The Committee of 100 on the Federal City

www.committeeof100.net

1317 G Street, N.W.
Washington, D.C. 20005
202.681.0225
info@committeeof100.net

Comments on behalf of the Committee of 100 on the Federal City Regarding the November 8, 2010 National Park Service Presentation of Options for the Design of Security Improvements at the Washington Monument

February 24, 2011

By Don Hawkins

A valuable service was rendered by the National Park Service when it commissioned a Cultural Landscape Report by Oehrlein & Associates and Robinson & Associates in anticipation of security enhancement at the Washington Monument in 2001-02. This gave interested parties a convenient opportunity to examine and consider the history of the structure in useful detail. In the eight years since that time, the complexity of the problem of balancing security and access at many national monuments has given NPS valuable experience in identifying the broad range of threats and risks which must be taken into account, and in determining the countermeasures most appropriate for the particular site. Formerly, when a sizable visitor orientation facility was included in the program, the broad principle of security screening at the greatest distance from the target guided NPS' process at the Washington Monument, and no acceptable solution was found. The inapplicability of that principle to the Monument has been demonstrated by the presence of a temporary screening structure at its very doorway for the last ten years. We may assume that NPS would not have created and maintained the existing condition if it had not been deemed effective when combined with a system of vehicle barriers in the landscape. The Committee of 100 anticipates that, since we and NPS and other signatories of the 2002 MOA have participated in many subsequent security improvement processes, the present undertaking will benefit from our cumulative experience and the enhanced technologies now available.

The roots of the following comments lie in two fundamental principles. The first, embodied in the Secretary of Interior's Standards for Historic Preservation, is that a historic structure must not be unnecessarily and irreversibly modified. The second, a matter of common sense and sound policy, is that the relative costs of alternatives deserve serious consideration when public funds are at stake. We are fortunate that time-proven technology is readily at hand to allow the caretakers of this great national icon to avoid the expensive, massive, and permanent interventions into its historic fabric that an earlier generation of planners may have considered necessary. Of the five options presented at the public scoping meeting on

November 8, only one could be executed without irreversibly changing the historic structure and that is Option E: replacement of the present temporary screening structure with another of a higher caliber of design. The Committee of 100 takes this opportunity to submit another alternative for consideration: Option F, security screening of visitors within the Monument.

Early in America's search for appropriate symbolic expression in a representative republic, the Washington National Monument Society advertised for a design that would "harmoniously blend *durability, simplicity* and *grandeur*". Robert Mills responded with an assemblage of disparate architectural, abstract, and figurative elements drawn from Greek, Roman, Christian and Egyptian sources. Though undeniably *grand*, his monument's inadequate foundations threatened its *durability*, and its *simplicity* dwelt entirely in the eyes of its contemporary beholders. It was the Monument's destiny however, to shed every interpretive detail and to be constructed as a pristine unity from its foundation to its crowning pyramidion. The elegant obelisk that pierces the skyline of the Federal City today has been a creation of History, not of a single designer. The Monument's rescue from the stylistic conventions of its original design was the result of its completion being assigned to a man of Science rather than Art. An army engineer, Major Thomas Lincoln Casey, saw through to the essence of the problem of completing the great task undertaken by Mills, and when he was done he presented *only* that essence to the nation. Under his direction the Monument became one of history's greatest examples of "less is more", the modernist dictum formulated half a century after he had stripped it down to its bare geometry.

In his quest for geometric purity, Casey even removed the already-carved Egyptian motifs from around the portals. He left only the four pairs of windows at the viewing level and the pair of portals at plaza level to disturb the abstract purity of the obelisk. In his hands the openings became simply absences of material in the smooth marble surfaces, and both portals remained open for some years after Casey delivered the Monument as a completed artifact. About a decade later the West Portal was closed. When both doors were opened at the same time powerful drafts had been troublesome, especially to ladies wearing large skirts. An attempt was made to efface the evidence of its former existence, but the shape of the Portal may still be discerned on the west face of the Monument, framed by fractures through the marble veneer (7a, 7b).

Beneath the Plaza, the Monument's foundations encapsulate the story of the maturing of American engineering. Casey began to study engineering at West Point at the very moment when the Washington Monument Society began construction on the naïve original foundation he would learn to correct and stabilize (9b). Uneven subsidence had already tipped the abandoned structure by the time he undertook its completion thirty years later. Buttresses and additional footings were installed, with great care taken to balance and resolve the gigantic forces at play. Gross quantities of materials needed to be dis-placed and re-placed with great delicacy over an extended period of time (8a, 8b, 8d). In its own grand symmetry, it was a major feat of engineering. The photographic record brought forward by NPS allows us to appreciate the simple magnificence of its final form, much too easily forgotten after its completion and burial in 1880, never to be seen again (9a).

In 2001, NPS also commissioned and made available a study of the soils underlying the Monument site, by Mueser Rutledge Consulting Engineers. A single set of principles guided its major recommendations: the existing conditions of loading on the soils must be maintained within prescribed limits, and whatever changes are required must be symmetrical relative to the Monument. This means that removing soil, stone and concrete to tunnel through the foundations for visitor access into the cellar of the Monument will require an equal mass to be removed from the opposite side for balance (8c). In practice, both subtraction and addition of material will be required. However skillfully this operation may be carried out, the symmetry of the existing masterpiece of engineering would be irreversibly destroyed by such an intervention and restructuring. This consideration alone should be enough to turn our attention away from Options A through D, and to encourage investigation of non-invasive solutions.

Option E would be entirely non-invasive. As noted above, its acceptable functionality has been demonstrated over a long period of time, so objections to it are more likely to be based on aesthetic than practical grounds. Such a relative improvement may be considered only a temporary solution, but it has the advantages of being relatively inexpensive, and easy to construct and remove without damaging the Monument's historic fabric.

The Committee of 100 submitted Option F to NPS in 2002, during the Section 106 consultation process (6a). It calls for screening of visitors within the Monument after reopening the original West Portal. This would require removing some of the marble veneer which was put in place around 1900 and has been damaged by differential settlement. NPS responded to this proposal by changing important characteristics of it to form Option F', and then judged it unworkable (6b). NPS' former reluctance to seriously consider the idea notwithstanding, there can be no doubt that it would be a far easier task to remove a few damaged pieces of marble from the face of the Monument than to tunnel through hundreds of tons of foundation stone and concrete beneath the Plaza. It is equally clear that this return to the West Portal's condition of 1885 would be as easily reversed to that of 2011 as the original closure was. That brings Option F into conformance with the Secretary of Interior's Standards.

The overwhelming disproportion of the effort and outlay required to accomplish Options A through D, to that of either Option E or F are enough to mandate serious consideration of the less invasive approaches. The cost ratio could easily approach 100:1.

We owe it to future generations to consider any possibility that would allow us to pass the Washington Monument on to them as it was passed to us. It would be a failure for which History would rightly condemn us if we were to desecrate an icon whose care has been entrusted to us for safekeeping. America owns the Washington Monument, and depends upon the Park Service to be its responsible custodian, dedicated to its whole and entire preservation.

Comments on Options Not Conforming to the Secretary of Interior's Standards

Option A Curved ramps on edge of Plaza down to entrance beneath East Plaza

Visual Effect: From halfway up the eastern walkways, the Monument would appear to be standing on a thin disc of a Plaza with the hill cut away in front of it, giving visitors the disturbing impression of a massive structure poised above the earth that should be supporting it.

Structural Effect: The removal of enough earth to accommodate comfortable downward ramps on the East side of the hill would require a massive countermeasure on the West side that would not be possible without a gross reshaping of Monument Hill.

Historical Effect: The irreversibility of work on the foundations is dealt with in the text above. The present shape of Monument Hill is neither natural nor historic, having been created only a few years ago, but the dished appearance in the vicinity of the Monument resulting from this solution would be entirely different from the Olin design.

Visitation Effect: Visitors would arrive at the Plaza level as at present and then descend curving ramps to the entrance. This would appear to be a reasonably smooth and rational traffic flow, if a lower level entrance were actually necessary.

Option B Direct walkway from Lodge to entrance beneath East Plaza

Visual Effect: Cutting through the oval foreground lawn with a straight walkway would require development and installation of an entirely different vehicle barrier system from the existing walled walkways in the vicinity of the Lodge. The slightly curved outline of the approach path relates to the existing curved walls as well as possible, given its basic straightness.

Structural Effect: The quantity of earth removed would be substantial: only less than that of Option A. The same objections to foundation changes noted above pertain to this Option.

Historical Effect: Though a straight roadway once ran up the East side of the hill, this entry path is too complex and dissimilar to be considered a precedent for this approach.

Visitation Effect: In practice, the mundane direct route to the Monument Entrance and Plaza would supplant the dynamic spatial experience of the present curving approaches from the East. The width of the entrance space between the split paths should not be wide enough to make the Monument appear to be on an insubstantial platform, as in Option A. Few visitors are likely to go to the Plaza before entering the screening facility, thereby missing an irreplaceable experience, since they tend not to take the time to look around them and appreciate the wonderful views when they are leaving.

Option C Direct walkway from Lodge to tunnel entrance halfway up hill

Visual Effect: The straight pavement cutting through the grassy oval lawn would require development and installation of an entirely different vehicle security system than the Olin designed walkways. The tunnel entrance would require the construction of a minor above–ground structure on the centerline of the Mall: an unimportant bit of clutter on a powerful axis.

Structural Effect: The quantity of earth removed and the complexity of its counter balancing would be comparable with Option B. The screening facility could be located further away from the center of the Monument where its weight would be less difficult to offset.

Historical Effect: There is no historical precedent for a paved route that ends halfway up Monument Hill.

Visitation Effect: Being required to sneak into the cellar of the Washington Monument through a tunnel for fear of potential enemies would be a humiliating experience for anyone who thought about it. Just wrong!

Option D Curving ramp from Plaza down to cellar entrance

Visual Effect: With railings as nearly invisible as possible, this Option would be the least visually intrusive of the structurally disruptive Options.

Structural Effect: It is likely that the entrance ramp close to the Monument and the screening facility under the Plaza would create the greatest balancing difficulties for the engineers. Less material might be displaced, but it would be in the most sensitive zone.

Historical Effect: The ramp cut into the Plaza would have only a minor effect on the perception of the Monument, though the Plaza would be affected negatively.

Visitation Effect: The arrival at the Plaza, whether for entry into the Monument or for experiencing the views would be unchanged from the present condition. Descending a ramp to enter through the cellar would be more acceptable in the immediate presence of the huge structure than through a tunnel from several hundred feet away.

Comments on Options Conforming to the Secretary of Interior's Standards

Option E Glass enclosed replacement of existing facility on Plaza

Visual Effect: Glass may not be a practical material for this purpose, but any carefully designed structure for security screening would be an improvement over the existing facility.

Structural Effect: None

Historical Effect: Reversible

Visitation Effect: No change from existing.

Option F (6a) Screening in East Vestibule and exit through reopened West Portal

Visual Effect: Opening the original West Portal would restore a degree of symmetry that had been lost. Marble veneer that has been damaged by settling would be removed.

Structural Effect: None.

Historical Effect: Reversion to its original condition could be as easily reversed again, to its 2010 condition, except that the fractured veneer stones would presumably be replaced with unbroken ones.

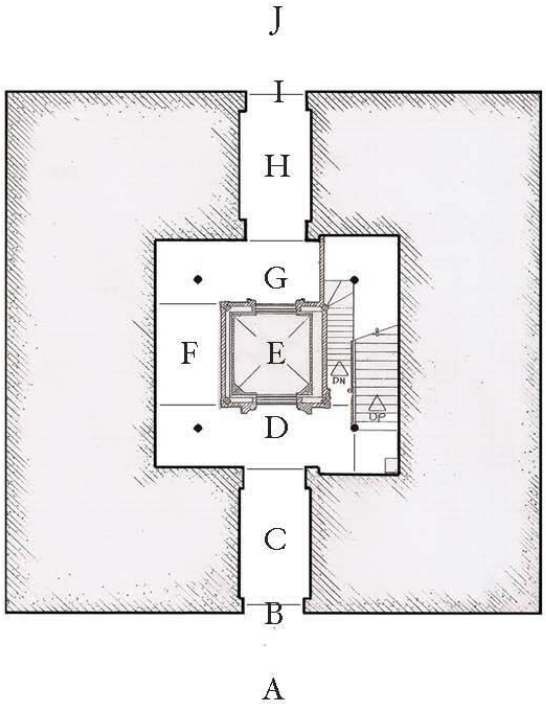
Visitation Effect: Entering through the East Portal and exiting through the West Portal would allow for the simplest, strongest, and most direct experience of the Monument.

Option F' (6b) Screening in East Vestibule with modified distribution of Spaces

(NPS Analysis and C100 Responses are included in the illustration)

(fig. a)

C100 OPTION "F"



J.) West Plaza

I.) Reopened West Portal Exit

H.) West Vestibule

G.) West Lobby

F.) Security Monitor Station

E.) Elevator

D.) East Visitor Waiting Area

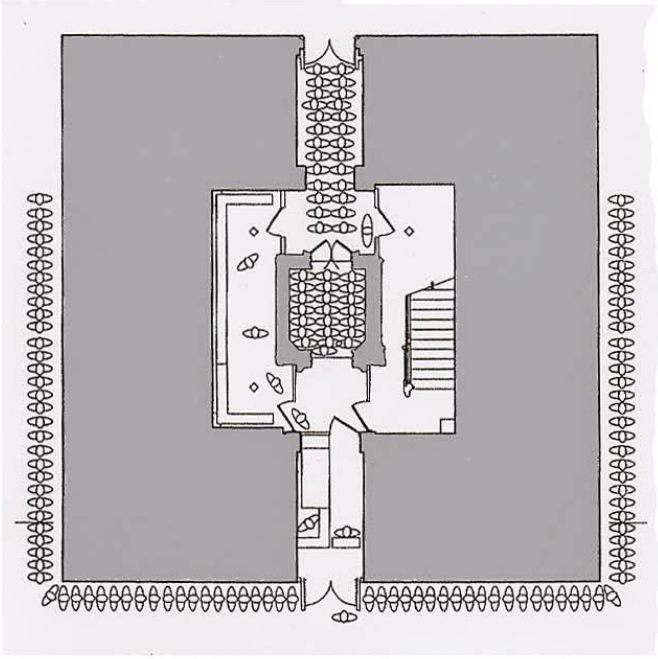
C.) East Vestibule Screening Area

B.) East Portal Entrance

A.) Visitor East Plaza Waiting Area

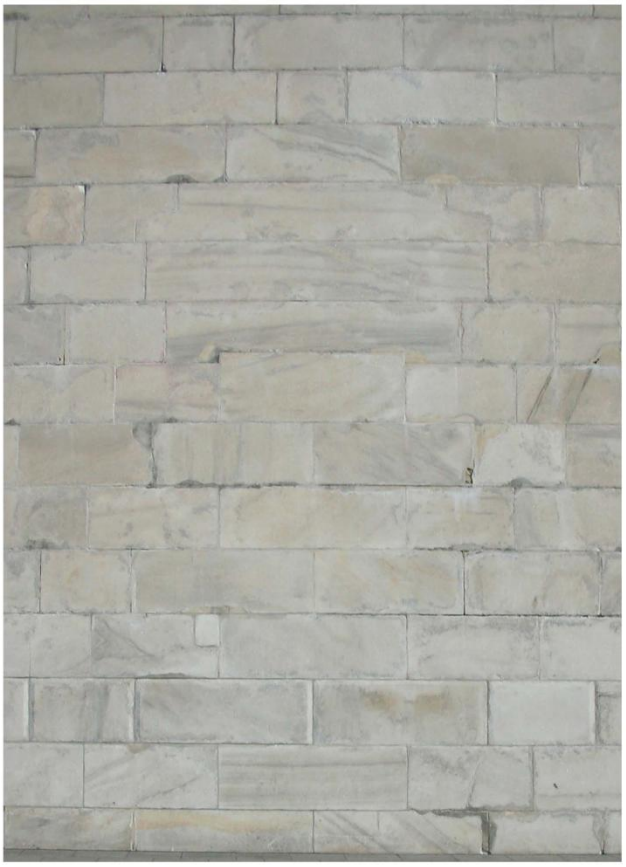
(fig. b)

NPS OPTION "F" "



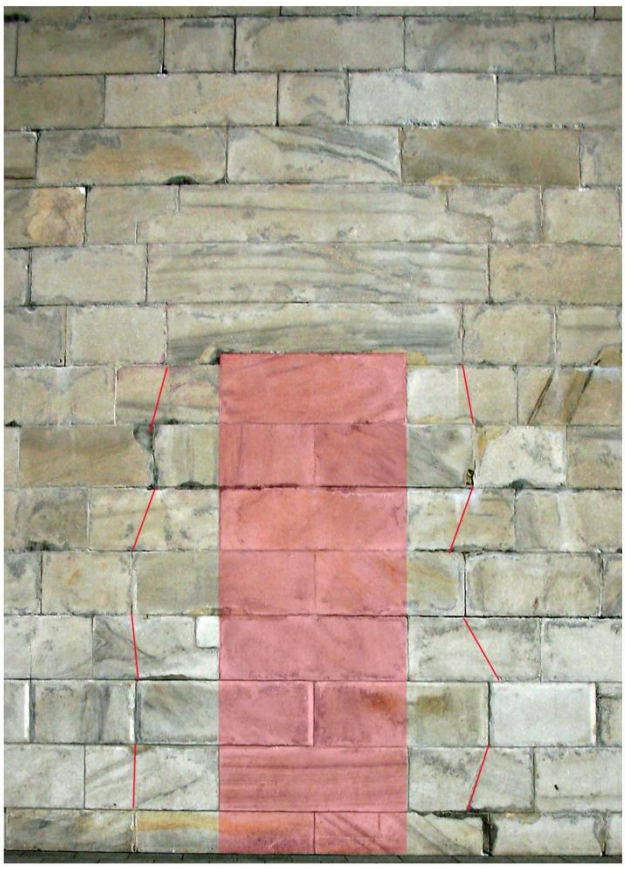
NPS Analysis - *C100 Response*

1. **Single X-ray and magnetometer rather than two of each**
   Existing facility has only one of each
2. **X-ray and magnetometer too large for space 'C'**
   Existing devices would easily fit.
3. **Blast doors at exterior would have to swing out. Affects historic fabric & aesthetic quality of facade at 'B'**
   Blast doors would open within the structure for no xterior effect.
4. **Insufficient entry space before screening. Main entry doors would have to remain open for each screening session.**
   Visitors would enter in small groups as at present.
5. **No queueing space - visitors exposed to elements.**
   Same as first century and a quarter and at present
6. **Private screening area is too small.**
   Need for more space is unclear and unsupported.
7. **Steel columns are unprotected from blast.**
   Columns only support the stairway & are isolated from blast area.
8. **Ranger area and stair would need blast protection**
   This could easily be done
9. **Historic fabric at west facade would be affected.**
   It would be restored to its 1884 condition.
10. **Visitors must wait in elevator for screening time.**
    Visitors would await elevator in East Lobby 'D'
11. **Space for only one guard at screening area.**
    Not true, but screening could be monitored remotely.
12. **Elevator time period would be increased due to use as holding area.**
    Visitors would wait in the lobby, as at present



EXISTING WEST PORTAL AREA

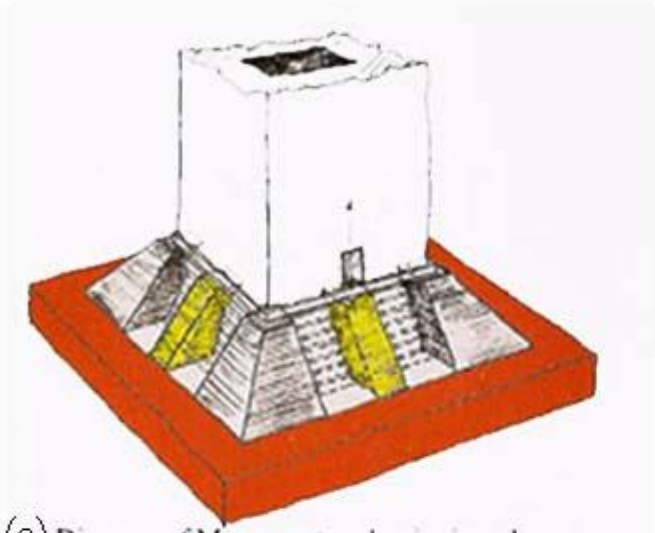
(a)



ENHANCED WEST PORTAL IMAGE
ORIGINAL MASONRY OPENING SHADED
RED LINES INDICATE SETTLEMENT FRACTURES

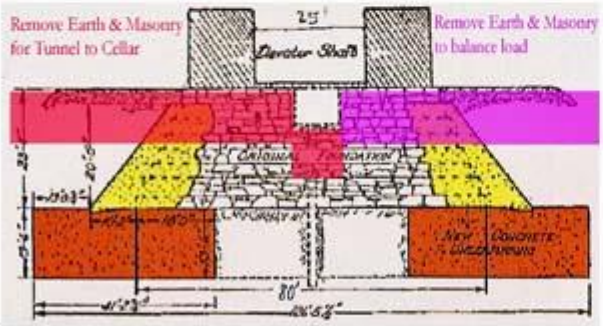
(b)

7



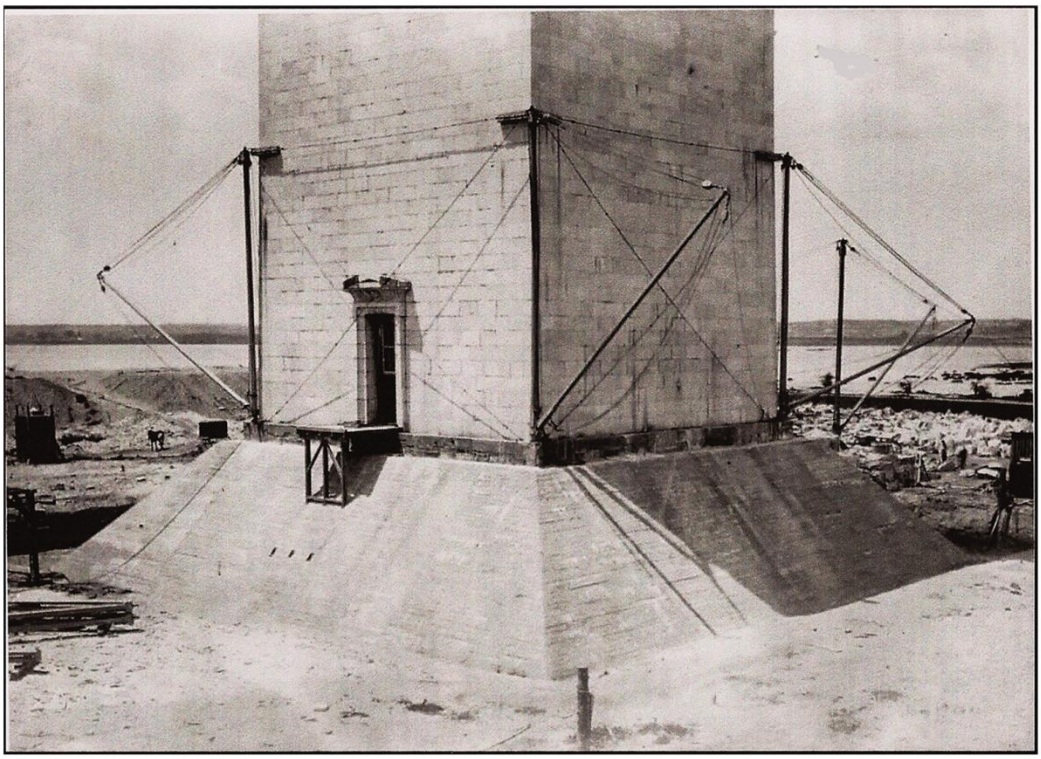
(a) Diagram of Monument underpinning plan.

(b) Buttress Construction 1879



(c) Diagrammatic Section Showing Excavation Through Buttresses and Foundation

(d) South Buttresses



Foundation of Monument in 1880 as Completed by Lt. Col. Casey

West Portal prior to closure with marble veneer & removal of ornaments and Robert Mills foundation showing minimum opening required for cellar access