

STAFF RECOMMENDATION

REVISED 12/06/06

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NCPC File No. 6267



PENTAGON RESERVATION
MEMORIAL TO THE VICTIMS OF SEPTEMBER 11, 2001 (PARK AND GATEWAY)
Arlington County, Virginia

Submission by Department of Defense

November 30, 2006

Abstract

The Department of Defense (DoD) has submitted preliminary and final site development plans for the Memorial to the Victims of September 11, 2001 (Park and Gateway) on the Pentagon Reservation. Section 2864 of Public Law 107-107, the National Defense Authorization Act for fiscal year 2002, authorized a memorial on the grounds of the Pentagon to honor the 184 lives lost at the Pentagon and on American Airlines Flight 77 on September 11, 2001. In accordance with the “design lock” initiated by the Family Steering Committee following the award of the winning design, this submittal retains the six primary design elements (184 memorial units (cantilevered benches with water basins), age lines, an age wall, a perimeter bench, landscaping and site material, and a memorial gateway). However, adjustments have been made to materials and layout, mainly related to the ground surfaces, and the gateway design is now included.

Commission Action Requested by the Applicant

Approval of preliminary and final site development plans pursuant to (40 U.S.C. § 8722 (a) and (b)(1)).

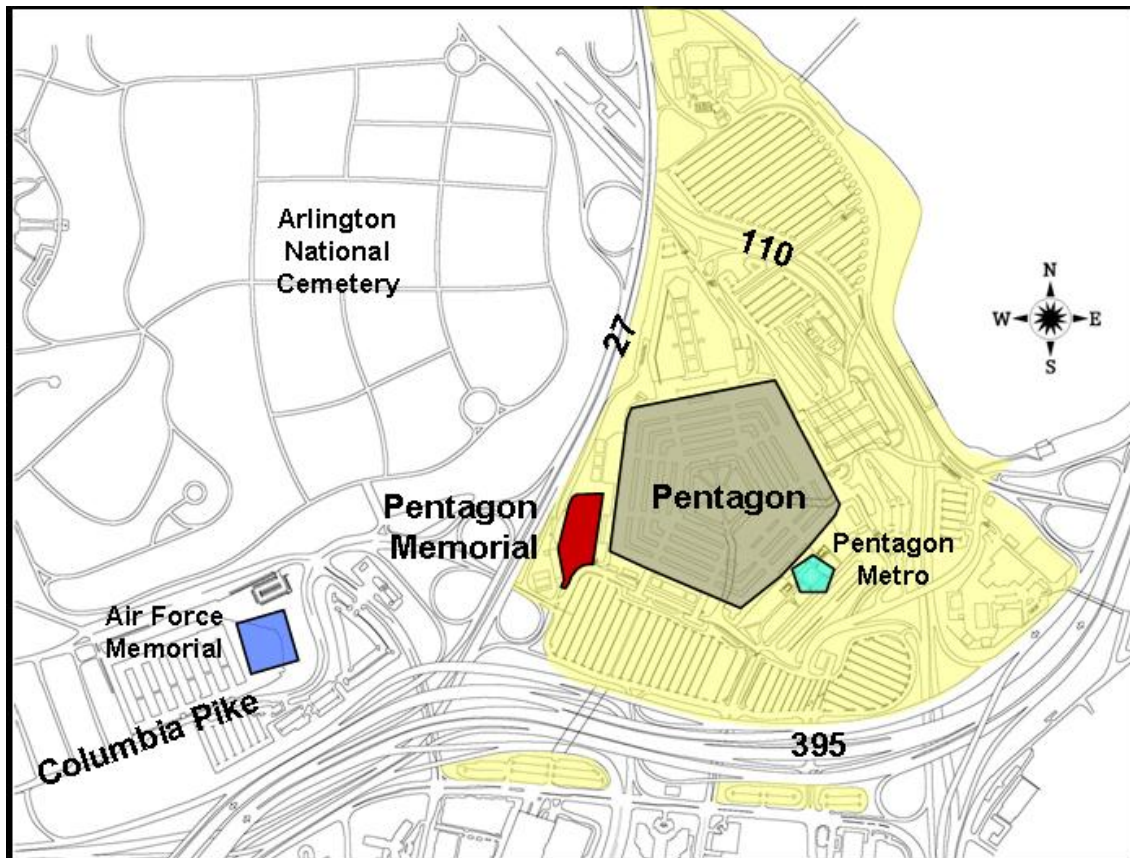
Executive Director’s Recommendation

The Commission:

- **Approves** the preliminary and final site development plans of a Pentagon Memorial commemorating those who died as a result of the terrorist attack at the Pentagon on September 11, 2001, as shown on NCPC Map File No. 1.62(73.10) 42075.

* * *

PROJECT DESCRIPTION



Site Vicinity

Site

The irregularly shaped memorial site (park and gateway) encompasses 2.91 acres and is located roughly 165 feet west of the face of the Pentagon on the Reservation grounds, bound by Interstate 395 (I-395) to the south and Route 27 to the west. The memorial site is adjacent to the Pentagon's Secure Access Lane (SAL) lading to the Remote Delivery Facility (RDF) and an Arlington County bike path parallel to Route 27.

Background

On July 11, 2002, the Commission granted approval of the memorial site location on the Pentagon Reservation. The original design concept included six primary features: memorial units, age lines, an age wall, a perimeter bench, landscaping/site material and a memorial gateway. The gateway area had been identified only recently when the concept design was submitted to the Commission for review, and had not been included in the design competition. Therefore the concept submission identified the gateway but did not include a design or a program. The Commission approved preliminary and final design plans for the Remote Delivery Facility (RDF) Secure Access Lane (SAL) at its June 5, 2003 meeting, concurrent with its



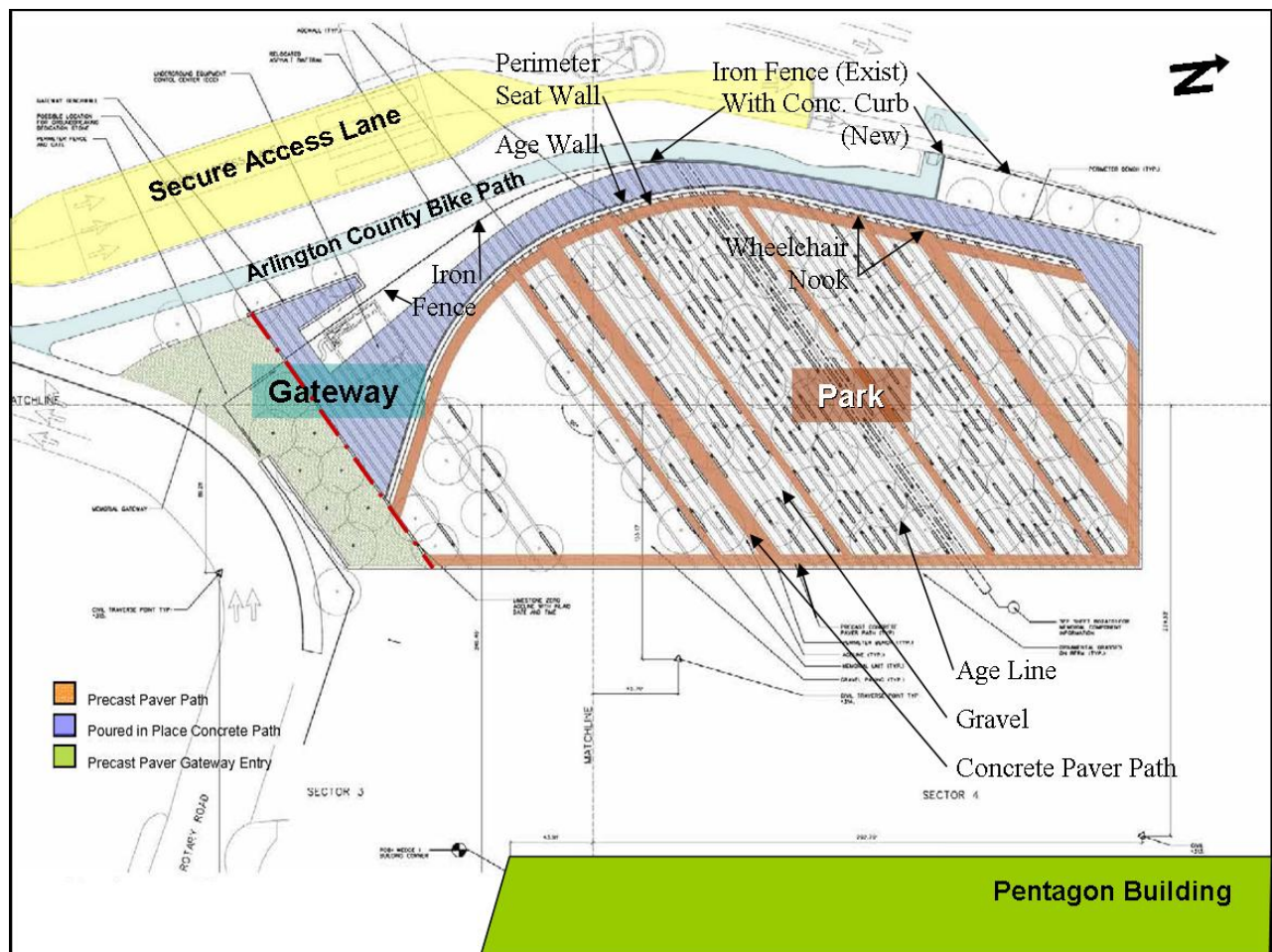
Conceptual Design of Memorial Site Features

approval of the Memorial conceptual design. As a result of the realignment of the Route 27 exit ramp to construct the SAL, additional site area for the Memorial (approximately .98 acres) was identified in the area occupied by the cloverleaf. DoD had also established a buffer zone north of the Memorial that would screen the Memorial from construction associated with the Pentagon. On June 5, 2003, the Commission approved the conceptual design with recommendations that the following information be included with the preliminary and final site development plans:

- A design for the memorial gateway that does not overwhelm the space or visually infringe on the Memorial.
- Drawings that clearly show the relationship between the Remote Deliver Facility (RDF) access road and the Memorial and memorial gateway.
- A plan showing pedestrian and vehicular access and circulation around and to the memorial site.
- Program details outlining any parking in the vicinity of the Memorial, hours of operation and how access will be controlled during times of increased security at the Pentagon.

Proposal

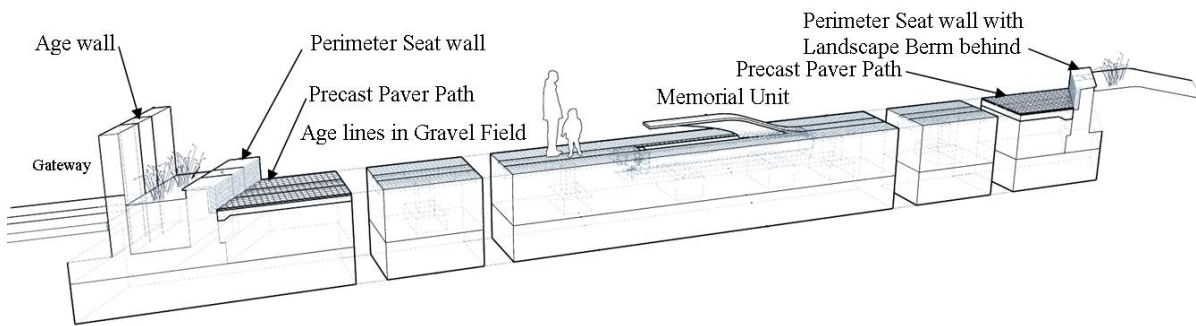
At the April, 2000 meeting of the Pentagon Memorial Project team, the Family Steering Committee requested a “design lock” on the memorial design. As a result, the design has not deviated significantly from the original concept, except that a gateway area has been added. Minor modifications to the memorial park include changes in the material and fabrication of memorial units and the site paving material and layout, such that a new set of paths have been added parallel to the age lines to accommodate handicapped access (wheelchairs and crutch users) through the gravel. Further, two additional features have been addressed in this submittal; a landscape buffer to screen the secure access lane from the Memorial, and lighting.



Current Submission

Memorial Unit

Since the Commission's June 2003 concept approval, changes to the memorial unit include casting as two separate components and materials rather than one, and a different seating surface. The above ground cantilevered bench will still be aluminum, but its seating surface will have a smooth polished polymer rather than a rough finish that was intended to be similar to the ground surface. The below grade basin containing the reflecting pool will be concrete instead of an extension of the aluminum casting. There will continue to be 184 memorial units (MU) placed within the memorial park, each dedicated to an individual victim lost on September 11, 2001. Each unit will include an individual reflecting pool that is expected to be illuminated at night under a cast aluminum cantilevered bench inscribed with the victim's name. The orientation of the memorial units will correspond to whether the victim was killed in the Pentagon or on the airplane. A visitor approaching a unit for a victim killed in the Pentagon will see the victim's engraved name with the Pentagon in the background. For victims killed on the plane, the units will face the opposite direction. The final mock-up for the MU is currently underway.



Section through Park with Typical Components



Section through Memorial Unit

Exploded View

Site Material/Landscaping

Most of the ground of the memorial site will still be covered with gravel loose enough to hear footsteps, with hard path surfaces added for ease of travel. The porous quality of the gravel will allow trees to be planted within the site without separate tree boxes. Trees will be clustered around each memorial unit to provide shade but also to allow opportunities for sunlight to penetrate the site. Paper bark maple trees, which retain their leaves until the winter and exfoliate their bark, are proposed as the sole variety of maple, rather than three types previously proposed.

Hard Path surfaces for Accessible Design

Hard Path surfaces will be added to the layout to allow for ease of travel throughout the almost 2 acre park. The paths will cut through the park parallel to the age lines in six locations, culminating in wheelchair nooks in the perimeter seatwall, and well ring the interior perimeter of the park. The gravel paving system has been modified to provide acceptable stability for crutch users and smoothness for wheelchair users, in collaboration with the US Access Board (USAB), and the majority of the walking surface will be firmer. The paths will be exposed aggregate precast concrete pavers and will match the gravel field. The placement of paths is intended to allow for a disabled person to travel no further than 30 feet across the gravel field from a hard surface to any memorial unit. The paths are not intended to be an interpretive or an organizing element of the park, but to blend in with the gravel field at a distance and become more visible as you approach them for use.



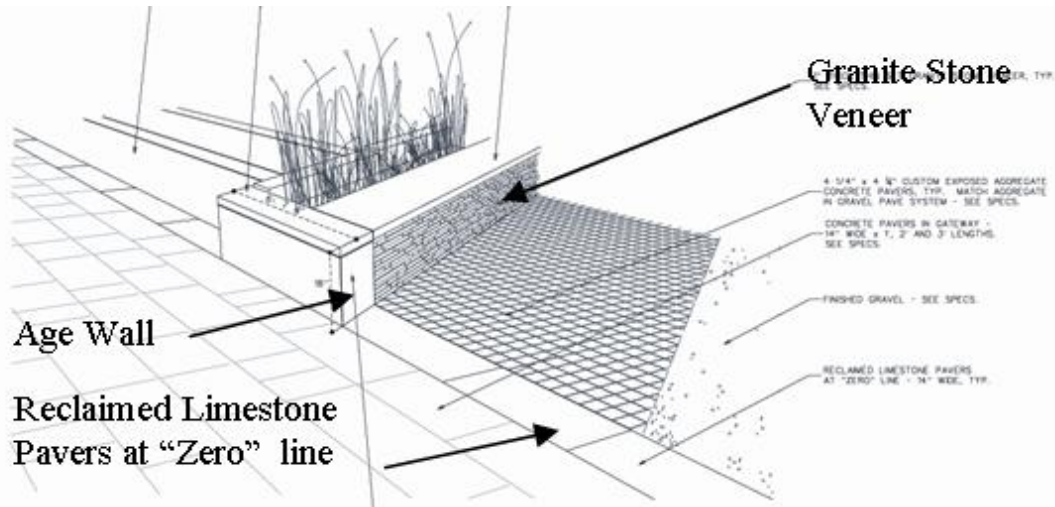
Site Materials and Landscaping



Loose Gravel Between Age Lines

Age Lines

The memorial units will be organized within the site along the trajectory of American Airlines Flight 77 on age lines that span the site. The first age line to the south will represent the youngest victim (a three-year-old) and the last age line represents the oldest victim (a 71-year-old). Victims of the same age will share the same age line, but be located on that line according to their birth date. The age lines (not, as stated above, the hard path surfaces) are still intended to serve as a directory or map of the Memorial. The age lines will be constructed of $\frac{3}{4}$ " thick aluminum flush to the top of gravel, and will continue for the width of the site and up and over the horizontal seating surface of the perimeter bench, and through to the gateway beyond, inset into the concrete paving as scoring.



Zero Age Line and Age Wall

Age Wall

The cast-in-place concrete age wall will run along the western edge of the site and has two purposes. The first is symbolic; the growing height of the wall corresponds to the growing birth years of the victim's, with the wall starting at a height of three inches for the youngest victim and ending at a height of 71 inches for the oldest victim. Second, as the height of the wall grows it will also screen the adjacent highways and the SAL. Grasses will be planted at the base of the wall to soften the edge of the memorial park. Entry from the gateway into the park will be at either end of the wall; at the zero age line and the age 71 line, with no access portals in between.

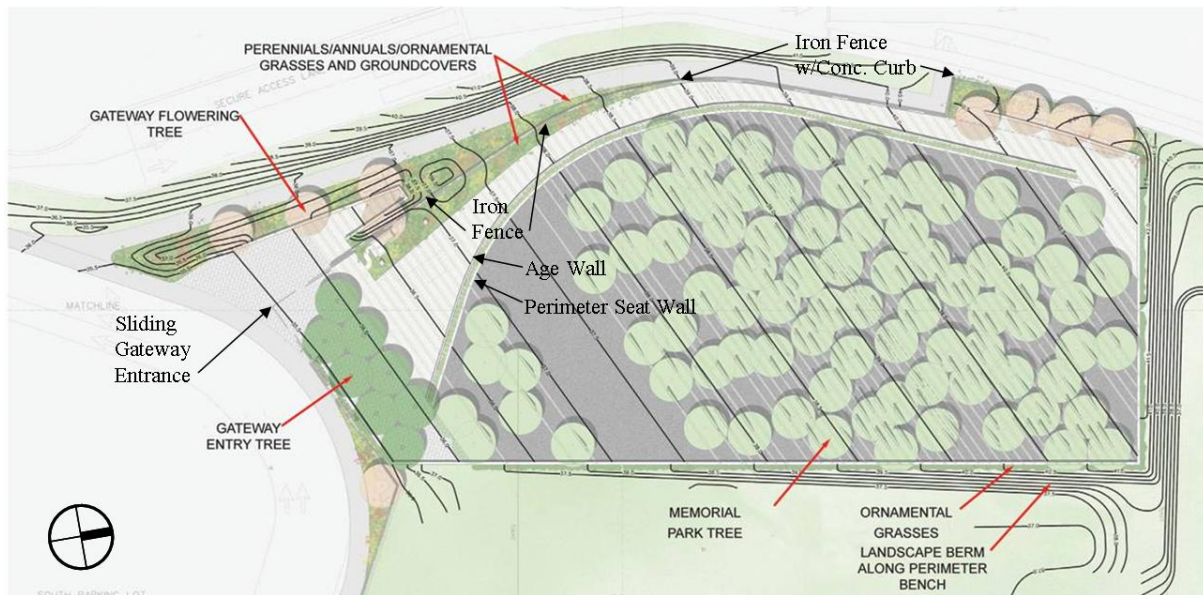
Perimeter Bench

The perimeter bench will be a continuous smooth seating surface on the eastern edge of the memorial park, punctuated by wheelchair nooks where the six hard paths intersect. The bench will incorporate the age lines and will also integrate a planter with ornamental grasses at the base that will serve as the eastern edge of the memorial park.

Memorial Gateway

This area was identified but not designed in the previous submittal. The gateway will function as an entry area for visitors to the Memorial. It will also serve as a buffer between the park and the Secure Access Lane, and as a gathering area for class field trips and other groups with a "u-shaped" "children's bench". Security dictates that the gateway be divided into interior and exterior portions delineated by an 8 foot high iron fence to protect the building from South Parking, with access to the interior through a dual sliding gate. Hard surface paving will relate to the paving materials inside the memorial park, and will include a band of limestone salvaged from the Pentagon as the zero age line. Landscaping will include a grove of trees (in the southeast corner as a living memorial to survivors), a landscaped grass strip (to obscure an equipment control center), and grass and landscaping (to soften the "children's bench"). Because of the narrow width, landscaping will stop at the gateway's narrowest point where only

the iron fence will separate the gateway and the realigned bike path, and will be reestablished at the northwest corner where it jogs out to widen.



Proposed Landscape Plan; Memorial Park and Gateway

Lighting

Light fixtures installed within the memorial units are intended to provide the primary light for the park, but supplemental tree lighting will be added as needed. Low level illumination will be provided along the perimeter seatwalls at each birth year so that the features will be seen at night. Handicap nooks along the perimeter seat walls will be lit as well. Gateway lighting will be achieved with down lighting from the trees and low profile ground wash lights along the hard surfaces, and illumination of interpretive elements. Lighting mock-ups have not been created yet, and therefore, the submittal does not contain any photo-simulations of the lighting effects.

Site Context: Landscape Buffers and Screening: Secure Access Lane

In the future, (2009 – 2010), DoD master planners envision North Rotary Road realigned farther from the building and the memorial, and a pedestrian plaza at the northern edge of South Parking. The applicant anticipates that an interim solution for re-routing North Rotary Road will be implemented by the time the memorial opens. In conjunction with a prior approval, DoD advised NCPC that construction funding for the new SAL canopy was scheduled for 2008. As soon as funding can be obtained, they also plan to modify the SAL and its checkpoint, replacing the SAL's temporary canopy with a lower profile shed roof and semi-dense landscaping and berms that will screen much of the new canopy from view of the memorial's occupants. Until that time, the SAL may be partially screened with landscaping, as implied in the sketches submitted indicating a row of trees between the memorial and the SAL. The applicant anticipates that noise from the SAL's truck screening operation, with peak activity in the early morning, will have minimal impact on memorial visitors, expected to peak later in the day.



Proposed Lighting Concept

Pedestrian and Vehicular Access, Parking, Circulation, and Hours

A plan showing pedestrian and vehicular access, parking and circulation around and to the memorial site has been included for the current North Rotary Road and parking lot configuration. It designates a block of several handicapped parking spaces and a bus drop off in close proximity to the memorial site for its current configuration. The applicant has explained that visitors who are able-bodied arriving by car will be expected to park at the Pentagon City Mall garage and proceed by foot through a pedestrian tunnel to the memorial. Visitors will be encouraged to use the Pentagon Metro and continue on foot or by bus to the memorial. Future conditions (after road realignment) are not shown explicitly in the submittal in a similarly detailed plan. However, the applicant has explained that during the interim realignment, dedicated handicapped spaces and regular parking spaces (five each), and a tour bus drop-off location near the memorial will be designated. The submittal implies that handicapped parking and bus drop-off will move farther away from the building, as indicated in the master plan, and that passage from the parking

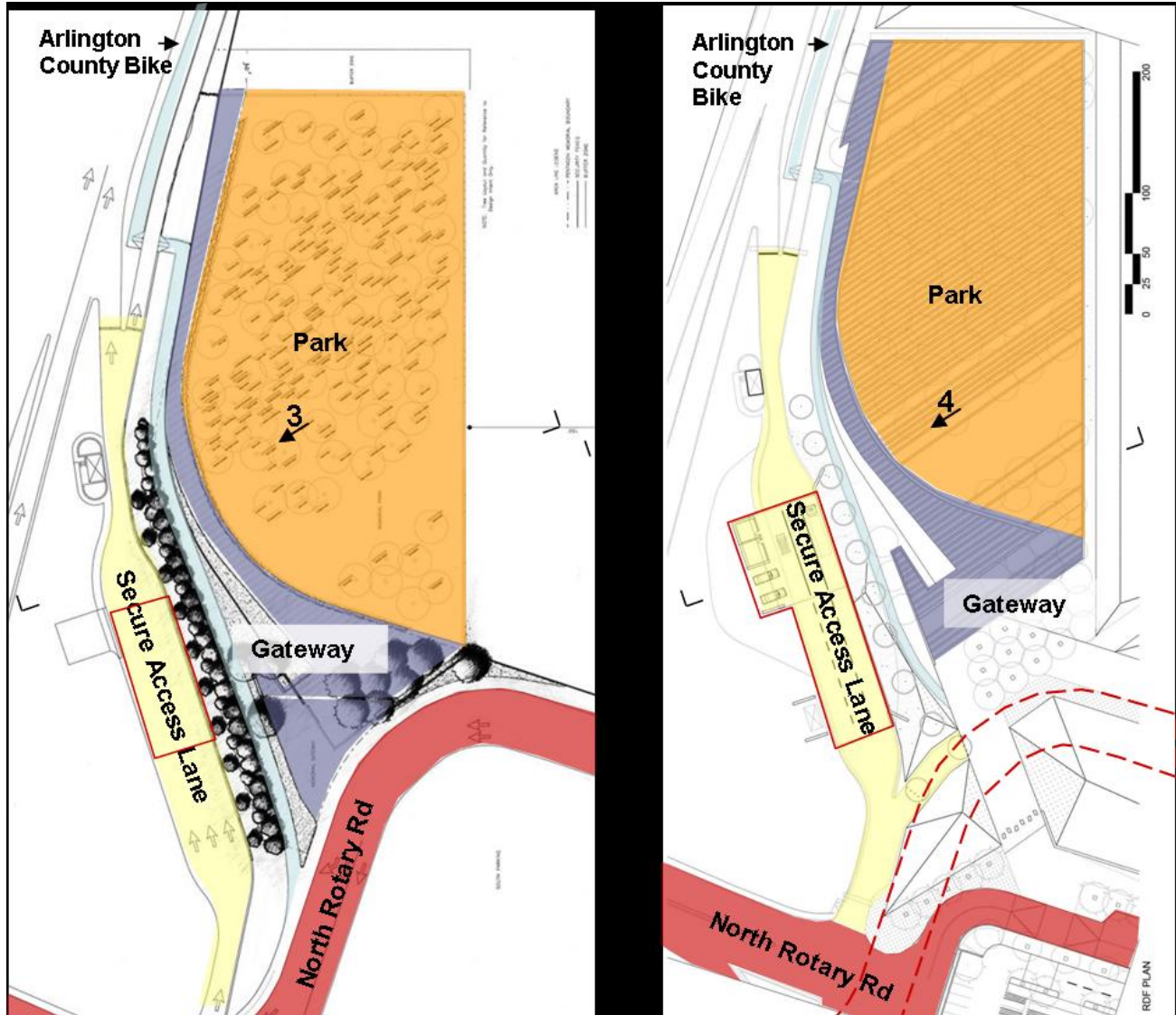


Pedestrian Access



Vehicle Access

area to the memorial will be through bermed areas. Regarding hours of operation, recently, the Pentagon Memorial Fund (PMF) and Family Members have been given the opportunity to state their preference. They have requested that the Park be operational twenty-four hours a day, seven days a week, with the option to close for large scale maintenance and heightened security.



Opening Day

Future Conditions

Development Program

Applicant: DoD; on behalf of a collaboration that includes the Family Steering Committee and Family Members of Pentagon Victims, in addition to directorates within DoD.

Architects: Kaseman Beckman Amsterdam Studio (KBAS), designers of the winning memorial concept, and Centex Lee LLC, design/build contractor

Acreage: 2.23 acres

Estimated Cost: \$42M. The Memorial Project is a public/private partnership, with DoD and the *Pentagon Memorial Fund (PMF) sharing costs. DoD is funding \$8M in site preparation costs. The PMF is sharing in design costs and will endeavor to pay for construction and ongoing maintenance.

Schedule: DoD agents, including the Pentagon Renovation and Construction Program Office (PENREN), are managing the effort to complete construction to open on September 11, 2008.

PROJECT ANALYSIS

Executive Summary

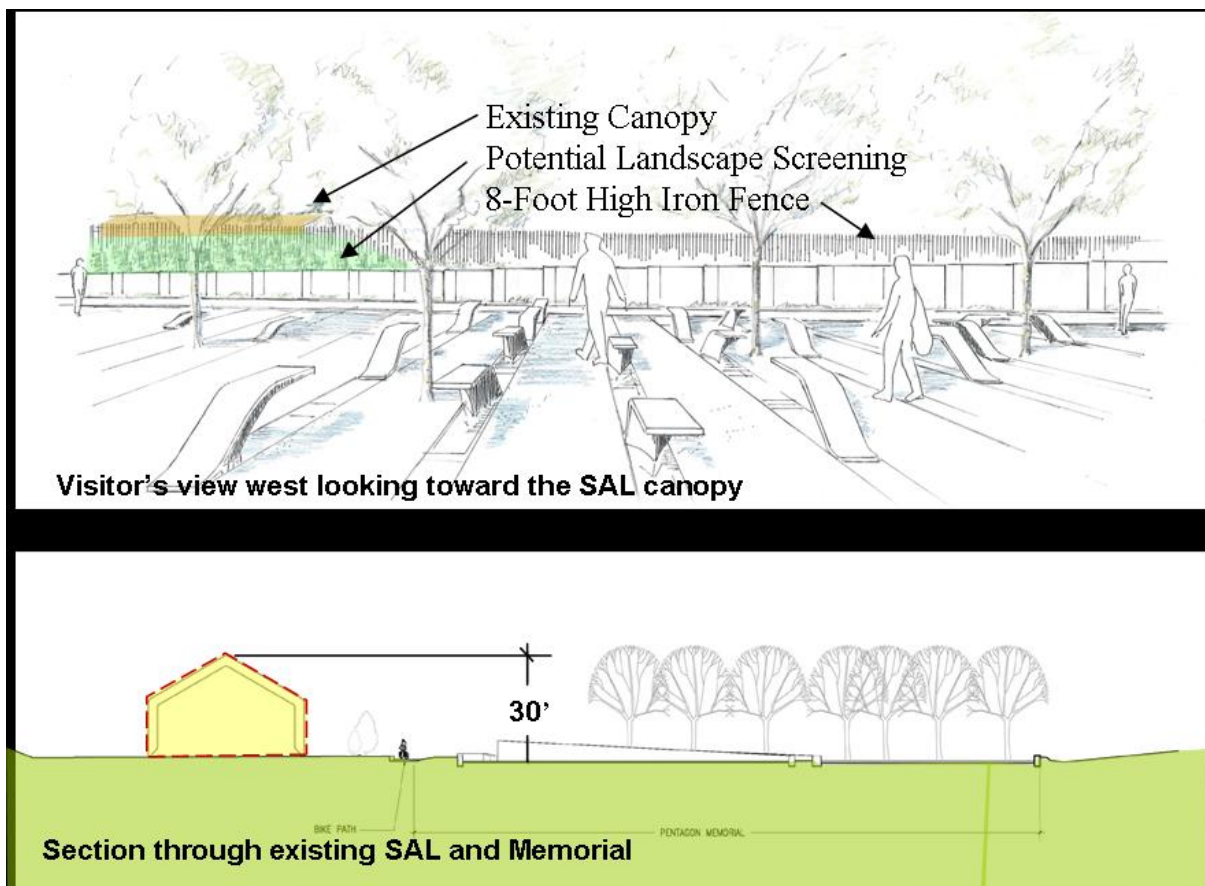
This submission responds to recommendations the Commission made on the concept submission. For the most part, the applicant has addressed the recommendations adequately, although information is not yet available to provide full and complete responses to all of them. Some questions still remain regarding pedestrian and vehicular access to the site, and new questions have arisen regarding hours of operation and handicapped parking spaces. Neither is likely to be resolved until the future projects that address them are initiated in several years. In addition, new information that was not available during the concept submittal has further defined the gateway area, resulting in further recommendations. Original recommendations were:

- A design for the memorial gateway that does not overwhelm the space or visually infringe on the memorial.

This submission shows that the gateway itself will buffer the park from the SAL. Trees and other plant materials chosen for the gateway are expected to screen and soften the edges of the iron fencing and the wall, as well as the SAL beyond. Gateway entry trees will certainly buffer the effects of traffic on North Rotary Road in its current configuration when the memorial opens. Staff believes that the submittal effectively addresses the previous staff recommendation including a design for the gateway that does not overwhelm the space or visually infringe on the memorial. Far from infringing on the memorial, it effectively frames and softens it while helping to screen visual encroachments for most of its length.

- Drawings that clearly show the relationship between the Remote Deliver Facility (RDF) access road and the memorial and memorial gateway.

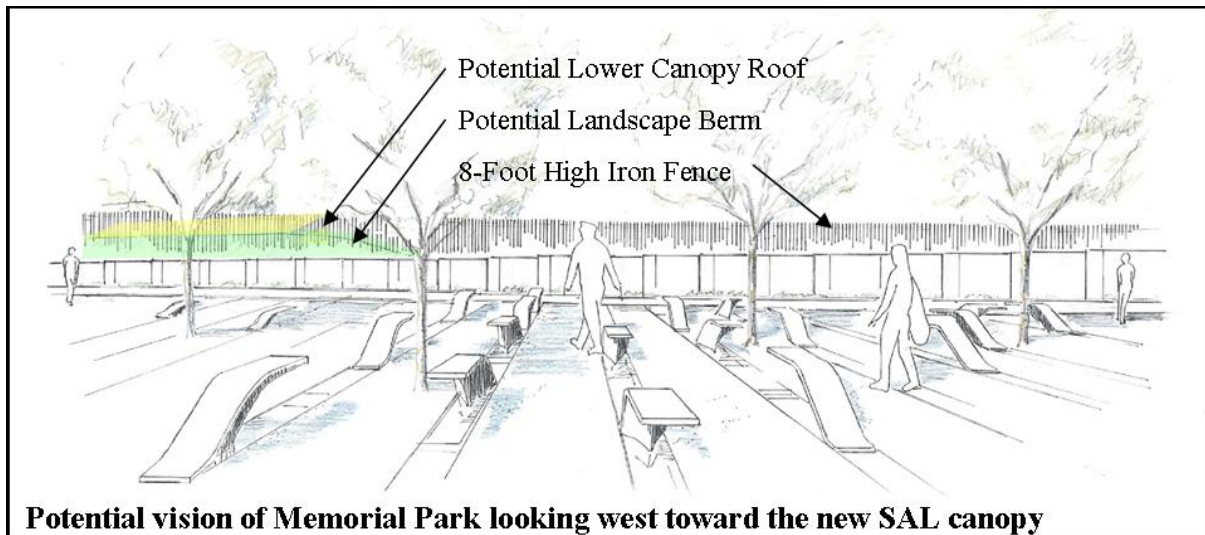
With this submittal, the applicant has included sketches of the memorial, gateway and the SAL for two different timeframes; when the memorial opens, and as envisioned with a future design to replace the temporary canopy at the SAL. Although the sketches convey landscape screening with a broad brush effect rather than with specifics, they help to visualize both potential screening scenarios. A future canopy with a potentially lower roof elevation is effectively screened by a berm that could block a significant portion of its height. Although the Pentagon master planners hope to obtain funds in 2008 to implement the canopy, there is no guarantee, so the specifics of that design have not been fleshed out at this time.



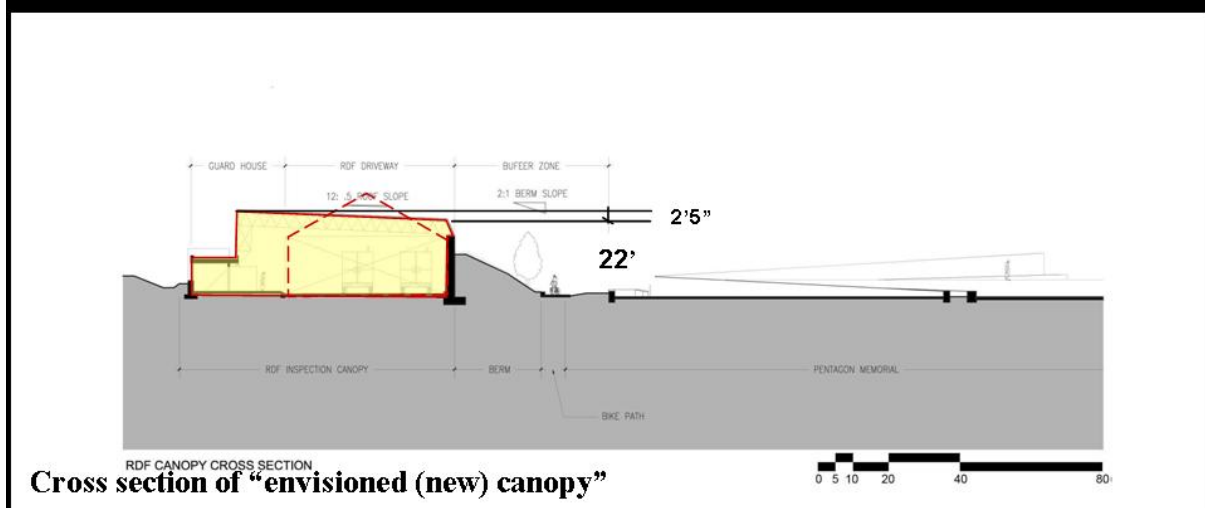
Context Projected for Opening Day

- A plan showing pedestrian and vehicular access and circulation around and to the memorial site.

Although the applicant submitted a site plan for when the memorial opens, and not for future parking and bus drop off after the road realignment of North Rotary Road, staff understands that the applicant does not know the specific design of the plan now, but expects that it will follow the master plan and will be submitted for Commission review once designed. In the submittal, the applicant cites the Columbia Pike Transit Initiative, which is expected to alleviate traffic congestion and provide access to the memorial in the future. Under the Initiative, the applicant further cites a WMATA Alternatives Analysis that proposes future implementation of a modified streetcar line along Columbia Pike, supplemented by bus service between the Pentagon and Pentagon City at peak hours. Staff recommends that the applicant further address the Transit Initiative in DoD's upcoming submittal for its Naval Annex Master Plan. Staff reiterates the recommendation that DoD develop an urban design plan for the area between the Pentagon Memorial and the Air Force Memorial across Route 27 with the goal of improving pedestrian and vehicular connections and circulation patterns between the two.



Potential vision of Memorial Park looking west toward the new SAL canopy



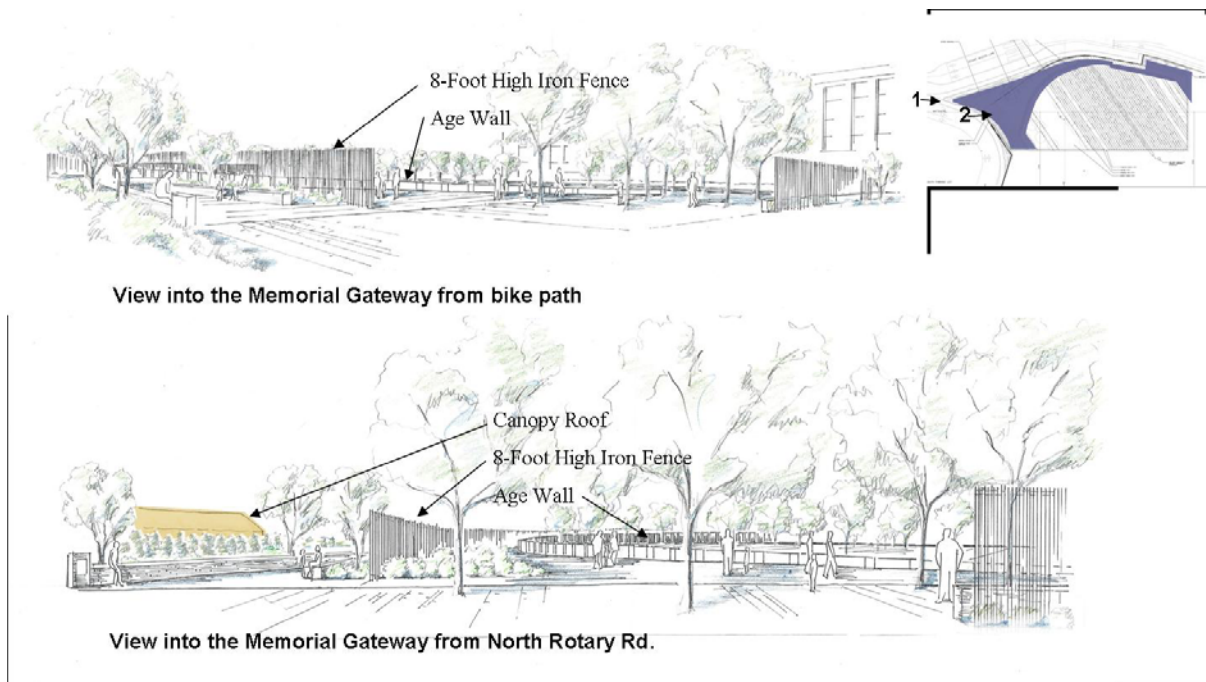
Cross section of "envisioned (new) canopy"

Potential Vision of Future SAL Canopy with Berm

- Program details outlining any parking in the vicinity of the Memorial, hours of operation and how access will be controlled during times of increased security at the Pentagon.

The applicant has submitted a site plan showing the closest visitor parking across Interstate 395 at the Pentagon City Mall Parking garage, in addition to a site plan showing several handicap accessible spaces for visitors and a bus drop off near the Memorial to provide access under the existing roadway scenario when the Memorial opens. However, this site plan indicates so few accessible parking spaces, that staff questions how it was determined. Staff has concerns that the number and location of handicapped parking spaces provided after road realignment could be even less satisfactory, given the distance it will be moved and any growth in visitorship. Staff recommends further study of how many handicapped-accessible spaces will be needed based on projected visitorship, and where they will be provided, after realignment of North Rotary Road and South Parking. Although the applicant did not submit a plan proposing parking and

circulation after the realignment, staff understands that the applicant does not know the specific design of the plan now, but expects that it will follow the master plan vision for a pedestrian plaza. Staff reminds DoD to submit projects for the realignment of the road and the Pedestrian Plaza once developed. Given the families' request to operate 24 hours a day, seven days a week, staff believes that the feasibility of 24-hour operation should be studied further.



Context Projected for Opening Day

CONFORMANCE

National Historic Preservation Act

The Pentagon is a National Historic Landmark listed in the National Register of Historic Places for its continuing nationally significant role as the headquarters of the Department of Defense since World War II. The Department of Defense has consulted with the Virginia State Historic Preservation Office (VA SHPO) throughout the site selection phase, and is continuing to consult with the VA SHPO as the memorial design progresses. On April 30, 2003 the DoD wrote to the VA SHPO with a determination of no adverse effect for the following reasons:

- No direct impacts on any of the five distinguishing elements of the Pentagon.
- Historic envelope of the building will be unchanged as a result of the Memorial.
- Alteration of the property will be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

The VA SHPO has given its concurrence that the Memorial would not adversely affect the architectural and historic qualities of the building and its setting that qualify the Pentagon for listing in the National Register.

National Environmental Policy Act

Pursuant to the regulations implementing the National Environmental Policy Act (NEPA), the responsible officials of the Pentagon have reviewed the project site selection and location in accordance with the provisions of the National Environmental Policy Act (NEPA). The project is categorically excluded pursuant to Department of the Army Regulation, AR 200-2, Appendix A, when no extraordinary circumstances exist.

Comprehensive Plan

The Pentagon is a national landmark and is designated for national defense facilities in the Federal Facilities Element of the Comprehensive Plan. As the proposed memorial site is located outside the Monumental Core, the Comprehensive Plan contains no specific policies that would apply to the placement of a memorial at this location. However, the site location is unquestionably consistent with the general intent of Comprehensive Plan policies for the placement of memorials at fitting locations that commemorate great events or national tragedies.

CONSULTATION

Commission of Fine Arts

At its November 16, 2006 meeting, the Commission of Fine Arts decided to defer action on the proposed final design for the Pentagon Memorial due to the complexity of the design elements, until the anticipated on-site mock-up of a memorial unit is available for inspection at its next meeting on January 18, 2007.