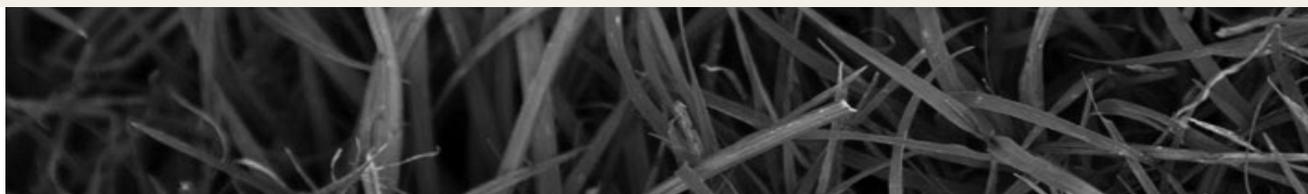


Chapter 1

Turf Management and Event Operations

Maintenance Guide for the Mall

National Park Service Operations and Maintenance Manual
December 14, 2012





CHAPTER 1: TURF MANAGEMENT OPERATIONS AND MAINTENANCE GUIDE FOR THE MALL

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1 Park Use and Resource Protection Planning Guide

1.1 Protecting the Mall

The Mall is highly desirable for all kinds of uses and has been typically scheduled for over 800 days of permitted use per calendar year. As a result, turf health and visual appearance and soil conditions deteriorated. By 2006, conditions were judged to be unsatisfactory to the National Park Service, Department of the Interior, Congress and the American public. The large number of permitted activities limited maintenance practices to renovation of half of the center turf panels every other year by taking the panels out of use for the winter. This approach has not been effective.

The National Park Service has invested in a major multi-phase landscape and soil restoration, drainage, and irrigation project. The high tech turf and soil system is similar to systems used on professional sports fields and includes durable strains of turf grass. This manual sets out standards to protect both the Mall's signature turf character and the significant investment. Developed in consultation with turf experts, incorporating best practices and new information, it establishes a different approach to resource protection and maintenance procedures.

The goal is to maintain turf, a contributing feature of this highly significant, designed historic landscape, in good to excellent condition even as it is used for a variety of permitted activities and recreational uses. Rather than taking large areas out of use for long time periods, the new approach will consistently utilize a combination of:

- intense maintenance procedures before, during and after events that will reduce or eliminate the need to take large areas out of use for longer time periods;
- spaces designed or designated for specific types of uses;
- encouraging use of non-turf areas by allowing temporary facilities on designated non-turf areas for longer time periods than on turfgrass areas; and
- requirements for temporary facilities placed on turf as described in tables 2 and 3 in this Chapter of the document.

In addition the National Park Service will establish a Mall Turf Advisory Group comprising turf experts to regularly review turf data collected by NPS, assess conditions and make recommendations to modify use conditions. The group will also examine new technology and decide what types of turf maintenance equipment will be allowed on the turf. The group will perform these duties while retaining public use of the turf, First Amendment demonstrations, recreational enjoyment and other permitted activities.

Between events, NPS will perform pre-event preparation and post-event restorative and preventative maintenance on the turf panels. The cost of any maintenance outside normal operating procedures, as outlined in Chapter 2 of the Turf Management Operations and



Maintenance Guide for the Mall, shall be considered part of the cost recovery for the event and is the responsibility of the Permittee

1.2 Introduction to the Mall within the National Mall, the NPS Regulatory Process, and Park Resource Protection

The National Mall is described as “the nation’s front yard,” and the furthest east portion of that is referred to as the Mall.. The Mall, more than 60 acres, is primarily turf and tree landscape that is intersected by roadways and walkways. Located in the heart of Washington, DC, the Mall is defined as the area bound on the east by Third Street¹, on the west by Fourteenth Street, on the north by Madison Drive, NW, and on the south by Jefferson Drive, SW.

The National Mall’s landscapes and open spaces provide a stunning visual setting in our Nation’s capital. “Here orchestrated events involving thousands of people or spontaneous ones with just a few participants are equally fitting. Space here is ever changing – at one point defined, at the next open and casual-but it is seldom limited to a single or even predominating use. In this sense the Mall’s space is neutral, allowing people freely to engage themselves in myriad ways...”*The Mall in Washington, 1791-1991* 15 (Richard Longstreth, ed.)(2002).

Permitted use is generally granted on a first come/first serve basis, through an application process. Applications are accepted no more than **one year in advance** of the first day of setup of the proposed event. Details regarding the permit process can be found in the *Special Events Planning Guide for the National Capital Region* (referred to in this document as the “SEPG” or “Special Events Planning Guide”).

Consistent with the NPS’s statutory mandate to protect parkland for the enjoyment of visitors while leaving it unimpaired for the enjoyment of future generations, the NPS regulations help protect park resources while managing assorted activities that may occur there. The terms “demonstrations” and “special event” are defined in the NPS regulations at 36 CFR 7.96(g)(1)(i)(ii). While demonstrations that involve 25 persons or fewer do not generally require a permit, all other demonstrations as well as all special events require that an application be submitted and a permit issued, per 36 CFR 7.96(g)(2)(3). The NPS does not accept applications more than one year in advance (including set-up time, if any) and they will be processed in order of receipt, per 36 CFR 7.96(g)(4)(i).

The NPS reviews applications and based upon regulatory criteria found at 36 CFR 7.96(g)(4)(vii)(A)-(D) and 36 CFR 7.96(g)(5)(v)(A)-(E) and determines whether a permit may be issued. Among the criteria the NPS considers is whether the park area requested is “reasonably suited in terms of accessibility, size and nature” or whether the proposed event “is of such a nature or duration that it cannot reasonably be accommodated in the particular area applied for; in that event, the Regional Director shall propose an alternate site to the applicant, if available for the activity; in this connection, the Regional Director shall reasonably take into account possible damage to the park, including trees, shrubbery, other plantings, park installations and statues.” In the event that a permit is issued, 36 CFR 7.96(g)(5)(xii) provides that the NPS “may impose reasonable restrictions

¹ The Capitol Reflecting Pool and the area east of Third Street is no longer part of the Mall; these areas were transferred to the U.S. Capitol jurisdiction in December 2011 and are now maintained by the Architect of the Capitol.



upon the use of temporary structures in the interest of protecting the park areas involved, traffic and public safety considerations, and other legitimate park value concerns.” Permits may be accepted during the hours of 8am to 4pm Monday through Friday, holiday excepted.

In addition to specific regulations governing the National Capital Region, initial sections of 36 CFR regulate “proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the National Park Service.” Section 1.5 governs *Closures and Public Use Limits* and provides a superintendent with the ability to designate areas for specific use or activities, impose conditions on use and other actions in order to maintain public health and safety; protect environmental and scenic values, protect natural and cultural resources, aid scientific research, and equitably allocate use to avoid conflict among visitor use activities. Section 1.6 states permits will be submitted during normal business hours unless otherwise specified, requires a compilation listing permitted activities that is available to the public upon request, and prohibits violation of permit process. Section 1.7 requires public notice when the authority of section 1.5 is invoked.

This Turf Management Operations and Maintenance Guide for the Mall, in conjunction with the “*Special Events Planning Guide*” and regulations in 36 CFR, is intended to be used by the NPS as it considers the potential impact caused by an application seeking to use the turf and its consideration of various turf protection measures. This document is also intended to advise and alert applicants of these turf issues, which the NPS will discuss as their application is processed. Certain permitted events that may impact the turf and either involve extensive logistical set-up, or the erection, construction or placement of structure or equipment such as tents, stands, platforms, or portable toilets will require the NPS and the applicant to work early together. That way, if a permit is issued, park resources are reasonably protected while the permitted activity can be safe, successful, and enjoyable. The Turf Management Operations and Maintenance Guide for the Mall describes special requirements that apply only to the Mall due to the Mall’s unique location and newly installed high-performance turf.

A smooth and well-coordinated relationship between NPS staff and the applicant’s staff is essential for the Permittee to have a successful event that furthers its desired message and provides attendees a safe and comfortable experience, while protecting park resources. To help establish this important collaboration, the NPS created this Turf Management Operations and Maintenance Guide for the Mall to help alert interested parties to the impact caused by permitted activities to turf and to detail various turf protection measures, to assist in each step in the event planning process.



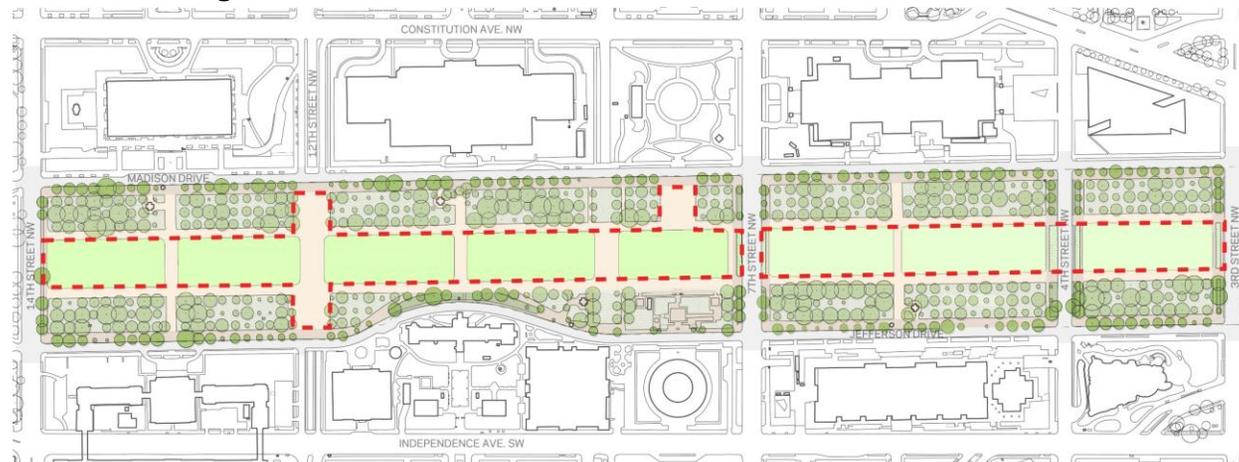
1.3 Mall Site

Located in the heart of Washington DC, the Mall is defined as the area bound on the east by Third Street, on the west by 14th Street, on the north by Madison Drive, and on the south by Jefferson Drive. Turf panels east of Third Street are no longer under the jurisdiction of the NPS; jurisdiction of this land was transferred to the Architect of the Capitol on Dec 23, 2011.

The first phase of landscape and soil restoration at the Mall was underway at the time of this report. This project includes not only turf and soil restoration, but also drainage and irrigation improvements. Phase I includes the portion of the Mall between Third and Seventh Streets. Future phases will include the remainder of the turf, from Seventh Street to Fourteenth Street.

1.3.1 Mall from Fourteenth Street to Third Street

1.3.1.1 Existing Conditions

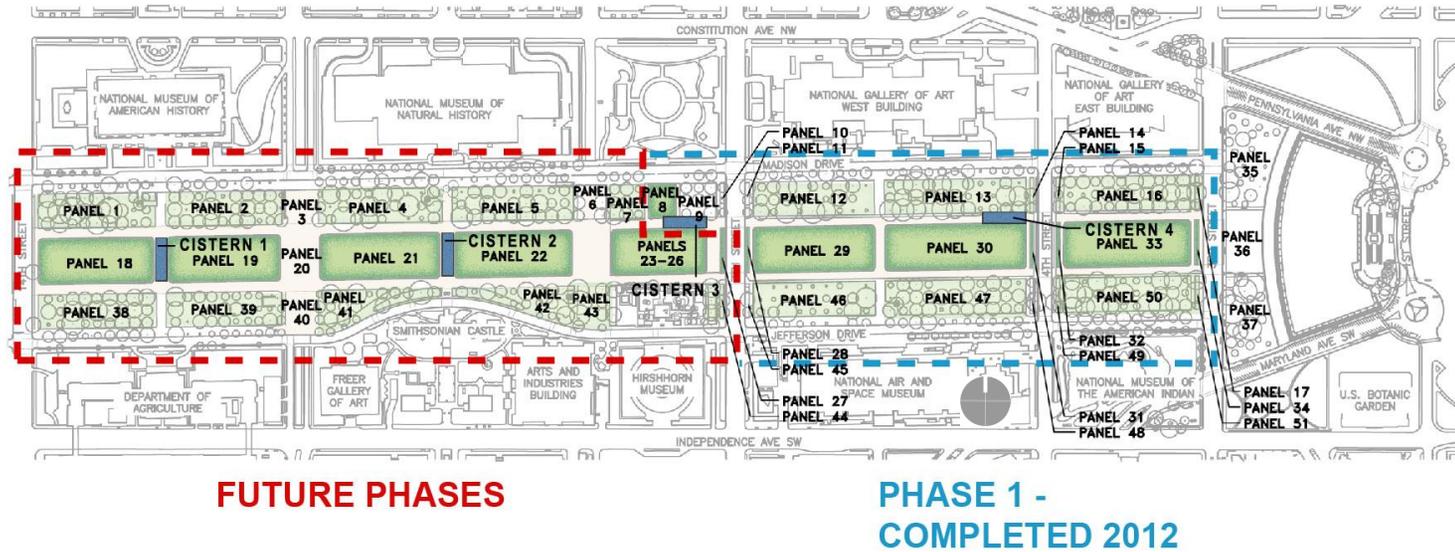


Phase 2 and 3

Phase 1



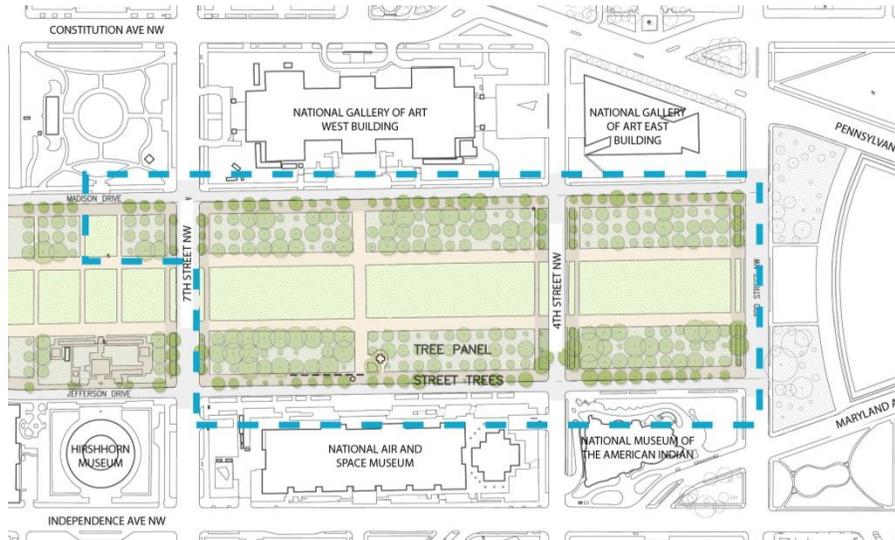
1.3.1.2 Phase 1 (Completed 2012) and Proposed Design for Future Phases



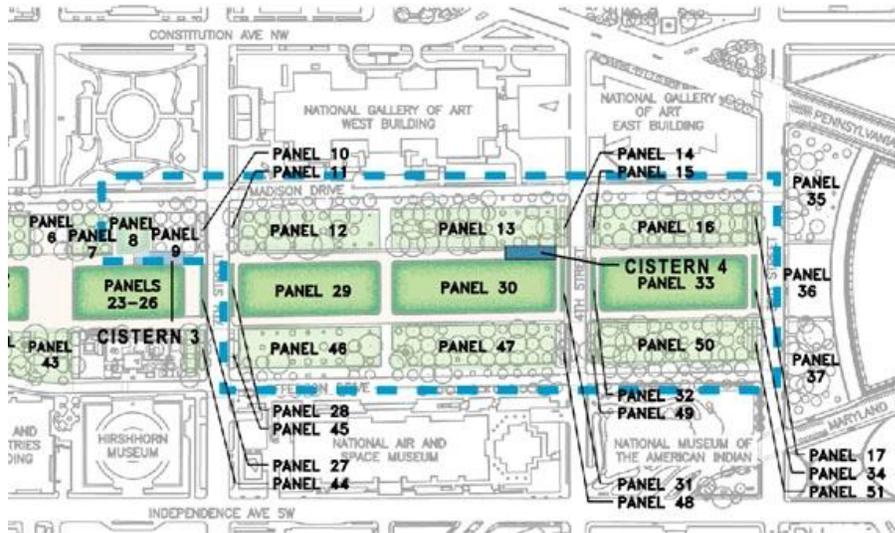


1.3.2 Phase 1: Completed 2012

1.3.2.1 Area of Phase 1



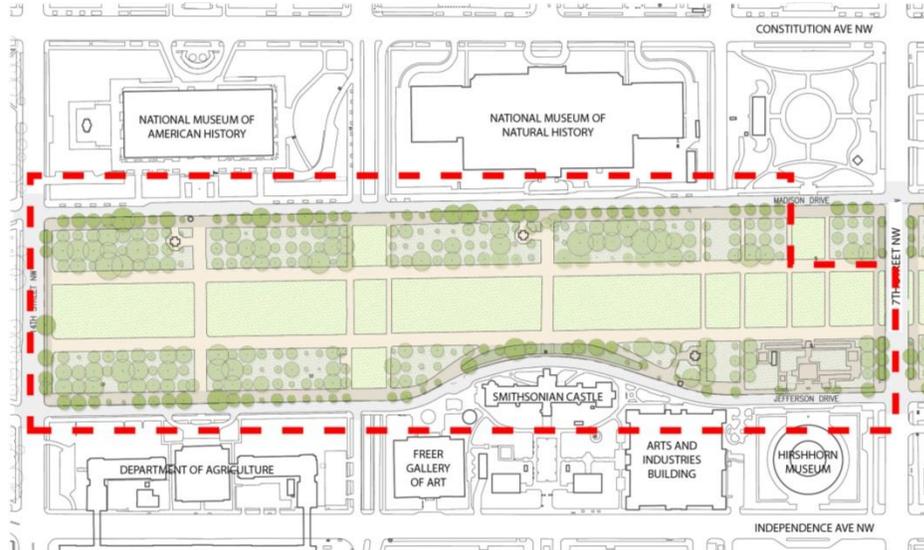
1.3.2.2 Design of Phase 1





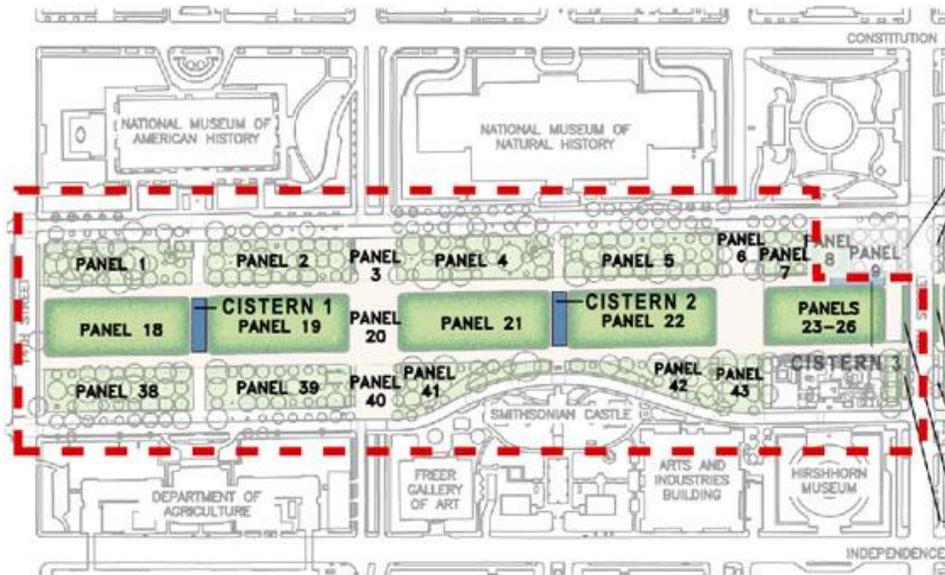
1.3.3 Future Phases

1.3.3.1 Existing Conditions



FUTURE PHASES

1.3.3.2 Proposed Design



FUTURE PHASES

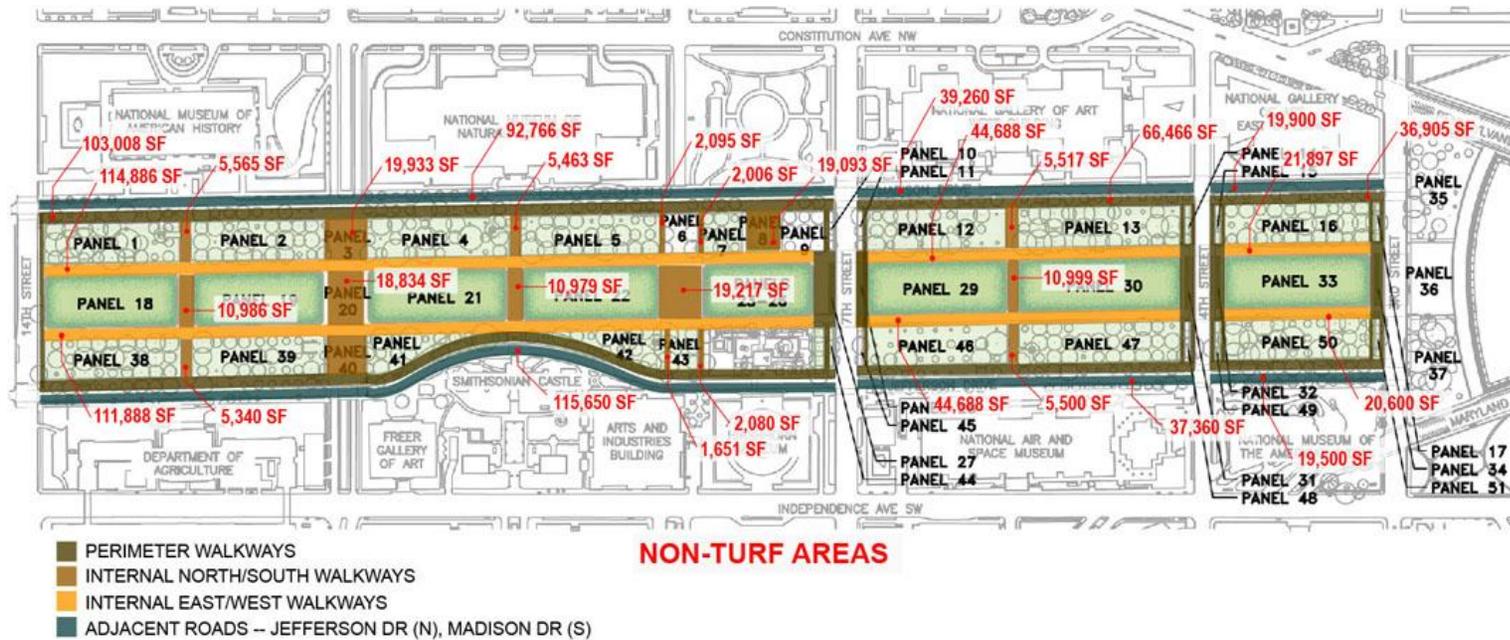


1.4 Mall Map with Venue Opportunities

The following maps illustrate areas in which Permittees may hold events. Where applicable, use limitations are noted. For additional details on event capacity, refer to section 3.3/Table 7.

1.4.1 Non-Turf Areas for Temporary Structures

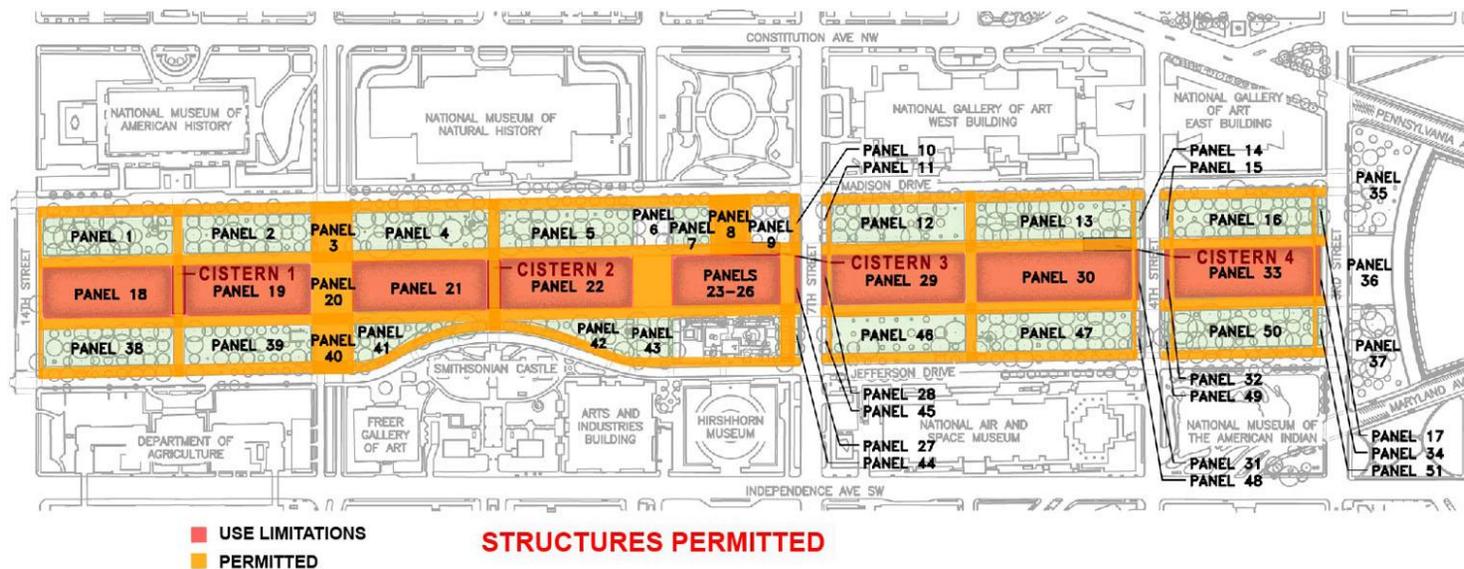
Non-turf areas such as walkways and hardscape panels are the preferred location for events of all types, particularly events using structures. Non-turf areas are highlighted in orange on the diagram below. Total square footage of non-turf areas is approximately 800,000 square feet. This includes four hardscape panels (3, 8, 20, and 40), as well as the north-south and east-west walkways.





1.4.2 Turf Area Locations for Temporary Structures

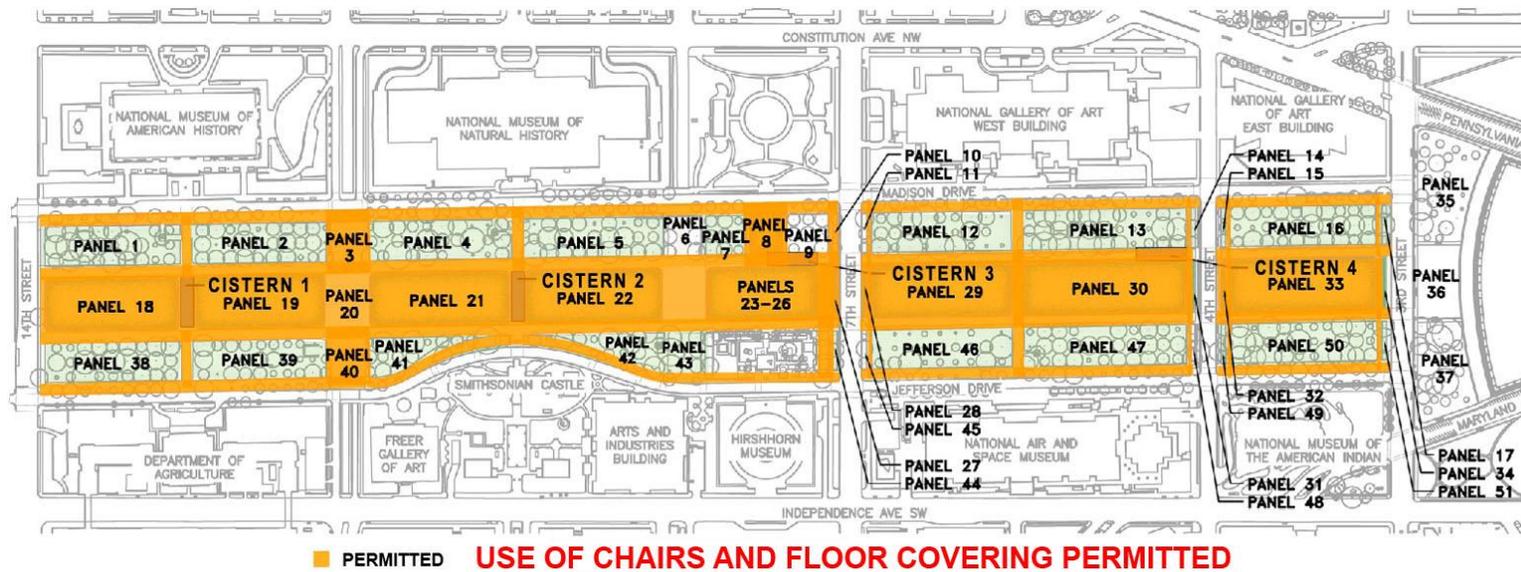
Structures are permitted on all walkways and hardscape. Structures can be permitted on turf panels with limitations listed in Section 3.3. The yellow areas on the diagram below indicate areas where structures are permitted; the red areas indicate areas where structures are permitted but with use limitations to protect the turf. Structures are not allowed in the tree panels.





1.4.3 Locations for Setup of Chairs or Other Seating

Setup of chairs or other seating is permitted on all walkways, hardscape panels, and turf panels (with protective turf covering). The orange areas on the diagram below indicate areas where seating setup is permitted. Appropriate turf cover must be used when seating is placed on turf panels².

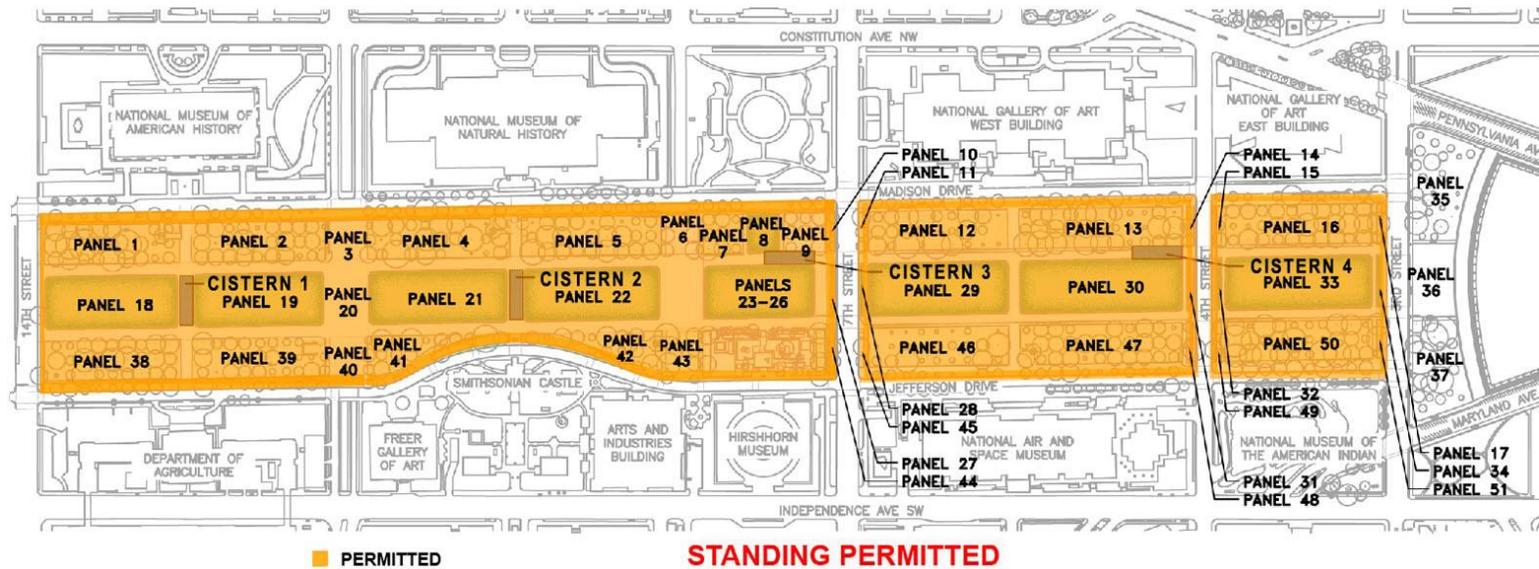


² See section 4.2 for information regarding temporary turf cover.



1.4.4 Locations for Pedestrian Standing Areas

Standing is permitted on all panels and walkways, as illustrated in orange in the diagram below.





1.5 Key Team Players

The Mall is in acutely high demand; its management requires diverse technical abilities and skills. Depending upon what is envisioned by an event producer, the mix of NPS staff necessary will vary by event. It is expected that the cost to support the necessary team shall be borne by the Permittee.

Many of the key team players identified in the *SEPG* are the same as those identified in this document; however, specific staff, with special responsibilities and appropriate technical training, is involved with National Mall and Memorial Parks (NAMA) events held on the high-performance turf on the Mall. This includes the following roles:

- NAMA Event Coordinator
- NAMA Permits Management Division Chief
- NPS Permits Management Specialist
- NAMA Turf Manager and Team
- NAMA Compliance specialists

The special duties of these positions as related to events on the Mall are outlined below:

1.5.1 NAMA Event Coordinator (Future position)

The NAMA Event Coordinator is the person responsible for coordinating and scheduling NPS-sponsored national celebrations, special events or activities. Events related to the Mall's purpose and significance have priority pre-scheduling on the permits management calendar or database. This staff position resides in the Division of Interpretation and Education.

1.5.2 NAMA Permits Management Division Chief

The NAMA permits management staff provides services not only to NAMA but also other parks within the National Capital Region (NCR). The NAMA Permits Management Division Chief assigns and manages staff to work with Permittees; to schedule, monitor, track and report on a wide variety of permitted activities; and to recover related costs. The Permits Management Division provides services not only to the National Mall and Memorial Parks, but also to other NPS units within the National Capital Region of the National Park Service.

1.5.3 NPS Permits Management Specialist

The NPS Permit Specialist serves as the primary point of contact for the Applicant and Permittee, and coordinates with other permit divisions and other park staff, such as the Turf Manager.

The NPS Permit Specialist shall be responsible for working with the Permittee to resolve all issues related to the event, particularly those reported by Event Monitors. Should the issue not be resolved in a timeframe determined appropriate by the Permit Specialist, the NPS Permit Specialist may revoke the permit and immediately terminate the event, and/or work with the United States Park Police (USPP) to issue citation(s) against the violator(s).

1.5.4 Event Monitors

Event Monitors are responsible for monitoring of the event, ensuring the Permittee follows the guidelines set forth by NPS and administering the permit. Event Monitors report to the NPS Permits Management Specialist and are responsible for being onsite during the duration of the event for monitoring purposes.

If monitors find issue with the Permittee, they will address the issue immediately with the persons involved and report the incident to the NPS Permits Management Specialist.



All reasonable instructions given by Event Monitors must be obeyed promptly. Failure to comply with all the terms and conditions of the special event permit may constitute grounds for revocation of the permit and immediate termination of the event, and/or citation against the violator(s).

1.5.5 NAMA Turf Manager and Team

The Turf Manager is responsible for the health and overall maintenance of the turf, soil and irrigation system. The Turf Manager generally monitors and tracks the condition of the turf to maintain a healthy turf and provides a record of conditions linked to permitted or other uses, weather conditions, or other factors. The Turf Manager and/or team participate in pre-event planning for events with expected attendance of over 1,000 or as determined in conjunction with the Permit Specialist as well as the pre- and post-event walk through assessments to evaluate and record the condition and health of the turf and to verify the functionality of the irrigation or other systems¹. The Turf Manager leads the Grounds Maintenance team assigned to the Mall.

The Turf Manager will determine if additional measures beyond those identified in the permit are necessary due to changing circumstances.

The Turf Manager and team act as a resource in the development of cost recovery requirements and also serve as a resource to the NPS Permit Specialist during the planning, implementation, and take-down of event.

In addition to the operations procedures outlined within this document, the Turf Manager has developed a turf wear index². This charting system assists the Turf Manager by enabling better visualization and tracking of the amount of activity occurring on the turf. Because some activities have greater impacts on turf than others, assigning numerical value to different uses will help the Turf Manager assess potential damage and prescribe an appropriate level of maintenance.

In addition to variety of use, environmental conditions are also considered when using a turf wear index. For instance, if an event takes place during or after a rain storm the negative impact on the turf is increased. Use of this tool allows the Turf Manager to accurately calculate turf wear based on activity, duration, and environmental conditions, and prescribe maintenance according to these factors.

1.5.6 NAMA Compliance Specialist(s)

A variety of compliance specialists may be required depending on the nature of the event. These could include code specialists, NEPA compliance, public health and safety, law enforcement, transportation, and could include a multi-agency or incident command approach. As defined in permit conditions, the Permit Specialist may serve this role³.

¹ Additional pre-planning activities may be required at the discretion of the Turf Manager.

² An example Turf Wear Index can be found in the appendix (*Using a Turf Wear Index*, adapted from work by David Schlotthauer, Turf Expert, Brigham Young University).

³ At the discretion of the permit specialist, additional input may be required. This will be determined on an event by event basis.



2

2 Revised Permit Conditions

2.1 Timeframes for Pre-event Preparation and Post-event Turf Restoration

The following table includes recommended scheduled timeframes for pre-event preparation and post-event restoration¹ for events held on the newly renovated high-performance turf panels. As activities are permitted, these time periods should be scheduled before and after the permitted event. Scheduled maintenance and restoration timeframes should be posted on the permit system for all to see.

This chart documents recommended timeframes only. The Turf Manager may recommend alternate durations based upon event conditions and/or turf conditions.

The following notes apply to all timeframes and all event parameters:

Pre-event preparation:

- Where feasible, it is recommended that the turf be mowed in two directions on the day of the event.

Post-event recovery:

- Following events where turf covers are used, the panel must be closed for 48-hours prior to interaction with the grass by the Turf Management team. See section 4.2 of this chapter for details on turf covering.
- Depending upon level of damage caused by event, resodding may be required.
- Sod knitting will take a minimum of three weeks, and may take up to 60 days depending on time of year and sod thickness. Sod knitting will occur more readily in spring and fall. During first three (3) weeks after installation, usage shall be extremely limited in order to provide the roots an opportunity to firmly knit with soil and insures that the turf will remain smooth.

¹ Extraordinary circumstances, such as a hurricane or larger than expected crowds, may require additional time affecting subsequent pre-events and next events. Pre-event preparation and post-event recovery time may vary based upon the size and duration of the event, the types of materials used, weather conditions, and the general conditions of the turf, among other factors. The timeframes recommended in this table are based upon best practices. The Turf Manager may make alternate recommendations based upon event parameters and turf conditions.



Table 1: Timeframes for Pre-event Preparation and Post-event Restoration

Event Parameters	Spring	Summer	Fall	WINTER
	March 15 – May 14	May 15 – Sept 14	Sept 15 – Nov 14	Nov 15 – March 14
Minor Event: less than 25 attendees no turf covering or structures	No time required	No time required	No time required	No additional recovery time is required.
Small Event: 26 to 999 attendees no turf covering or structures	3 – 5 days	3 – 5 days	3 – 5 days	One event per turf area during this period
Medium Event: 1,000 to 4,999 attendees no turf covering or structures	5 – 10 days	5 – 10 days	5 – 10 days	One event per turf area during this period
Large Event: 5K to 50K attendees no turf covering or structures	2 weeks	2 weeks	2 weeks	One event per turf area during this period
Very Large Event: 50k to 249K no turf covering or structures	3-4 weeks	3-4 weeks	3-4 weeks	One event per turf area during this period
Extreme Event: 250K+ attendees no turf covering or structures	4-5 weeks	4-5 weeks	4-5 weeks	One event per turf area during this period



2.2 Mall Center Turf Panels Use Limits for Temporary Facilities

The following table includes use limits for temporary facilities on the Mall center turf panels.

Table 2: Mall Center Turf Panels Use Limits for Temporary Facilities

Note: Set up and take down crews shall work continuously 24 hours a day during the set up and take down time period, regardless of season. All structures on turf require protective decking.

	SPRING March 15 – May 14	SUMMER May 15 – Sept 14	FALL Sept 15 – Nov 14	WINTER Nov 15 – March 14
<ul style="list-style-type: none"> • Vehicles of any kind (delivery, cranes, forklifts, golf carts, trailers, exhibit trailers, etc.) 	Not allowed on turf or curbs	Not allowed on turf or curbs	Not allowed on turf or curbs	Not allowed on turf or curbs.
<ul style="list-style-type: none"> • Temporary facilities that can be hand carried onto panels from hardscapes • Tents and facilities with stakes no longer than 36"¹ • Facilities such as stages, exhibits, displays, and media towers² • Seating, pedestrian surfacing, bicycle rack, cardboard recycling or trash containers³ 	5 days inclusive of set up and take down	3 days inclusive of set up and take down	5 days inclusive of set up and take down	7 days inclusive of set up and take down

¹ No staking within the designated no-staking zone to protect irrigation. The irrigation system shall be tested before and after event to ensure functionality. Stakes longer than 36" are always prohibited because they could damage drain lines, which cannot be tested.

² Weight cannot exceed 3,000 pounds unless materials are used to distribute the weight; in this event, the pressure to the turf cannot exceed 10 pounds per square inch.

³ Trash containers/bags must be hand carried to walkways/streets and held in designated areas for pick up as per permit conditions.



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	SPRING March 15 – May 14	SUMMER May 15 – Sept 14	FALL Sept 15 – Nov 14	WINTER Nov 15 – March 14
<ul style="list-style-type: none"> • Back of house, trailers, bone yards, generators, portable toilets, etc. 	Not allowed on turf or curbs	Not allowed on turf or curbs	Not allowed on turf or curbs	Not allowed on turf or curbs.
<ul style="list-style-type: none"> • Vehicle mounted equipment such as signs, stages, LED screens, media towers and light towers 	Not allowed on turf or curbs	Not allowed on turf or curbs	Not allowed on turf or curbs	Not allowed on turf or curbs.
<ul style="list-style-type: none"> • Pick-up games – <ul style="list-style-type: none"> – green flags designate areas open for play; – red flags designate areas rotating into short rest periods and not available for use¹ 	Per flag system	Per flag system	Per flag system	Per flag system

¹ See section 3.3 on page 32 for detailed description of the Public-Awareness Closure Program.



2.3 Allowable Temporary Facilities on the Mall (Outside Center Turf Panels)

The following table includes allowable temporary facilities on the Mall (areas other than the center turf panels).

Table 3: Allowable Temporary Facilities on the Mall (Outside Center Turf Panels)

	Walkways and Non-turf Areas	Madison and Jefferson	Tree and Turf Panels	Gravel Tree Verges ¹ (Madison Jefferson)	Turf Verges ²	Welcome Plaza/ Smithsonian Metro	Refreshment Stand Areas
• Tents	Yes – but no staking	Yes – but no staking	No	No	No	Yes – but no staking	No
• Stages	Yes	No	No	No	Yes	No	No
• Other temporary structures ³	Per conditions	Per conditions	No	No	Per conditions	Per conditions	Per conditions
• Back of house, trailers, bone yards, generators, etc.	Yes	Yes, but no boneyards	No	No	No	No	No
• Vehicles (golf carts) as per permit conditions ⁴	Yes	Yes	No	No	No	Per conditions	No
• Cranes and delivery vehicles ⁵	Yes	Yes	No	No	No	No	No

¹ A tree verge is a narrow planting zone at the back of a curb, adjacent to a roadway.

² A turf verge is a narrow turf grass planting zone at the back of a curb, adjacent to a roadway. Efforts should be made to span the verge when possible when structures are used.

³ Temporary structures beyond tents, stages, and fencing might include elements such as lighting towers, audio towers, AV towers, displays, platforms, and portable restroom facilities, among others.

⁴ Vehicle parking areas or corrals shall be identified in plans related to permit conditions.

⁵ Cranes and delivery vehicles must obey designated routes in permit conditions; cranes must remain five feet (5') away from granite curbs and turf; curbs and turf must be protected at all times.



	Walkways and Non-turf Areas	Madison and Jefferson	Tree and Turf Panels	Gravel Tree Verges ¹ (Madison Jefferson)	Turf Verges ²	Welcome Plaza/ Smithsonian Metro	Refreshment Stand Areas
• Vehicle mounted signs, stages, LED screens, media towers, light towers	Yes	No	No	No	No	No	No
• Portable toilets/toilet trucks ¹	Designated areas only	Designated areas only	No	Designated areas only	No	No	No
• Dumpsters	Per conditions	Yes	No	No	No	No	No
• Barriers/bike racks ²	Yes	Yes	Yes	Yes	Yes	Per conditions	Yes
• NPS fencing that is staked ³	No	No	Yes	Yes	Yes	No	No
• Security Checkpoints	Yes	Yes	No	No	No	No	No

¹ Portable restroom facilities are not permitted on the turf or tree panels and must be located in hardscape areas.

² Event barriers shall not be secured using stakes.

³ NPS staking will follow guidelines as outlined for Permittees and be installed under NPS oversight.



2.4 Closure and Cancellation for the Mall

The following table includes information related to closure and cancellation policy for the Mall. Closures shall be enacted for health and safety, weather, and soil condition¹ reasons. It shall be the responsibility of the Turf Manager to determine the level of saturation suitable for usage; this will vary based upon factors such as the season and recent/upcoming weather events.

Table 4: Closure and Cancellation for the Mall

	Soil Moisture Level/Test	Public/Permit Holder Informed ² (per 36 CFR 1.5, 1.6, 1.7, 1.10)
GENERAL INFORMATION: CLOSURE AND CANCELLATION		
Mandatory cancellation		<ul style="list-style-type: none"> • For emergency, public health or safety (36 CFR 1.5)³ • In conjunction with USPP • Mass notification procedures in place
Cancelling permitted athletics and pick-up ball games <ul style="list-style-type: none"> • NPS shall establish a flag system for the Mall to rotate panel usage and notify players when areas are too wet for use⁴ • Flags will incorporate symbols per 36 CFR 1.10 	No events shall be held in the event that there is visible puddling on the Mall. In the event of recent rain that has not resulted in puddling, the Turf Manager should use a soil probe to determine the moisture of the soil. ⁵	<ul style="list-style-type: none"> • Permitted athletics are prohibited from playing on wet ground (36 CFR 79.6 (b)(2)) • On-site temporary signs placed by Turf Manager • On-site NPS staff • NPS will establish a public information campaign - no play in standing water or when soil moisture is high; flag system described

¹ Soil conditions shall be evaluated to ensure prevention of damage to the turf; this is particularly in the event of extremely moist or wet soil, which is subject to greater damage.

² USPP, in conjunction with NPS, will be responsible for citing permit holders causing damage or not adhering to permit rules.

³ 36 CFR 2.32(a)(2) This regulation allows lawful orders to be issued “to maintain order and control public access and movement during...law enforcement actions, and emergency operations that involve a threat to public safety or park resources...where the control of public movement and activities is necessary to maintain order and public safety.

⁴ See chapter 2 section 3.10 for detailed description of the Public-Awareness Closure Program.

⁵ The Turf Manager may determine that impending weather conditions will result in wet conditions within the same day and may cancel events to prevent damage. Soil moisture readings greater than 30% indicate that damage will occur.



	Soil Moisture Level/Test	Public/Permit Holder Informed ² (per 36 CFR 1.5, 1.6, 1.7, 1.10)
PERMIT STEPS AND CLOSURE AND CANCELLATION INFORMATION FOR APPLICANT AND PERMITTEE		
Application contains notification of cancellation policy		<ul style="list-style-type: none"> • Review weather projections and seasonal patterns • Rain dates pre-determined during rainy seasons • Review closure and cancellation policy; there is no guarantee of rescheduling; there is no reimbursement
Operations inventory and event schedule <i>14 days before event</i>		<ul style="list-style-type: none"> • Weather and soil moisture warning; • Back-up plan for cancellation, rain dates, relocation to Tidal Basin Parking Lot, or rescheduling availability
Pre-event meeting <i>5 days before</i>		<ul style="list-style-type: none"> • Weather and soil moisture warning
Pre-event walk through <i>3 days before event</i>	Test soil moisture	<ul style="list-style-type: none"> • Initiate back up plan
Set up of temporary facilities	Soil moisture is high	<ul style="list-style-type: none"> • Delay of set up; cancellation required within 2-3 days of event
Event days (public activity days)	On site monitoring	<ul style="list-style-type: none"> • Rain delays
Take down of temporary facilities		<ul style="list-style-type: none"> • Postpone tear down until soil moisture levels are at an appropriate level.¹

¹ The amount of time necessary for soil moisture levels to reduce to an appropriate level will vary based upon weather conditions. The Turf Manager and team shall monitor conditions and inform Permittee when soil moisture levels have reached an acceptable level for take down of temporary facilities.



3

3 Permitting Process: Special Steps for Events on the Mall

3.1 Event Checklist and Procedures to Protect Mall Turf, Soil and Irrigation

The following table can be used to ensure Permittees meet all the deadlines outlined in the manual and meet the conditions of the permit. Please note that the timeline may vary based upon the scale of the event. The NPS Permit Specialist will work with the Permittee to determine exact dates/schedule for the permitted event. The table can also be used to ensure Permittees, the Permits Management Office, and the Turf Manager and teams understand responsibilities associated with procedures established to help protect the Mall turf, soil, and irrigation system.

Table 5: Event Checklist and Procedures to Protect Mall Turf, Soil and Irrigation

Steps	Permit System	Permittee	Permits Management Office	Turf Manager/Staff
PRE-EVENT PREPARATION				
Planning	<ul style="list-style-type: none"> Permit system must highlight the scale of event and expected attendance 	<ul style="list-style-type: none"> Inform Permit Office about scale of event and expected attendance 	<ul style="list-style-type: none"> Inform Turf Manager of events likely to affect turf condition 	<ul style="list-style-type: none"> Identify concerns and work with permits office Plan advance strategy to maintain turf in good to excellent condition
Aeration				<ul style="list-style-type: none"> Document soil and turf conditions on a regular basis Follow guidelines from Chapter 2



Steps	Permit System	Permittee	Permits Management Office	Turf Manager/Staff
Irrigation/watering				<ul style="list-style-type: none"> • Examine irrigation system heads • Test system • Program system so as not to spray the event • Determine whether special irrigation such as hand watering or syringing will be necessary during the event and to what level
PRE-EVENT WALK THROUGH PRIOR TO START OF SETUP <i>(48 hours prior to start of setup)</i>				
Participants	<ul style="list-style-type: none"> • Permit system identifies which stakeholders must attend, including Permittee 	<ul style="list-style-type: none"> • Permittee must attend 	<ul style="list-style-type: none"> • Permit specialist must attend 	<ul style="list-style-type: none"> • Representative from Mall Turf Management Team must attend
Condition assessment	<ul style="list-style-type: none"> • Permit system must recommend photo documentation for the benefit of all parties • Permit system must require Permittee to sign-off on condition assessment document 	<ul style="list-style-type: none"> • Photo documentation is recommended for the benefit of all parties • Signoff on condition assessment document. 	<ul style="list-style-type: none"> • Confirm grounds condition for patches, dead grass, and cracked cement noted as “existing” pre-event • Sign-off on condition assessment document • Prepare report. Archive report with permit 	<ul style="list-style-type: none"> • Photo document to support long term tracking of turf and soil conditions • Document findings of walk-through • Sign-off on condition assessment document



Steps	Permit System	Permittee	Permits Management Office	Turf Manager/Staff
Logistics: <ul style="list-style-type: none"> • Delivery schedule • Fencing • Ground cover • Cables 	<ul style="list-style-type: none"> • Permit system must require Permittee to provide information about delivery and load in 	<ul style="list-style-type: none"> • Provide information about delivery and load in 	<ul style="list-style-type: none"> • Review posted delivery schedule • Ensure permit conditions are followed 	<ul style="list-style-type: none"> • Review posted logistics and transmit concerns to Permits office
EVENT				
Soil and turf condition		<ul style="list-style-type: none"> • Follow permit conditions 	<ul style="list-style-type: none"> • Ensure permit conditions are followed 	<ul style="list-style-type: none"> • Daily turf and soil monitoring check conditions and transmit concerns to Permit office • Overseed as needed during event
Generators		<ul style="list-style-type: none"> • Follow permit conditions 	<ul style="list-style-type: none"> • Ensure permit conditions are followed • Ensure all generators enclosed by fence and placed in fire retardant containment unit 	<ul style="list-style-type: none"> • Check conditions daily and transmit concerns to Permit office
Structures		<ul style="list-style-type: none"> • Follow permit conditions 	<ul style="list-style-type: none"> • Ensure permit conditions are followed • If staked, ensure that stakes are less than 36" 	<ul style="list-style-type: none"> • Check conditions daily and transmit concerns to Permit office



Steps	Permit System	Permittee	Permits Management Office	Turf Manager/Staff
In case of significant rainfall or other extreme weather conditions		<ul style="list-style-type: none"> • Work with Permits Management Office and Superintendent in the event of extreme weather conditions 	<ul style="list-style-type: none"> • Coordinate cancellations, delays, or other requirements with the superintendent and Permittee 	<ul style="list-style-type: none"> • Examine turf conditions including soil temperature and saturation; make recommendation to superintendent whether event can continue without damage to the turf and if additional steps are required (such as additional pedestrian flooring, etc.)
Daily inspections: monitoring and recording conditions, weather, etc.			<ul style="list-style-type: none"> • Events monitors to monitor event for compliance 	<ul style="list-style-type: none"> • Turf Manager and/or staff to monitor condition of turfgrass • Archive information in database



Steps	Permit System	Permittee	Permits Management Office	Turf Manager/Staff
POST-EVENT WALK THROUGH <i>(1 day after event take down is complete)</i>				
Post event walk through with the Permittee/condition assessment	<ul style="list-style-type: none"> • Permit system must require Permittee to participate in walk through • Permit system must require Permittee to sign off concurrence document related to condition assessment 	<ul style="list-style-type: none"> • Participates in walk through • Signs off on condition assessment document 	<ul style="list-style-type: none"> • Participate in walk through • Photo documentation of conditions • Note inconsistencies with permit conditions • Sign off concurrence document related to condition assessment 	<ul style="list-style-type: none"> • Participate in walk through • Examine turf for excessive wear or damage caused by event • Photo documentation of conditions • Sign off concurrence document related to condition assessment
POST-EVENT RECOVERY PERIOD				
Turf recovery	<ul style="list-style-type: none"> • Permit system documents if level of damage resulting in the need for cost recovery is caused to turf, and notifies Permittee 	<ul style="list-style-type: none"> • Responds to cost recovery request 	<ul style="list-style-type: none"> • Assign damage costs to Permittee if applicable • Assign costs of turf management team 	<ul style="list-style-type: none"> • 48 hours after flooring removal, mow turfgrass • Three days after flooring removal, staff will commence recovery maintenance practices



Steps	Permit System	Permittee	Permits Management Office	Turf Manager/Staff
Aeration/seeding	<ul style="list-style-type: none"> Permit system documents if additional aeration is required, and notifies Permittee of cost recovery 	<ul style="list-style-type: none"> Responds to cost recovery request 	<ul style="list-style-type: none"> Determine whether Permittee is responsible for bearing the cost of additional aeration 	<ul style="list-style-type: none"> Determine whether additional aeration or seeding is necessary based on turf and soil conditions following event.
Irrigation/watering	<ul style="list-style-type: none"> Permit system documents if damage is caused to the irrigation system, and notifies Permittee to pay cost of alternate/interim irrigation 	<ul style="list-style-type: none"> Responds to cost recovery request 	<ul style="list-style-type: none"> Assign damage costs to Permittee if applicable 	<ul style="list-style-type: none"> Examine heads Test system Determine if event has caused damage to system Determine if additional watering is required to ensure health of turf
Soil condition	<ul style="list-style-type: none"> Permit system documents if level of damage resulting in the need for cost recovery is caused to soil, and notifies Permittee 	<ul style="list-style-type: none"> Responds to cost recovery request 	<ul style="list-style-type: none"> Determine whether Permittee is responsible for bearing the cost of additional fertilization 	<ul style="list-style-type: none"> Examine soil for excessive damage caused during event Determine whether additional fertilization is required
Fencing	<ul style="list-style-type: none"> Permit system documents if level of damage resulting in the need for cost recovery is caused to soil, and notifies Permittee 	<ul style="list-style-type: none"> Responds to cost recovery request 	<ul style="list-style-type: none"> Assign damage costs to Permittee if applicable 	<ul style="list-style-type: none"> Use fencing as necessary to protect recovering turf



Steps	Permit System	Permittee	Permits Management Office	Turf Manager/Staff
Record conditions	<ul style="list-style-type: none"> Permit system saves archive copy of conditions 	<ul style="list-style-type: none"> Records conditions 	<ul style="list-style-type: none"> Record conditions and add observations to set of best practices 	<ul style="list-style-type: none"> Record conditions and add observations to set of best practices Archive conditions
Prepare report	<ul style="list-style-type: none"> Permit system saves archive copy of report with permit 	<ul style="list-style-type: none"> Archive report 	<ul style="list-style-type: none"> Prepare letter on event-related issues; combine with turf report from Turf Manager 	<ul style="list-style-type: none"> Develop report of findings related to turf



3.2 Mall Area Capacity

Refer to section 1.4 for venue opportunity maps indicating areas in which Permittees may hold events as well as type of use allowed for each area.

Table 7: Panel Use Limitations to Protect Mall Turf, Trees, Soil, and Irrigation

Panel	Description	Area (SF)	Maximum Estimated Capacity – Seated	Maximum Estimated Capacity – Standing	Temporary Structures ¹¹
<i>Suggested capacity calculation metric: 15 SF per person seated, with tables and chairs; 5 SF per person standing²</i>					
1	Tree	60,988	Not permitted	12,200	Not permitted
2	Tree	63,834	Not permitted	12,770	Not permitted
3	Hardscape	19,933	1,330	3,990	Permitted
4	Tree	64,865	Not permitted	12,970	Not permitted
5	Tree	66,536	Not permitted	13,310	Not permitted
6	Tree	19,990	Not permitted	4,000	Not permitted
7	Tree	18,970	Not permitted	3,790	Not permitted
8	Hardscape	19,093	1,270	3,820	Permitted
9	Tree	19,895	Not permitted	3,980	Not permitted
10	Tree	3,122	Not permitted	620	Not permitted
11	Tree	2,034	Not permitted	410	Not permitted
12	Tree	66,483	Not permitted	3,300	Not permitted
13	Tree	77,935	Not permitted	15,590	Not permitted
14	Tree	2,222	Not permitted	440	Not permitted
15	Tree	2,268	Not permitted	450	Not permitted
16	Tree	69,520	Not permitted	13,900	Not permitted
17	Tree	2,722	Not permitted	540	Not permitted
18	Turf	84,780	5,650	16,960	Use Limits

¹ Not permitted on tree panels; strongly discouraged on turf panels but allowed with approved protection. Refer to Section 2.2, Mall Center Turf Panels Use Limits for Temporary Facilities and Section 2.3, Allowable Temporary Facilities on the Mall (Outside Center Turf Panels)

² Capacity calculation metrics assume no structures on the panel; calculations may be adjusted in conjunction with the NPS Event Coordinator based on the site plan. All egress and fencing must be designed to be code compliant.



Panel	Description	Area (SF)	Maximum Estimated Capacity – Seated	Maximum Estimated Capacity – Standing	Temporary Structures ¹¹
19	Turf	83,780	5,585	16,760	Use Limits
20	Hardscape	18,834	1,260	3,770	Permitted
21	Turf	88,985	5,930	17,800	Use Limits
22	Turf	87,680	5,845	17,540	Use Limits
23-26	Turf	76,370	5,090	15,275	Use Limits
27	Turf	3,288	220	660	Use Limits
28	Turf	2,712	180	540	Use Limits
29	Turf	87,327	5,820	17,470	Use Limits
30	Turf	101,566	6,770	20,310	Use Limits
31	Turf	2,897	190	580	Use Limits
32	Turf	2,787	190	560	Use Limits
33	Turf	91,623	6,110	18,325	Use Limits
34	Turf	3,213	215	640	Use Limits
35*	NA	NA	NA	NA	NA
36*	NA	NA	NA	NA	NA
37*	NA	NA	NA	NA	NA
38	Tree	64,860	Not permitted	12,970	Not permitted
39	Tree	60,222	Not permitted	12,040	Not permitted
40	Hardscape	19,910	1,330	3,980	Permitted
41	Tree	25,350	Not permitted	5,070	Not permitted
42	Tree	4,755	Not permitted	950	Not permitted
43	Tree	19,450	Not permitted	3,890	Not permitted
44	Tree	3,081	Not permitted	620	Not permitted
45	Tree	1,990	Not permitted	400	Not permitted
46	Tree	66,394	Not permitted	13,280	Not permitted
47	Tree	74,328	Not permitted	14,870	Not permitted
48	Tree	1,916	Not permitted	380	Not permitted

* Panels 35, 36, and 37 are no longer under the jurisdiction of the NPS; jurisdiction of this land was transferred to the Architect of the Capitol on December 23, 2011.



49	Tree	2,106	Not permitted	420	Not permitted
50	Tree	70,030	Not permitted	14,010	Not permitted
51	Tree	2,160	Not permitted	430	Not permitted
--	North and South running hardscape – walkways*	TBD [†]	TBD	TBD	Permitted
--	East and west running hardscape walkways*	TBD [†]	TBD	TBD	Permitted

* No staking is permitted on walkways. Emergency access requires a fifteen foot (15') clear span.

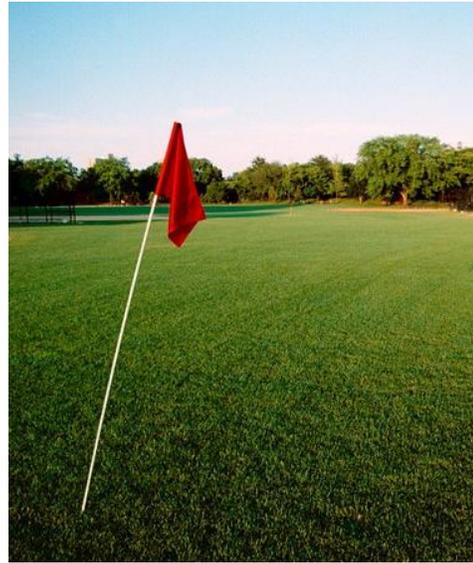
[†] Design of walkways is incomplete at the time of this publication; at completion of design, the area allotted to Permittees will be calculated by multiplying the entire width of the sidewalk used by the length of the sidewalk contiguous with the panels included in the permit. Refer to Section 1.4 for proposed areas.



3.3 Public-Awareness Closure Program

For the success of turf maintenance, it is critical for the public to be not only aware but actively engaged in the protection and preservation of the resource. Development of a system to educate and engage the public on when to use or avoid turf areas is recommended. Such a system will demonstrate to the general public the care and dedication of NPS to maintaining and preserving the Mall as a national treasure.

NPS believes using positive messaging to convey to the public why an area is closed or a use restricted due to resource rehabilitation efforts or regular maintenance procedures helps build support for maintenance goals. This includes signage on and around the Mall, as well as online. Outreach may be done with local neighbors such as the Capitol Complex, the Smithsonian, the Capitol Hill neighborhood, and many of the Federal Agencies inhabiting the facilities surrounding the Mall.



A red flag system will be used to help communicate the usability of each panel or sections thereof on the Mall, similar to that used on the Central Park lawn spaces. Red flags will be located at the four corners of a panel or section thereof along the two east-west walkways, thus signifying the closure of the adjacent panel. These shall be posted when panels are closed for maintenance or due to adverse weather conditions when the turf is vulnerable to damage, or during recovery periods after a large event.

NPS will provide an education system to inform the public of the flag system's intent and procedures. Flags will be accompanied by informational signage addressing the process and purpose of the flags, informing visitors of the program that is in place to protect the Mall. The information provided should be identifiable, consistent, understandable, and current. Messaging of the program should be integrated with repair and recovery signage.

Panels should be marked with red flags, signaling the closure for issues related to scheduled and unforeseen maintenance including:

- Newly seeded or sodded panels to allow for the turf to grow in
- Pest mitigation, mowing, fertilizing, aeration, topdressing operations
- Heavily trafficked panels requiring a rehabilitation and recovery period

Panels may be temporarily closed due to permitted events. Some events require set up and breakdown periods; the permit may call for closure of panels to the public during these times to promote public safety. Permitted events may have limited attendance; thereby requiring closure of the panel to the public during the event. Closure of panels will be determined by the NPS permit staff in conjunction with the Turf Manager.

Adverse weather conditions will also force the temporary closure of panels for casual use, including those that are:



- Heavily saturated from large rain events
- Frosted over, as this high traffic on frosted grass will greatly damage the turf

The NPS Turf Manager is responsible for monitoring the conditions of the turf panels and determining whether the turf areas are acceptable for use; if not, then the Turf Manager will implement the red flag closure system.

Once the red flags are clearly displayed, the U.S. Park Police will enforce the flag system and direct users to open panels. Ideally, regulations will be put in place to provide Park Police with the authority to cite users who disobey the direction provided by the flags.



4

4 Turf Protection Planning Guide – A Primer for Applicants

Turfgrass is a living, breathing, organism which requires six basic elements for survival: air, water, food/nutrients, sunshine/light, proper temperature and rest. When any of these elements are not provided or removed from the equation the death and decline of the turfgrass is imminent.

Events can be very damaging to the health of turf as they do not allow the turfgrass to rest and often result in limiting the turfgrass from access air, water, nutrients and light. Damage to the turf panels primarily occurs due to wear (tearing and abrasion of the above ground parts of the plant) and soil compaction, which reduces the pore space in the soil and limits air and water availability, ultimately damaging turf.

4.1 Use and Rest Periods

In order to best protect the health of the turfgrass, NPS will carefully consider if and how events may use the turf panels. This includes whether or not the panels are available, if floor coverings and structures are requested to be placed on the turf panels, and the permitted duration of the event. These decisions will be made by the Permit Specialist and Turf Manager upon examination of an ever increasing body of knowledge that will be supplemented by information gained from each permitted activity.

The use of the turfgrass panels will be rotated, closing panels or portions of panels periodically for turfgrass renovation/recovery. Rotation is required to prevent all the turf panels from becoming devastated. NPS will accomplish this by scheduling events and renovation/recovery on different panels to allow the turfgrass to regenerate.

Additionally, when approving site layouts, NPS will work with Permittees to ensure that the layout of structures and circulation varies from previous layouts. This ensures that the same areas of the panel are not continuously used, thereby preventing damage such as compaction of soil or the deprivation of natural light reducing the amount of chlorophyll.

During events, the turf may require maintenance such as watering, or mowing. No fertilizing, aeration, or topdressing will occur during the event. Requirements for maintenance will vary based upon the time of year, size and scale of event, and environmental conditions. Contact the NPS Permit Specialist for additional information provided by the Turf Manager.

The post-event rest period, recovery period, and repair or replacement of turf will vary based upon the conditions of the event, such as length of time turf is covered, number of attendees, and weather conditions during the event. Generally, the first three (3) days after use are dedicated solely to recovery procedures as highlighted in the Turf Management Operations and Maintenance Guide for the Mall. Post-event rest is required after each use of the turf – see table 2. In the case of medium to extreme events the



recovery period may be as short as two (2) weeks, but may be extended up to eight (8) weeks, particularly where substantial reseeding or resodding is required³⁰.

4.2 Temporary Covering of Turf Panels

For the protection of the resource, the National Park Service must limit damage to the turf. There will be no vehicular access at all on turf. Pedestrian use of turf panels is acceptable. When permitted, temporary covering shall be used for pedestrian walkways, temporary flooring, and structure support.

No materials are permitted on the turf unless the turfgrass has been properly protected by temporary coverings. Temporary covering of turf substantially reduces wear injuries by protecting the plant from tearing and abrasion due to traffic. Temporary covering helps reduce soil compaction; however, this may still occur.

Plywood is not ever an acceptable temporary covering. Plywood blocks nearly all irradiance, thereby shutting down the photosynthetic process within the turfgrass plants. This results in unacceptable decline of turfgrass health.

Acceptable Turf Covers. Products such as Terraplas, Matrax LD, or equal, are ADA-compliant, interlocking mats that are translucent and allow UV light to pass through to the grass below. This results in less damage to the turf than solid materials. These products feature perforations and are ribbed, allowing for ventilation and some moisture access to the turf below.

While temporary turf covering helps prevent some damage, covering the turfgrass results in additional stressors such as reduced airflow, restricted moisture infiltration, and reduced irradiance.

- Pedestrian flooring shall follow the guidelines below:
 - Comprised of single-sided white high density polypropylene, with open back such as Terraplas or approved equal. These types of materials are considered leading turf protection systems for stadia and other venues such as public parks, racecourses, and private events and is used for walkways, exhibitions, show stands and hospitality areas. These products are quick and easy to fit; allows passage of air, light, and water; perform to high public safety standards; and protect turf from large crowds and structures. For example: Terraplas is supplied in solid panels of six foot square by two and a half inches thick (6' x 6' x 2.5"). Each panel locks to the adjoining panels by means of eight (8) camlocks. It has a cavity under the surface gives a clear height of 60mm will protect grass for longer periods.
 - Be lightweight—covering must be carried and set in place without vehicular assistance. Hand carts will be allowed on the turf protection.
 - Have appropriate clearance above crown of grass per performance specification, this depends on the time of year and ground conditions.
 - Have holes for air and water to permeate the product No carpet or other obstructions to turf covering holes will be allowed below the protective

³⁰ Damaged areas of one (1) square yard or greater require sodding. The type of sod selected (thin or thick cut) will affect cost recovery differently.



decking. May be allowed above the decking with seasonally defined time limits.

- Not result in turf damage during removal
- Installed starting after five (5) pm and working through the night
- Installed no more than one (1) day prior to the event when turf is actively growing, any flooring system down for five (three in the summer) or more days will have adverse damage to the turf.
- There are conditions that warrant a solid back such as soft wet conditions or hot weather. In this case Matrax or equal is acceptable; plywood is not an acceptable pedestrian walkway material. An approved equal to Matrax would be translucent or white in color, flat backed, and would lock together with adjoining pieces. The maximum amount of time that this can be down is 72 hours no matter the time of year.

Permitted products, such as Terraplas, Matrax LD or equal, will need to be monitored and are only allowed for specific durations. The permitted product is based upon the season, the use and the covering material proposed, see table 1 on page 16. Product selection must be approved by the NPS Permit Specialist at the time of event site plan submission.

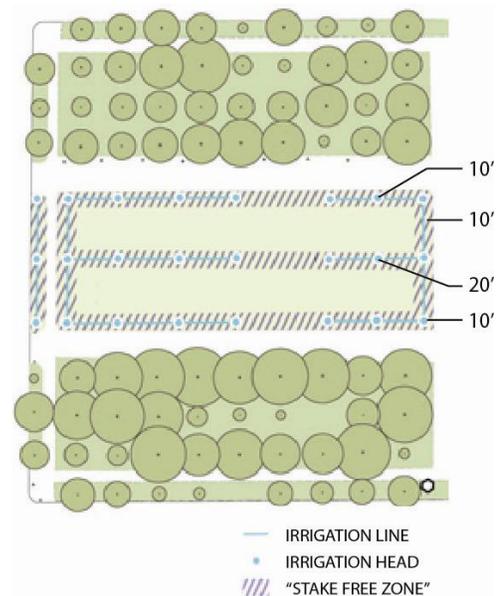
Vehicles shall not be driven or parked on pedestrian flooring or protective decking.

4.3 Structures on Turf Panels

It is strongly encouraged that structures be placed on the Mall's hardscape areas where they will not impact the turf; however, the NPS may allow, under permit, structures on turf, if the Permittee's use of structure and equipment follows the turf protection measures as detailed below. Without the necessary resource protection measures, structures are not permitted on turf panels and must be limited to locations on the hardscape surfaces of the Mall.

If tents or other temporary structures are allowed on the turf, they must follow the guidelines below:

- Secured by stakes no longer than thirty six inches (36") driven into the ground. Stakes must avoid all underground pipes in order to protect the Mall's drainage system.
- Staking only where permitted as shown. The diagram to the right illustrates the location of irrigation lines. A ten foot (10') no-staking zone is located on either side of the center irrigation line. A 10' no staking zone is established adjacent to inside of the granite curbs. Staking is only allowed with an NPS official present.
- Turf Verges are no-staking zones. The turf verges are the grassy areas that extend along the edge of the curb, typically between roadways and walkways. No staking is permitted in these areas.
- Water filled ballast tanks may be used on the turf with proper protection decking and seasonal time restrictions. This is to avoid compaction of the high performance turf by





the weight of the tanks. This also allows maximum access of air, sunlight, and water to the turfgrass.

- Temporary flooring must be approved in advance by NPS
- Plywood is never an acceptable type of temporary flooring.
- All structures shall be hand carried onto turf panels or delivered by crane. See guidelines above regarding necessary turf protection.
- Chairs in addition to all structures will be located on protective decking.
- All screws and fasteners should be policed during the build and retained during the deck removal. They should be made of a NON- ALUMINUM material. Cleanup with a magnet sweeper required.
- Steel, lumber, vinyl, and other construction materials, etc. should not be left on the turfgrass for a prolonged period of time (more than 8 hours).

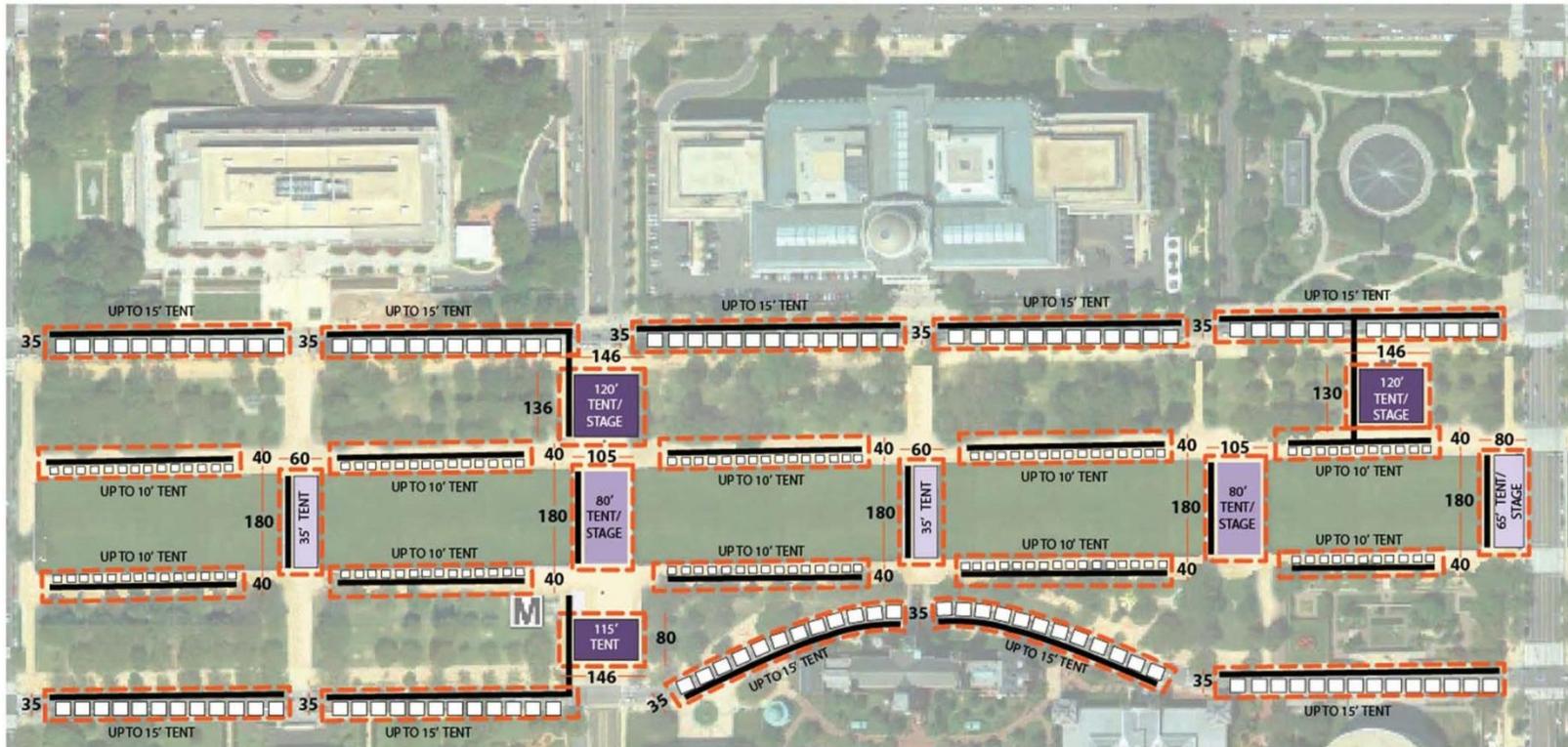
4.4 Stages on Turf Panels

Stages with proper turf protection can be set up in designated areas of the Mall area near turf verges. Part of the stage must be arranged so that as much turf can be protected as possible, this is accomplished by utilizing hardscape areas. Areas ideal for stage set up back up against 3rd, 4th, and 7th streets. Event planners should plan on some turf replacement with thick cut sod.

- Every effort should be made to design the stage so that the turf can be clear spanned.
- All structures must minimize all points that come in contact with the turf grass, structure's on the turf should be on a riser with as few points as possible touching the turf, these points should have Enkamat and plywood pads under their points as outlined:
 - Each screw jack should have a 16"x16" wooden pad (3/4" plywood) and two layers of Enkamat 18"x18".
 - Three day maximum.
- Ballasts should be situated on hardscape. Otherwise protect turf with 4 layers of Enkamat and two layers of plywood (3/4"). Cost recovery to include sodding these areas with thick cut sod. All cables (power, audio, etc) should be flown over the steel, tied to stage or structure under the stage, and the mix position and not allowed to touch any grass area.
- Each time the crane is positioned, its down rigger's should have four layers of Enkamat and two layers of plywood under them. Tarps should be placed under the crane at all times in case of a spill/leak. Cranes are to stay 5' off the edge of any turf panel.
- Tear-down of the stage and structures should begin immediately following the load out of show productions. Unless conditions due to weather would cause tear down operations to damage the turf.
- The turf manager will inspect the area for damage after the event in order to determine the extent of turf verge that will need to be replaced by sod.
- Scheduling of set up should take into account efforts to hold off skirting installation until last possible moment.



The following map illustrates the maximum width and length for temporary structures placed in non-turf areas. Each designation allows for the maximum standard tent size, space for tent supports on every side, and a required 15 foot clear area for pedestrians and emergency vehicles.



Legend: structure size per walkway width required

	146 walk	81 to 115	tent (or stage)
	105 walk	36 to 80	tent (or stage)
	60 walk	21 to 35	tent (or stage)
	40 walk	up to 10	tent
<p>— 15' Pedestrian walk and Emergency access route + 10' Area for Tent Support</p>			



4.5 Vehicles on Center Turf Panels

To protect the turf, parking or operation of equipment is not permitted on center turf panels or granite curbs^{1,2}. Vehicles are to stay a minimum of five feet (5') away from the curb.

4.6 Crate Storage and Bone Yards on the Mall

Crate storage, bone yards, and staging areas may never be located within the tree panels and turf panels; they must be located on hardscape areas or off-site. Bone yards may not be located on Madison or Jefferson Drives. Refer to table 3 in section 2.3.

Staging areas for pallets must be designated for set up and take down only. Off-site preparation and construction in bone yards is strongly encouraged. On-site staging areas are to be used for no more than two (2) days; staging and storage requiring lengths of greater than two (2) days must occur off-site.

4.7 Load In/Load Out

For set-up and take down construction of temporary facilities that involve turf covers on turf panels, work may occur in shifts twenty four hours per day. The maximum time allowed for these activities is greater than permitted in the *SEPG (Special Events Permit Guide)*. This extension exists for events taking place on the Mall's high performance turf. Condensing loading hours will decrease the amount of time structures and temporary floor coverings are present on the turf, thus decreasing the potential for damage to the turf.

The location of the Mall is conducive to extended hours as there are few neighbors who could be disrupted by late night or early morning Mall activity.

The Permittee will be responsible for paying personnel overtime charges related to the assignment of National Park Service employees and US Park Police for monitoring set-up and take down construction or security beyond an eight hour shift.

Load in and event set-up may not occur until the pre event walk through is complete. This is in order to establish if any damage is present with the high performance turf, granite curbs or irrigation system.

¹ Vehicles are permitted on hardscape areas such as walkways if addressed in the terms of the Permit; however, no vehicles are permitted on curbs. When vehicles travel over curbs, they exert both down and lateral force, depending upon the direction the vehicle is being driven, making it very difficult to predict the effects of each vehicle type on the condition of the curb. With regard to non-curb hardscape areas, vehicle operators must provide protection for hardscape areas that will be used to host vehicles. The equipment weight, number of tires, estimated tire pressure, and the type of material used for protection must be discussed with the NPS Event Coordinator prior to any staging.

² Prohibition of vehicles on lawns and fields is a best practice for protecting the health of the turf; this is practiced in major urban parks and designed landscapes throughout the country. Examples of parks prohibiting vehicles on turf include: Central Park (New York, NY), Millennium Park (Chicago, IL), and Patterson Park (Baltimore, MD).



5 Appendix

5.1 Code of Federal Regulations

36 CFR 1.5 through 1.10, available online at: http://www.ecfr.gov/cgi-bin/textidx?c=ecfr&SID=c2f1e94aa72e04fff4a29e36307f154a&tpl=/ecfrbrowse/Title36/36cfr1_main_02.tpl

36 CFR 7.96 - National Capital Region, available online at: <http://www.ecfr.gov/cgi-bin/textidx?c=ecfr&SID=c2f1e94aa72e04fff4a29e36307f154a&rqn=div8&view=text&node=36:1.0.1.1.7.0.1.95>

5.2 Special Events Planning Guide for the National Capital Region

The most recent version of the *SEPG for the National Capital Region* is available online at: INSERT NEW LINK WHEN AVAILABLE

5.3 Sample Application

Applications can be found online at <http://www.nps.gov/nama/planyourvisit/permits.htm>

5.4 Resources

5.4.1 Policy References

Refer to the following resources for additional information on policies:

- Special Events Planning Guide for the National Capital Region
- Americans with Disabilities Act: <http://www.ada.gov/>
- EPA Hazardous Materials Guidelines: <http://www.epa.gov/osw/laws-regs/regs-haz.htm>
- Concessions Policy Act (Public Law 105-391): <http://www.doi.gov/ocl/2003/npsconman.htm>
- Public Law 108-108, Title I, § 145: <http://www.gpo.gov/fdsys/pkg/PLAW-108publ108/pdf/PLAW-108publ108.pdf>
- NPS Management Policies 8.6.2.2: <http://www.nps.gov/applications/npspolicy/index.cfm>

5.4.2 Sources

The following sources were consulted in the creation of this Guide.

- Best Management Practices Used at Urban Parks in National and International Locations: A Background Report for the National Mall Plan. NPS (March 2007).
- Draft Elms of the Monumental Core History and Management Plan, NPS Natural Resource Report, NPS/NCR/NRR-2009/001.



- Evaluation of the Effects on Turf of Different Terraplas Pitch Protection Systems, Sports Turf Research Institute (July 2010).
- Event Impact Observation Study, HOK (2011).
- NAMA 151515 Specification Section 329219 part 3.11(2011).
- *National Mall Trafficked Turf Systems Report for the National Park Service*, Virginia Polytechnic Institute and State University Department of Crop and Soil Environmental Sciences (Fall 2010).
- NPS NCR Requirements 36 CFR 7.96 (g)
- Report on the National Mall Soil Compaction Evaluation (April 4, 2008).
- Requirements for Special Events Held on Parkland, National Park Service (Version 8-6-07-A).
- Resource Conservation Practice; Understanding and Managing Soil Compaction, Iowa State University (2009).
- *Soils of the Mall in Washington, DC*, 50 Soil Science Society of America Journal No. 3 (May-June 1986).
- *Soil Compaction and Its Effects upon Urban Vegetation*, Better Trees for Metropolitan Landscapes Symposium Proceedings, USA Forest Service Tech. Rep. NE-22 (1976).
- Summer 1992 Studies by CUE Confirm Compacted Mall Soils Memo, Center for Urban Ecology (1992).
- The Elms of the National Mall: Studies, Findings and Recommendations. Center for Urban Ecology (August 10, 1993).
- Trial to Evaluate Turf Protection Systems, Sports Turf Institute (2010).

5.4.3 Websites

The following websites may be visited for additional information on the agencies and services discussed in this guide.

- National Park Service – Permitting Information: <http://www.nps.gov/nama/planvisit/permits.htm/>
- National Park Service – Permitting FAQs: <http://www.nps.gov/nama/planyourvisit/permits-faqs.htm/>
- National Park Service – Public Gathering Application: <http://www.nps.gov/nama/planyourvisit/upload/NPS-Form-10-930-2010-special-use-new-phone-numberse.pdf/>
- District Department of Transportation (DDOT): <http://ddot.dc.gov/>
- U.S. Park Police: <http://www.nps.gov/uspp/>
- Metropolitan Police Department: <http://mpdc.dc.gov/>
- DC Mayor’s Special Events Task Group: <http://mpdc.dc.gov/mpdc/cwp/view,a,1241,g,548278.asp>
- Metrorail/Metrobus: <http://www.wmata.com/>
- Circulator: <http://www.dccirculator.com/>
- District of Columbia Department of Fire & Emergency Medical Services: <http://fems.dc.gov/>
- Department of Health: <http://dchealth.dc.gov>