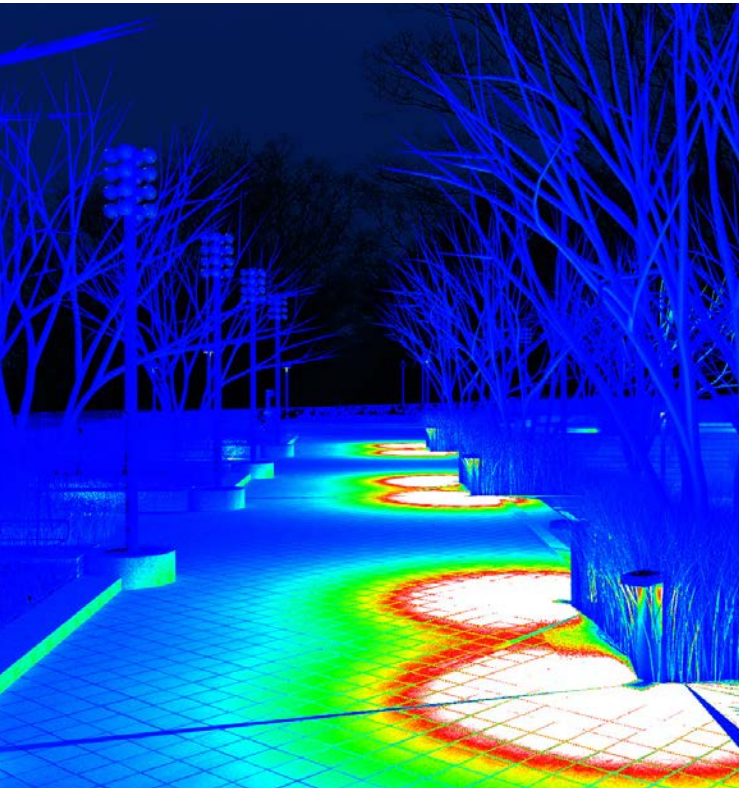
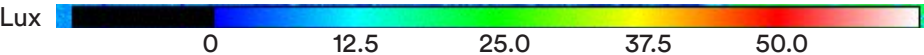
OTHER STUDIES: EXISTING FIXTURE



Other studies: Reduce Wattage (Dimmable)



Other Studies: Fixture as Sculpture - illuminated from below



Other Studies: Fixture as Sculpture - no wattage

APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

NE CORNER - 4' ON CENTER BOLLARDS AT BACK OF SIDEWALK

- Row of bollards 4' on center
- Visually blocks off the grove from the sidewalk experience
- Works from a security standpoint, but not preferred by the design team
- Meets NCPC Preference for bollards at the back of the sidewalk rather than at the curb



APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

NE CORNER - CONTINUATION OF PA AVE PLANTER BENCHES N/S ONLY

- Continuation of only the N/S side of PA Avenue benches
- Less impact on site, but not as stable as the chevron form in terms of stopping strength



APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

NE CORNER - CONTINUATION OF PA AVE PLANTER BENCHES: ELEVATED PLANTING

- Continuation of the PA Avenue benches and planters
- Planting and S/W sides elevated to 18" to increase stopping power of barrier



APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

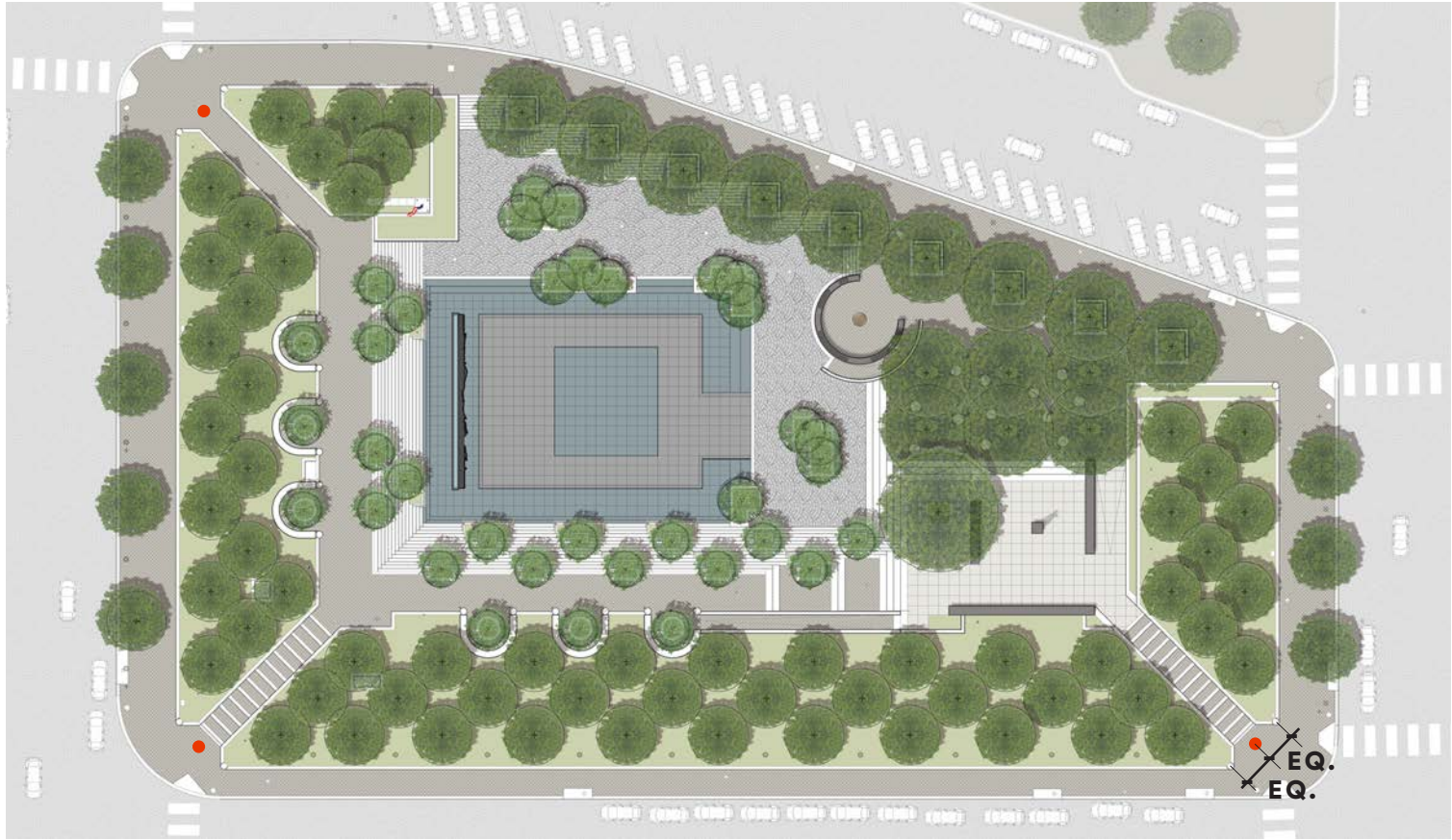
NE CORNER - CONTINUATION OF PA AVE PLANTER BENCHES WITH BACK ADDED

- Continuation of the PA Avenue benches and planters
- Planting and S/W sides also elevated to 18" to increase stopping power of barrier
- A back is added bringing the full height up to 30" to maximize security barrier effectiveness
- Blocks views into the park



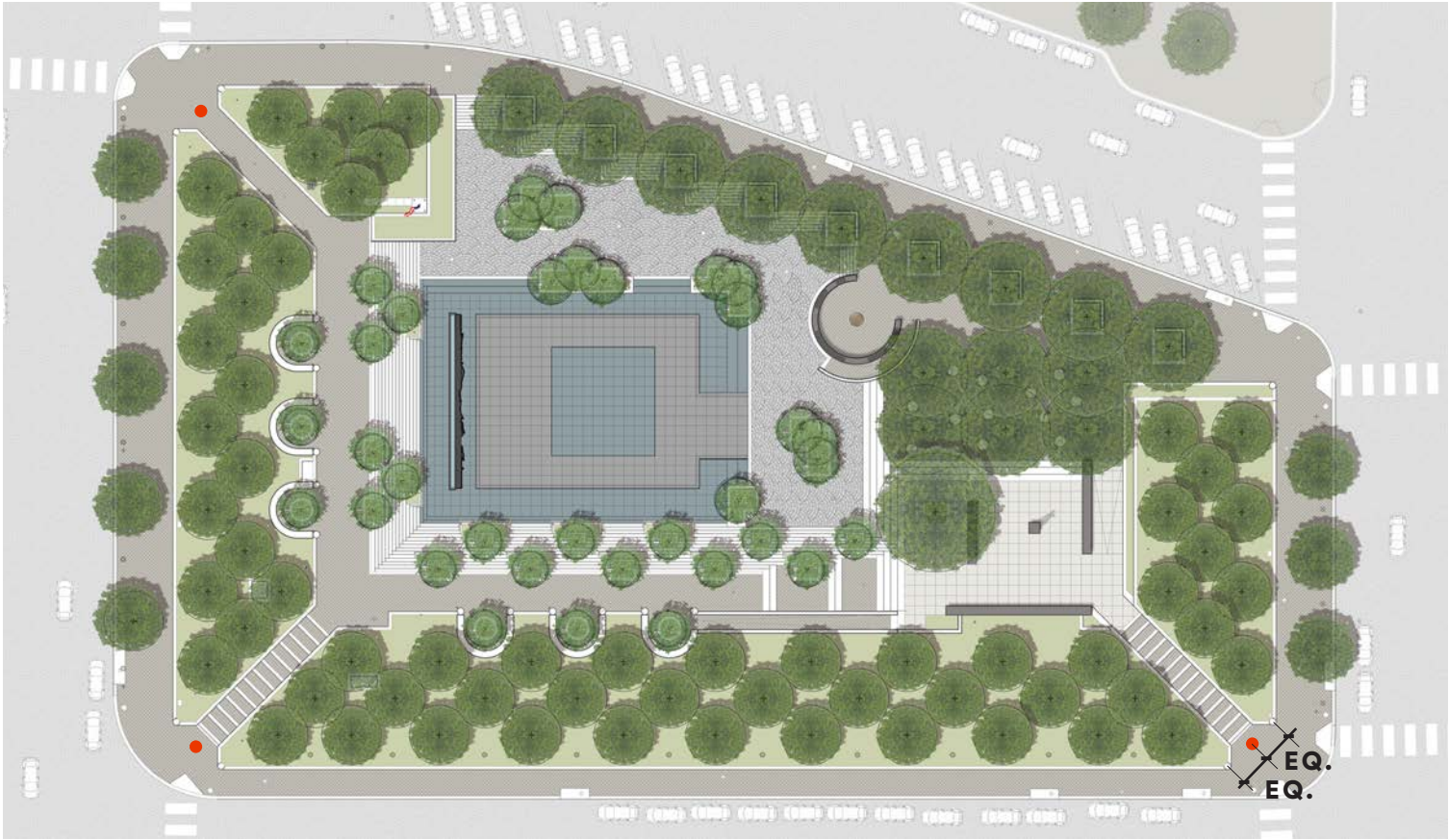
APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

NW, SW, SE CORNER - SINGLE BOLLARD



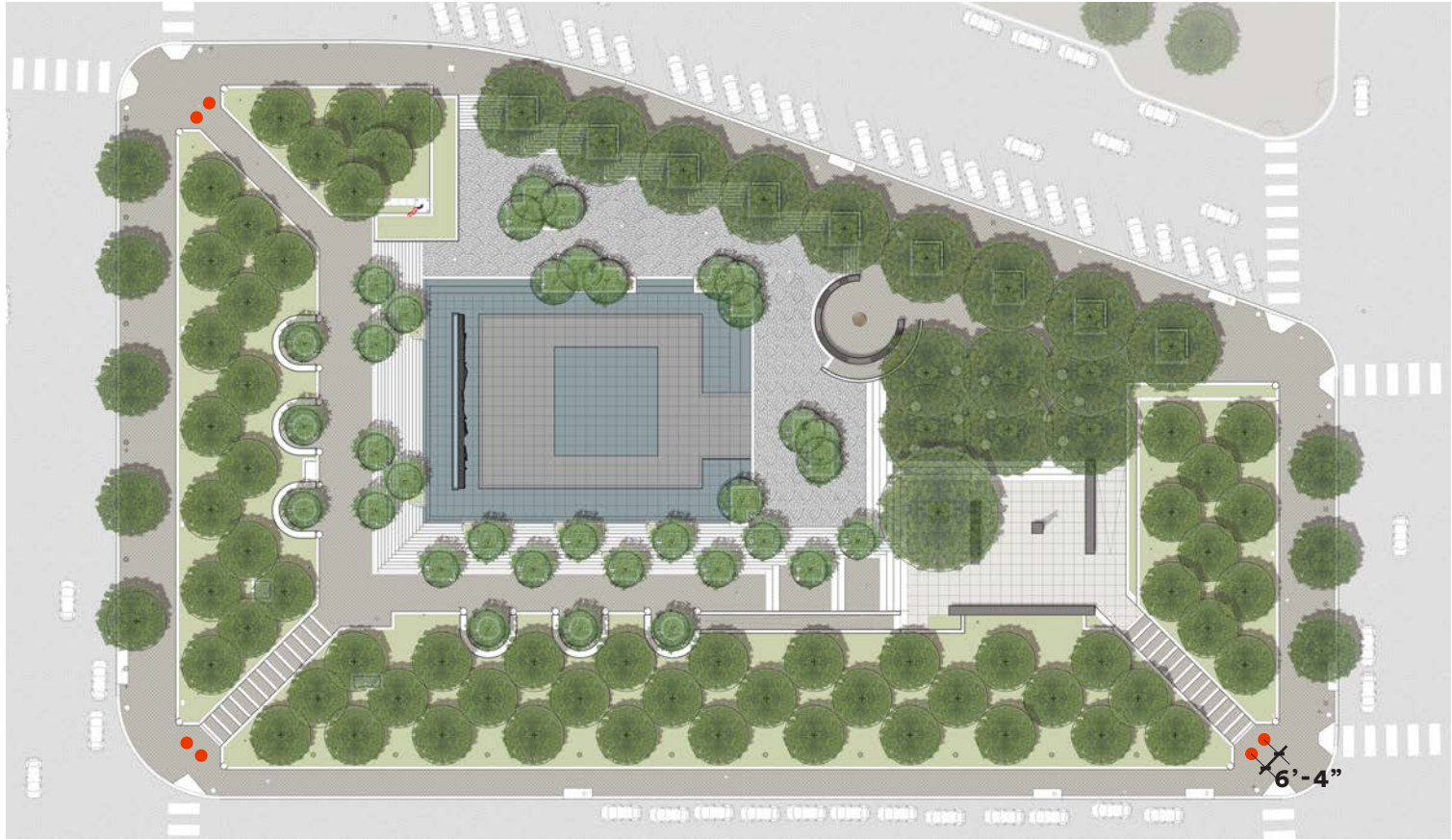
APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

NW, SW, SE CORNER - SINGLE STONE BOLLARD



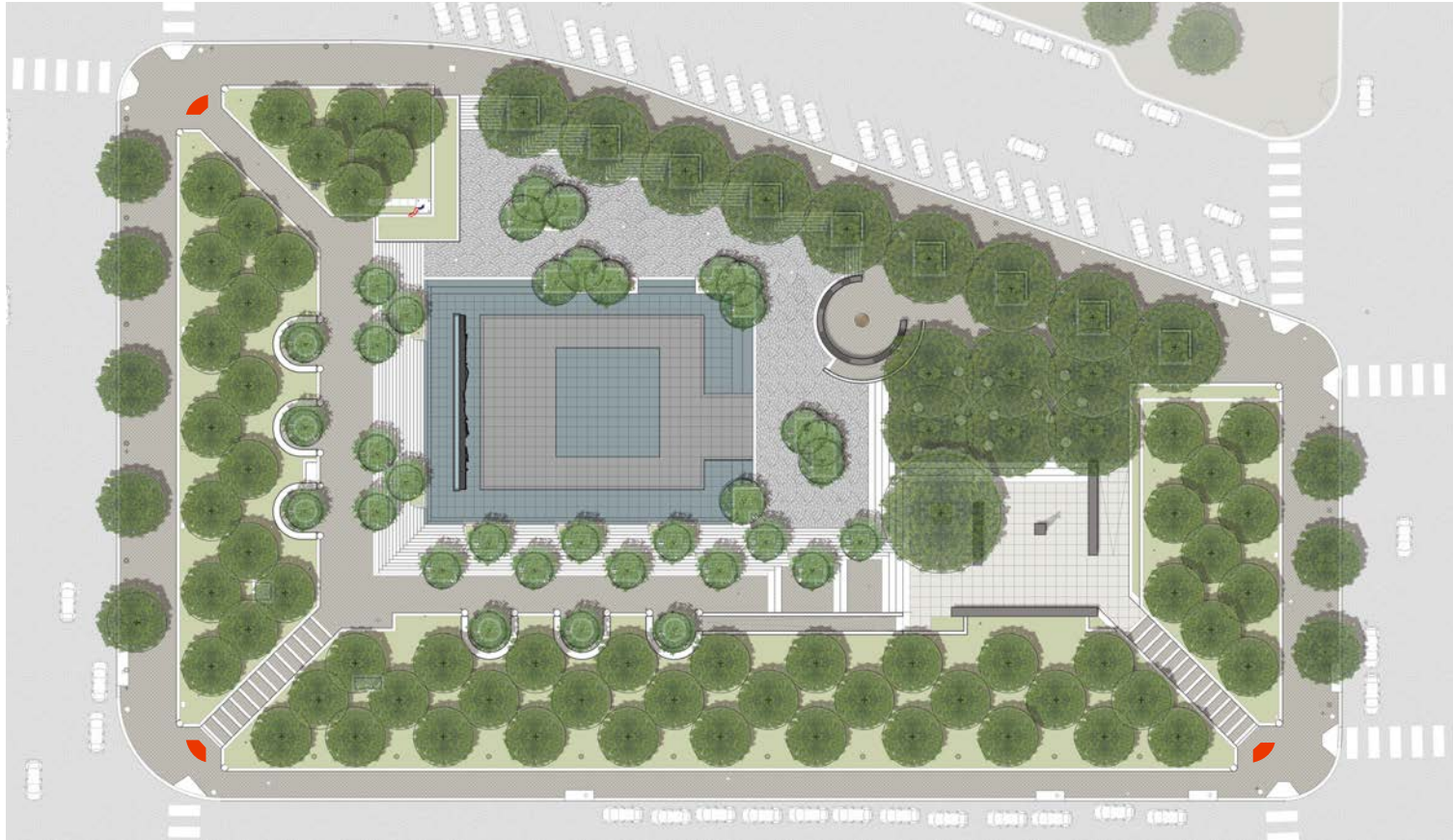
APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

NW, SW, SE CORNER - TWO STONE BOLLARDS



APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

NW, SW, SE CORNER - FAN



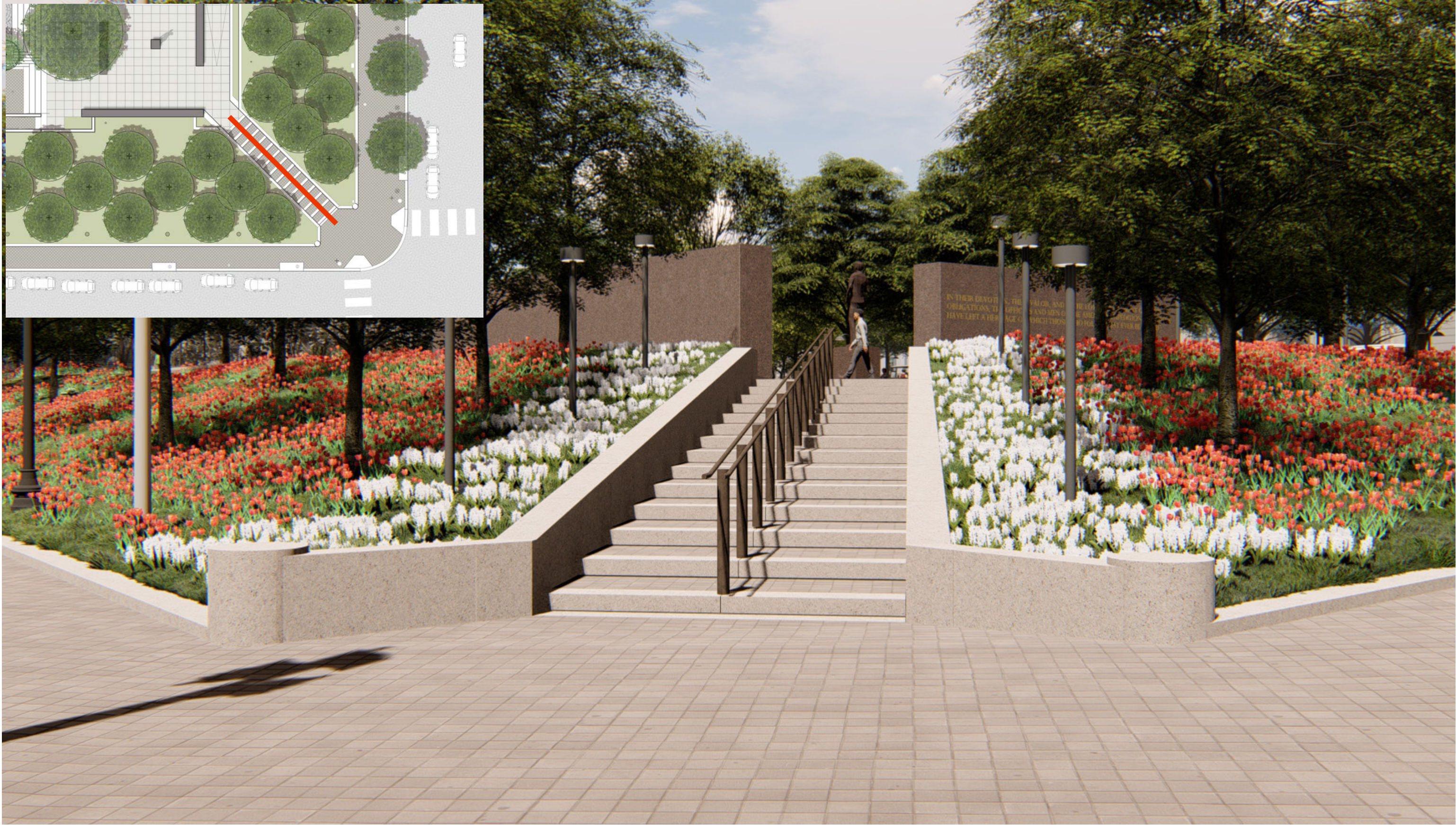
APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

SW CORNER - SECURITY HANDRAIL



APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

SE CORNER - SECURITY HANDRAIL



APPENDIX: SITE SECURITY MEASURES - OPTIONS STUDIED AND DISMISSED

SW CORNER - DECREASED TREAD DEPTH

