

Parks and Recreation Facilities

DESIGN GUIDELINES



ACKNOWLEDGEMENTS

The Maryland-National Capital Park and Planning Commission

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I. INTRODUCTION



01 DEPARTMENT OF PARKS & RECREATION MISSION

MISSION

The Maryland-National Capital Park and Planning Commission (M-NCPPC) serves most of the bi-county area of Montgomery County and Prince George's County, Maryland. The purpose, powers, and duties of M-NCPPC are found in the Land Use Article 28 of the Annotated Code of Maryland. The mission statement of the M-NCPPC, Prince George's County Department of Parks and Recreation (Department of Parks and Recreation), is to provide, in partnership with local citizens, comprehensive park and recreation programs, facilities, and services which respond to the changing needs within the local community. We strive to preserve, enhance, and protect our open spaces to enrich the quality of life for present and future generations in a safe and secure environment.

With its vision statement, the Department of Parks and Recreation, in Prince George's County pledges to:

- Provide stewardship of our county's natural, cultural and historic resources.
- Foster the needs of our citizens for recreational pursuits in a leisure environment.
- Provide the highest standard of excellence in public service through cooperative partnership with our diverse community.

B. VALUES

Value Our Employees - Our greatest asset is our highly-qualified, diverse, and committed staff. We value their contributions, innovations, and service to the community. We foster a culture of integrity, communication, empowerment, innovation, fairness, and professional development.

Strive for Excellence - We strive for excellence in all we do. We continuously work to improve our performance, products, and services. We create a progressive environment where excellence flourishes.

Service to Community - We engage the multicultural communities we serve and represent their interests. We meet community and customer needs. We respect all customers and respond to their needs with integrity, honesty, and dependability.

Rely on Facts - We rely on facts. We make informed decisions based on a shared understanding of the facts, context, and research. We use facts to guide our direction and strategies.

Collaborate for Success - We collaborate for success with all stakeholders. We effectively communicate, using partnerships, teamwork, and strategic thinking. We collaborate with decision-makers, residents and citizens, and other agencies to accomplish our mission.

C. ABOUT

The M-NCPPC earned national accreditation for its innovative parks and recreation programs and strong management from the Commission for Accreditation of Park and Recreation in 2004, 2009, 2014, and 2019. Every five years, an accredited agency must be thoroughly reviewed to ensure continued compliance with the national accreditation standards. These standards represent all areas of operation for parks and recreation departments. As a six-time National Gold Medal winner, the Department of Parks and Recreation is responsible for acquiring land for parks, developing park and recreational facilities, maintaining and policing park property and conducting a wide array of leisure activities.

The Department of Parks and Recreation manages a comprehensive park system that includes more than 27,000 acres of developed parkland, open space, stream valley parks and conservation parcels, with an additional 8,000 acres anticipated by 2040. In addition to the network of parks, Prince George's County residents also enjoy first-rate recreation

programs through community centers, arts centers, aquatic facilities, museums, therapeutic programs for residents of all ages, senior programs, day camps and nature programs. Amenities include over 300-miles of trails, hundreds of athletic fields, basketball and tennis courts, 46 community centers and other special facilities. Stewardship of these resources involves land acquisition, programming, planning and design, construction, maintenance and operations.





02 PURPOSE

A. DESCRIPTION

The purpose of the Design Guidelines for Parks and Recreation Facilities is to ensure that public and private recreation facilities in Prince George's County are developed and constructed in a safe, functional, and long-lasting manner to meet residents' recreational needs, while conserving public open space, natural resources, historic resources and cultural resources. The Guidelines are also intended to assist in maintaining the goals of the Prince George's County Department of Parks and Recreation:

- We want County residents to be both socially and physically connected
- We want our investments in facilities and programs to stimulate the economy
- We want our facilities and programs to have wellness components that will contribute to the physical and mental health of our patrons and to the environmental health of communities

These guidelines are provided to give specific design guidance to staff, consultants, and private entities in the design and implementation of park facilities on public and private property when applicable. It should also be noted that these Guidelines are a typical sampling of possible recreational facilities that can be proposed in our park facilities. The popularity and needs of each facility are forever changing and should accommodate the residents that they serve. It is intended that future amendments be made to these Guidelines to address new, desired and available facilities, along with any changes in product lines and technology.

This update seeks to provide clarity and delineate clear expectations for those proposing to create residential development within Prince George's County.

yields increased transparency and equitable outcomes.

Formula 2040 identified the following strategies for the development, maintenance and use of parks and open spaces:

1. Provide consistent standards for publicly and privately developed parks and recreation facilities.
2. Promote a unified approach to park development.
3. Limit use of private developer construction and design standards.
4. Promote Department of Parks and Recreation goals for connectivity, economic development, and health and wellness.





03 ALLIED DOCUMENTS

A. DESCRIPTION

M-NCPPC has developed guidelines and strategies for land acquisition, land preservation and recreation, environmental management and historic preservation within the park system. Park development is guided by planning documents, starting with Prince George's Plan 2035 (approved 2014) and M-NCPPC's Physical Development of the Maryland-Washington Regional District within Montgomery and Prince George's Counties. Further refinement is reflected in the recommendations, guidelines and legal requirements adopted and approved by the Prince George's County Planning Board and County Council, and contained in the County's many planning documents. These documents include:

- Area Master Plans
- Special District Plans
- Zoning Ordinance and Subdivision Regulations
- Master Plan of Transportation
- Landscape Manual
- Formula 2040: Functional Master Plan for Parks, Recreation and Open Space
- Countywide Green Infrastructure Functional Master Plan
- Resource Conservation Plan
- Land Preservation, Parks and Recreation Plan (LPPRP)
- Strategic Trails Plan

The Formula 2040 Functional Master Plan marked an ambitious, integrated, and collaborative update to the 1982 version which identified foundational park and recreation programming needs for the next three decades, which was identified as a period when there will be few remaining major land acquisition opportunities. The Land Preservation, Parks and Recreation Plan established levels of service standards across service areas throughout Prince George's County in order to identify areas of

recreational and open space need. Together these two documents, which are updated regularly, work to create a needs-based road map with tangible goals for park and open space infrastructure. These plans are used by the Department Planning Board and other agencies to support capital projects budgeting, prioritization, and implementation. They also provide vital information for the Planning Department to use during development review processes.



II. THE ROLE OF PARKS AND RECREATION IN THE DEVELOPMENT REVIEW PROCESS



01 MANDATORY PARKLAND DEDICATION

A. DESCRIPTION

New development proposals in Prince George's County are typically submitted through the Planning Department. The Department reviews plans for public and private open space, recreation spaces, and the public realm for compliance with the previously approved plans, applicable law, and adopted ordinances and plans. This includes review of the proposal for meeting the mandatory dedication requirement for residential development as outlined in Subtitle 24 of the Prince George's County Code, Section 24-4600 of the Subdivision Regulations which states that the Planning Board shall require Mandatory Dedication of parkland which is suitable and adequate for active or passive recreation.

In commercial, industrial, or institutional development, the Department of Parks and Recreation will review the development proposal for any impacts on adjacent parkland or recreational facilities.

To meet the mandatory dedication of parkland requirements, the land conveyed to M-NCPPC shall meet the following requirements:

- Be above the 100-year floodplain.
- Have slopes less than 7%.
- At least one suitable vehicular access shall be provided
- Access shall include one minimum 60-foot-wide frontage on a dedicated street or be constructed as otherwise required.
- All other additional access to the land to be dedicated shall be at least 40 feet wide or be constructed as otherwise required.
- Land that is to be dedicated to the M-NCPPC for public park use shall also be subject to the conditions for Conveyed Property as listed in Appendix A of this manual.
- Land that is to remain privately-owned must have a public use agreement to meet the mandatory dedication requirement.
- Other encumbered lands may be proposed

or requested for conveyance to M-NCPPC if they provide tangible public benefit

Public Recreational Facilities

If it is determined that the dedication of parklands is unsuitable or impractical due to the amount of the parklands required to be dedicated (size), the location of the land in relation to the subdivision or surrounding residential development, the topography or natural features of the land, drainage issues, the amount of parklands for Urban, Neighborhood, or Community Parks already available to serve the subdivision in the Park Service Area, other physical characteristics or similar circumstances, the subdivider may provide recreational facilities or a combination of parklands and recreational facilities. The value of the recreational facilities provided shall be at least an amount equivalent to the fair market value of the parklands for which it is substituted, in accordance with Section 24-4601(b)(3), Amount of Park and recreation Land required. Facilities shall also meet the following requirements:

- Public recreational facilities shall be equal or superior to those that would have been provided under the provisions of Section 24-4601(b)(4)(C) of the Subdivision Regulations.
- Public recreational facilities shall be built in accordance with the standards and specifications of the Department of Parks and Recreation as outlined in this publication unless equal or better standards are presented to the Planning Board for review and approval.
- If public recreational facilities are to be provided, the Detailed Site Plan shall show the following:
 - ◇ The type, location, and monetary value of all facilities
 - ◇ The square footage of land devoted to each facility.
 - ◇ The type, width and location of all trails to connect the facilities within the development.

If off-site recreational facilities are proposed, the location and type of facilities will be negotiated with Department staff and must meet the above requirements.

Fee-in-lieu of Parkland Dedication Section 24-4601(b)(4)(B) of the Subdivision Regulations of the Prince George's County Code provides that the developer may pay a fee-in-lieu of parkland dedication.

If a fee-in-lieu of mandatory dedication is proposed, the Preliminary Plan shall note the following:

“A Fee-in-lieu for Service Area [X] shall be paid prior to the approval of the Final Plat to meet the Mandatory Parkland Dedication requirement.”

The amount of the fee-in-lieu, at the option of the subdivider, shall be based on either (1) the median fair market value of land in the Park Service Area in which the subdivision is located, as established in the Median Per Acre Fair Market Value, by Park Service Area table in Appendix E, which may be updated on an annual basis by the Department of Parks and Recreation, or (2) the per-acre fair market value of the land at the time of Preliminary Plan, as established by a private appraiser licensed to practice in Maryland who is acceptable to the Planning Board. The cost of using the private appraiser shall be the sole responsibility of the subdivider. The decision on whether to pay fee-in-lieu and the amount of the fee-in-lieu shall be determined at the time of preliminary plan. A payment in certified funds should be made payable to the M-NCPPC.

Additional Requirements

Any hiker/biker trails and/or equestrian trails shown on the approved and adopted Trails Master Plan that run through the proposed development should be constructed and included as part of the mandatory dedication requirement.

Pursuant to Subdivision Regulations Section 24-34023(c)(2)(B)(i)(CC) when construction of private and/or public recreation facilities is required, a Recreation Facilities Agreement (RFA) is mandatory pursuant to Subdivision Regulations Section 24-3402(c)(2)(B)(i)(cc). Specific facilities, along with conditions and schedules for construction, are established by previous plan approvals and set forth in the RFA. The recreation facilities must also be bonded in accordance with the RFA and Regulating Plan conditions. Performance bonds for public recreation facilities must be submitted to the Department of Parks and Recreation, Park Planning and Development Division. Performance bonds for private recreation facilities shall be submitted to the Planning Department's Development Review Division. All performance bonds must be approved by the M-NCPPC's Office of the General Counsel prior to the issuance of the appropriate permits.

Recreation Facilities Agreements (RFA)

Typically prior to the issuance of the final plat, the RFA must be approved and executed between all parties. A public RFA is submitted to the Department of Park and Recreation's Park Planning and Development Division for review and approval, while a private RFA shall be submitted to the Planning Department's Development Review Division. The timing for executing a RFA may be further amended by subsequent regulating plan submissions.

The intent of the RFA is twofold: (1) to ensure that the conditions of the Preliminary Plan of Subdivision and other plan approvals for the provision of parks, recreation facilities and open space for a particular property are met; and (2) to establish requirements for financial guarantees to ensure that all required recreation facilities will be provided by the Developer, his/her successors and/or assigns.

After the RFA is executed, it must be recorded in the Prince George's County Land Records Office by the Developer, where it will be accessible to any future owners of the subdivision or other interested parties. The RFA serves as a covenant that runs with the land and is binding on the Developer and his/her successors and assigns and will be used, if needed, as an enforcement tool during the construction of a subdivision. Sample public RFA formats along with the procedures for processing RFA's are included in Appendix A. Also included in Appendix A are sample forms and procedures for an Amended RFA and a Rescinded RFA. A sample Private RFA form is in Appendix D.

Performance Bonds

A performance bond is defined as a Letter of Credit, Surety Bond, Escrow agreement or other suitable financial guarantee as Determined by the M-NCPPC's Office of the General Counsel. A Performance Bond is a mandatory requirement when the construction of public recreational facilities is proposed. The timing requirement for both the posting and the acceptance of the required financial guarantee shall be addressed in the RFA.

At a minimum, the Developer shall submit a cost estimate for the proposed recreation facilities to be constructed at the time of the RFA submittal. The cost estimate shall be reviewed and agreed upon with the Department of Parks and Recreation to

determine the exact bonding amounts. The total of the financial guarantee shall be determined upon final approval by Department of Parks and Recreation. Sample public financial guarantee agreements, along with the procedures for processing them, are included in Appendix C.

Right of Entry Permits (ROE)

A Right of Entry Permits (ROE) is required to allow a third party the rights to enter onto M-NCPPC property to perform work of any kind. The ROE must be signed and executed with the proper documentation prior to the commencement of any activities by an outside party on M-NCPPC-owned property. Included with this agreement will be bonding and insurance verification to provide indemnification to the M-NCPPC. Sample ROE and surety bonds are included in Appendix B.

Site Inspection

Recreation facilities located on property owned by the M-NCPPC are subject to inspection by the Department of Parks and Recreation before posted performance bonds can be released. The responsibility for requesting an inspection lies with the Developer/Applicant.

Requests for inspections of facilities located on property that the M-NCPPC owns may be made to the Department of Parks and Recreation, Park Planning and Development Division. The Department of Parks and Recreation inspections shall be conducted pursuant to the following general criteria:

- Inspections will be made as soon as feasible, following a request from the Developer.
- Inspections will be made pursuant to the requirements of the RFA and all pertinent approved plans (site plans, landscape plans and recreation plans).
- An objective of the inspection is to check the installation and layout of facilities to help ensure safety and the prevention of injuries.

- The Developer is responsible for assuring full compliance with all approved plans. Proof of same lies with the Developer.
- Deviations from approved plans may require the submission of revised plans for approval to the Planning Board or the Department of Planning's Development Review Division acting as the designee of the Planning Board.
- Generally, recreation facilities will only be accepted after all construction has been completed (unless site phasing provisions are otherwise accounted for in an approved RFA).
- Discrepancies between graphic representations and charts or tables or between various plans will be governed by whichever provides the more stringent requirement. This determination will be made by the Department of Parks and Recreation.
- Punch lists of inspected facilities will be provided to the Developer by staff from the Department of Parks and Recreation either in written form or by the use of marked-up plans showing deficiencies.
- Punch lists of inspected facilities or plans will be valid for a period of not more than 45 days. After this period, the inspection will be rendered void and a new inspection will be required.
- The Department of Parks and Recreation will provide appropriate letters of release to other agencies, when facilities have been completed and accepted. A written request must be submitted which includes complete contact information for the appropriate agency.

Recreation Equipment Substitution

Requests for substitution of recreation equipment shown on an approved plan can be initiated by submitting an Equipment Substitution Request Form to the Planning Department for private facilities, or the Department of Parks and Recreation for public

facilities. Equipment substitution requests will be evaluated for compliance according to the following:

- The proposed substitution must be deemed equal to or better (by the appropriate authority) than the recreation equipment originally approved by staff.
- If the proposed substitution is not deemed to be equal or better, a formal detailed site plan or specific design plan revision will be required with a hearing before the Planning Board.
- For any given piece of recreation equipment, only one item of substituted equipment may be submitted and approved at a time. Multiple applications for substitutions for one piece of equipment will not be accepted.
- An Equipment Substitution Request Form must be completed in its entirety for each item.
- All Equipment Substitution Request Forms must be signed by the Owner/Developer. Equipment Substitution Request Forms signed only by recreational facilities sales staff or manufacturers will not be accepted.
- The applicant may be requested to provide copies of the approved site plan and the revised site plan, showing the proposed substitutions along with the Equipment Substitution Request Form as provided in Appendix D.

Violations

If the Developer does not construct the recreation facilities or complete site work as specified in the RFA, the M-NCPPC reserves the right to initiate legal action to ensure the completion of the recreational facility.

Enforcement of the violation may include using the financial guarantee as posted by the Developer, (pursuant to the RFA), to complete the required construction.

The Performance Bond will be released upon the satisfactory completion of the requirements of the RFA. The Developer will also be required to sign a Recreation Facilities Certification Form (see Appendix D) certifying that the recreation facilities have been constructed or installed in accordance with the approved plans, the Park and Recreation Facilities Guidelines, the Americans with Disabilities Act, standards of the latest edition of the Handbook for Public Playground Safety published by the U.S. Consumer Products Safety Commission, the standards of the American Society of Testing Materials, and any equipment manufacturer's specifications. After the certification form is signed, the Performance Bond will be released and returned to the Developer.





02 PARK FUNDING SOURCES

A. DESCRIPTION

Park construction and renovations in Prince George's County are planned and funded through the M-NCPPC Capital Improvement Program, or by developer contributions through the Development Review Process and the Mandatory Parkland Dedication Program, or a combination of both.

Capital Improvement Program (CIP)

Utilizing the guidelines as established by the Spending Affordability Committee, the M-NCPPC sets forth a 6-year CIP budget to focus on major park development projects. The 6-year CIP provides funding for the construction of new neighborhood, community, and regional parks, and for the renovation of existing facilities.

Preparation of the M-NCPPC's 6-year Capital Improvement Program is a twelve-month process beginning every July. The Department of Parks and Recreation begins preparation of the proposed Fiscal Year (FY) CIP in August of each year. All CIP requests are first processed and then prioritized. The Department then determines project funding needs for the Fiscal Budget Year, as well as for the outer years of the CIP.

In some cases, the proposed parks and facilities could be implemented through a combination of the CIP and mandatory dedication. For example, the land may be dedicated as part of a parkland dedication and CIP funds are used for the design and development of the facilities.

Developer Contributions

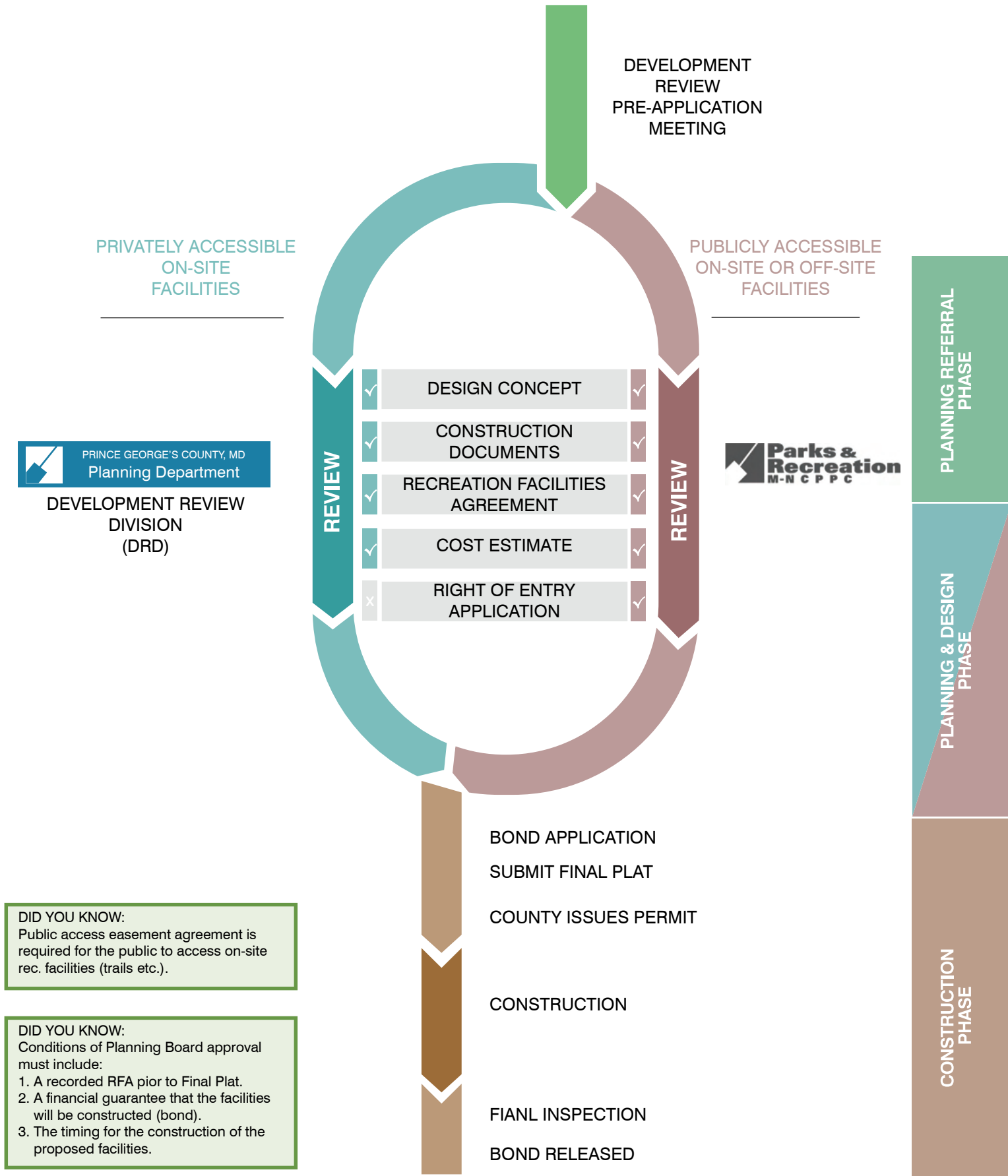
As part of the mandatory parkland dedication process, a developer may proffer to dedicate parkland, provide public recreation facilities, or pay a fee-in-lieu of dedicating parkland. That fee may be used by the Department on capital projects that directly benefit the development from which they came.



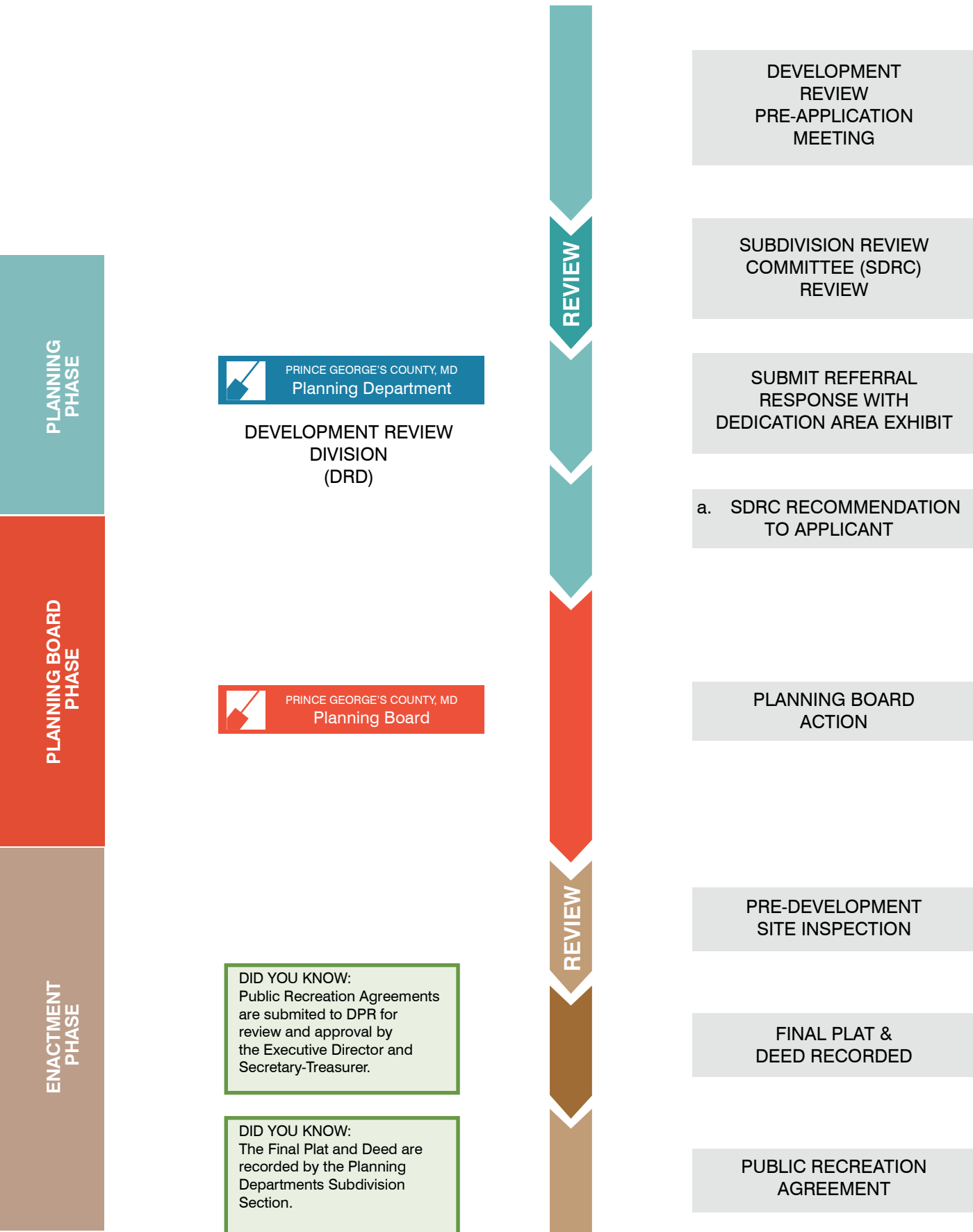


03 FLOWCHARTS

PROVISION OF PUBLIC OUTDOOR RECREATIONAL FACILITIES



LAND DEDICATION REVIEW PROCESS



III. DEVELOPMENT OF OUTDOOR PARKS AND RECREATION FACILITIES



01 PARKLAND CLASSIFICATION SYSTEM

A. DESCRIPTION

Dedicated parkland will generally fall within one of the following three categories of park types.

1. COMMUNITY PARK

A public park that is 20 acres or more in size. It is intended to serve a local audience, that can access the facilities by walking or driving, and includes parking spaces. A Community Park may include passive recreational facilities as well as active recreational facilities such as fields, play structures for children, game courts, tennis courts, volleyball courts, swimming pools, or a community building/recreation center.

2. NEIGHBORHOOD PARK

A neighborhood park that is less than 20 acres in size. It is intended to serve residents within walking distance (up to about a half-mile). Amenities may include passive spaces as well as active recreational facilities geared towards families, such as playground equipment, game courts, tennis courts, volleyball courts, and splash pads. Neighborhood parks are not staffed, have limited parking, and typically do not include revenue-producing amenities.

3. URBAN PARK

A public park that consists of a pocket park/mini park, plaza, square, commons/green, or similar facility.

- A pocket park/mini park is up to one-quarter acre in size. It is intended for both active and passive recreation and often is located near an area with a high volume of pedestrian traffic. This type of park includes limited amenities like planted areas, hardscape, seating, and a visual feature such as a fountain. Active uses can include mini-skate parks, splash pads, and mini playgrounds.
- A plaza is between one-quarter and one

acre in size. It is typically a paved area that often supports group activities such as open-air markets, festivals, and other special events. Amenities may include benches, lighting, and hardscape.

- A square is an open space between one and one-half and two acres in size. A square serves as a public gathering space. Amenities may include benches, landscaping, lighting, picnic areas, programmable gathering spaces, and play spaces.
- A commons/green is an open space larger than one acre in size that is designed as the social focus of a neighborhood with a mix of residential and nonresidential uses. Often located near housing, retail, or office uses, a commons/green is often used for public gatherings such as markets and performances. A commons/green often includes a central lawn, and can include other features such as gardens, water features, play spaces, and shade structures.

4. GREENWAYS/LINEAR PARKWAYS

Greenways and Linear parkways are narrow open space systems that knit together other parks or natural systems. Greenways may follow natural resources like stream and river corridors. Others can be corridors that are built as a part of development projects or interconnected recreational and natural areas.

5. REGIONAL PARKS

Developed parkland encompassing more than 200 acres and offer diverse opportunities for experiences and activities that cannot be found or supported at smaller local parks. Regional parks often include multiple athletic fields, imagination playgrounds, picnic shelters, regional road and trail networks that provide access to and from adjoining communities, and large parking areas for signature events. Each regional park also contains unique facilities and natural features

that express the local environment or culture, which include historic structures, stream valleys, and rare, threatened, and endangered plant species.



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02 PREFERABLE SITE CHARACTERISTICS FOR PARKLAND

A. IDENTIFY PREFERABLE SITE CHARACTERISTICS FOR PARKLAND

There are many criteria by which successful parks may be measured. They all generally provide an opportunity to recreate in a particular way, meeting the demand of those they serve. They are comfortable and attractive spaces. They provide good visibility and offer effective access and internal circulation. They have a synergistic relationship between their designed features and natural settings, whether developed or undeveloped in nature.

It is essential that other types of new parkland be developed on sites matched to the civic characteristics and environmental conditions of the community they will serve. Does the land contain a cultural landscape that merits its protection and incorporation within the public realm? Does the land offer characteristics necessary for the proposed recreational uses?

The following list asks the site planner/designer to consider a variety of locational elements when determining the ideal location for parkland within a new development.

Location & Access

- Does the site's usable acreage support both the intended activities and all supporting infrastructure?
 - ◊ Primary area associated with each activity to be provided
 - ◊ Buffering and screening between primary activity areas, adjacent site conditions as is appropriate, and the following site elements
 - » Parking
 - » Other right-of-way to be dedicated
 - » Utilities and associated easements
 - » Storage for amenity equipment or to support infrastructure
 - » Maintenance equipment, materials, and personnel
- Is the site highly visible within the larger community by being centrally located or in

close proximity to community gateways?

- Is the site perimeter bounded at least 60% by public streets with sidewalks?
- For urban and neighborhood parks,
 - ◊ Is the site co-located with civic facilities and uses?
 - ◊ Is the site within one half mile of a residential use?
- Can the site be accessed safely via:
 - ◊ At least one of the following
 - » Mass transit
 - » Road
 - ◊ And at least one of the following
 - » Sidewalk
 - » Trails (walking, bicycle, water, or equestrian)
- Do the site conditions allow for design which will provide equitable circulation and access to site elements in accordance with applicable regulations including, but not limited to, the Americans with Disabilities Act?
- Are park entries designed to adequately allow for access by emergency services?

Topography

- Will the site provide adequate drainage to minimize maintenance needs naturally or will added infrastructure need to be constructed?
- Is the site comprised of more than 5% total area designated by FEMA as being a type other than Zone C or Zone X?

Microclimate and natural features

- Have the following features been designed to enhance user comfort of the site?
 - ◊ Aspect and solar exposure
 - ◊ Natural ventilation
- Will existing high-quality vegetation be preserved in a way that it can be expected to survive without a decline in health for at least 15 years?



03 COMMUNITY INTEGRATION

A. DESCRIPTION

Parks play an important role in encouraging active lifestyles, strengthening local economies, increasing community engagement, and reducing crime. They also help clean air, make cities more resilient, and offer tools for urban areas to achieve their equity goals. Two of the most important aspects in the planning and design of outdoor places and parks are their location and their relevance to the surrounding context.

Context Sensitive Park Design is an approach that celebrates and highlights the historic, scenic, natural environment, and other community values that are unique to the site while accommodating the essential recreational, mobility, safety, and economic needs of the park project (1). It is also a fundamental aspect of place making that promotes people's health, happiness, and well-being.

B. ELEMENTS TO CONSIDER FOR AN EFFECTIVE CONTEXT SENSITIVE OPEN SPACE DESIGN:

Role of the Open Space in the Overall Context:

Some parks and open spaces are isolated patches or discrete areas of the landscape that are surrounded by a residential or commercial development. Some parks are part of a corridor or a linear feature such as a stream corridor that might connect other patches or they are part of an important edge or transition such as riparian corridor or transition between commercial and residential areas. While designing an open space it is important to understand the role of that space in the overall matrix or landscape pattern of the region. This will help to maximize environmental and green infrastructural benefits offered by the parks (2).

Cultural and Historical Context of the Site:

Park planning and design provides a great opportunity to highlight significant historical and cultural resources that are unique to the

site or its surrounding context. This context could be in the form of a historical building, an event, or cultural aspects of the surrounding community. For example, an industrial past shared by the community, or its significance to indigenous people, or its unique connection to art and architecture could provide an impetus for the overall theme or an important element of the park. Incorporation of such unique and site-specific stories helps instill a deep sense of pride in the community.

Community values:

Community values fulfill basic social and psychological needs of a community. They inspire and empower collective actions that improve the lives of others. Researching the community and its values helps the planning team to understand its strengths and the challenges it faces (3). It also helps uncover the spoken and unspoken rules and traditions by which the community lives. It can include everything from community events to slogans such as Azalea City (Takoma Park) or Queen of the Alleghenies (Cumberland).

Understanding the community and its values may assist in selection of appropriate amenities, crafting an appropriate design response and making provisions for programming opportunities. For example, some parks may promote community gardens and a farmers market to overcome limited access to fresh and healthy food. Some parks may place emphasis on community gathering spaces and some may place more emphasis on promotion of native habitat and conservation of natural resources.

Surrounding Land Use and Built Form:

Placemaking involves taking into account the interrelations between surrounding land uses, such as commercial, retail, residential, institutional, etc. Developing Park design and fine-tuning spaces, materials, and furnishings to respond to the activities generated by these land users creates greater value for the community and contributes to the success of the park. 'Project for Public Spaces' has identified the following qualities of a great public open space (4,5):

Access & Linkages

Connectivity of a place to its surroundings, both visually and physically, is important for making sure the place is inviting and accessible. A successful public space is easy to get to and get through; it is visible both from a distance and up close. The edges of a space are important as well; for instance, a row of shops along a street is more interesting and generally safer to walk by than a blank wall or empty lot. Accessible spaces have a high parking turnover and, ideally, are convenient to public transit.

Comfort & Image

Whether a space is comfortable and presents itself well, has a good image is key to its success. Provision of shade in outdoor spaces is necessary for the comfort of the users. Comfort includes perceptions about safety, cleanliness, and the availability of places to sit, the importance of giving people the choice to sit where they want is generally underestimated.

Uses & Activities

Activities are the basic building blocks of great places: They are the reasons why people visit in the first place, and why they continue to return. They are also what makes a place special or unique. When there is nothing to do in a place, it will sit empty and unused—a sure sign something needs to change.

Sociability

This is a difficult quality for a place to achieve, but once attained it becomes an unmistakable feature. When people see friends, meet and greet their neighbors, and feel comfortable interacting with strangers, they tend to feel a stronger sense of place or attachment to their community and to the place that fosters these types of social activities.

1. <https://cityparksalliance.org/about-us/>
2. <https://planning-org-uploaded-media.s3.amazonaws.com/document/Green-Infrastructure-Park-Planning-Briefing-Paper.pdf>
3. <https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/describe-the-community/main>
4. <https://www.pps.org/article/grplacefeat>
5. <https://thecityfix.com/blog/public-spaces-10-principles-for-connecting-people-and-the-streets-priscila-pacheco/>





04 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Safe, livable communities are important to everyone. The perception of safety has major consequences on people's decisions about where to live, work, and play and therefore the development of the community as a whole. Crime Prevention Through Environmental Design (CPTED) is an approach to deterring crime that focuses on how spaces look and feel. Spaces that are connected, visible, and well cared for enjoy greater use by the public. Areas that are perceived as unsafe are avoided, furthering the cycle that prevents positive use.

Social cohesion and interconnectivity are also key aspects of crime prevention. Positive social relations between residents and programs to enhance community culture are encouraged. Care should be given to design spaces that feel safe to all users. Tools such as participatory planning and gender and safety audits are encouraged.

The Maryland-National Capital Park Police may review park design projects for compliance with the CPTED design principles of Surveillance, Access Management, Territorial Reinforcement, and Quality Environments outlined below. Additional information is available from Park Police, the International CPTED Association, and the National Institute of Crime Prevention.

A. SURVEILLANCE

The principle of surveillance provides people with the opportunity to observe the areas around them, so they can see who is approaching. Clear sightlines and good lighting are important. High contrast lighting that creates dark spots is not desirable. Visual connections between trails, streets, common areas, parks and parking lots are important. Blind spots and hiding places should be avoided. Examples of this principle would be to keep plantings low immediately adjacent to trails and sidewalks to maintain open view corridors, particularly around curves.

Grouping activities and facilities together to provide natural surveillance of all areas from the various participants is beneficial. An example of this would be to locate shelters and gathering areas close to active areas such as fields, courts, playgrounds, occupied buildings and parking lots or roads, to provide visibility into areas where people are likely to gather.

B. ACCESS MANAGEMENT

This principle encourages access to parks and trails at specific points that are observable or well lit. The goal is to provide orientation and direct behavior naturally to appropriate places, while discouraging inappropriate access. The access points into a park or facility could be defined or controlled by use of grades, natural landscape features, fences, or other barriers. Wayfinding elements such as lighting, signage or artwork are helpful. Inappropriate access may be limited via real or perceived barriers without completely disconnecting adjoining uses.

C. TERRITORIAL REINFORCEMENT

Territoriality is the use of physical markers to create boundaries and express a positive sense of ownership. When residents assume informal ownership of public or semi-public spaces, they are more likely to care for them and exert positive influence over the space. This communicates that a space is cared for and protected.

Examples of this principle would be the use of landscaping, fencing or signage at main entrances to distinguish between public and private areas, reinforce borders and express ownership.

D. QUALITY ENVIRONMENTS

Quality environments are well-designed, well-maintained places that attract people and provide opportunities for regular surveillance. An attractive public space encourages activity, promotes respect for cleanliness, and reduces the likelihood of crime or vandalism.

A good maintenance plan will express ownership and encourage space use for its intended purposes. Brush and overgrown plantings should be kept away from the edges of sidewalks and trails to maintain good visibility. Light fixtures should be regularly maintained, litter picked up, and graffiti should be removed regularly.





05 MULTI-MODAL SITE DESIGN

A. WHAT IS MULTI-MODAL DESIGN?

For the purposes of these guidelines a Multi-modal Design is a planning and design approach that provides safe, convenient and equitable access to public parks and facilities using public transportation, vehicular, bicycle, pedestrian and other alternative transportation modes.

B. WHAT ARE KEY ADVANTAGES OF MULTI-MODAL DESIGN?

A successful multi-modal transportation design reduces automobile dependency, improves the catchment area and subsequent use of our parks and public facilities. It is also important to note that since physically, economically, and socially disadvantaged people tend to rely heavily on walking, cycling and public transit, the multi-modal design approach helps to reduce inequities in public access. Finally, effective integration of alternative transportation, specifically bicycling and walking, helps in advancing various environmental, health, and congestion-mitigating benefits for communities.

C. MULTI-MODAL DESIGN IN PRINCE GEORGE'S COUNTY

Prince George's County's '2035 General Plan' and the new development zoning ordinances provide a general framework for multi-modal transportation. In 2012, the Prince George's County Council passed a Complete Streets Ordinance. Complete streets is a transportation policy and design approach that incorporates many principles of Multi-modal Design. It requires streets to be planned, designed, operated, and maintained to enable safe, convenient, and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation.

The County Department of Public Works and Transportation is rehabilitating a set of arterial roads as Green Streets. The new street design is providing a modern urban grade of pedestrian and bicycle accommodations, better sidewalks and bus stops, along with best

practice stormwater treatments. These upgrades of County roadways will set a new standard for multi-modal accommodations.

Additionally, the County has developed an Urban Street Design Guide and committed itself to a Vision Zero initiative that intends to reduce traffic fatalities and serious injuries to zero per year.

While still in the midst of changing practices and detailed road design standards to reflect a new approach to transportation, these actions support the Department of Parks and Recreation's desire to ensure that our parks and their surrounding communities and neighborhoods are composed of safe, accessible streets, roads, sidewalks and trails that provide a fully multi-modal environment that serves park users.

The purpose of this section is to provide guidance for the design of vehicular, pedestrian and bicycle circulation that serves dedicated parks, parkland, trails and recreation facilities. This guidance is applicable to the design of collector and residential streets within mixed use and residential developments, which must contribute to the county's increase in park and recreation amenities and/or conservation lands.

Given that vision zero has been adopted as a county goal and policy, we encourage developers to consider the guidelines stated herein for park and recreation areas and surrounding neighborhoods. .

D. DESIGN OF THE ROADWAY SECTION

Designing a multi-modal street is not a one-size-fits-all approach. It requires an analysis of various site conditions to determine appropriate treatments and solutions. Factors that should be considered include the physical characteristics of the street, urban vs. suburban vs. rural context, surrounding land uses, collision history, and expected pedestrian, bicycle, and motor vehicle demand.

The appropriate design for, and operation of, a street must consider the existing and future surrounding land use. The development layout should consider both the existing conditions and the future plans for the area by reviewing the

area's planning documents and zoning, as well as project travel demand for all modes within the project limits.

E. DESIGN FOR BICYCLES

While many factors play into a person's choice to bicycle for any particular trip, a key factor will be- "Do I feel safe on the route I must take for this trip?" Individual skill level and confidence determine what type of bicycling accommodation is sufficient to feel safe.

For short trips like running errands, grocery shopping, going to the park, daily exercise or visiting friends, close to home streets, roads and paths should be designed to serve the widest range of ages and skill levels. Additionally providing a comprehensive and continuous local bicycling network is needed to encourage frequent use and enjoyment.

- Provide an interconnected, continuous network of bicycle facilities, including striped bike lanes, shared lanes, marked bike routes, and off-street bike paths and trails, that allows bicyclists to safely travel to any destination that can be reached by vehicle.
- Provide bicycle connections to parks and other public open spaces, as well as civic buildings.
- Provide low speed roads designed for 20-25 mph with good sight lines, and pathway alternatives along or instead of high speed arterials (35-45 mph).
- Provide alternative routes that can accommodate bicyclists of varying levels of experience.
- Provide marked bike lanes on designated bike routes with high traffic volumes and speeds of 35 miles per hour or more.
- On lower-volume, lower-speed streets, consider providing marked bike lanes. Coordinate the location of bike lanes with on-street parking.
- Use "back-in angled parking" on streets with angled parking to make bicyclists more visible to drivers.
- Provide bicycle parking in clear visibility and near the most convenient places such as building entrances, trailheads, restrooms, parking lots, etc. Consider providing covered parking where possible.

F. GUIDELINES FOR PEDESTRIAN ACCESS

Pedestrians should be accommodated on all streets, even auto-oriented streets. The following guidelines explain how to design a street that meets the basic needs of pedestrians.

- Provide continuous pedestrian connections within the public right-of-way, avoiding any gaps or diversions that require significant detours.
- Design all pedestrian routes to meet or exceed the requirements of the Americans with Disabilities Act (ADA).
- Where needed, provide a 6-foot to 12-foot buffer between pedestrians and moving traffic, using a combination of landscaping, street trees, on-street vehicle parking and striped bicycle lanes.
- Include pedestrian amenities such as street trees that provide a canopy over the sidewalk, seats where people can rest and pedestrian-scaled lighting.
- Incorporate public plazas and public art in selected locations.
- Give strong consideration to incorporation of any of the following treatments that enhance pedestrian safety and comfort in a multi-modal environment. Utilize any of a wide variety of pedestrian safety design documents that discuss best practices and key factors when evaluating appropriateness for any particular setting and condition.
 - Provide high visibility crosswalks.

- Provide curb extensions at corners to shorten street crossing distances
- Provide median refuges on multi-lane roadways
- Provide effective lighting at crossing locations.
- Provide mid-block crossings when appropriate for pedestrian convenience; ensure pedestrian safety using features to slow and control motor vehicle traffic
- Consider the spacing of crossings and orientation to entrances and attractors.
- Provide speed humps, if needed, speed tables or speed table crosswalks.
- Provide sidewalks, marked crossings and other features in large parking lots
- Minimize driveways and mark and sign them to highlight their presence and stress motorist's requirement to yield.
- Use rapid flash beacons and hawk signals where appropriate, especially at all shared use path crossings of collector and arterial roadways.
- Use video detection to call green/walk signal for pedestrians and cyclists.
- Provide leading pedestrian intervals at signalized intersections.
- Apply for speed limit reductions where appropriate.
- Provide special signage at locations where new pedestrian crossings are installed, speed limits are reduced or traffic patterns are significantly altered. Also provide additional motorist education and alert messaging to help break motorist driving habits.



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06 PARKING

PARKING LOTS AND ROADS

Parking lots and roads are needed to support park use and may be constructed of asphalt, gravel, turf-grid systems, or other special materials, depending on the type of park and its use. The number of parking spaces needed for each individual park is variable, depending on the size and type of the park and the recreation facilities and activities provided. For more information please see Table III-8.1.

A. GENERAL GUIDELINES

Park Roads

Park roads occur within parks to provide vehicular access to park facilities. Park roads do not include public roads, which are the purview of the Prince George's County Department of Public Works and Transportation (DPW&T) or state and interstate roads, which are the purview of the county or state. As stated previously the county has adopted vision zero as a goal and policy, so we encourage developers to consider the guidelines stated herein for park roads.

Depending on drainage and stormwater management requirements, the park roads may be designed as open section or closed section (curb and gutter). In park settings, bicycles are likely to share the road with motor vehicles. In most parks, particularly Neighborhood, Community and Stream Valley Parks, the park road width should be adequate to accommodate shared bicycle use. If a bicycle route connecting to a park road is designated on the Countywide Master Plan of Transportation or in a park master plan, the park road may need to be widened and specially designed to accommodate bicycle use, or a separate bicycle trail may be provided. Alternatively, a shared narrow roadway marked as such with traffic calming measures may serve as a better alternative in some cases.

Design criteria for bike lanes on roads are illustrated in the Trails, Bikeways and

Pedestrian Mobility section of the Countywide Master Plan of Transportation. Bike lanes should be provided on each side of a two-way road. The lanes should have a 4-foot minimum width on an open section road, and a 5-foot minimum width from the face of a curb, guardrail or parked cars. A clear riding zone of 4 feet is desirable. Drainage grates in the roadway should be designed so that they do not trap the wheels of bicycles.

Maintenance Access

All parks shall provide vehicular access to facilities for park maintenance vehicles and park police. This access could be provided with the park walkway and trail system or with separate maintenance access routes. Park maintenance access routes are required to be paved and 8 feet wide at minimum. Maintenance access routes need to be identified for all park facilities and maintained landscaped areas during the design phase, so that all required minimum 8 feet width, curb cuts and paved routes are well-integrated into the design of the park to accommodate future maintenance needs.

Parking Lots

The total number of parking spaces required for a park should be determined by the activities that are provided in the park. Recommendations for the number of parking spaces needed for the most common recreation facilities included in public parks are included in Table III-8.1 at end of section.

In general, parking areas should be located within a reasonable distance of the facilities they serve. Parking or drop-off aisles should be provided as close as practically possible to recreation facilities (such as ball fields or picnic areas) that require equipment set up, if parking cannot be located nearby.

Paved parking areas should be arranged in an orderly and safe manner and clearly marked with striping and directional signage for traffic control. Parking areas should be designed efficiently with double loaded parking aisles to keep the paved area to the minimum required size. Specialized parking spaces shall be

clearly marked to indicate the intended use. Gravel or turf-grid parking lots, in which spaces are not striped, should be designed with larger parking spaces to accommodate less efficient use of the parking area. For these facilities, the width of each space should be increased by 6 inches to 1 foot from the standard facility dimensions.

Where parking is provided, wheelchair and van-accessible parking spaces should be provided in accordance with the Americans with Disabilities Act. Pedestrian walkways shall be provided to connect parking areas to the facilities they serve, in compliance with the Americans with Disabilities Act. Walkways should be protected from vehicular encroachment by wheel stops, curbs or other methods.

Paving Materials

Parking lots and roads are typically constructed of asphalt, gravel, or turf-grid systems, depending on the type of park and its use. Asphalt is the most common material used. Gravel and turf-grid systems are often used in sensitive or less used areas, such as Conservation Parks, rural areas, overflow parking areas, and maintenance access routes. In some circumstances, concrete or special pavers may be used to achieve the design goals of a specific park or park setting.

The urban heat island effect contributes to elevated temperatures in urban areas, amplifying the energy demand for air conditioning, contributing to heat-related illness and mortality, detrimentally affecting water quality, and contributing to smog formation. Dark building materials and paving surfaces absorb solar radiation causing the material to heat up, and then re-radiate the heat, elevating surrounding ambient air temperatures. Value is placed on measures which will reduce a parking area's heat island effect. The Solar Reflectance Index (SRI) is a measure of a surface's ability to reflect the sun's solar energy (solar reflectance) and emit heat (emissivity). SRI is measured on a scale from 0 to 100, with lower numbers indicating the material absorbs more energy while higher

numbers indicate greater reflection of energy. Using materials with high initial SRI values, as well as high three-year-aged SRI values, will benefit the community and potentially contribute to LEED credits.

Pervious paving materials can be important tools in the retention and detention of stormwater. Pervious parking areas reduce the need for large detention ponds, because of a lower volume of surface runoff. In reducing runoff from paved areas, pervious materials may reduce the need for separate stormwater retention ponds and allow the use of smaller-capacity storm sewers. They may also provide benefits such as reducing the need for de-icing chemicals, providing an aesthetically pleasing surface, and improving stormwater infiltration to the groundwater. Types of pervious paving materials may include a wide variety of options, such as pervious concrete, porous asphalt, aggregate without binder (such as gravel), open grid systems made of plastic, clay or concrete, and bound recycled glass porous pavement. Use of such materials should be encouraged and considered as part of the overall stormwater strategy, with careful consideration given to the feasibility of long-term maintenance of such areas.

B. FACILITY TYPES

Standard dimensions for various aspects of Park Road and Parking Lot are as follows:

MAINTENANCE ACCESS ROUTES

- 8 feet minimum width, 10 feet preferred width

ONE-WAY PARK ROAD OR DRIVEWAY

- 10-12 feet roads with a marked bike lane are preferred, but consideration should be given to expected traffic volumes, maintenance, and emergency vehicle requirements and regulations.

ROADWAY BIKE LANES OR WIDENED SHARED ROADS

- 4 feet to 5 feet wide on each side of road, MNCPPC, MD - Parks and Recreation Facilities Design Guidelines

added to dimension of road

TWO-WAY PARK ROADS

- Standard Road: 20 feet wide (typical for Neighborhood, Community and Stream Valley Parks) or 18 feet where volumes are low and reduced impervious surface is needed.
- High-Use Road: 22 feet wide (typical for Recreational and Regional Parks)
- Roads 20 feet wide and above should have centerline stripes. Depending on the expected multimodal volume provide shared lane markings or designated lanes for cyclists and pedestrians.
- Roads below 20 feet wide should have no centerline stripes, but two-way bike, pedestrian and motor vehicle markings should be provided.

PARKING SPACE ACCESS AISLES

- 22 feet minimum width for two-way traffic
- 11 feet minimum width for one-way traffic

EMERGENCY ACCESS DRIVES (Where required by County Code)

- Along the longest side of the buildings;
- At least twenty-two (22) feet in width; and
- At the road edge nearest to the building no closer than ten (10) feet and no further than forty (40) feet from the building
- Turnaround room for emergency vehicles shall comply with the Prince George's County Department of Transportation standards

PARKING SPACES

- Perpendicular spaces: 9 feet - 6 inches x 19 feet minimum parking spaces with 22 feet drive aisle
- Parallel spaces: 8 feet x 22 feet minimum parking spaces
- 45 to 59 degree angled spaces: 16 feet drive aisle
- 60 to 75 degree angled spaces: 18 feet

drive aisle

- Handicapped accessible space: 8 feet wide with 5 feet access aisle
- Handicapped van accessible space: 11 feet wide with 5 feet access aisle
- Horse trailer spaces: 28 feet x 55 feet in length min. (78 feet preferred).

C. DESIGN STANDARDS

SITE LOCATION

Roads and parking lots shall not be sited in environmentally sensitive areas such as wetlands, wetland buffers, stream buffers, 100-year floodplain, and shrink swell soils.

- If determined to be unavoidable and necessary approvals are obtained, roads constructed within the 100-year floodplain, must be built to be submergible, to withstand flooding, and with floodways to facilitate controlled flooding into wetland areas or recharge zones

SETBACKS

Comply with the following minimum setbacks:

- Refer to Section 4.7 of the Prince George's County Landscape Manual for required setbacks from adjacent uses
- 25 feet minimum from any non-fenced facility or activity
- 12 feet minimum from any fenced facility or court
- Access drives and entrances to parking lots should not be located across the street from residential property, where car headlights could shine into residential homes

DRAINAGE

Comply with the following requirements:

- Slope of paved parking areas shall be 1% minimum and 5% maximum. The preferred maximum slope is 4%
- Slope of parking areas for the disabled shall not exceed 2% in any direction

- Slope of gravel or turf-grid parking areas, shall be 2% minimum and 5% maximum in one direction
- Slope on roads shall have 1.5% minimum and 12% maximum slope
- Roads may be crowned or superelevated and sloped to one side, depending on site conditions
- If a road is sloped to one side, careful consideration must be given to the direction and radii of horizontal curves
- Side slopes of drainage swales shall be a maximum of 3:1
- Adequate provisions for surface and subsurface drainage shall be provided to prevent erosion and damage to adjoining properties

BASIC FEATURES

Provide the following items:

- Paving, curbs, gutters, wheel stops and drainage structures
- Directional signage
- Handicapped accessible parking spaces and van accessible spaces as required by the Americans with Disabilities Act Accessibility Guidelines
- 5 bicycle parking spaces for every 10 automobile parking spaces (bicycle parking needs to be strategically located based on the bike-friendly access route and close proximity to park destination served.) Wherever 10 or more bike spaces are provided they should be covered
- Stormwater management facilities as required

ENHANCED FEATURES

(if requested by the M-NCPPC)

- Entrance gates
- Lighting (for facilities open at night)
- Gatehouse or other entrance features
- Bicycle lockers
- Electric Vehicle charging stations

- Bike share/scooter share locations (must comply with all ADA guidelines for bicycle facilities)

LANDSCAPING

Landscaping with ornamental and shade trees should be provided in natural groupings along park roads and at entrances to enhance the visitor's experience. Landscaping shall be provided in and around parking lots to provide shade and visual relief to parking areas, as well as to visually screen and buffer parking facilities from surrounding uses. Trees within parking lots should be native to the Atlantic Coastal Plain and preferably types that produce minimal litter.

The Prince George's County Landscape Manual has guidelines and regulations regarding the landscaping of parking lots (Section 4.3) and (Section 4.7) buffering adjacent uses. Refer to Prince George's County Zoning Ordinance (Part 6) Off Street Parking and Loading Standards for additional requirements and exceptions. Some of the setback requirements may be reduced in width for urban parks, if space is not available and a better design solution may be achieved through the use of walls or fences in conjunction with landscaping. Refer to Appendix F for a listing of both recommended plants and plants to avoid in park facilities.

D. DETERMINING PARKING CAPACITY

When multiple amenities are co-located together and have programming expectations associated with a site, it will be appropriate to consider adjusting the total quantity of parking spaces accordingly.

SEE TABLE III-8.1: PARKING RECOMMENDATIONS

E. DETAILS

Comply with the most current version of construction details as included in Section V of this manual. Applicable details include but are not limited to the following:

TABLE III-8.1 PARKING RECOMMENDATIONS

Design Element Categories		Recommendations	LOS Variations
Trails			
	Primary Trails	as can be reasonably accommodated on site	none
	Secondary Trails	as can be reasonably accommodated on site	none
	Recreation Trails: Fitness Loops	1 per 1/4 mile of loop	LOS 2: No parking required, ADA spaces strongly encouraged.
	Recreation Trails: Hiking & Mountain Biking	as can be reasonably accommodated on site	
	Recreation Trails: Equestrian	2-10 cars & stock trailers as site allows, with sufficient staging area per guidelines	LOS 1: As indicated, include paved ADA spaces. May include allowed reductions to 50% of required amount.
	Trail Overlays	none, ancillary use	N/A
	Water Trails	Refer to launch requirements	N/A
Athletic Recreation Facilities			
	Multi-purpose Rectangular Fields	20 for non-programmed fields, 60 for programmed fields	LOS 3: Limited parking acceptable. Provide ADA spaces per use. LOS 2: As indicated, include paved ADA spaces. Include dropoff area for programmed field/court uses. May include allowed reductions to 50% of required amount. LOS 1: As indicated, paved, include ADA spaces. Include dropoff area for programmed field/court uses. May include allowed reductions to 30% of required amount at reviewer's discretion.
	Soccer fields	20 for non-programmed fields, 60 for programmed fields	
	Football Fields	20 for non-programmed fields, 60 for programmed fields	
	Multi-purpose Fields	20 for non-programmed fields, 60 for programmed fields	
	Softball Fields	20 for non-programmed fields, 60 for programmed fields	
	Baseball Fields	20 for non-programmed fields, 60 for programmed fields	
	Cricket Fields	30	
	Basketball Courts	20	
	Multi-purpose Courts	20	
	Tennis Courts	4 per court	
	Pickle Ball Courts	4 per court	
	Volleyball Courts	20	
	Boat and Kayak Launch	15 each ramp ¹ Adequate to support balancing operational needs, while minimizing environmental impact and reducing impervious surface.	LOS 1, 2, 3: As indicated
	Fishing Dock	1 per 50 square feet of gross pier surface area	
	Skate Park	25	Similar to Playground category below.
	Disc Golf	1 per basket ¹	LOS 1, 2, 3: As indicated
	Ultimate Frisbee	20	Similar to multi-purpose field category above.
	Bleachers/Spectator Areas at Sport Facilities	1 space per 4 spectator seats ³	LOS 1, 2, 3: As indicated.

¹ Refer to Prince George's County Code, "Sec. 27-6305. - Schedule (number) of spaces required, generally" for exact number of spaces required.

Table continued on next page

TABLE III-8.1 - Continued

Games and Play Areas			
	Playground Facilities	1 per 4 occupants ¹	LOS 3: Limited parking acceptable. Provide ADA spaces per use.
	Unstructured Play Areas	1 per 4 occupants ¹	
	Ball Walls	2, or none if ancillary to other court use	LOS 2: As indicated, include paved ADA spaces. May include allowed reductions to 50% of required amount.
	Bocce Ball	2	
	Shuffle Board	2	LOS 1: As indicated, paved, include ADA spaces. May include allowed reductions to 30% of required amount at reviewer's discretion.
	4- Square	2	
	Gaga pits	6	
Passive Recreation			
	Natural Areas	5 spaces for the first acre; and 1 space for each additional 10 acres, plus whatever is required for specific use zones within the park.	LOS 3: Limited or no parking acceptable. Provide ADA spaces per use as feasible.
	Sitting Areas	1 per bench not associated with other facilities	LOS 2: As indicated, include paved ADA spaces. May include allowed reductions to 50% of required amount.
	Picnic Areas	1 per picnic table	
	Community Gardens	1 per 5 plots	LOS 1: As indicated, paved, include ADA spaces.
	Interpretive Elements	none, ancillary use	LOS 1, 2, 3: As indicated
			N/A
Urban Spaces			
	Plazas	1 per 300 sf	LOS 3: Limited or no parking acceptable. Provide ADA spaces per use as feasible.
			LOS 2: As indicated, include paved ADA spaces. May include allowed reduction to 50% of required amount.
			LOS 1: As indicated, paved, include ADA spaces. May include allowed reductions to 30% of required amount at reviewer's discretion.
	Through-Block Connections	none	N/A
Dog Facilities			
	Parks	20 per acre	LOS 3: Limited or no parking acceptable. Provide ADA spaces per use as feasible.
	Runs	20 per acre	w LOS 2: As indicated, include paved ADA spaces. May include allowed reduction to 50% of required amount.
			LOS 1: As indicated, paved, include ADA spaces. May include allowed reductions to 30% of required amount at reviewer's discretion.
	Cleaning Stations	none, ancillary use	N/A
Site Elements			
	Shelters	Refer to picnic area table requirement	N/A
	Restroom Buildings	none, ancillary use	
	Pedestrian Trail Bridges	none, ancillary use	

¹ Number of occupants may be calculated by referring to the Building Code Occupancy of 1 occupant per 35 square foot net ratio for daycare usages; or the number of individuals per equipment capacity, whichever is higher.

Refer to allowable deductions on the following page

E. DETAILS

Comply with the most current version of construction details as included in Section V of this manual. Applicable details include but are not limited to the following:

- Accessible Parking: E-1.1
- Bituminous Concrete Pavement: E-2.1
- Turf Pavers: E-6.1
- Bicycle Rack: G-3.1

F. SPECIFICATIONS

Comply with the most current version of technical specifications. Applicable specification sections include, but are not limited to the following:

- Section 212: Stone Base
- Section 308: Sediment and Erosion Control
- Section 504: Hot Mix Asphalt Pavement
- Section 603: Sidewalks
- Section 608: Wheel Stops

The following details and standards from Prince George's County Department of Public Works & Transportation, Specification and Standards for Roadways and Bridges are often used in the design of parking lots and roads for park facilities and should be referenced:

- Standard Driveway Entrances
- Section III: Category 200-Grading
- Standard Concrete Details
- Section III: Category 300-Drainage
- Concrete Curb and Gutter- Detail 300.01
- Traffic Calming
- Section III: Category 700-Landscaping
- Speed Hump
- Storm Drainage and Stormwater Management

G. REFERENCES

The following documents provide general guidelines and policies on the design for park roads. References dated as revisions or supplements are released by their respective publishers.

- Publications of the American Association of MNCPPC, MD - Parks and Recreation Facilities Design Guidelines

State Highway and Transportation Officials (AASHTO)

- ◇ Roadside Design Guide, latest edition
- ◇ Manual on Uniform Traffic Control Devices, latest edition
- ◇ Guide for the Development of Bicycle Facilities, 2000, latest edition.
- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- Publications of the Maryland State Highway Administration (MSHA). Maryland Department of Transportation (MDOT)
 - ◇ MDE 1994, Maryland Standards and Specification for Soil Erosion and Sediment Control, latest edition
 - ◇ Standard Specifications for Construction Materials, latest edition
 - ◇ Maryland Supplement to the Manual on Uniform Traffic Control Devices, latest edition
- Publications of the Prince George's County Government
 - ◇ Prince George's County Code- Subtitle 23 – Roads and Sidewalks
 - ◇ Prince George's County Code- Subtitle 27 – Zoning Ordinance
 - ◇ Prince George's County Soil Conservation District- Soil Erosion and Sediment Control
- Publications of the Prince George's County Department of Public Works and Transportation: DPW&T Specifications and Standards for Roadways and Bridges
 - ◇ Roadway Development Guidelines
 - ◇ Technical Specifications
 - ◇ Standard Roadway Sections and Details
 - ◇ Guidelines for the Design of Scenic and Historic Roads, Section IV, Appendix F
 - ◇ Specifications and Standards for Stormwater Management
 - ◇ Stormwater Management Design Manual
 - ◇ DPW&T Urban Street Design Standards
- Maryland Department of Natural Resources: The Maryland Roadside Tree Law, Title 08, Law and Regulations- Permits and Certified Tree Care Experts

- Publications of The Maryland-National Capital Park and Planning Commission (M-NCPPC)
 - ◊ Countywide Master Plan of Transportation
 - ◊ Woodland Conservation Manual
 - ◊ Local Area and Subregion Master Plans

4. Proximity to Transit

Automobile parking spaces for projects located within 1,500 feet of a major transit stop may reduce parking requirement by 10%.

5. Bicycle Parking Provided

New or existing automobile parking spaces required may be replaced by bicycle parking at a ratio of one standard or compact automobile parking space for every four required or non-required bicycle parking spaces provided.

TABLE III-8.1 ALLOWABLE REDUCTIONS:

1. Duplicate Amenities

Parking spaces should be shared between uses as much as is practically possible to reduce the size of paved areas. When multiple activities are provided, counts from the activity requiring a lower number of parking may be disregarded up to an overall reduction of 20% maximum.

Example: if a park has a non-programmed soccer field (20), a basketball court (20), 2 acres of open space (6) and six picnic tables (6); the parking requirements for the lower Level of Service uses may be disregarded up to 20% of the required total (52), so that 42 parking spots would be required.

2. Proximity to Housing

If the majority of users can be shown to be coming from a 1/4 mile radius, parking requirements may be reduced by 50% or higher, provided that adequate pedestrian access is provided to the satisfaction of the plan reviewer. Neighborhood parks may not require parking outside of ADA access and playground access.

3. Availability of On-Street Parking

In residential neighborhoods, as much as 20% of the required parking for a park may be accommodated with on-street parking, provided it would not result in negative impacts to the community. In urban areas, the 20% may be increased, if space is available.

TABLE III-8.1 NOTES:

1. Site conditions may vary and warrant special circumstances. All proposed reductions are subject to review and approval of the plan reviewer.
2. Refer to Prince George's County Zoning Ordinance (part 6) Off street parking and loading standards.



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07 STORMWATER MANAGEMENT

STORMWATER MANAGEMENT FACILITIES

A. DESCRIPTION

Most broadly, the goal of any stormwater management system is to maintain an area's predevelopment runoff characteristics after development has occurred. Stormwater management (SWM) facilities such as ponds and basins are strategies often used during site development and are significant visual components of the landscape which require site specific planning and design. Best Management Practices (BMPs) are techniques and structural controls used to manage the quantity and improve the quality of stormwater runoff. The purpose of BMPs is to reduce or eliminate contaminants from stormwater runoff before entering our streams. In addition to the fundamental utilitarian function of controlling and disposing of stormwater, SWM facilities can, with careful planning, become complementary site amenities.

B. PROCESS

Stormwater management facility landscape requirements are generally established by the Department of Permitting, Inspections and Enforcement (DPIE), or by those municipalities with stormwater management authority. Requirements may be found in the most recent Storm Drainage and Stormwater Management Design Manual for Prince George's County.

DPIE and M-NCPPC will coordinate review of the design of all landscaping associated with stormwater management facilities prior to the final technical approval of the stormwater management plan by DPIE. Landscape plans for stormwater management facilities shall be reviewed and approved by the appropriate authority alongside regulatory plan review.

A Stormwater Management Declaration of Covenants is a Maintenance Agreement which must be signed by the Executive Director prior to conveyance of parkland to M-NCPPC. All stormwater facility bonding must also be completed.

There are three basic stages of plan review performed by multiple agencies including M-NCPPC Environmental Planning Section (EPS), DPIE, Prince George's Soil Conservation District (PGSCD), and M-NCPPC Development Review Division (DRD). See the Stormwater Management Design Manual Appendix 3-1 for more information.

- Stage One: Land Development Concept Approvals
- Stage Two: Land Development Entitlement Approvals
- Stage Three: Land Development Final Approvals and Permits

In addition, the following are required for parkland dedication:

- Submit Conceptual and Final SWM Plans for approval by Department of Parks and Recreation.
- Submit the Landscape Plan for approval by Department of Parks and Recreation.
- Notify the Department of Parks and Recreation a minimum of 48-hours prior to start of construction for attendance at all pre-construction meetings for SWM facility construction.
- Establish an approved M-NCPPC inspection schedule during preconstruction.

C. MAINTENANCE RESPONSIBILITY

Private Land

Prince George's Department of the Environment inspects privately-owned and maintained best management practices (BMPs) located throughout the county on private residential and commercial properties triennially for operational performance and compliance. Property owners are responsible for conducting periodic preventive maintenance of these BMPs (per owner's

manual) so that they function as designed.

Property owned by M-NCPPC

The County and the M-NCPPC's Department of Parks and Recreation jointly maintain SWM ponds located on property owned by M-NCPPC through a joint use maintenance agreement.

D. DESIGN REQUIREMENTS (On Parkland or Property to be Conveyed to M-NCPPC)

- Locating site specific and/or regional SWM ponds on land owned by the M-NCPPC is prohibited without written approval from Department of Parks and Recreation. Facilities will be considered on M-NCPPC parkland only after all alternatives for placement on private property have been exhausted, including any portion of the proposed pond with areas to be flooded by a 2 year, 10 year and 100 year flood.

SWM ponds located on parkland owned by or to be conveyed to M-NCPPC in Prince George's County:

- Traditional wet ponds are preferred, however, smaller scale SWM facilities such as bioretention facilities, infiltration trenches, underground storage vaults and bioswales must be approved by M-NCPPC.
- Must be designed and accessible for community use when appropriate:
 - ◊ Recreation amenities shall be incorporated into the SWM facility by the Developer.
 - ◊ The selection, location and design of these amenities shall be coordinated with staff from the Department of Parks and Recreation. The SWM plan shall show the proposed recreation uses to be included with the facility, including, but not limited to, nature trails, non-motorized boating, fishing piers, benches, and boat access points.
- Vehicular access must be provided for maintenance via an asphalt trail with a

minimum width of 8-feet from a public street.

- Provide an aquatic shelf 6 inches to 1 foot in depth and a minimum 10 feet in width around the entire shoreline of the pond, except where the riser structure and outfalls require greater depth.
 - ◊ An aquatic shelf is primarily for the safety of park users.

The park facility may require exposed concrete surfaces (e.g., head walls, end walls and riser structures) to have an architectural treatment of brick or stone veneer or formed architectural concrete with a color admixture. Subject to design review.

E. DESIGN CONSIDERATIONS

Alternatives to the traditional pavement in the parking lots and trails can help reduce runoff by infiltrating rainwater and melting snow.

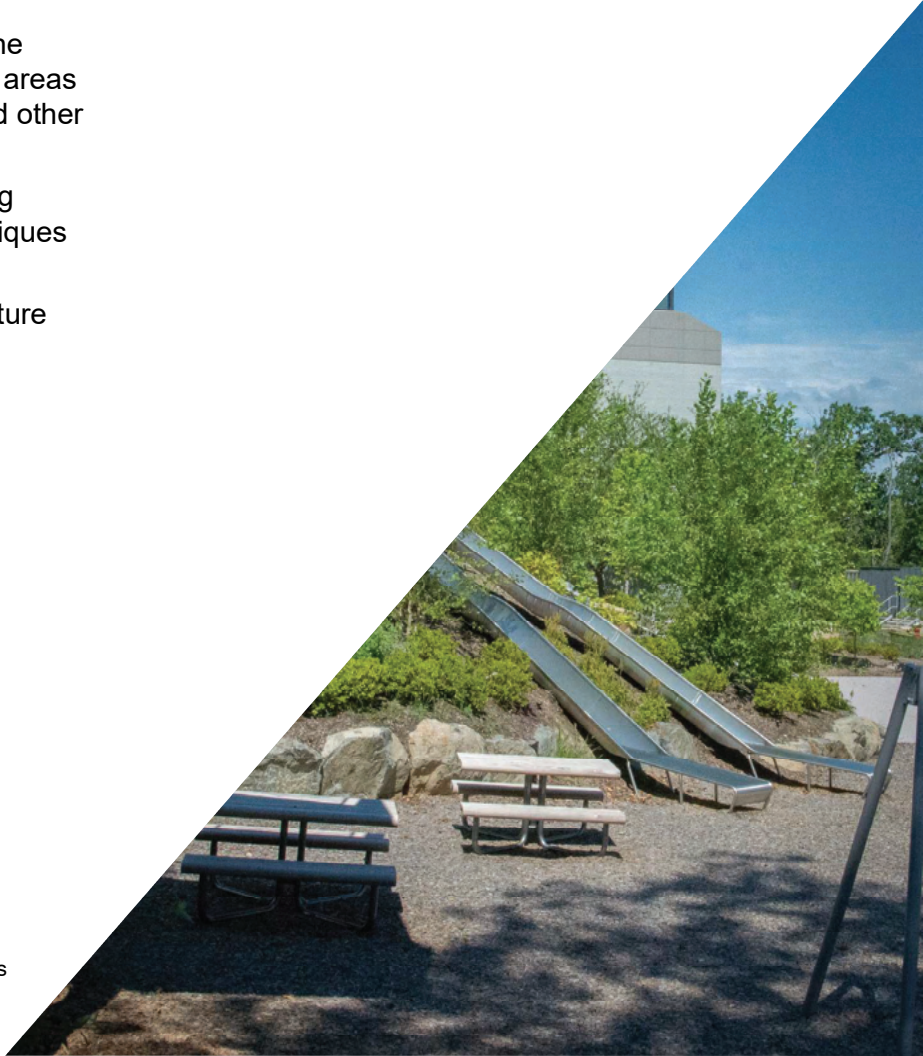
The Department of Parks and Recreation welcomes alternative materials which include pervious asphalt, pervious concrete, interlocking pavers, and plastic grid pavers, allowing rain and snowmelt to seep through the surface down to underlying layers of soil and gravel. Some of the important considerations may include the permeability of the existing soil and potential maintenance.

Consider the following stormwater management facility design techniques:

- Locate in a natural low area and be sensitive to general topography.
- Create naturalistic appearance (In an urban setting, other aesthetics may be acceptable).
- Promote as a site amenity.
 - ◊ Visual from multiple points on site.
 - ◊ Use as a focal point with additional site elements (gazebos, art, water jets, fishing piers, etc.).
- Provide at 4:1 maximum slope in disturbed areas, except where higher is permitted by Sec. 32-160, 32-161, and

other regulations.

- Landscape planting for stormwater management facilities should:
 - ◇ Provide food and cover for wildlife.
 - ◇ Include types favorable for native pollinator insects.
 - ◇ Contribute to water quality improvement.
 - ◇ Increase on-site water infiltration to enhance aquifer recharge.
- Locate structures associated with the SWM pond in areas with low visibility but easily accessible for maintenance.
 - ◇ Carefully locate inflow channels.
 - ◇ Long channels of rip rap at the outlet of pipes discharging into the SWM facility are discouraged.
 - » Where large areas of rip rap are required, curvilinear channels and/or the use of washed river stone or other decorative stone is encouraged.
 - » Attention should be paid to the visual presentation of rip rap areas by considering screening and other techniques.
 - » Reduce vegetative screening needed by using other techniques such as imbricated rip rap.
 - ◇ Creative solutions to outlet structure design are encouraged.





08 LANDSCAPE MANUAL

A. LANDSCAPING

Trees and other plant materials are essential components of successful parks and recreation areas and any landscape. They provide vital ecosystem services, or direct and indirect benefits, like regulating local climate, supporting pollination, and carbon sequestration. They are essential to providing scale, visual interest, cooling shade, and screening within and outside of the park. They stabilize soil, stream banks, and steep slopes. They increase the perceived property value of parks and surrounding land(fn). Plant selection should begin early in the design process.

Landscape standards and requirements are defined in the County Landscape Manual, latest version, and the Zoning Ordinance Subtitle 25, division 3 Woodland and Wildlife Habitat Conservation Ordinance. The Manual lays out the approval and certification procedures, plan preparation guidelines, design criteria, and applicable landscape standards.

Successful park planting projects are most often the result of an understanding of the site's existing and proposed conditions by an experienced landscape architect with a strong horticultural background. It's essential that plant materials selected be matched to particular climatic, soil and physical usage conditions on site, that the landscape contractor and team members obtain materials evaluated to be free of root defects (that cannot be successfully corrected), low vigor, and diseases, and that they are properly installed, established, and maintained.

- Except for screening and buffering purposes or locations other than very large, open environments, select tree types which do not have down swept habitat. Similarly, these materials shall be grown to meet nursery standards. The caliper size must be large enough so that the canopy is in proportion as dictated by

ANSI Z60.1 standards when the clear limb height is achieved.

- Operations budgets are often constrained for public park systems. Select design schemes and details which minimize the need for pruning, cutting back, mowing, adjusting irrigation (where applicable), treatment of disease, and replacement of plantings
- Species should be native to the MidAtlantic region

B. TREE CONSERVATION

Forests are defined and protected by state law. The state Forest Conservation Act, title 8-19, provides specific requirements that apply to development activities which are codified locally in County Code, Subtitle 25. Generally, forests, existing tree stands, and individual trees that are not considered invasive and assessed by a qualified professional to not be in poor or hazardous condition should be identified early in the site selection process and incorporated within the design in a way which will provide for their proper preservation. This will result in parkland, park facilities, and surrounding communities with enhanced visual, economic, and experiential value. Several other state and local mandates and policies provide guidance impacting resource preservation and sustainable project criteria. Plan 2035, Prince George's County's Approved General Plan presents a vision and series of natural environment policies such as Policy 5, to preserve and enhance existing forest and tree canopy coverage levels. In turn, the Approved Countywide Green Infrastructure Plan identifies quantifiable objectives and strategies. These are further reflected within local regulations such as the Tree Canopy Coverage Ordinance which affect development projects.



09 ACCESSIBILITY

A. DESCRIPTION

The Americans with Disabilities Act (ADA) recognizes and protects the civil rights of people with disabilities. The ADA covers a wide range of disability, from physical conditions affecting mobility, stamina, sight, hearing, and speech to conditions such as emotional illness and learning disorders. Titles II and III of the ADA address access to buildings, facilities, and transit vehicles. Chapter ten of the ADA includes specific language applicable to play and recreation facilities which are found throughout the park system. All newly designed, newly constructed, and any alterations to M-NCPPC Parks and Recreation facilities must comply with the latest requirements and recommendations in the ADA Accessibility Guidelines (ADAAG).





10 MAINTENANCE CONSIDERATIONS & REQUIREMENTS

A. SAFETY, MAINTENANCE AND LIABILITY

In order to foster safe environments for play and recreation in Prince George's County, the M-NCPPC requires that recreation facilities in new and existing developments that are undergoing significant alteration be designed and constructed in accordance with all of the following: the approved Site Plan or building permit; the guidelines and specifications in the current edition of the Park and Recreation Facilities Guidelines; the Handbook for Public Playground Safety (published by the U.S. Consumer Product Safety); the manufacturers' specifications for particular pieces of equipment, ASTM F1487 98 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use; ASTM F1292 99 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment; ASTM F1951 99 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment; and the Americans with Disabilities Act. Any conflicting requirements among these items will normally be resolved in favor of the most stringent requirement.

Prior to release of the Performance Bond guaranteeing construction of recreation facilities, a qualified professional representing the Developer must certify in writing that the facilities have been constructed in accordance with the guidelines and requirements identified above. The manufacturer must also certify that the equipment itself meets the minimum standards.

Maintenance of and liability associated with newly built recreation facilities remain the responsibility of the Developer until such time as the M-NCPPC conducts a final inspection, receives the certification mentioned above, officially accepts the facilities as completed and releases the Performance Bond. At this time, maintenance responsibility and liability may remain with the Developer or may transfer to the homeowners association. Depending on the transition, provisions of the

homeowner's documents, the homeowners association may be controlled by either the Developer or the homeowners themselves.

Regardless of who controls the homeowners association or when the transition from Developer to homeowner control takes place, the homeowners association must take seriously its responsibility to maintain the recreation facilities. The association should conduct regular safety inspections, using the manufacturer's maintenance checklist. If the association should choose, there are certified playground safety inspectors who can provide this service. Any repairs or replacements of unsafe equipment should be done quickly. Homeowners are also well advised to establish a contingency fund for repair and replacement of recreation facilities and to maintain adequate liability insurance coverage.

Homeowners associations should be aware that the Maryland Homeowners Association Act establishes a one-year warranty on improvements to common areas. This is an implied warranty to the homeowners association that any improvements, including recreation facilities, are free from faulty materials, are constructed in accordance with sound engineering standards and in a professional manner. The warranty begins with the first transfer of a lot to a homeowner. The warranty on improvements to common areas not completed at that time begins with the completion of the improvement or with its availability for use by lot owners, whichever occurs later. The law further states that this warranty will not apply to defects caused through abuse or failure to perform maintenance by a lot owner or the homeowner's association.

Section 11B-104 of the Maryland Homeowners Association Act also prohibits local governments from enacting any law, ordinance or regulation that creates or requires any additional implied or express warranties or improvements to common areas other than those described above.

B. MAINTENANCE CONSIDERATIONS AND REQUIREMENTS

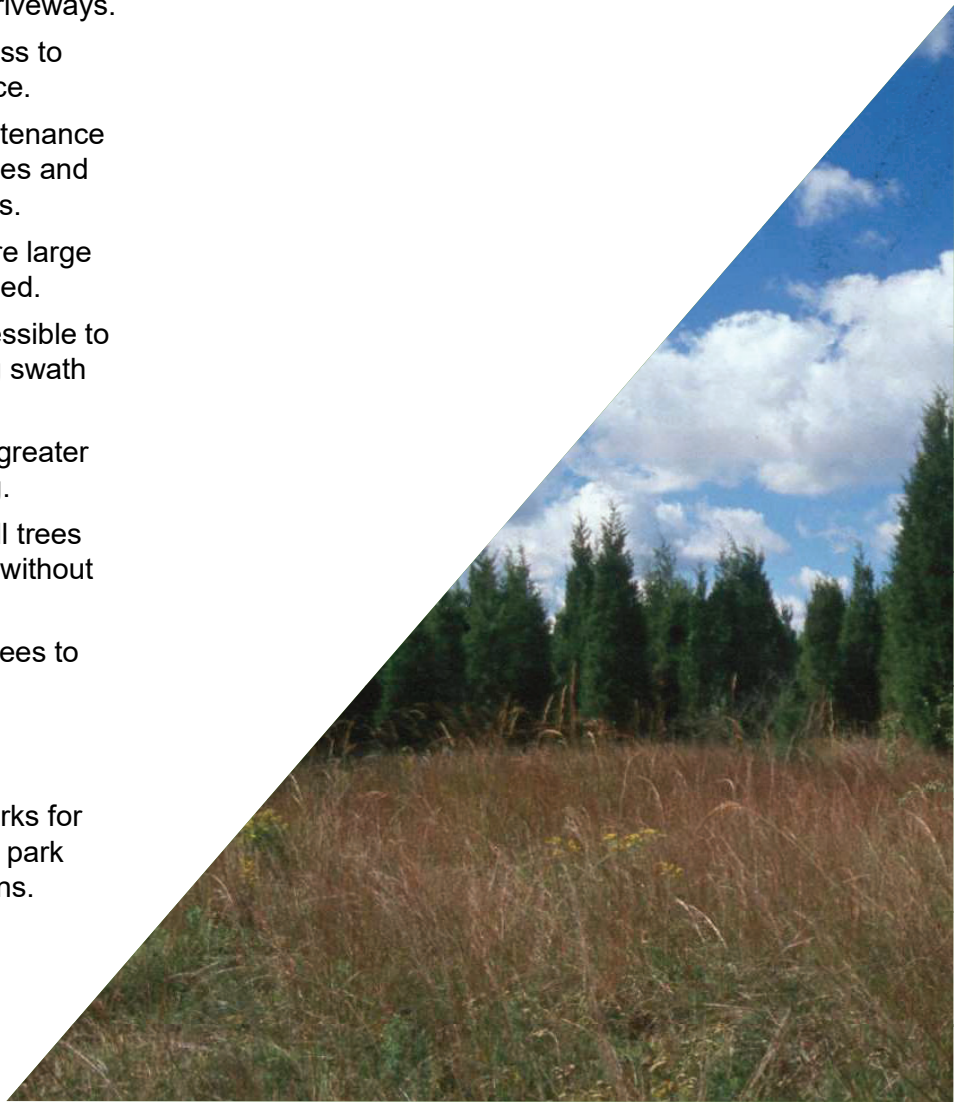
A primary factor in the long-term success of any public park is maintenance. Incorporate the following where possible:

- Select durable construction materials (not necessarily materials with the lowest initial cost).
- Select equipment that has low life-cycle costs (not necessarily equipment with the lowest initial cost).
- Provide consistency in the selection of equipment where possible, so that hardware and repair parts can be readily stocked.
- Select materials and equipment that are resistant to vandalism.
- Select equipment that conserves energy and that can be recycled.
- Locate portable toilets and trash receptacles near parking lots or driveways.
- In general, provide vehicular access to recreation facilities for maintenance.
- Provide vehicular access for maintenance of stormwater management facilities and playgrounds to replace wood chips.
- Provide locations in the park where large mowing equipment can be unloaded.
- Ensure that all turf areas are accessible to mowers with 15-foot wide mowing swath when possible.
- Provide turf areas with slopes no greater than 3:1 to accommodate mowing.
- Provide mulched circles around all trees in lawn areas to facilitate mowing without damage to trees.
- Shape planting beds and space trees to accommodate mowers.
- Select plant materials with low maintenance requirements.
- Provide appropriate signage in parks for directional purposes and to clarify park regulations, policies and restrictions.

- Locate park facilities away from low-lying areas that could be affected by storms and rising water.

Immediately after acceptance of substantial project completion:

- Prepare accurate as-built drawings and submit to M-NCPPC's construction manager in electronic format, so that a permanent record of facility and utility locations is available for any future work in the park.
- Submit all warranties for equipment, instruction and maintenance manuals, and spare parts to M-NCPPC's park manager.





11 SUSTAINABLE PLANNING AND CONSTRUCTION

A. DESCRIPTION

Land conservation and sustainable practices during land planning and development are priorities M-NCPPC has identified in various policy documents. Manage new growth and redevelopment in ways that evaluate important environmental features comprehensively and minimize adverse impacts to the greatest extent practical (LPPRP). All development in Prince George's County over approximately one acre must complete an approved Natural Resources Inventory, and if present on site, Woodland Conservation permitting which is based on state forest conservation regulations. The Green Infrastructure Plan (2002) and Resource Conservation Plan (2017) identify policies and measurable objectives for water quality protection and other sustainable practices.

Today there are multiple sustainable development framework and rating systems available centered around the idea that every construction project “holds the potential to protect, improve, and regenerate the benefits and services provided by healthy ecosystems”. The Sustainable Sites Initiative (SITES) is a particular system focused on holistic land development practices that is well suited to park environments. Leadership in Energy and Environmental Design (LEED) is a complementary framework for sustainable facilities and buildings. These systems are centered around many practical tools which should be implemented to the extent feasible beginning during planning and throughout design and construction for parkland development. Below are some tools that are part of the SITES initiative.

SITE CONTEXT

- Limit development on farmland
- Protect floodplain functions
- Conserve aquatic ecosystems
- Conserve habitats for threatened and endangered species
- Redevelop degraded sites

- Protect existing forest and trees
- Locate projects within existing developed areas
- Connect to multi-modal transit networks

PLANNING

- Use an integrative design process
- Conduct a pre-design site assessment
- Designate and communicate Vegetation and Soil Protection Zones
- Engage users and stakeholders

SITE DESIGN - WATER

- Manage precipitation on site
- Reduce water use for landscape irrigation
- Manage precipitation beyond baseline
- Reduce outdoor water use
- Design functional stormwater features as amenities
- Restore aquatic ecosystems

SITE DESIGN - SOIL & VEGETATION

- Restore soils disturbed by previous development during construction, and create soil management plan
- Control and manage invasive plants
- Use appropriate plants
- Conserve healthy soils and appropriate vegetation
- Conserve special status vegetation
- Conserve and use native plants
- Conserve and restore native plant communities
- Optimize biomass
- Reduce urban heat island effects
- Use vegetation to minimize building energy use
- Reduce the risk of catastrophic wildfire

SITE DESIGN - MATERIALS SELECTION

- Eliminate the use of wood from threatened tree species

- Maintain on-site structures and paving
- Design for adaptability and disassembly
- Use salvaged materials and plants
- Use recycled content materials
- Use regional materials
- Support responsible extraction of raw materials
- Support transparency and safer chemistry
- Support sustainability in materials manufacturing
- Support sustainability in plant production

SITE DESIGN - HUMAN HEALTH & WELLBEING

- Protect and maintain cultural and historic places
- Provide optimum site accessibility safety, and wayfinding
- Provide adequate areas of shade for respite from the heat
- Promote equitable site use
- Support mental restoration
- Support physical activity
- Support social connection
- Provide on-site food production
- Reduce light pollution
- Encourage fuel efficient and multi-modal transportation
- Minimize exposure to environmental tobacco smoke
- Support local economy

CONSTRUCTION

- Communicate and verify sustainable construction practices
- Control and retain construction pollutants
- Restore soils disturbed during construction
- Restore soils disturbed by previous development
- Divert construction and demolition

materials from disposal

- Divert reusable vegetation, rocks, and soil from disposal
- Protect air quality during construction and landscape maintenance

OPERATIONS + MAINTENANCE

- Plan for sustainable site maintenance
- Provide for storage and collection of recyclables
- Recycle organic matter
- Minimize pesticide and fertilizer use
- Reduce energy consumption
- Use renewable sources for electricity needs
- Protect air quality during landscape maintenance

EDUCATION + PERFORMANCE MONITORING

- Promote sustainability awareness and education
- Develop and communicate a case study
- Plan to monitor and report site performance.





12 REFERENCE STANDARDS

A. DESCRIPTION

In order to foster safe and sustainable park environments, the M-NCPPC requires that all new and renovated facilities be designed and constructed in accordance with current editions of all of the following guidelines and standards. In general, any conflicting requirements among these documents should be resolved in favor of the most stringent requirement or guideline. Guidelines and standards for specific facilities are referenced in the applicable facility guidelines.

- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- Conservation Manual for the Chesapeake Bay Critical Area Program
- Countywide Master Plan of Transportation (from M-NCPPC)
- Maryland Stormwater Management Act of 2007
- Model Standard Stormwater Management Plan 2009
- US Army Corps of Engineers: Nontidal Wetland Protection Program
- Prince George's County Code: Subtitle 23 – Roads and Sidewalks
- Prince George's County Code: Subtitle 24 –Subdivision
- Prince George's County DPW&T Specifications and Standards for Roadways and Bridges
- Prince George's Soil Conservation District: Soil Erosion and Sediment Control- Pond Safety Reference Manual (latest edition)
- Woodland and Wildlife Habitat Conservation Ordinance (from M-NCPPC)



IV. DESIGN GUIDELINES FOR COMMON PARK FEATURES



01 INTRODUCTION

A. INTRODUCTION

This section describes guidelines and standards for various park elements. These elements include the following:

- Shared Use Paths and Trails
- Athletic Recreation Facilities
- Game and Play Courts
- Passive Outdoor Recreational Elements
- Urban Plazas and Open Spaces
- Site Elements such as Shelters, Restrooms, and Pedestrian Bridges

Just as demographics and cultural preferences evolve over time, sports and recreational activity preferences in Prince George's County have also evolved. Demand has remained strong for athletic facilities such as diamond and multi-purpose rectangular fields, and play courts for tennis and basketball; also for paved shared use paths and natural surface trails. A number of less common activities are gaining in popularity, such as cricket, pickle ball, futsal courts, disk golf, which are now covered in more detail in the Department's facility guidelines. Additionally, urbanization of the County is increasing demand for plazas, pocket parks, skate parks, and dog parks, which are also addressed in this chapter.

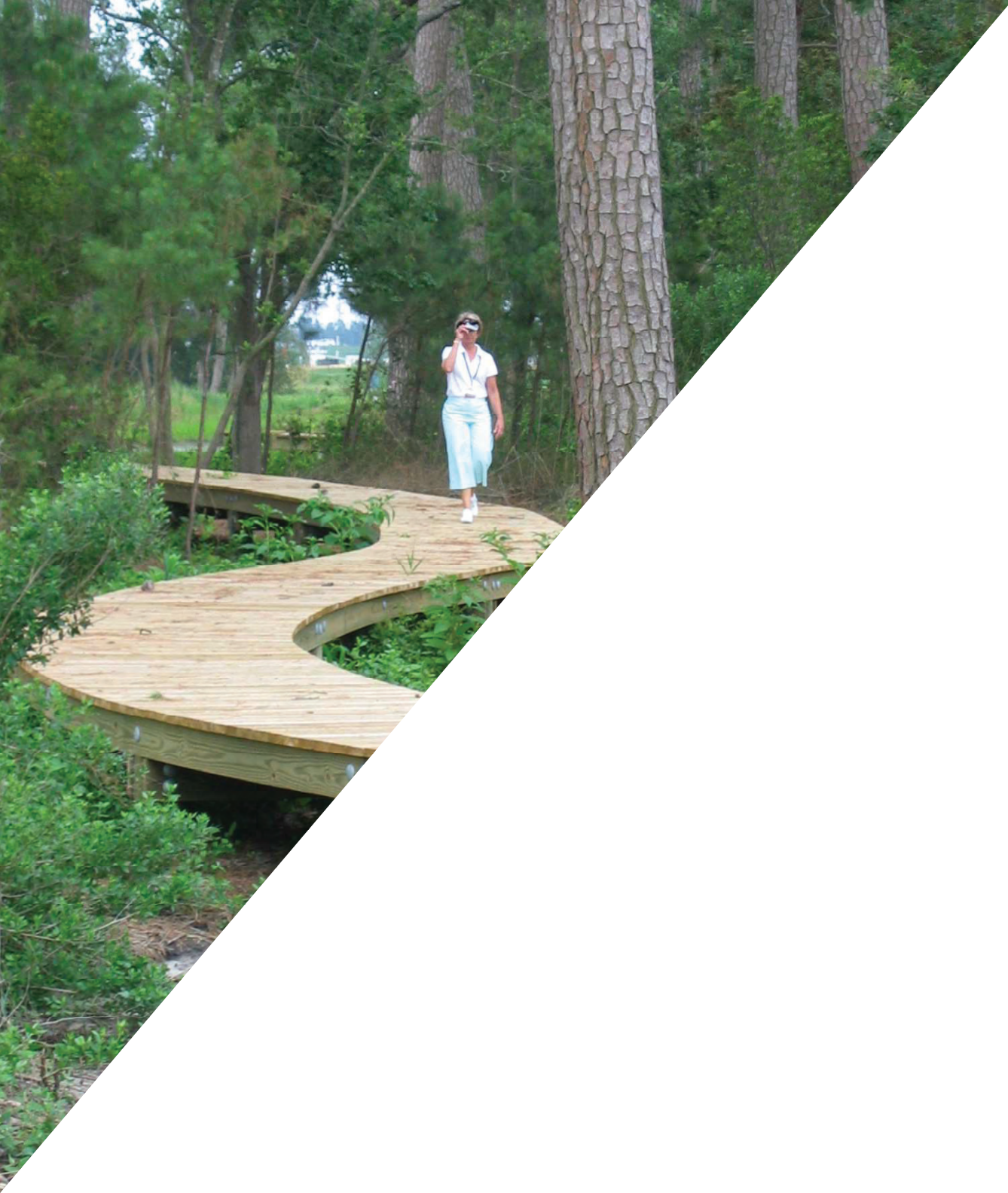
These guidelines and standards will assist in creating open spaces and recreational amenities that meet or exceed minimum quality standards and appropriate levels of service for the park and recreation facilities provided by M-NCPPC. They can also be used by municipalities within the County and other agencies and organizations as an optional guide for the supplemental recreation facilities they may choose to provide.

The guidelines presented in this section cover a number of site-related issues including appropriate orientation, drainage, setbacks, parking, access and seating. For each facility type, general and specific design criteria is provided including size, surfacing, other design features and necessary equipment

related to the level of service required. Where appropriate, specific M-NCPPC guidelines and standards are provided, along with references to applicable national or sport-specific standards.

Beyond these guidelines, completion of the design and construction process frequently involves the selection of specific material types, finishes, or other product characteristics. Rather than pre-define these design choices the Department prefers to provide flexibility within a framework of identified selection criteria—including durability and lifecycle, available warranty, efficiency, sustainability and environmental impact, ease of maintenance, replacement and operations, cost, and for select locations contextual compatibility.

The Department utilizes a collaborative process of designing such facilities, involving multiple staff from various Divisions who will provide input on the design and selection of these products and materials.



02 SHARED USE PATHS AND TRAILS

A. GENERAL GUIDELINES:

Design of Department of Parks and Recreation and Countywide Pathway and Trail Facilities

The Prince George's County Department of Parks and Recreation classifies its pathways and trails in a manner that dovetails with the Countywide classification system as established by the Countywide Master Plan of Transportation (MPOT 2035). The Department of Parks and Recreation owns and manages the largest portion of bicycle and pedestrian pathways that are used for recreation; many of which are also used for daily transportation.

The Department of Parks and Recreation Classification System is as follows:

- Primary Shared Use Paths
- Secondary Shared Use Paths
- Recreation Paths—Paved Loops in Parks
- Recreation Trails—Paved and Natural Surface
- Circulation Paths and Sidewalks--Paved

Application of Guidelines

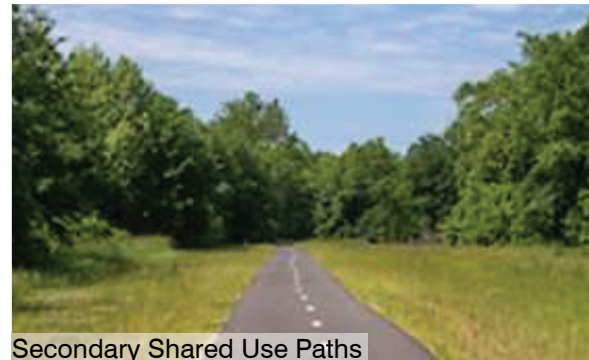
This chapter of the Design Manual provides guidelines for property developers, and other entities, who are designing and building path or trail facilities for public use on Department of Parks and Recreation parkland, or in other settings that will be used by the public.

These guidelines will enable all public and private entities to develop high quality public paths and trails by adhering to a set of standards, guidelines and design criteria that is commensurate with current national standards and best practices.



Primary Shared Use Paths

Image source: <https://www.pg parks.com/4724/Walk-with-Ease>



Secondary Shared Use Paths

Image source: <https://www.pg parks.com/4604/Henson-Creek-Trail>



Recreational Paths

Credit is owned by M-NCPPC



Recreational Trails

Image source: <https://trot-md.org/agriculture-history-farm-park/>

B. PATH AND TRAIL CLASSIFICATIONS

Typically, Path and Trail classifications are assigned to existing, planned and proposed segments when they are identified in a formal Master Plan, Sector Plan, trail or park plan, or other public planning process. The classifications differentiate pathway and trail types by function, as follows:

- Primary Shared Use Paths
- Secondary Shared Use Paths
- Recreation Paths—Paved loops in Parks
- Recreation Trails—Paved and Natural Surface
- Circulation Paths and Sidewalks--Paved

C. GENERAL CONSIDERATIONS FOR PATH AND TRAIL DESIGN

General Alignment Relative to the Natural Environment

- It is preferred that Primary and Secondary Shared Use Paths avoid or minimize their alignments through floodplains. Wetlands as well should be avoided where possible, but can be crossed by using boardwalks or bridges.
- Forested areas are often ideal locations for paths and trails, however, shared use path design should minimize tree removal, especially old growth and specimen trees. Tree replacement will be required by County regulations.
- Avoid routing Paths in areas with steep slopes and severe grade changes. In hilly or sloped areas, Paths and Trails should be aligned to follow the contours of the land to reduce the potential for creating an erosive condition and maintain ADA acceptable grades.
- Retaining walls should be avoided as much as possible. When absolutely necessary switchbacks with retaining walls can be used. Path width should be increased at the turning point, and resting points should be provided in accordance with ADA.
- Stream crossings should be at a narrow point and at a location where the crossing is designed perpendicular to the channel and flow. Soil stability should also be considered as part of the design process.
- Along steep slopes, around curves, and in areas with poor sight distances, trail or cleared corridor widening should be considered for short stretches to increase user safety.

General Alignment Relative to the Built Environment

Setbacks from the Built Environment

- Within parks Primary and Secondary Shared Use Paths should be setback 30 feet from playgrounds, dog parks, ballfields and other activity areas that might generate user conflicts, or safety hazards. If 30 feet setback is not possible then fencing may be considered in consultation

with the DPR staff.

- From stormwater management ponds, Paths should be set back 10 feet from the waters edge, and fencing should be provided to ensure child safety. Routing Paths on paved access roads to and around stormwater ponds is an appropriate dual use of impervious surface, however, design and safety for dual use may require special features and regulatory clearance.
- From private property lines, Paths that are not providing access to the property, should be set back 20 feet. If this cannot be achieved special clearance or regulatory relief may need to be obtained.
- From buildings, Paths that are not providing access to the building should be setback 25 feet where feasible.

- All path and trail classifications must be designed to applicable and current ADA accessibility standards. The following three documents published by the United States Access Board are sufficient to address all five of the Shared Use Path and Trail classifications used in Prince George's County.
 - ◇ A Summary of Accessibility Standards for Federal Outdoor Developed Areas, United States Access Board (USAB), May 2014.
 - ◇ (Proposed) Shared Use Paths: Accessibility Guidelines for Pedestrian Facilities in Public Right-of-Way (PROWAG) 2013
 - ◇ 2010 ADA Standards for Accessible Design
- Some of the key features that ADA standards affect include the following:
 - ◇ Trail surface, running slope, cross-slope, and curb ramps.

Accessibility

TABLE IV-1.1 APPLYING ADA ACCESSIBILITY STANDARDS TO PGC PATH AND TRAIL CLASSIFICATIONS

OUTDOOR DEVELOPMENT AREA ROUTE TYPE *	PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES **	PGC CLASSIFICATION	KEY ELEMENT OF DESIGN INTENT
Shared Use Path	Shared Use Path	Primary and Secondary Shared Use Path	Intended for multi-use, provides both active transportation and recreation Machined, layered surface (improved) Located in either an "independent corridor" or public right-of-way.
Outdoor Recreation Access Route (ORAR)	Not applicable	Recreation Trails--Natural Surface Circulation Paths and Sidewalks	Connects outdoor constructed features and spaces within picnic and camping facilities, viewing areas, and trailhead only.
Trail	Not applicable	Recreation Trails--Paved Loop Recreation Trails--Natural Surface	Designed for the "recreation experience." Does not connect elements and spaces on a site. Typically includes a trailhead. Has limited or no transportation function.
Sidewalk—Pedestrian Access Route (PAR)	Sidewalk or Paved Roadway Shoulder	Circulation Paths or Sidewalks	Parallel to Roadway (in or adjacent to right-of-way) Designed for pedestrians (not bicyclists) Sometimes part of the roadway
Accessible Route (AR)	Not Applicable (See USAB Accessible Routes, 2015)	Circulation Paths or Sidewalks	Connects accessible elements and spaces of a building or facility on a site.

* From the document: Accessibility Standards for Federal Outdoor Developed Areas

** Public Right of Way Accessibility Guidelines (PROWAG), U.S. Access Board

- ◇ Amenities such as benches, water fountains, and interpretive signage.
- Table IV-1.1 shows how the relevant Access Board's ADA Standards for paths and trails correspond with the Prince George's County classifications.
- In general, the design of all pathways and trails should consider the needs of a wide range of users including the very young and very old, and people of all abilities.

Path and Trail Width

- Path and trail width guidelines vary based on classification (see Table IV-1.2 for details).
- ◇ For Primary and Secondary Shared Use Paths, 10 feet is standard, 11 feet

or more may be required for heavily used paths. The expected volume and mix of pedestrians and bicyclists, i.e. slow and fast users, is the key factor to consider.

- ◇ The Federal Highway Administration's Shared Use Path Level of Service Calculator can be used to help determine the need for wider or narrower path segments within these classifications. Department of Parks and Recreation staff can assist with use of this tool. Moreover, Department of Parks and Recreation staff will determine if it is acceptable to use minimum standards or below minimum standards for short distances or in very tight locations.
- ◇ If the developer, lead project proponent, DPR or Planning Department staff

TABLE IV-1.2 BASIC DESIGN REQUIREMENTS: PATHS AND TRAILS

	Primary Shared Use Paths	Secondary Shared Use Paths	Recreation Paved Loop Trails	Recreation Trails - Paved or Natural Surface	Circulation Paths and Sidewalks
Surface Type	Asphalt or concrete; boardwalks; permeable and flexible pavements; perhaps crushed stone Decorative surface treatments can be considered for hard surface treadways but should not compromise accessibility.	Asphalt or concrete; permeable and flexible pavements; boardwalks. Decorative surface treatments can be considered for hard surface treadways but should not compromise accessibility.	Asphalt, concrete, permeable and flexible pavements; boardwalks. Decorative surface treatments can be considered for hard surface treadways but should not compromise accessibility.	Natural: Dirt, Dirt/gravel mix, turf, wood chips, crushed stone; boardwalks; Paved: Asphalt, permeable and flexible pavements Decorative surface treatments can be considered for hard surface treadways but should not compromise accessibility.	Asphalt or Concrete; permeable and flexible pavements; boardwalk Decorative surface treatments can be considered for hard surface treadways but should not compromise accessibility.
Width	Standard is 10-11 feet; 12-14 feet if justified by desired Level of Service	Standard is 10 feet; 6-9 feet may be acceptable depending on length, function and setting.	Standard is 8 feet; 10-12 feet is recommended at high use locations.	Single Track (hike and bike): 2-5 feet. Equestrian: 5-12 feet. Equestrian (adjacent to shared use path): 12-16 feet off set from edge of pavement. Paved: 8 feet.	10-foot minimum for maintenance road shared with pedestrian circulation traffic. Wider depending on size of typical maintenance vehicles.

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Table IV-1.2 Continued From Previous Page

Corridor Width	28 feet or greater	18-25 feet	Typically 15-20 feet	5 to 40+ feet	N/A
Shoulders and Buffers (Total Width)	Minimum total: 18 feet	Minimum total: 8 feet	Typical total: 10 feet	N/A	N/A

recommend a path width of more than 11 feet or less than 10 feet the Shared Use Path Level of Service Calculator shall be used to justify deviation from the standard 10-11 feet.

cross flow to pass over surface of the path at a location where the treadway has been “dipped” through the channel. Culverts, under drains, or concrete ford structures with subsurface low flow accommodations should be provided.

Drainage and Stormwater Management

- Drainage design is one of the most important aspects along paved Shared Use Paths.
- Cross slopes should not exceed 2% in the direction of positive drainage. Shoulders may slope up to 4%.
- Asphalt pavements are easier to maintain and last longer if crowned, however in most cases drainage swales must be provided on each side, with periodic under drains. Sloping trails to one side is acceptable, but not preferred in all situations.
- Drainage swales shall be considered on the uphill sides of the path to interrupt drainage and direct water under the Path through culverts or drains.
- Both careful design and construction are needed to prevent pavement settling that generates standing water or puddling on the surface.
- Long running slopes that generate heavy and fast flows will need special treatments to prevent erosion.
- Revegetating shoulders and swales is important to stabilize soils and ensure long term integrity of the drainage design.
- Where intermittent or low flows of water need to cross a path, it should not be designed for the

Structures

- A wide variety of pathway structures can and should be considered based on need. To determine need, consider sound pathway design standards, public safety, standard civil engineering practices, site conditions and the likely impacts of climate change.
- Structures include aluminum and steel bridges, concrete abutments and piers, boardwalks, culverts, vented-fords drainage swales, rain gardens and other environmentally sound stormwater treatment facilities, retaining walls, railings and fences, ramps, and stairways with bicycle rolling features.
- Key design considerations for structures include path width, type and height of railings, lighting for tunnels and underpasses, non-slip treatments for wood or concrete surface decking, discharge of drainage from overhead roadways, seams between different pavement surfaces, and overall aesthetics.
- AASHTO and ADA standards and guidelines typically apply and are recommended references for acceptable designs and specifications.

Intersections: Paths Crossing Roadways and Driveways

- Intersections of paths and roadways are

the most likely locations where path user crashes will have the worst outcomes—serious injury, permanent disability or death. Intersection design in the U.S. is undergoing rapid change due to the high volume of bicycle and pedestrian crashes at these locations, nationwide. Improvements in available traffic safety technology are also enabling innovation and higher standards. The following set of resources should be consulted as well as the latest best practices:

- **Driveways and Side Street Crossings:**
 - ◊ Sidepath Intersection and Crossing Treatment Guide, Michigan Department of Transportation, June 2018.
- **Roadway Crossings:**
 - ◊ Small Town and Rural Multimodal Networks, December 2016, Federal Highway Administration U.S. Department of Transportation. Key Section: Chapter 4: Physically Separated Facilities, Shared Use Paths; Sidepath, Separated Bike Lane. This publication is available for download. (PDF version, 40.2 MB) www.fhwa.dot.gov/environment/
 - ◊ Across the Arterial: Mid-Block Shared Use Path Crossings of Multilane Roadways in California, Rails-to-Trails Conservancy, January 2011.
 - ◊ Guide for the Development of Bicycle Facilities, American Association of State Highway and Transportation Officials (AASHTO), 2012, 4th Edition.
 - ◊ Manual on Uniform Traffic Control Devices, 2009 MUTCD with Revisions 1 & 2, May 2012; PART 9, Traffic Control for Bicycle Facilities.
 - ◊ Maryland Manual on Uniform Traffic Control Devices (MdMUTCD), 2011.
 - ◊ Bicycle Policy and Design Guidelines, Maryland State Highway Administration, Revised, January 2015

Utilities

- The location of both the treadway and the entire Limit of Disturbance (LOD) must take into consideration all underground and above ground utilities. Locating pavements on top of certain utilities may not be permitted. If permitted, access covers and/or vaults needs

to be designed and constructed without causing a tripping or slipping hazard for trail users. Meeting vertical clearances or horizontal offsets requirements may be necessary. Adjustments to guy wires that support utility poles are often required.

Design Exceptions and Waivers

Where minimum standards cannot be achieved, DPR staff will consider waivers, exceptions, or use of mitigation strategies. These situations may include, but are not limited to, the following:

- At street corners and other locations where paths and path users must make sharp turns, provide increased path width.
- At locations where geometric compromises are required ensure that sight distances are met, widen the path if possible, and/or provide appropriate warning signs.
- In locations such as underpasses adjacent to major rivers, railings may be needed within the standard 2-3 foot clear zone on the edge of a path.
- Where fixed objects cannot be moved, such as utility poles, bridge piers or abutments, etc. path widths can be narrowed for short distances and offsets from the edge of pavement can be reduced to 1 foot. Warning signs, hazard striping and retro-reflective material on the object must be used to alert path users of less than standard conditions.

High Value Optional Amenities

- Access to safe drinking water and bathrooms or portable toilets are two amenities that are highly desirable by the public, but not always feasible or affordable to provide along paths and trails on a frequent basis. While these features should be considered by each trail project, proximity to existing water and sewer services will be the primary limiting factor.
- Portable toilets are provided in Department of Parks and Recreation parks on an as needed basis, and can be provided along trails at appropriate locations.

Crime Prevention Through Environmental Design (CPTED)

- Sight distances, visibility, types of plantings, and other features are key to ensuring that CPTED guidelines are used throughout the design process.
- Moreover, emergency vehicle access is also a key factor for ensuring adequate public safety.
- Security Cameras: while it is not standard to place security cameras on Department of Parks and Recreation paths and trails, Park Police do manage a network of security cameras on select segments of some paths and trails. Based on the crime history of the trail, or areas where a new path or trail is located in a challenging neighborhood, Department of Parks and Recreation staff may request inclusion of cameras along specific trail segments.
- Special Emergency Call Phones (Blue Phones). Department of Parks and Recreation manages a very limited amount of this type of security equipment and does not expect to expand its use along the Department of Parks and Recreation path and trail network.

Emergency and Maintenance Access

- For all classifications of paved paths and trails, it is important to ensure that the design process includes features that make emergency and maintenance vehicle access relatively convenient. This includes pavement widths and depths that support such motor vehicles, or a firmer gravel and soil mix for shoulders, driveways, key access to bollard or gate locks, and bridges and boardwalks wide enough and strong enough to support motor vehicles. Where design limitations prevent access for typical emergency vehicles the managing agency must provide access to smaller vehicles that can provide these support services.

D. DESIGN GUIDELINES AND REQUIREMENTS FOR SHARED USE PATHS

Primary Shared Use Paths compose a countywide, connected network of premier off-road, paved, bicycle and pedestrian travelways. They are intended to serve both recreation and active transportation functions, providing high levels of safety as well as the comfort and enjoyment provided by a greenway setting away from motor vehicle traffic.

Secondary Shared Use Paths are paved bicycling and walking that supplement the Primary Path Network in one of three ways:

1. Spur paths that connect the Primary Path Network to residential neighborhoods and commercial districts;
2. Public path networks within suburban residential communities or those owned and managed by municipalities or other entities; and
3. Off-road sidepaths built adjacent to arterial and collector roadways, primarily to provide a bicycle and pedestrian transportation option in that roadway corridor (the recreational greenway experience not being a primary objective).

Secondary Shared Use Paths generally follow the same technical standards as Primary Shared Use Paths, with some key differences, including width, durability and geometry, because they typically serve shorter trips, support smaller user volumes, and do not need to accommodate bicyclists traveling at higher speeds.

This section includes three extensive tables which address the following aspects of both Primary and Secondary Shared Use Paths: Planning Considerations, Technical Design Criteria, and Design of Supplemental and Alternative Features. The tables are structured to show how Primary Paths and Secondary Paths vary, as well as how they are similar. The design topics addressed in the Technical Criteria table include a number of topics that readers may have noted were not addressed in the set of General Design Considerations discussed in the previous section. This includes lighting, signage, plantings, trailheads, waysides and many other important topics.

TABLE IV-1.3: PLANNING CONSIDERATIONS

	Shared Use Path Classification	
	Primary	Secondary
Users Accommodated	Bicyclists, Pedestrians, Runners, Skaters, Select Personal Electric Devices (PED); people of all abilities from 8 months to 80.	Bicyclists, Pedestrians, Runners, Skaters, Select Personal Electric Devices ; people of all abilities from 8 months to 80.
Typical Setting	Linear parks, stream valleys, rail corridors, power line corridors or along major roads where ROW width can provide a park-like setting.	Along roadways, providing connectivity to Primary Shared Use Paths from surrounding communities located within mixed use and residential developments or neighborhood parks.
Experience	Broad range of active recreation and transportation experiences.	Non-motorized access to jobs, school and other destinations for daily living. Close to home access to the Primary Shared Use Path Network or neighborhood paths that provide access to outdoor recreation.
Relationship to Other Paths in the Prince George's County Network	Provides routes for nationally-designated, long-distance trails, connects to neighboring jurisdictions, supports the regionally designated network (by the Capital Trails Coalition and Washington Council of Governments), and provides key links across major barriers.	Spurs link neighborhoods to Primary Network. Sidepaths supplement the countywide network and may connect with the Primary Network, thus extending its reach. Neighborhood path networks provide close to home recreation and local connectivity, and may connect to the larger networks.
Alignment relative to existing and future elements of the built-community	High priority to provide direct and convenient linkages between community centers, major parks, and higher density residential and commercial areas within 1/2 mile.	Alignments are selected in four ways: 1. To improve connectivity to the Primary Network. 2. To build-out a low stress bicycle and pedestrian network that broadens access and connectivity in disconnected suburban development patterns and provide connectivity to currently underserved communities. 3. To reduce demand for school bussing by enlarging the safe walk zones of schools. 4. To enhance quality of life and property values at the neighborhood level.
Planning Source	Master Plan of Transportation; Strategic Trails Plan; Sector Plans, Park Master Plans; Other special plans.	Master Plan of Transportation; Strategic Trails Plan; Sector Plans, Municipal plans and Developer plans.
Hours of Operation	5:30 am to midnight for through cyclists, unless otherwise posted. If lighted, pedestrian use may extend beyond dawn to dusk. Department of Parks and Recreation staff will determine.	Varies depending on managing agency and relationship to public space, public transit services, the Primary Network, and overall setting.

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Part of Regional Trail Network (Capital Trail Coalition)	Yes	As needed for network connectivity and elimination of gaps.
	Primary	Secondary
Part of a Nationally Designated Trail Designation	Consider if the trail is associated with national or regional designation.	No, unless needed for continuity and closing critical gaps.
Path/Trail Name	Yes, all Primary Network paths have a formal name.	Secondary Shared Use Paths are unlikely to have a formal name.
Published Map/ Marketing Brochure	Yes, most completed Primary Network paths have a published map and marketing brochure. Consult the Department of Parks and Recreation Trails webpage for .pdf and publisher information.	Secondary Shared Use Paths will be shown on published maps.
Maintenance and Management Agency	Typically, Department of Parks and Recreation or Municipality	Varies: Department of Parks and Recreation, DPW&T, SHA, Municipality, HOA, Public Institution

TABLE IV-1.4 TECHNICAL DESIGN CRITERIA

	Shared Use Path Classification	
	Primary	Secondary
Surface Type	Asphalt or concrete; flexible pavements, boardwalks; perhaps crushed stone	Asphalt or concrete; flexible pavements, boardwalks, perhaps crushed stone
Width	- Standard: 10 feet; 11 feet in high use areas. - Use the FHWA Shared Use Path Level of Service Calculator to justify minimum 8-foot widths, or wider 12-14-foot pavements. - On bridges and boardwalks that serve paved pathways, AASHTO recommends providing 4 feet of additional width to the width of the approaching pavement.. DPR recommends a minimum of 2 additional feet.	- Sidepaths: Standard is 10 feet; 11 feet in high use areas, 8 feet if justified by desired LOS. - Spur Paths to Primary Network paths: Standard is 8 feet. Department of Parks and Recreation staff may recommend 9-11 feet, depending on desired LOS, or 6-7 feet based on length and low levels of expected use. - Secondary Path Networks: Standard is 8 feet. In residential or mixed use communities/developments or town centers it may vary between 6-12 feet depending on development density of the areas served, their role in the local path network, and the extent that sidewalks and on-road bicycling accommodations are provided. - Bridge and Boardwalk width: At a minimum, provide an additional 2 feet of width. AASHTO recommends an additional 4 feet of width to carry the clear shoulders across the bridge.

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	Primary	Secondary
Corridor Width	If along a road, 28 feet or greater. Away from roads 25 feet or greater	- If along a road, 18 feet minimum (19-20 feet preferred) Section: 5 feet buffer to roadway, 10 feet paved treadway, 3 feet shoulder. - In other settings, Department of Parks and Recreation staff will make recommendations. Recommendations will vary depending on the nature of adjacent activity or built features. Generally, 3 feet of clear shoulder is recommended on each side of the paved treadway.
Maintenance vehicle access and support	The pavement width and cross section should be sufficient to support typical trail maintenance vehicles. If heavy vehicles related to access needs of WSSC or other utilities is expected, pavement specifications may need to be adjusted to prevent trail damage.	The pavement width and cross section should be sufficient to support typical trail maintenance vehicles. If heavy vehicles related to access needs of WSSC or other utilities is expected pavement specifications may need to be adjusted to prevent trail damage.
Length	1 to 20 linear miles	0.1 to 5 linear miles
Shoulder and Buffer Width	Adjacent to roadway: minimum total: 18 feet Non-roadway settings: Minimum 15 feet total.	Adjacent to roadway: minimum total: 8 feet (5 feet + 3 feet) Non-roadway settings: Minimum 6 feet total.
Vertical Clearance	Minimum 12 feet, 12-14 feet preferred.	Minimum 9 feet, 10-14 feet preferred. Where newly constructed roadway bridges are built over existing or planned trails, 12-14 feet of vertical clearance should be provided for the trail. The same applies for newly constructed trail tunnels and underpasses.
Horizontal Clearance	Minimum 3 feet shoulder clearance to nearest fixed object.	Minimum 3 feet shoulder clearance to nearest vertical impediment. It can be reduced to 1 foot where speeds are slow and hazard signs and striping are provided.
Fencing and Railings	In general, fencing should be used where needed to prevent trail users from crashing into a dangerous area if they swerve or steer off the path. Dangerous areas may be a steep slope or ravine, a stream, large boulders, a medium to high speed roadway, a culvert, etc. Fences should be 4-5 feet in height and placed 3 feet or more off the edge of the trail. Refer to Section V: Construction Details for more information. In locations where there are long runs of fencing (~100+ feet), and a fence or other barrier on the opposite side of the trail, provide small breaks in the fencing (3-4 feet in width) so that trail users are not trapped, should an emergency arise.	In general, fencing should be used where trail side recovery areas are less than 5 feet, to prevent trail users from crashing into a dangerous area if they swerve or steer off the path. Dangerous areas may be a steep slope or ravine, a stream, large boulders, a medium to high speed roadway, a culvert, etc. Along sidepaths, fences may be used in locations where the buffer distance to the road is less than 5 feet. Fences should be 4-5 feet in height and placed 3 feet or more off the edge of the trail. Refer to Section VI for design features. In locations where there are long runs of fencing (~100+ feet), and a fence or other barrier on the opposite side of the trail, provide small breaks in the fencing (3-4 feet in width) so that trail users are not trapped, should an emergency arise.

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	Primary	Secondary
Plantings	- Turf, trees, raingarden vegetation and other plantings can be considered based on the trailside context and level of effort available for maintenance. - In situations other than buffers between the path edge and a curb, trees should not be planted closer than 10 feet from the edge of pavement; 15-20 feet is preferred, depending upon the species. - Tree species planted in buffers of 5-10 feet in width should be selected for small root zone areas and pruned to ensure that branches do not become a low hanging hazard for trail users. - It is important to provide shade along the trail. The type of tree selection should take into account its distance from the trail and the spread of the canopy in addition to other requirements according to the Landscape Design Manual.	- Turf, trees, raingarden vegetation and other plantings can be considered based on the trailside context and level of effort available for maintenance. - In situations other than buffers between the Path edge and a curb, trees should not be planted closer than 15 feet from the edge of pavement; 20 feet is the standard offset from the edge of the pavement, depending upon the species. - Tree species planted in buffers of 5-10 feet in width should be selected for small root zone areas and pruned to ensure that branches do not become a low hanging hazard for trail users. - It is important to provide shade along the trail. The type of tree selection should take into account its distance from the trail and the spread of the canopy in addition to other requirements according to the Landscape Design Manual.
Grade	In general, grades should not exceed a running grade of 5% and a cross slope of 2%. Where steeper grades are unavoidable, justification can be documented for using recreational trail guidance as follows: --8.3% for distances up to 200' --10% for distances up to 30' --12.5% for distances up to 10' --Multiple "steeper" segments can be sequential if landings (resting intervals) of level surface are provided at the beginning and end of each segment.	In general, grades should not exceed a running grade of 5% and a cross slope of 2%. A Sidepath adjacent to a roadway should follow the grade of the road and thus may exceed 5%. Whether along a roadway or in a non-roadway setting, Secondary Shared Use Paths can enhance accessibility by using recreational trail ADA guidance, as follows: --8.3% for distances of up to 200 feet --10% for distances up to 30 feet --12.5% for distances up to 10 feet --Multiple "steeper" segments can be sequential if landings (resting intervals) of level surface are provided at the beginning and end of each segment. See Accessibility Standards for Federal Outdoor Developed Areas, 2014.
Stopping and Sight Distance, Design Speeds, Geometry and Alignments	Standards for Federal Outdoor Developed Areas, 2014. - Design Speed: 12 to 20 mph - Minimum curve radius: 27 feet to 74 feet depending on design speed. - Stopping Sight Distance: See AASHTO. The AASHTO Guide for the Development of Bicycle Facilities provides standards, guidelines and methods of calculation for each of these important geometric considerations.	See AASHTO Guide for the Development of Bicycle Facilities for standards, guidelines and methods of calculation. These guidelines are most important for Sidepaths along major roadways. Per Department of Parks and Recreation staff approval, lower standards are likely to be acceptable on Spur Paths, and residential path networks with expected low volumes of cyclists.
Signs: Operations, Regulatory and Warning	Use MUTCD Chapter Nine	Use MUTCD Chapter Nine

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	Primary	Secondary
Striping	Centerline striping is required, per the AASHTO Guide for development of Bicycle Facilities. Department of Parks and Recreation staff will determine if white edgeline striping is required.	On sidepaths along roadways centerline striping is highly recommended, per the AASHTO Guide for development of Bicycle Facilities. Department of Parks and Recreation staff will determine if white edgeline striping is required. Along Spur Paths and Neighborhood Path Networks, striping is not required but may be useful at spot locations.
Wayfinding Signs	Wayfinding signs are required per Department of Parks and Recreation staff recommendation, either MUTCD style or Department of Parks and Recreation's new Primary Network standard.	Wayfinding signs are required per Department of Parks and Recreation staff recommendation, either MUTCD style or Department of Parks and Recreation's new Primary Network standard for Spurs Paths along the Primary Network.
Motor Vehicle Access Controls	• Use of wood or metal bollards is discouraged. • Where they are necessary or recommended by Department of Parks and Recreation staff, they must be provided in threes and have 5 feet 6 inches between them. They should be lockable and movable to enable fast police, maintenance and emergency vehicle access. • Pipe railings are recommended to block larger lawn areas. • Flexible bollards with flags are preferred in some locations, or P-Gates. • Yellow color with generous portions of retro-reflective material should be used to maximize visibility in low light. • Standard hazard striping should be included (See AASHTO). • In most cases, the standard sign NO UNAUTHORIZED VEHICLES ALLOWED should be used. • Note: Most standard at-grade road crossings with curb and gutter do not need bollards to prevent motor vehicle access. If problems are anticipated, striping and marking for the trail, or separating direction of path travel with a splitter island on the approach to the curb ramp should be considered. Refer to Section V: Construction Details for more information.	• Use of wood or metal bollards is discouraged. • Where they are necessary or recommended by Department of Parks and Recreation staff, they must be provided in threes and have 5 feet 6 inches between them. They should be lockable and movable to enable fast police, maintenance and emergency vehicle access. • Pipe railings, plantings or boulders can be used to block larger lawn areas. • Flexible bollards with flags are preferred in some locations, or P-Gates. Refer to Section VI for design features. • Yellow color with generous portions of retro-reflective material should be used to maximize visibility in low light. • Standard hazard striping should be included (See AASHTO). • In most cases, the standard sign NO UNAUTHORIZED VEHICLES ALLOWED should be used. • Note: Most standard at-grade road crossings with curb and gutter do not need bollards to prevent motor vehicle access. If problems are expected, striping and marking for the trail, or separating direction of path travel with a splitter island on the approach to the curb ramp, should be considered. Refer to Section V: Construction Details for more information.

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	Primary	Secondary
Waysides	A minimum wayside (trailside bench on a hard surface pad) is recommended at least every 1/2 mile, with a multi-service wayside or trailhead provided every 1.5-2 miles, depending on the setting, rural, suburban or urban and availability of other “rest” areas along the corridor (existing parks or commercial areas). Refer to Section V: Construction Details for more information and example.	On Sidepaths: A minimum wayside (trailside bench on a hard surface pad) is recommended every mile, with a multi-service wayside or trailhead provided every 2-3 miles. Waysides are not typically applicable to Spur Paths, unless the purpose of the Spur is to link to a Wayside or Trailhead. Trailside benches and trash cans may be recommended at more frequent locations along path networks in residential and mixed use neighborhoods or town centers. Coordinate with Planning Department Urban Design Standards. Refer to Section V: Construction Details for more information and example.
Connecting Trails and Sidewalks	Existing, proposed or planned connecting trails or sidewalks shall be designed as per the recommendations of the Department of Parks and Recreation staff. Refer to Section V: Construction Details for more information and example.	Existing, proposed or planned connecting trails or sidewalks shall be designed as per the recommendations of the Department of Parks and Recreation staff. Refer to Section V: Construction Details for more information and example.
Determining Right of Way at intersections with cross traffic	Department of Parks and Recreation Staff will provide guidance regarding who has the Right of Way at intersections or crossings. Typically, on small residential streets motorists will be required to stop or yield. Four-way stops are recommended where warranted and safety is a major concern. The path always has Right of Way over driveways.	Department of Parks and Recreation Staff will provide guidance regarding who has ROW at intersections or crossings. Typically, on small residential streets motorists will be required to stop or yield. Four-way stops can be used where warranted and safety is a major concern. The path always has ROW over driveways.
Crosswalks	Department of Parks and Recreation requires use of High Visibility Crosswalks at all Shared Use Path crossings of roadways. This includes the Ladder pattern, cross-hatch Ladder, or Continental. See Maryland MUTCD for details. Refer to Section V: Construction Details for more information and example.	Use the version of MUTCD high visibility crosswalk that is acceptable to the road agency/owner. Refer to Section V: Construction Details for more information and example.
At-Grade Street Crossings	At street crossings provide space for trail users to cue. High Visibility Crosswalks are required per MD MUTCD. Median refuges are preferred. Department of Parks and Recreation requests for high quality safety features may include motor vehicle speed limit reduction, traffic calming adjustments, rapid flash beacon signals, HAWK signals or full signalization. Refer to Section V: Construction Details for more information and example.	At street crossings provide space for trail users to cue. High quality crossing design is required, per recommendations of Department of Parks and Recreation Staff. Median refuges are preferred. Department of Parks and Recreation requests for high quality safety features may include motor vehicle speed limit reduction, traffic calming adjustments, rapid flash beacon signals, HAWK signals or full signalization. Refer to Section V: Construction Details for more information and example.
Driveway Crossings	Driveway crossings should provide STOP signs for exiting motor vehicles & STOP BARS; or yield signs and yield pavement markings per the MD MUTCD. Green painted driveway crossings may also be used.	Driveway crossings should provide STOP signs for exiting motor vehicles & STOP BARS; or yield signs and yield pavement markings per the MD MUTCD. Green painted driveway crossings may also be used.

TABLE IV-1.5: SUPPLEMENTS AND ALTERNATIVES

	Shared Use Path Classification	
	Primary	Secondary
Trailheads with Parking	On Primary Shared Use Paths that will attract high levels of recreational use, and may even function as a regional destination trail, formal trailheads with parking will need to be provided approximately every 5 miles. However, adjacent land uses and land acquisition opportunities will play a major role in the provision and siting of trailheads. Refer to Section VI for design features.	Trailheads are optional on Secondary Shared Use Paths. However, they should be considered in large developments where local shared use path networks are included as a component of the whole development. Refer to Section V: Construction Details for more information and example.
Lighting	See Department of Parks and Recreation Lighting Policy. Generally, lighting is considered only in areas that have close proximity to high volume transit services, or areas where pedestrian and bicycle trip generators indicate significant levels of dark time usage. Along roadways, lighting may be requested by Department of Parks and Recreation depending on the nature of adjacent land uses and adequacy of standard roadway lighting.	See Department of Parks and Recreation Lighting Policy. Generally, lighting is considered only in areas that have close proximity to high volume transit services, or areas where pedestrian and bicycle trip generators generate significant levels of dark time usage. Along roadways, lighting may be recommended by Department of Parks and Recreation depending on the nature of adjacent land uses and adequacy of standard roadway lighting.
Public Art	Public Art is encouraged along Primary Shared Use Paths. Department of Parks and Recreation staff can advise regarding government-related and non-profit public art promotion agencies, including Department of Parks and Recreation. Staff can also advise regarding space requirements, trail offsets, appropriate trail settings, maintenance agreements, etc.	Consideration of Public Art is encouraged along Secondary Shared Use Paths. Department of Parks and Recreation staff can advise regarding government-related and non-profit public art promotion agencies, including Department of Parks and Recreation. Staff can also advise regarding space requirements, trail offsets, appropriate trail settings, maintenance agreements, etc.
Grade Separated Crossings	Required for limited access highways and high speed, multi-lane arterials. Also for mainline RR crossings and rivers.	Recommended for crossing limited access highways and high speed, multi-lane arterials. However, grade separations for Sidepaths along major arterials may not be feasible, or a prudent public expenditure. High quality at-grade crossings are required using best practices for bicycle and pedestrian safety.
Separation of Path Users	Generally, path user volumes are not high enough to warrant separation of bicycle and pedestrian users, however it may be considered, or recommended, for short segments of path near passenger rail stations, through high density mixed-use developments or in town/activity centers where future levels of bicycling and walking is highly encouraged.	Generally, path user volumes are not high enough to warrant separation of bicycle and pedestrian users, however it may be considered or recommended for short segments of path near passenger rail stations, through high density mixed-use developments or in town/activity centers where future levels of bicycling and walking is highly encouraged.

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	Primary	Secondary
Protected Bike Lanes and Sidewalks	Protected Bike Lanes and Sidewalks, or Protected Shared Use Paths can and should be considered as acceptable designs for the Primary Network in areas such as high-density commercial or mixed-use development, in town centers or activity centers, or along major arterial roadways where existing development makes a linear park corridor infeasible. Sidewalks should always accompany two-way protected bike lanes that are provided to provide shared use path continuity.	Protected Bike Lanes and Sidewalks, or Protected Shared Use Paths can and should be considered as acceptable designs for the Secondary Network in areas such as high-density commercial or mixed-use development, in town centers or activity centers, or along major arterial roadways where existing development makes this the best design choice. Sidewalks should always accompany two-way protected bike lanes that are provided to provide shared use path continuity.
Protected Shared Use Paths	Protected Shared Use Paths can and should be considered as acceptable designs for the Primary Network in areas such as high-density commercial or mixed-use development, in town centers or activity centers, or along major arterial roadways where existing development makes a linear park corridor infeasible. Protected Shared Use Paths built in the roadway should provide sufficient path width and effective, appropriate and visually appealing types of protection from adjacent motor vehicles, relative to their travel speeds.	Protected Shared Use Paths can and should be considered as acceptable designs for the Primary Network in areas such as high-density commercial or mixed-use development, in town centers or activity centers, or along major arterial roadways where existing development makes a linear park corridor infeasible. Protected Shared Use Paths built in the roadway should provide sufficient path width and appropriate and visually appealing types of protection relative to motor vehicle travel speeds.
Shared Roadways	In low-density residential or rural areas, or on small roadways with low motor vehicle volumes and speeds, the Primary Network can include routing trail users on minor roads for short distances. Per recommendations by Department of Parks and Recreation, various minimal interventions/treatments can be used to increase safety and promote respect among all trail and road users sharing the same pavement. A similar approach can be undertaken for Department of Parks and Recreation park roads.	In low-density residential or rural areas, or on small roadways with low motor vehicle volumes and speeds, the Secondary Network can include routing trail users on minor roads for short distances. Per recommendations by Department of Parks and Recreation, various minimal interventions/treatments can be used to increase safety and promote respect among all trail and road users sharing the same pavement. A similar approach can be undertaken for Department of Parks and Recreation park roads.

SHARED ROADWAY EXAMPLES:

Credit is owned by M-NCPPC



Credit is owned by M-NCPPC

SHARED USE PATH: SUPPLEMENTAL GUIDANCE

REFERENCES FOR NATIONAL AND LOCAL STANDARDS

National

Accessibility: US Access Board Documents

- A Summary of Accessibility Standards for Federal Outdoor Developed Areas, United States Access Board (USAB).
- (Proposed) Shared Use Paths: Accessibility Guidelines for Pedestrian Facilities in Public Right-of-Way.
 - a. Federal Register, Vol. 78, No. 30, (Proposed Rules).
- Detectable Warnings, USAB.
- Accessible Routes, USAB.
- Accessible Public Rights of Way: Planning and Designing for Alterations, USAB.

Shared Use Paths

- Guide for the Development of Bicycle Facilities, American Association of State Highway and Transportation Officials (AASHTO, 2021, Fourth Addition).
- Manual on Uniform Traffic Control Devices, 2009 MUTCD with Revisions 1-3, May 2012; PART 9, Traffic Control for Bicycle Facilities.
- Maryland Manual on Uniform Traffic Control Devices (MdMUTCD, 2011 with Revisions).
- Bicycle Policy and Design Guidelines, Maryland State Highway Administration.
- International Crime Prevention Through Environmental Design Association (<https://www.cpted.net/>)
- Prince George's County Landscape Manual (Prince George's County, 2018)

Local

Accessibility

- Countywide Master Plan of Transportation, M-NCPPC (Expected in 2023-2024), Chapter IV: Trails, Bikeways, and Pedestrian Mobility; M-NCPPC
- Formula 2040: Functional Master Plan for Parks, Recreation and Open Space, 2013, M-NCPPC
- Strategic Trails Plan, Department of Parks and Recreation, Prince George's County, Maryland; M-NCPPC 2018.

E. DESIGN GUIDELINES AND REQUIREMENTS FOR RECREATION PATHS AND TRAILS AND PEDESTRIAN CIRCULATION PATHS IN M-NCPPC PARKS

Recreation paths are intended for recreational uses and generally do not serve a transportation function.

In Prince George's County, recreation Paths and Trails are developed primarily in Department of Parks and Recreation regional parks and on Department of Parks and Recreation conservation lands, especially along the Patuxent River. National Park Service parks and state DNR parks and conservations areas also feature networks of natural surface trails.

Classifications:

Recreation Paths—Paved loops and linear path segments in Parks. These paths function as close to home locations for outdoor exercise; walking, jogging, low stress biking, etc. As of 2022, the Department of Parks and Recreation has 60 of these loop trails in the park system. They are also common in other settings such as education campuses, employment centers, retirement communities, and municipal, state or federal parks.

Recreation Trails—Natural Surface: These trails are designed for recreation activities and do not provide a travel route that is useful for commuting or utilitarian transportation. Recreation activities include hiking, mountain biking, horseback riding, bird watching, fishing access, and just being outdoors and in nature. Frequently they are designed as a network of loops that traverse beautiful and special forests, wetlands, or hilly landscapes.

Circulation Paths and Sidewalks: These travelways are usually hard surface; concrete and/or asphalt. These facilities provide safe, accessible and all-weather pedestrian circulation among a variety of activity areas

within a park, or park facility site. In small Neighborhood or Community parks, they may connect the park to sidewalks along streets or cul de sacs in the surrounding neighborhoods, where they may also be used by children, youths and others on bicycles, as means of access to the park.

TABLE IV-1.6 PLANNING FRAMEWORK

	PATH AND TRAIL CLASSIFICATIONS		
	Recreation Paths—Paved Loops	Recreation Trails—Natural Surface	Circulation Paths and Sidewalks
Users Accommodated	Primarily walkers, joggers, and children learning to ride a bike. Larger loops provide safe biking areas for novice cyclists.	Walkers, hikers, mountain bicyclists, equestrians, birdwatchers, anglers, naturalists, photographers, etc.	Primarily pedestrians, including those using assistive devices. Respectful bicycle riding may be allowed.
Typical Setting	Within Department of Parks and Recreation regional, community and neighborhood parks.	Within Department of Parks and Recreation regional parks, and large natural area parks, especially along the Patuxent River. Also, in large parks and natural areas managed by conservation organizations or State or Federal agencies.	In Neighborhood, Community and Regional Parks and at Community Centers and other M-NCPPC facilities.
Experience	Exercise, health and fitness; socialization and community bonding.	Being in the outdoors, quiet, exercise, sports challenge, separation from the built environment.	Easy access between facilities and activity areas.
Relationship to Other Paths in the Prince George's County Network	Sometimes stand-alone facilities, but may be connected to circulation paths within the same park.	Typically laid out as connected trail networks within a defined natural area, and connected to other trails in that park.	May provide linkages to any of the other classes of paths and trails.
Alignment relative to existing and future elements of the built community	Typically not connected directly to surrounding community, but close by and accessible through existing park entrances.	Typically isolated from the built community or neighboring rural portions of the County.	These paths and sidewalks may be either isolated from the surrounding community or fully integrated with the adjacent community.
Planning Source	Internal Department of Parks and Recreation, Community Requests	Strategic Trails Plan, Internal Department of Parks and Recreation	Facility Site Plans, Regional Park Master Plans
Hours of Operation	Dawn to Dusk	Dawn to Dusk; subject to park closures or special limitations.	Varies by location; typically same hours as associated facility.

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Table IV-1.6 Continued From Previous Page

	Recreation Paths—Paved Loops	Recreation Trails—Natural Surface	Circulation Paths and Sidewalks
Part of Regional Trail Network (Capital Trail Coalition)	NO	NO	NO
Part of a Nationally Designated Trail	NO	NO	NO
Path/Trail Name	Named for Park in which its located.	System Name and individual trail names, or color codes.	NO (but can vary)
Published Map/ Marketing Brochure	YES	YES	Can vary
Maintenance and Management Agency	Department of Parks and Recreation, HOA, Municipality	Department of Parks and Recreation, MD DNR, NPS, Municipality, other federal or state agency.	Department of Parks and Recreation, Municipality

TABLE IV-1.7 TECHNICAL DESIGN CRITERIA

	PATH AND TRAIL CLASSIFICATION		
	Recreation Paths—Paved Loops	Recreation Trails—Natural Surface	Circulation Paths and Sidewalks
Surface Type	Asphalt, boardwalks, crushed stone, flexi-pave or stone dust may also be acceptable	Dirt, dirt/gravel mix, turf, wood chips, crushed stone.	Asphalt or concrete; boardwalk; Brick, special pavers, crushed stone, or stone dust may also be acceptable
Tread Width	Standard is 8 feet; 10-12 feet is recommended at high use locations.	Minimum 3 feet for single track hike and bike, 5-8 feet for equestrian.	5 feet minimum; can vary 6-12+ feet as determined by Department of Parks and Recreation staff.
Corridor Width	Typically 15-20 feet	5 to 50+ feet	N/A
Maintenance vehicle access and support	Heavy Department of Parks and Recreation maintenance vehicles should limit use. Pick-up trucks and mowers ok.	Trails should generally support gators and 4-wheel ATV access.	Heavy Department of Parks and Recreation maintenance vehicles should limit use. Pick up trucks and mowers ok.
Length	Varies	Varies	50 feet to 1300 feet
Shoulders and Buffers Width	Typical total: 10 feet	N/A	8 feet
Vertical Clearance	10 feet	8-10 feet; trails that accomodate equestrian should have vertical clearance of 12-14 feet.	10 feet
Horizontal Clearance	Minimum 3 feet, 5 feet preferred.	Minimum 3 feet, 5 feet preferred.	Minimize obstructions.

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Table IV - 1.7 Continued From Previous Page

	Recreation Paths—Paved Loops	Recreation Trails—Natural Surface	Circulation Paths and Sidewalks
Plantings	Turf, trees, raingarden vegetation. In situations other than buffers between the Path edge and a curb, trees should not be planted closer than 10 to 15 feet from the edge of pavement; 20 feet is the standard offset from the edge of pavement, depending upon the species. Tree species planted in buffers of 5-10 feet in width should be selected for small root zone areas and pruned to ensure that branches do not become a low hanging hazard for trail users.	Reforestation, native plants appropriate to setting. Plantings should favor species with increase in height and density away from the trails.	Per Department of Parks and Recreation staff requirements
Grades (ADA)	Generally, running slopes should be very gentle. Grades should not exceed a running slope of 5% and a cross slope of 2%.	?	Follow national guidelines for outdoor recreation
Stopping and Sight Distance, Design Speeds, Geometry and Alignments	N/A	N/A	N/A
Relationship to Roadways & Crossing Accommodations	N/A	N/A	Minimum: Standard at-grade crossing treatments using high visibility crosswalks and trail width curb ramps.
Signs: Operations, Regulatory and Warning	N/A	NHRD to provide.	Per Department of Parks and Recreation staff requirements.
Striping	N/A	N/A	N/A
Wayfinding Signs	Department of Parks and Recreation to provide branding and health information signs.	Use NHRD standards for trail blazing and wayfinding	Department of Parks and Recreation to provide.
Motor Vehicle Access Controls	If needed, Department of Parks and Recreation will provide.	If needed, Department of Parks and Recreation will provide.	If needed, Department of Parks and Recreation will provide.
Crosswalks	High-Visibility Ladder	High-Visibility Ladder	High-Visibility Ladder

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Table IV - 1.7 Continued From Previous Page

	Recreation Paths—Paved Loops	Recreation Trails—Natural Surface	Circulation Paths and Sidewalks
Waysides	Ideally provide a bench and concrete pad every 100-200 feet. Confirm final bench locations with Department of Parks and Recreation Staff.	MPS Guidelines	Per Department of Parks and Recreation staff recommendation.
Connecting Trails and Sidewalks	Per Department of Parks and Recreation Staff recommendation.	Per Department of Parks and Recreation Staff recommendation.	Per Department of Parks and Recreation Staff recommendation.
Determining Right of Way at intersections with cross traffic	Determine Right of Way at intersections with cross traffic. Department of Parks and Recreation staff will recommend.	Determine Right of Way at intersections with cross traffic. Department of Parks and Recreation staff will recommend.	Determine Right of Way at intersections with cross traffic. Department of Parks and Recreation staff will recommend.
At-Grade Street Crossings	Per Department of Parks and Recreation staff recommendation.	Per Department of Parks and Recreation staff recommendation.	Per Department of Parks and Recreation staff recommendation.

TABLE IV-1.8: SUPPLEMENTS AND ALTERNATIVES

PATH AND TRAIL CLASSIFICATION			
	Recreation Paved Loop Trails	Recreation Natural Surface Trails	Circulation Paths and Sidewalks
Trailheads with Parking	The park setting serves as a trailhead. Typical provisions may include: motor vehicle parking, trail identity signage, park information, health and fitness information water, restrooms, benches, picnic tables, trash cans, etc.	Horse trailer accommodation at select sites	N/A
Lighting	NO, not typical.	NO	Varies depending on hours of operation.
Public Art	Not Typical.	Not Typical.	In select locations.
Grade Separated Crossings	N/A	NO	N/A
Separation of Path Users	Not Typical.	Not Typical.	NO
Protected Bike Lanes and Sidewalks	N/A	N/A	N/A
Protected Shared Use Paths	N/A	N/A	N/A
Shared Roadways	Sharing with Park Roads may be recommended. Signage and striping will be required, per Department of Parks and Recreation Staff recommendation.	Sharing with Park Roads may be recommended. Safety treatments per NHRD.	Sharing with Park Roads may be recommended. Signage and striping will be required, per Department of Parks and Recreation Staff recommendation.

REFERENCE STANDARDS

- US Access Board
- US Forest Service Design Manual: Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds
- Maryland Park Service Natural Surface Trail Specifications Matrix

M-NCPPC STANDARDS

- Approved Countywide Masterplan of Transportation Planning, Chapter IV: Trails, Bikeways, and Pedestrian Mobility, 2009; M-NCPPC
- Strategic Trails Plan, Department of Parks and Recreation, Prince George's County, Maryland, 2018; M-NCPPC

Refer to County DPW&T sidewalk standards, and state and local curb ramp standards and details.

TRAIL CONSTRUCTION

- Trail alignments should be staked in field prior to clearing and grading for approval by Parks staff.
- Alignments of trails should be field adjusted to maximize preservation of the natural environment.
- Invasive species management plan should be created at the time of design and updated regularly.
- Tree protection techniques should be utilized .
- Appropriate machinery should be utilized in environmentally sensitive areas to minimize disturbance.

As expected speeds of trail users increases, adjustments must be made to stopping and sight distances, and trail alignments and geometry. The AASHTO Bike Guide provides specific guidance.

REFERENCE STANDARDS

- Maryland Park Service Natural Surface Trail Specifications Matrix
- Guide for the Development of Bicycle Facilities, American Association of State Highway and Transportation Officials (AASHTO), 2012, 4th Edition.
- Manual on Uniform Traffic Control Devices, 2009 MUTCD with Revisions 1&2, May 2012; PART 9, Traffic Control for Bicycle Facilities.
- Bicycle Policy and Design Guidelines, Maryland State Highway Administration, Revised, January 2015

Provide maximum comfort for cyclists who are not sufficiently confident to mix with traffic on the roadway. They are more comfortable traveling a slower speeds and sharing a travel way with pedestrians.



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03 ATHLETIC RECREATION FACILITIES

MULTI-PURPOSE - RECTANGULAR FIELD

A. DESCRIPTION

Rectangular field to be used by all age groups for multiple sports. Typically left unmarked but can be striped to accommodate soccer, football, rugby, lacrosse, field hockey or dual youth soccer fields. Sited singularly or in conjunction with other facilities in a central location.

B. STANDARD FIELD DIMENSIONS

- Rugby: 348 feet X 223 feet; add 15 feet Run-off area on all sides.
- Lacrosse: 330 feet X 180 feet; add 15 feet Run-off area on all sides.
- Field Hockey: 300 feet X 180 feet; add 10 feet run-off area on all sides.
- Ultimate frisbee: 120 yards X 40 yards; add 4 yard Run-off area on all sides.

C. ORIENTATION

- Preferred North-South

C. SITE RESTRICTIONS

- Overhead utility lines and rights of way
- Utility manholes
- Easements (goal posts only)

D. DRAINAGE

- Provide positive drainage on rectangular fields with a longitudinal crown draining from the center of the field to each side
- Preferred slope is 1.25% to 1.50%
- The maximum allowable slope is 2.0%
- Fields with underdrainage can be sloped at 1% minimum.

E. REFERENCE STANDARDS

- U.S. Field Hockey Association (USFHA)
- Landscape Architect Graphic Standards (2007)
- National Collegiate Athletic Association (NCAA)
- National Federation of State High School Association, Court and Field Diagram Guide
- United States Soccer Federation (USSF)
- United States Association of Rugby

F. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- A-1.1 Soccer Fields
- A-3.1 Combination Football/Soccer Field
- A-2.1 Football Fields
- A-2.2 Football Goal
- A-10.1 Rectangular Field Drainage Patterns
- A-4.1 Rugby Field
- G-1.1 Bench
- G-2.1 Trash Receptacle

TABLE IV-2.1

LEVEL OF SERVICE			
	3	2	1
FIELD SIZE	100 feet x 200 feet	150 feet x 240 feet	225 feet x 480 feet
RUNOUT	15 feet	20 feet	30 feet
PARKING¹	Limited Parking Acceptable	Minimum 20	60
SEATING			
Number of users/ Seating area	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 80 Bleacher Seats (40 field users plus 1 spectator per person)	160 Bleacher Seats (40 field users plus 3 spectators per person)
Field Surface	Cool Season Turfgrass	Cool or Warm Season Turfgrass	Synthetic Turf w/ Infill ² or natural
SETBACKS			
Fields	30-50 feet Side by Side, 50-75 feet End to End	30-50 feet Side by Side, 50-75 feet End to End	30-50 feet Side by Side, 50-75 feet End to End
Parking/Road³	50 feet	50 feet	50 feet
Property Line	100 feet	100 feet	100 feet
EQUIPMENT	N/A	All LOS 3 Equipment Signage Fence/Netting Enclosure Storage Goal Posts with Capped Pipe Sleeves	All LOS 2 Equipment Underdrainage Piping Drinking Water Shade Structure Bleachers Irrigation Lighting Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. 70% EPDM rubber granules, 30% semi-rounded silica sand.

3. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source:
<https://parkrxamerica.org/m/1177/foxhill-park>

LEVEL OF SERVICE 2



Image source:
<https://barbadostoday.bb/2019/08/10/slb-u19-wins-first-friendly-match-in-washington-dc/>

LEVEL OF SERVICE 1



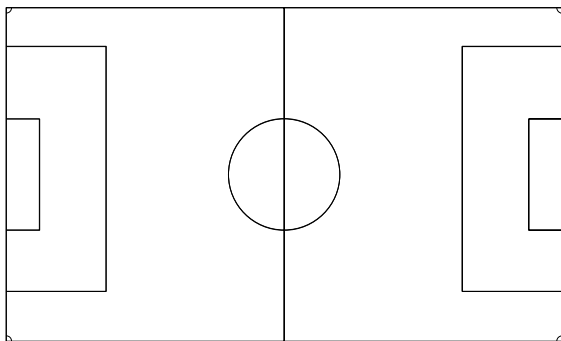
Credit is owned by M-NCPPC

SOCCER FIELD - RECTANGULAR FIELD

A. DESCRIPTION

Rectangular field with a goal centered on both ends, used for both recreation and competition. Markings within the field include a penalty area, kick-off spots in the corners and center, and a halfway line with a circle.

B. FIELD DIAGRAM



C. ORIENTATION

- North-South

D. SITE RESTRICTIONS

- Overhead utility lines and rights of way
- Utility manholes
- Easements (goal posts only)

E. DRAINAGE

- Provide positive drainage on rectangular fields with a longitudinal crown draining from the center of the field to each side
- Preferred slope is 1.25% to 1.50%
- The maximum allowable slope is 2.0%
- Fields with underdrainage can be sloped at 1% minimum.
- Comply with drainage patterns shown on Detail B-6.4

F. REFERENCE STANDARDS

- American Youth Soccer Organization (AYSO)
- National Collegiate Athletic Association (NCAA)
- Major League Soccer (MLS)
- United States Soccer Federation (USSF)

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- A-1.1 Soccer Fields
- A-10.1 Rectangular Field Drainage Patterns
- G-2.1 Trash Receptacle

TABLE IV-2.2

	LEVEL OF SERVICE		
	3	2	1
FIELD SIZE	75 feet x 150 feet	150 feet x 270 feet	260 feet x 330 feet
ALTERNATIVE USAGE	(2) at 65 feet x 75 feet	(2) at 125feet x 150feet	(2) at 155 feet x 210 feet
RUNOUT	5 feet	10 feet	30 feet
PARKING¹	Limited Parking Acceptable	20/60	60
SEATING			
Player	N/A	28 feet Bench / Team	28 feet Bench / Team
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 80 Bleacher Seats (40 field users plus 1 spectator per person)	160 Bleacher Seats (40 field users plus 3 spectators per person)
FIELD SURFACE	Cool Season Turfgrass	Cool or Warm Season Turfgrass	Synthetic Turf w/ Infill ² , or natural
SETBACKS			
Fields	30-50 feet Side by Side, 50-75 feet End to End	30-50 feet Side by Side, 50-75 feet End to End	30-50 feet Side by Side, 50-75 feet End to End
Parking/Road³	50 feet	50 feet	50 feet
Property Line	100 feet	100 feet	100 feet
EQUIPMENT	Goal Posts at each end with pins for seasonal removal	All LOS 3 Equipment Signage Fence/Netting Enclosure Storage Goal Posts with Capped Pipe Sleeves	All LOS 2 Equipment Underdrainage Piping Drinking Water Shade Structure Bleachers Irrigation Lighting Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. 70% EPDM rubber granules, 30% semi-rounded silica sand.

3. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://kcparks.org/places/frank-vaydik-park-soccer-field/>

LEVEL OF SERVICE 2



Image source: <https://www.scwarriors.com/facility/details/2-sc-soccer-field>

LEVEL OF SERVICE 1



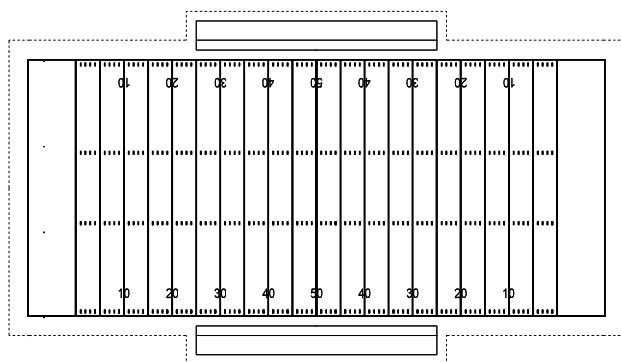
Image source: <https://insidecollegesoccer.com/2016/01/25/dr-mark-cindey-lynn-stadium/>

FOOTBALL FIELD - RECTANGULAR FIELD

A. DESCRIPTION

Rectangular field with goal posts centered on both ends, used for recreation and competition. Markings within the field include end zones, inbound yard lines and optional team areas on either sideline.

B. FIELD DIAGRAM



C. ORIENTATION

- North-South

D. SITE RESTRICTIONS

- Overhead utility lines and rights of way
- Utility manholes
- Easements (goal posts only)

E. DRAINAGE

- Provide positive drainage on rectangular fields with a longitudinal crown draining from the center of the field to each side
- Preferred slope is 1.25% to 1.50%
- The maximum allowable slope is 2.0%
- Fields with underdrainage can be sloped at 1% minimum.
- Comply with drainage patterns shown on Detail B-6.4

F. REFERENCE STANDARDS

- Landscape Architect Graphic Standards (2007)
- National Football League
- National Collegiate Athletic Association

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- A-2.1 Football Fields
- A-2.2 Football Goal
- A-3.1 Combination Football/Soccer Goal
- G-2.1 Trash Receptacle

TABLE IV-2.3

	LEVEL OF SERVICE		
	3	2	1
FIELD SIZE	96 feet x 216 feet	128 feet x 288 feet	160 feet x 360 feet
PARKING¹	Limited Parking Acceptable	20/60	60
SEATING			
Player	N/A	50 feet Bench / Team	50 feet Bench / Team
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 80 Bleacher Seats (40 field users plus 1 spectator per person)	160 Bleacher Seats (40 field users plus 3 spectators per person)
FIELD SURFACE	Cool Season Turfgrass	Cool or Warm Season Turfgrass	Synthetic Turf w/ Infill ² , or natural
SETBACKS			
Fields	75 feet	75 feet	75 feet
Parking/Road³	50 feet	50 feet	50 feet
Property Line	100 feet	100 feet	100 feet
EQUIPMENT	H Frame Goal Posts	All LOS 3 Equipment Signage Fence/Netting Enclosure Storage Goal Posts with Capped Pipe Sleeves	All LOS 2 Equipment Underdrainage Piping Drinking Water Shade Structure Bleachers Irrigation Lighting Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. 70% EPDM rubber granules, 30% semi-rounded silica sand.

3. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



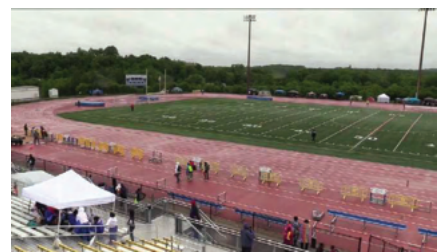
Image source: <https://parkxamerica.org/m/1185/collington-station-park>

LEVEL OF SERVICE 2



Image source: <https://parkxamerica.org/m/1343/k-della-underwood-park>

LEVEL OF SERVICE 1



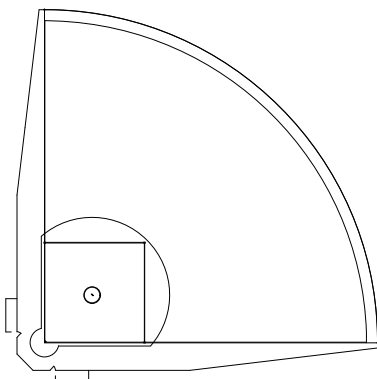
Credit is owned by M-NCPPC

SOFTBALL - DIAMOND FIELD

A. DESCRIPTION

Diamond shaped field sited singularly or in conjunction with other facilities in a central recreation area.

B. FIELD DIAGRAM



C. ORIENTATION

- Preferred East-Northeast, single field to be aligned through pitchers circle, home plate and second base (per Court and Field Diagram Guide).

D. SITE RESTRICTIONS

- 100-year floodplain
- Overhead utility lines and rights of way
- “Skinned” area and backstop should not be placed within easements
- Utility manholes
- Playgrounds or facilities that serve children

E. DRAINAGE

- Skinned area shall be higher than all other areas of the field
- No area should drain onto the infield
- Infield to slope away from the pitcher’s circle and bases. Home plate to be level
- Slopes on turf areas outside the skinned area should range from 1.0% and 1.5%
- The maximum allowable slope is 2.25%
- Field shall be symmetrically drained
- Comply with drainage Detail B-6.4

F. REFERENCE STANDARDS

- Landscape Architectural Graphic Standards
- National Collegiate Athletic Association (NCAA)
- National Softball Association (NSA)

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- A-5.2 Softball Field
- A-5.3 Ball Field Drainage
- B-22 Soil Section for Field
- F-3.1 Concrete Mow Strip
- G-2.1 Trash Receptacle

TABLE IV-2.4

	LEVEL OF SERVICE		
	3	2	1
FIELD SIZE	200 feet	250 feet	300 feet
RUNOUT	20 feet	25 feet	25 feet
PARKING¹	Limited Parking Acceptable	20/60	60
SEATING			
Player	At least 1 bench per team.	(2) 10 feet Bench / Team	(2) 10 feet Bench / Team
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 80 Bleacher Seats (40 field users plus 1 spectator per person)	160 Bleacher Seats (40 field users plus 3 spectators per person)
FIELD SURFACE	Cool Season Turfgrass	Cool or Warm Season Turfgrass	Synthetic Turf w/ Infill ² , or natural
SETBACKS			
Fields	50 feet	50 feet	50 feet
Parking/Road³	40 feet	40 feet	40 feet
Property Line	50 feet	50 feet	50 feet
EQUIPMENT	Hooded Backstop Bases: Including Pitcher's Rubber and Home Plate	All LOS 3 Equipment Skinned Infield area Signage Outfield Fence/Netting Enclosure Storage Restrooms Lighting	All LOS 2 Equipment Underdrainage Piping Drinking Water Shade Structure Bleachers Irrigation Comfort Station Perimeter fence

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. 70% EPDM rubber granules, 30% semi-rounded silica sand.

3. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://montgomeryparks.org/parks-and-trails/broadacres-local-park/>

LEVEL OF SERVICE 2



Image source: <https://parkrxamerica.org/m/978/oakcrest-park-building>

LEVEL OF SERVICE 1



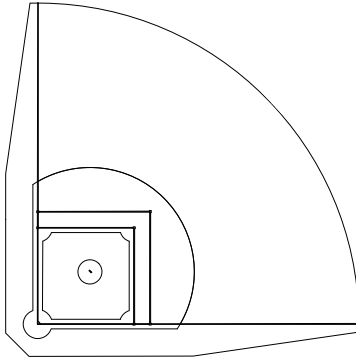
Credit is owned by M-NCPPC

BASEBALL - DIAMOND FIELD

A. DESCRIPTION

Diamond shaped field predominately used by organized leagues. Baseball fields should be sited with other major facilities with adequate parking and spectator seating.

B. FIELD DIAGRAM



C. ORIENTATION

- Preferred East-Northeast, single field to be aligned through pitchers circle, home plate and second base (per Court and Field Diagram Guide).

D. SITE RESTRICTIONS

- 100-year floodplain
- Overhead utility lines and rights of way
- “Skinned” area and backstop should not be placed within easements
- Utility manholes
- Playgrounds or facilities that serve children

E. DRAINAGE

- Skinned area shall be higher than all other areas of the field
- No area should drain onto the infield
- Infield to slope away from the pitcher's mound & bases and home plate to be level
- Slopes on turf areas outside the skinned area should range from 1.0% and 1.5%
- The maximum allowable slope is 2.25%
- Field shall be symmetrically drained
- Comply with drainage Detail B-6.4

F. REFERENCE STANDARDS

- Landscape Architectural Graphic Standards
- National Collegiate Athletic Association (NCAA)
- National Softball Association (NSA)

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- A-5.1 Baseball Field
- A-5.3 Ball Field Drainage
- B-22 Soil Section for Field
- F-3.1 Concrete Mow Strip
- G-2.1 Trash Receptacle

TABLE IV-2.5

	LEVEL OF SERVICE		
	3	2	1
FIELD SIZE	225 feet	350 feet	400 feet
RUNOUT	25 feet	40 feet	60 feet
PARKING¹	Limited Parking Acceptable	20/60	60
SEATING			
Player	1 bench per team	(2) 10 feet Bench / Team	(2) 10 feet Bench / Team
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 60 Bleacher Seats (30 field users plus 1 spectator per person)	120 Bleacher Seats (30 field users plus 3 spectators per person)
FIELD SURFACE	Cool Season Turfgrass	Cool or Warm Season Turfgrass	Synthetic Turf w/ Infil ²
SETBACKS			
Fields	50 feet	50 feet	50 feet
Parking/road³	40 feet	40 feet	40 feet
Property line	50 feet	50 feet	50 feet
EQUIPMENT	Hooded Backstop Bases Including Pitching Rubber & Home Plate	All LOS 3 Equipment Skinned Infield base path Signage Outfield Fence/Netting Enclosure Storage Lighting at 30 fc Comfort Station	All LOS 2 Equipment Underdrainage Piping Drinking Water Shade Structure Bleachers Irrigation Lighting at 30-50 fc Perimeter fence

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.
2. 70% EPDM rubber granules, 30% semi-rounded silica sand.
3. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://parkrxamerica.org/m/1123/enterprise-estates-park>

LEVEL OF SERVICE 2



Image source: <https://parkrxamerica.org/m/995/t-howard-duckett-park-building>

LEVEL OF SERVICE 1



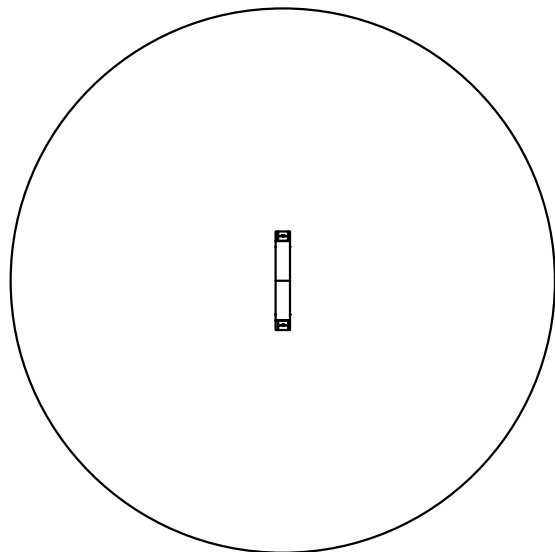
Credit is owned by M-NCPPC

CRICKET - ROUND/OVAL FIELD

A. DESCRIPTION

Turf or synthetic turf pitch located within a larger round or oval turf field. The pitch has fixed dimensions, but the extents of the outfield are variable.

B. FIELD DIAGRAM



C. FIELD BOUNDARY BY AGE

- U11 - radius of 105 feet
- U13 - radius of 135 feet
- U15 - radius of 165 feet
- U17 - radius of 180 feet
- U19 - radius of 210 feet

D. ORIENTATION

- Preferred North-South for pitch

E. SITE RESTRICTIONS

- Overhead utility lines and rights of way
- Utility manholes

F. DRAINAGE

- Slope of pitch shall be 1%, following the slope pattern of the oval

G. REFERENCE STANDARDS

- International Cricket Council

H. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- A-6.1 Cricket Field
- G-2.1 Trash Receptacle

TABLE IV-2.6

	LEVEL OF SERVICE		
	3	2	1
PITCH SIZE	10 feet x 74 feet	10 feet x 74 feet	10 feet x 74 feet
OUTFIELD SIZE	±400 feet dia	±450 feet dia	±500 feet dia
RUNOUT	25 feet	25 feet	25 feet
PARKING¹	Limited Parking Acceptable	30	30/60
SEATING			
Player	12 feet Bench/Team	28 feet Bench / Team	28 feet Bench / Team Provide covered seating
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 80 Bleacher Seats (40 field users plus 1 spectator per person)	160 Bleacher Seats (40 field users plus 3 spectators per person)
FIELD SURFACE	Concrete slab covered with artificial turf	Compacted clay covered with Jute matting ²	Compacted dirt with natural turf grass
SETBACKS			
Fields	50 feet	50 feet	50 feet
Parking/Road³	40 feet	40 feet	40 feet
Property Line	50 feet	50 feet	50 feet
EQUIPMENT	Storage for equipment Rope boundary Player's bench	All LOS 3 Equipment	All LOS 2 Equipment Underdrainage Piping Drinking Water Shade Structure Bleachers Irrigation Lighting Comfort Station with changing area

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Maintenance is required to keep clay compacted. Matting is to be rolled out and nailed to the ground before every cricket match and removed to storage after each match.

3. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: https://nicelocal.com/maryland/entertainment/laurel_5_cricket_ground/

LEVEL OF SERVICE 2



Image source: <https://www.visitraleigh.com/media/press-release/post/major-league-cricket-stadium-expansion-set-for-morrisville-north-carolina/>

LEVEL OF SERVICE 1



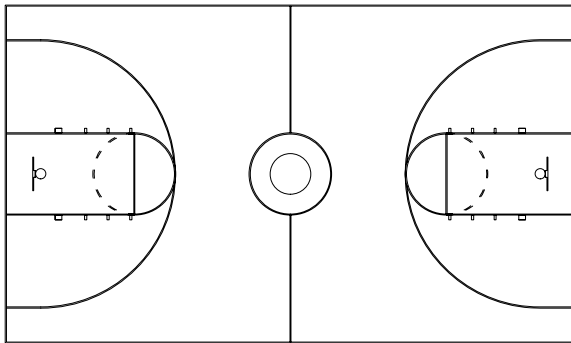
Image source: <https://siteresourcesinc.com/portfolio/south-germantown-recreational-park-cricket-field/>

BASKETBALL - HARD SURFACE COURT

A. DESCRIPTION

A paved rectangular court with court striping and a minimum of two goals. Courts can be utilized by a single person, or formally with teams of 5+ players. Striping and goals can be provided such that one full-court game is possible per court, or two half-court games.

B. COURT DIAGRAM



C. ORIENTATION

- Preferred North-South

D. SITE RESTRICTIONS

- 100-year floodplain
- Overhead utility lines and rights of way
- Easements
- Shrink-swell soils

E. DRAINAGE

- Slope of court shall be 1%
- Courts shall drain in one plane
- Provide spot elevations in all four corners

F. REFERENCE STANDARDS

- Landscape Architect Graphic Standards
- USA Basketball
- National Federal State High School Associations (NFHS)

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- B-1.1 Half Basketball Court
- B-1.2 Single Basketball Court
- B-1.3 Double Basketball Court
- B-1.4 Basketball Backboard
- B-6.1 Court Pavement Section
- B-6.2 Court Renovation Pavement Replacement
- B-6.3 Court Renovation Slip Sheet Method
- B-5.1 Combination Multi-Purpose Court - Type 1
- B-5.2 Combination Multi-Purpose Court - Type 2
- B-6.4 Court Drainage Patterns
- F-1.2 Chain Link Fence
- F-1.1 Ornamental Fence
- G-1.1 Bench
- G-3.1 Bicycle Rack

TABLE IV-2.7

	LEVEL OF SERVICE		
	3	2	1
COURT SIZE	(2) at 50 feet x 42 feet (Half Court Layout)	56 feet x 84 feet	56 feet x 84 feet
RUNOUT	10 feet	10 feet	10 feet
PARKING¹	Limited Parking Acceptable	20	20
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Team
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 60 Bleacher Seats (30 court users plus 1 spectator per person)	120 Bleacher Seats (30 court users plus 3 spectators per person)
COURT SURFACE	Striped Asphalt Paving	Striped Asphalt Paving	Asphalt Paving w/ Court Surfacing, striping
SETBACKS			
Courts	6 feet Between Courts	6 feet Between Courts	6 feet Between Courts
Parking/Road²	30 feet	30 feet	30 feet
Property Line	25 feet	25 feet	25 feet
EQUIPMENT	Basketball Standards Including: Steel Post, Backboard, and Rim with Net Court Pavement Minimum of one 6 feet bench for each court Perimeter fencing	All LOS 3 Equipment A minimum of one 6 foot bench for each court Signage 10 foot High fence with gate Pavement color-coating or seal coat Trash receptacle and recycling bin Storage Lighting Comfort Station	All LOS 2 Equipment Drinking Water Shade Structure Bleachers 1 player bench / team

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://parkrxamerica.org/m/1121/ardmore-park-building>

LEVEL OF SERVICE 2



Image source: <https://montgomeryparks.org/projects/directory/outdoor-tennis-court-renovation-program/>

LEVEL OF SERVICE 1



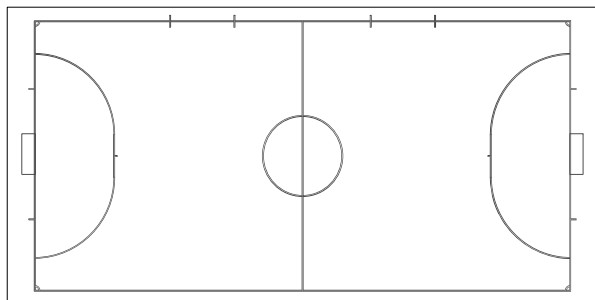
Image source: <https://www.pg parks.com/gallery.aspx?PID=182>

FUTSAL COURT - HARD SURFACE COURT

A. DESCRIPTION

Paved rectangular court that can vary in dimension depending on available space. Can be installed as a separate court or as part of a multi-use court.

B. COURT DIAGRAM



C. ORIENTATION

- Preferred North-South

D. SITE RESTRICTIONS

- 100-year floodplain
- Overhead utility lines and rights of way
- Easements
- Shrink-swell soils

E. DRAINAGE

- Slope of court shall be 1%
- Courts shall drain in one plane
- Provide spot elevations in all four corners

F. REFERENCE STANDARDS

- Landscape Architect Graphic Standards
- National Federal State High School Associations (NFHS)
- United States Futsal Federation

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- B-5.1 Combination Multi-Purpose Court - Type 1
- B-5.2 Combination Multi-Purpose Court - Type 2
- B-6.1 Court Pavement Section
- B-6.2 Court Renovation Pavement Replacement
- B-6.3 Court Renovation Slip Sheet Method
- B-6.4 Court Drainage Patterns
- F-1.2 Chain Link Fence
- F-1.1 Ornamental Fence
- G-1.1 Bench
- G-3.1 Bicycle Rack

TABLE IV-2.8

	LEVEL OF SERVICE		
	3	2	1
COURT SIZE	60 feet x 90 feet or 110 feet x 122 feet	60 feet x 90 feet or 110 feet x 122 feet	60 feet x 90 feet or 110 feet x 122 feet
RUNOUT	10 feet	10 feet	10 feet
PARKING¹	Limited Parking Acceptable	20/60	60
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Team
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 60 Bleacher Seats (30 court users plus 1 spectator per person)	120 Bleacher Seats (30 court users plus 3 spectators per person)
COURT SURFACE	Striped Asphalt Paving	Striped Asphalt Paving	Asphalt Paving w/ Court Surfacing, striping
SETBACK			
Courts	6 feet Between Courts	6 feet Between Courts	6 feet Between Courts
Parking/Road²	30 feet	30 feet	30 feet
Property Line	25 feet	25 feet	25 feet
EQUIPMENT	Court Pavement Futsal Goals Perimeter fencing	All LOS 3 Equipment Signage 10 foot High fence with gate Pavement color-coating or seal coat Trash receptacle and recycling bin Comfort Station Lighting	All LOS 2 Equipment Drinking Water Shade Structure Bleachers

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://www.allsportamerica.com/residential/futsal-courts/>

LEVEL OF SERVICE 2



Image source: <https://www.parkintennis.com/services/futsal-soccer-courts/>

LEVEL OF SERVICE 1



Image source: <https://www.muscataineiowa.gov/DocumentCenter/View/22363/Musco-Lighting-Mini-Pitch-System-Brochure-PDF>

MULTI-PURPOSE - HARD SURFACE COURT

A. DESCRIPTION

A basketball or otherwise paved court used as a multipurpose court by adding additional striping, allowing for activities such as futsal, skating, roller hockey, four square, hopscotch, tricycling, and radio controlled cars.

B. ORIENTATION

- Preferred North-South

C. SITE RESTRICTIONS

- 100-year floodplain
- Overhead utility lines and rights of way
- Easements
- Shrink-swell soils

D. DRAINAGE

- Slope of court shall be 1%
- Courts shall drain in one plane
- Provide spot elevations in all four corners
- Comply with drainage patterns shown on Detail C-16

E. REFERENCE STANDARDS

- Landscape Architect Graphic Standards

F. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- B-5.1 Combination Multi-Purpose Court - Type 1
- B-5.2 Combination Multi-Purpose Court - Type 2
- B-6.1 Court Pavement Section
- B-6.2 Court Renovation Pavement Replacement
- B-6.3 Court Renovation Slip Sheet Method
- B-6.4 Court Drainage Patterns
- F-1.1 Ornamental Fence
- F-1.2 Chain Link Fence
- G-1.1 Bench
- G-3.1 Bicycle Rack

TABLE IV-2.9

	LEVEL OF SERVICE		
	3	2	1
COURT SIZE	56 feet x 84 feet (Basketball Court)	62 feet x 122 feet	62 feet x 122 feet
RUNOUT	10 feet	10 feet	10 feet
PARKING¹	Limited Parking Acceptable	20	20
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Team
COURT SURFACE	Striped Asphalt Paving	Striped Asphalt Paving	Color-coated Asphalt Paving w/ Court Surfacing
SETBACKS			
Courts	6 feet Between Courts	6 feet Between Courts	6 feet Between Courts
Parking/Road²	30 feet	30 feet	30 feet
Property Line	25 feet	25 feet	25 feet
EQUIPMENT	Court Pavement A Minimum of One 6 feet Bench for Each Court Perimeter Fencing	All LOS 3 Equipment Multi-goal Signage 10 feet High fence with gate Pavement color-coating or seal coat Trash receptacle and recycling bin Storage Comfort Station	All LOS 2 Equipment Drinking Water Shade Structure Bleachers Player bench / team

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://www.pgiparks.com/4512/Columbia-Park-Community-Center>

LEVEL OF SERVICE 2



Image source: <https://www.morgan-properties.com/apartments/md/largo/northampton/photos-virtual-tours>

LEVEL OF SERVICE 1



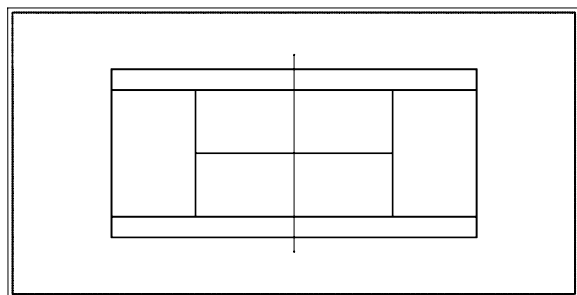
Image source: <https://www.tvs-sportssurfaces.com/what-is-the-best-surface-for-an-outdoor-basketball-court/>

TENNIS - HARD SURFACE COURT

A. DESCRIPTION

Paved rectangular court, with striped boundaries and surrounded by fencing. courts are often grouped in a series, and outdoor courts are commonly used both informally and for regulated league play.

B. COURT DIAGRAM



C. ORIENTATION

- General Preference: North-South.
- Arranging courts at 22 degrees from true north will maximize the usability of tennis courts year round.

D. SITE RESTRICTIONS

- 100-year floodplain
- Overhead utility lines and rights of way
- Easements
- Shrink-swell soils

E. DRAINAGE

- Slope of court shall be 1%
- Courts shall drain in one plane
- Provide spot elevations in all four corners
- Tennis courts shall never be crowned in any direction, as it would affect the height of the net
- Comply with Drainage Detail C-17

F. REFERENCE STANDARDS

- Landscape Architect Graphic Standards
- United States Tennis Association (USTA)

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- B-2.1 Single Tennis Court
- B-2.2 Double Tennis Court
- B-2.3 Net Hold Down Footer
- B-2.4 Net Post Anchor, Center Footer
- B-2.5 Net Post Anchor, End Footer
- B-2.6 Tennis Court Fence and Players Gate
- B-2.7 Tennis Court Maintenance Gate
- B-6.1 Court Pavement Section
- B-6.2 Court Renovation Replacement
- B-6.3 Court Renovation Slip Sheet Method
- B-6.4 Court Drainage Patterns
- F-1.2 Chain Link Fence
- F-1.1 Ornamental Fence
- G-1.1 Bench
- G-2.1 Trash Receptacle

TABLE IV-2.10

	LEVEL OF SERVICE		
	3	2	1
COURT SIZE	Single Court 62 feetx 122 ft	Single Court 62 feetx 122 ft	Single Court 62 feetx 122 ft Double Court 110 feet x 122
RUNOUT	Apron Included	Apron Included	Apron Included
PARKING¹	Limited Parking Acceptable	4 per court	8 per court
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Court
Spectator	750-1,200 sf Seating Area	750-1,200 sf Seating Area or 80 Bleacher Seats (30 court users plus 1 spectator per person)	120 Bleacher Seats (30 court users plus 3 specta- tors per person)
COURT SURFACE	Color-Coated Asphalt Paving	Color-Coated Asphalt Paving	Color-Coated Asphalt Paving
SETBACKS			
Courts	12 feet Between Courts	12 feet Between Courts	12 feet Between Courts
Parking/Road²	30 ft	30 ft	30 ft
Property Line	25 ft	25 ft	25 ft
EQUIPMENT	Net posts with net and cleats Pavement with colorcoating Players' gate with self- latching hardware Maintenance access fence gate with lock Perimeter fencing	All LOS 3 Equipment Practice board 10 feet high chain link fence A minimum of one 6 foot bench for each court Signage Trash receptacle and recycling bin Storage Comfort station Lighting	All LOS 2 Equipment Drinking Water Shade Structure Bleachers

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://www.pg parks.com/4551/Upper-Marlboro-Community-Center>

LEVEL OF SERVICE 2



Image source: <https://montgomeryparks.org/parks-and-trails/seven-locks-local-park/>

LEVEL OF SERVICE 1



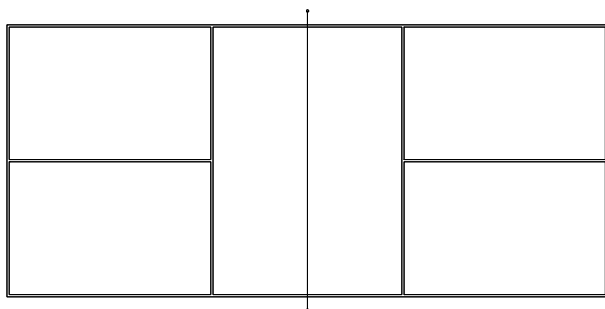
Image source: <http://thetennisdesignstudio.com/prince-georges-community-college>

PICKLEBALL - HARD SURFACE COURT

A. DESCRIPTION

Paved rectangular court, with striped boundaries and surrounded by fencing. Pickleball courts are often grouped, and are used both informally and for league play. Courts can be specially constructed or converted by modifying other paved courts.

B. COURT DIAGRAM



C. ORIENTATION

- Preferred North-South

D. SITE RESTRICTIONS

- 100-year floodplain
- Overhead utility lines and rights of way
- Easements
- Shrink-swell soils

E. DRAINAGE

- Slope of court shall be 1%
- Courts shall drain in one plane
- Provide spot elevations in all four corners
- Pickleball courts shall never be crowned in any direction, as it would affect the height of the net
- Comply with Drainage Detail C-17

F. REFERENCE STANDARDS

- Landscape Architect Graphic Standards
- USA Pickleball

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- B-2.1 Single Tennis Court
- B-2.2 Double Tennis Court
- B-2.3 Net Hold Down Footer
- B-2.4 Net Post Anchor, Center Footer
- B-2.5 Net Post Anchor, End Footer
- B-2.6 Tennis Court Fence and Players Gate
- B-2.7 Tennis Court Maintenance Gate
- B-6.1 Court Pavement Section
- B-6.2 Court Renovation Replacement
- B-6.3 Court Renovation Slip Sheet Method
- B-6.4 Court Drainage Patterns
- F-1.2 Chain Link Fence
- F-1.1 Ornamental Fence
- G-1.1 Bench
- G-2.1 Trash Receptacle

TABLE IV-2.11

	LEVEL OF SERVICE		
	3	2	1
COURT SIZE	20 feet x 44 feet	20 feet x 44 feet	20 feet x 44 feet
RUNOUT	10 feet x 16 feet	10 feet x 16 feet	14 feet x 16 feet
PARKING¹	Limited Parking Acceptable	4 per court	4 per court
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Court
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 20 Bleacher Seats (10 court users plus 1 spectator per person)	40 Bleacher Seats (10 court users plus 3 spectators per person)
COURT SURFACE	Color-Coated Asphalt Paving	Color-Coated Asphalt Paving	Color-Coated Asphalt Paving
SETBACKS			
Courts	10 feet between courts	10 feet between courts	10 feet between courts
Parking/Road²	30 feet	30 feet	30 feet
Property Line	25 feet	25 feet	25 feet
EQUIPMENT	Net posts with net and cleats Pavement with colorcoating Players' gate with self-latching hardware Maintenance access fence gate with lock Perimeter fencing	All LOS 3 Equipment Practice board 10 feet high chain link fence A minimum of one 6 foot bench for each court Signage Trash receptacle and recycling bin Comfort Station Lighting	All LOS 2 Equipment Drinking Water Shade Structure Bleachers

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://www.orillia.ca/en/news/grand-opening-of-orillias-first-outdoor-pickleball-courts-aug-31.aspx>

LEVEL OF SERVICE 2



Image source: <https://www.thprd.org/activities/sports/pickleball>

LEVEL OF SERVICE 1

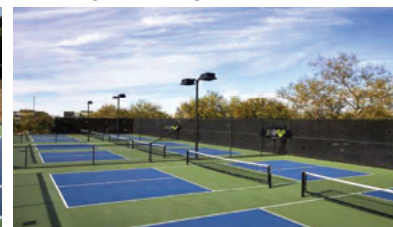


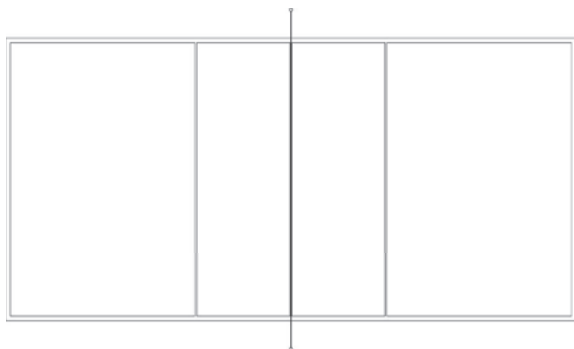
Image source: <https://azbigmedia.com/lifestyle/why-is-pickleball-growing-in-popularity-in-arizona/>

VOLLEYBALL - SAND OR GRASS COURT

A. DESCRIPTION

Rectangular court that can be sand or grass for outdoor play. Outdoor courts are predominantly used for informal games and play.

B. COURT DIAGRAM



C. ORIENTATION

- Preferred North-South

D. SITE RESTRICTIONS

- Under overhead utility lines and rights of ways
- Utility manholes
- Easements
- 100-year floodplains

E. DRAINAGE

- Court underdrainage can be sloped at 1% minimum.

F. REFERENCE STANDARDS

- Landscape Architect Graphic Standards
- USA Volleyball

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- B-4.1 Volleyball Court
- F-1.1 Ornamental Fence
- F-1.2 Chain Link Fence
- G-1.1 Bench
- G-2.1 Trash Receptacle

TABLE IV-2.12

	LEVEL OF SERVICE		
	3	2	1
COURT	91 feet 6 inches x 49 feet or Fit to Available Space	91 feet 6 inches x 49 feet	91 feet 6 inches x 49 feet
RUNOUT	Apron Included	Apron Included	Apron Included
PARKING¹	Limited Parking Acceptable	20	20
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Court
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 80 Bleacher Seats (30 court users plus 1 spectator per person)	120 Bleacher Seats (30 court users plus 3 spectators per person)
COURT SURFACE	Grass or Sand	Grass or Sand	Sand
SETBACKS			
Courts	20 feet (13 feet min.)	20 feet (13 feet min.)	20 feet (13 feet min.)
Parking/Road²	40 feet	40 feet	40 feet
Property Line	25 feet	25 feet	25 feet
EQUIPMENT	Volleyball Court Standards: Including Steel Posts with Net. Court Sand - Non-Abrasive Underdrain Piping	All LOS 3 Equipment Permanent Court Sand Lines Adjustable Posts Signage Pavement color-coating or seal coat Trash receptacle and recycling bin Storage	All LOS 2 equipment Antenna Drinking Water Shade Structure Bleachers Lighting Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://www.provo-utah.us/riverviewpark.html>

LEVEL OF SERVICE 2



Credit is owned by M-NCPPC

LEVEL OF SERVICE 1



Image source: <https://www.recreator.com/785/Sand-Volleyball-Tournaments-Competitions>

FISHING DOCK

A. DESCRIPTION

Dock/pier without boat access to allow people to fish

B. SITE RESTRICTIONS

- Environmental protection areas

C. REFERENCE STANDARDS

- Landscape Architect Graphic Standards

TABLE IV-2.14

	LEVEL OF SERVICE		
	3	2	1
SERVING	Individuals / small groups	Individuals / small groups	Individuals, small or large groups
SIZE	10 feet wide	30 feet wide	30 feet + wide
PARKING ¹	1 per 50 square feet/feet of gross pier surface area	1 per 50 square feet/feet of gross pier surface area	1 per 50 square/feet of gross pier surface area
SEATING	Min. 1 Bench	Min. 2 Bench	Min. 4 Bench
CONSTRUCTION	Existing Stable Slope (Sand, Earth, etc)	Stabalized Hardscape Slope (Concrete Slab, Riprap edges	Stabalized Hardscape Slope (Concrete Slab, Riprap edges, or Wood/ Metal Floating Dock
EQUIPMENT	Wood, composite, or metal deck structure with guard rail and Bench Seating	All LOS 3 Equipment	All LOS 2 Equipment Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://www.experienceprincegeorges.com/listing/patuxent-river-park/590/>

LEVEL OF SERVICE 2



Image source: https://www.businessyab.com/explore/united_states/maryland/anne_arundel_county/3/pasadena/john_downs_loop/8311/downs_park.html

LEVEL OF SERVICE 1



Image source: <https://images.app.goo.gl/LdfEVV1v4AwW3fuq9>

ULTIMATE FRISBEE

A. DESCRIPTION

Ultimate frisbee fields are 120 feet x 360 feet but the sport can be played on any rectangular field. Casual/informal play can take place on a non-standard rectangular multipurpose field.

B. FIELD DIAGRAM



C. ORIENTATION

- Preferred North-South

D. SITE RESTRICTIONS

- Overhead utility lines and rights of way
- Utility manholes

E. DRAINAGE

- Use cross field in steep areas and on combination fields (soccer/football).
- 1.25%-1.5%. Maximum slope: 2%.

F. REFERENCE STANDARDS

- National Federation of State High School Associations (NFHS) standards

G. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- A-10.1 Rectangular Field Drainage Patterns
- G-1.1 Bench
- G-2.1 Trash Receptacle

TABLE IV-2.17

	LEVEL OF SERVICE		
	3	2	1
FIELD SIZE	120 feet x 360 feet	120 feet x 360 feet	120 feet x 360 feet
RUNOUT	10 feet	10 feet	10 feet
PARKING¹	Limited Parking Acceptable	20	20
SEATING			
Player	1 Bench/Field	1 Bench/Field	1 Bench/Field
Spectator	750-1,200 square feet Seating Area	750-1,200 square feet Seating Area or 80 Bleacher Seats (40 field users plus 1 spectator per person)	160 Bleacher Seats (40 field users plus 3 spectators per person)
FIELD SURFACE	Cool Season Turfgrass	Cool or Warm Season Turfgrass	Synthetic Turf w/ Infill ²
SETBACKS			
Fields	30 - 50 feet Side by Side, 50 - 75 feet End to End	30 - 50 feet Side by Side, 50 - 75 feet End to End	30 - 50 feet Side by Side, 50 - 75 feet End to End
Parking/Road³	50 feet	50 feet	50 feet
Property Line	100 feet	100 feet	100 feet
EQUIPMENT	N/A	All LOS 3 Equipment Signage Storage	All LOS 2 Equipment Underdrainage Piping Drinking Water Shade Structure Bleachers Irrigation Lighting Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. 70% EPDM rubber granules, 30% semi-rounded silica sand.

3. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source: <https://montgomeryparks.org/parks-and-trails/nolte-local-park/>

LEVEL OF SERVICE 2



Credit is owned by M-NCPPC

LEVEL OF SERVICE 1



Image source: <https://images.app.goo.gl/6chKL1zeF7b1eGjt6>



04 GAMES AND PLAY AREAS

PLAYGROUND FACILITIES

A. DESCRIPTION

A facility of play features to support cognitive, social, emotional, and physical development for all age groups and abilities. Can include the following elements or settings: entrances, pathways, fences and enclosures, signage, play equipment, game areas, landforms, topography, trees and vegetation, gardens, animal habitats, water play, sand play, loose parts, gathering places, stage areas, storage, ground covering, and safety surfacing.

B. AGE GROUPS

Provide separate areas for younger and older children. Age group separation can be provided by constructing two separate play lots, or by creating a single multi-age playground where separation occurs through equipment placement.

C. SITE RESTRICTIONS

- Poorly drained areas, wetlands, 100-year floodplain
- Underground utility lines
- Overhead utility lines and right of way
- Easements
- Should be separate from park activities such as: baseball and softball fields, bicycle trails, dog parks, basketball courts, or skateboarding areas
- Follow setback requirements located in Table IV-3.1

D. DESIGN CRITERIA

Play areas should support diverse play opportunities. Must encourage a range of challenges, both mental and physical, and should provide a variety of challenge levels appropriate to the age of the intended users. The play area should be designed creatively and take into account topography, vegetation, location of adjacent residences, parking lots, streets, structures, and pedestrian access. All playgrounds should follow the design criteria listed below.

- Support diverse play opportunities
 - Provide physical and mental challenges
 - Provide a range of challenges to accommodate different ability levels
 - Provide options to play alone and in groups
- Provide creative playground design
 - Incorporate topography, shade, and vegetation
 - Provide special and memorable elements
 - More abstract equipment styles are preferred to stimulate imagination
 - Solicit community input on selection of activities, colors, and themes
- Provide an inclusive play environment
 - Meet accessibility requirements at equipment, circulation, and seating areas
 - Incorporate Universal Design principles
- Integrate with environmental opportunities and constraints
 - Provide sunny and shaded play areas
 - Account for location of adjacent residences, parking lots, streets, structures, and pedestrian access
- Submit proposed play environment design for M-NCPPC approval

Basic Features

Seating (LOS 1,2,3)

- Provide seating elements for all play areas.
 - A direct line of sight from seating to each activity is required for guardian supervision
- Provide seating outside of the play equipment use zones

Pathways (LOS 1,2,3)

- Provide accessible paved pathways
 - Connects every activity and play component
 - Many routes through the space and multiple means of access for each play feature is preferred
- Widened pathway from maintenance access where needed

Play Equipment (LOS 1,2,3)

Provided to stimulate large muscle activity and kinesthetic experience, as landmarks for wayfinding and rendezvous spots, and as places for social interaction.

- Equipment designed as part of a comprehensive multipurpose play environment is preferred.
 - Isolated pieces of equipment are ineffective on their own.
- Properly sited, selected, and installed equipment over an appropriate safety surface is required.
- Provide swings and rotating equipment.

Refer to National Playground Safety Institute's Design Standards (NPSI) for minimum play equipment requirements and prohibited equipment.

Basic Play Site Elements

- Trash receptacles (LOS 1,2,3)
- Rest rooms (LOS 2,3)
- Drinking fountains (LOS 1,2,3)
- Bicycle Rack (LOS 2,3)
- Shade structure, pavilions, or gazebos (LOS 2,3)
- Picnic Tables (LOS 2,3)

Enhanced Features

Fences (If requested by M-NCPPC)

- Limited number of entrances/exits for ease of monitoring
- Seating provided at entrance areas is preferred
- Fences completely enclosing an area is not preferred (Keep entrances open)

Sand Play

- Recommend a part of the sand play area be accessible
- Recommend including shelves, tables, or rocks for sand play
- Do not include drinking fountain near sand play
- A foot washing station is recommended
- Drainage under sand play is required

Water Play

- Water play settings can include: hose in sandpit, puddles, ponds, bubblers, sprinklers, sprays, cascades, pools, etc.
- Recommend part of the water play be wheelchair accessible
- Standing water prohibited
- Potable water required
- Provide access to drainage for maintenance

Enhanced Play Site Elements

- Information Kiosk
- Public Art

5. COLORS

Colors are project specific and will be determined by the designer for each design. The community might desire certain colors, therefore input from the surrounding community is required. Light colors are not recommended under large trees. Red is not recommended in sunny areas.

E. SURFACING MATERIALS

Different surfaces are needed to support different types of play activities and user groups. Considerations include: durability, toxicity, allergenicity, slip resistance, all-weather use, climate zone, maintenance, aesthetics, accessibility, and required shock absorbency. Protective shock absorbing surface materials is required in all use zones under and around playground equipment. When playgrounds are renovated, the surfacing should be recycled and used for landscaping purposes within the park system if possible.

Play Surface

Comply with latest versions of CPSC Handbook, ASTM F2075, F1951, and related standards governing playground safety surface.

Surfacing in Equipment Use Zones

- Standard: Engineered Wood Fiber
- Permissible: Poured-in-Place Rubber, Rubber Mats, Synthetic Turf for Playgrounds. Alternative surface materials are to be approved by Department of Parks and Recreation.

Provide edge restraints for all materials.

F. DRAINAGE

- Not including mounding; a maximum of 2% slope in any direction on the playground surfacing, 1% slope is preferred
- Provide surface spot elevations in all corners of the playground
- Subgrade shall have positive drainage to the underdrainage line
- Provide invert elevations of underdrainage line at each end, every change of direction, and at the outfall area

G. LANDSCAPING

Incorporate natural features such as trees, open lawn, berms, boulders, ground covers, etc. Landscaping that provides seasonal interest, small ecosystems and pollinators, and are flowering or scented are preferred for play areas. Prefer ground cover species that have capabilities to withstand wear or have the capability to regrow after being damaged. Proposed plants shall not have thorns, messy fruits or nuts, and shall be non-poisonous to humans. Refer to Appendix F for a list of plants not recommended for planting near playgrounds and parks.

- Provide shade trees.
 - Trees planted minimum 15 feet from playground edging
- Provide plantings as needed to screen the area.
 - Between playgrounds and nearby adjacent homes, or other incompatible park uses.
 - Section 4.7 of the Prince George's County Landscape Manual should be consulted for buffering requirements

between playgrounds (pre-school and school-age play lots) and adjoining properties.

- Should not be designed in a manner that would create a security risk
- Turf should only be used for Sports Surfaces, unstructured recreation areas, and surfaces on mounds and slopes.

H. REFERENCE STANDARDS

U.S. Consumer Product Safety Commission (CPSC) "Handbook for Public Playground Safety", latest edition
 American Society for Testing and Materials (ASTM) (ASTM 1487, 1951, 1292, 2223, 1191)
 Americans With Disabilities Act/Architectural Barriers Act (ADA/ABA)
 Americans with Disabilities Act Accessibility Guidelines (ADAAG) for Play Areas, 36 CFR Part 1191, Section 15.6 (most current version)
 National Playground Safety Institute—Design Standards (NPSI)
 National Building Code—(BOCA): Building Officials and Code Administrators International
 Landscape Architectural Graphic Standards

I. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- C-6.1 Play Equipment Footing
- G-6.2 Poured in Place Safety Surface
- G-6.3 Safety Surface Resilient Tile - Granular Base
- G-6.4 Safety Surface Wear Mat
- G-6.5 Safety Surface Wood Fiber
- G-6.6 Safety Surface Concrete Edge
- F-1.1 Ornamental Fence Refer to Detail
- E-7.1 Timber Edge - Type 1
- E-7.2 Timber Edge - Type 2
- E-7.3 Timber Edge - Type 3
- E-6.1 Turf Pavers
- H-1.1 Dry Well
- G-2.1 Trash Receptacle
- G-3.1 Bicycle Rack

Section 740: Playgrounds

Section 741: Playgrounds – Special Conditions

J. REQUIRED CERTIFICATIONS AND TESTING

Manufacturers shall provide written certification from the International Playground Equipment Manufacturers Association (IPEMA) that equipment has been tested and meets ASTM specifications. The design of the playground shall be prepared

or reviewed by a National Playground Safety Institute (NPSI) certified landscape architect or civil engineer.

Playground installers and inspectors shall be certified by the National Playground Safety Institute (NPSI).

TABLE IV-3.1

	LEVEL OF SERVICE		
	3	2	1
SITE AREA			
Ages 2-5*	1,300-1,500 sf Min.	2,000-2,500 sf Min.	3,000-4,000 sf Min.
Ages 5-12*	2,000 sf Min.	2,500-3,500 sf Min.	3,500-5,500 sf Min.
Multi-Age Adventure Playground	N/A	N/A	45,000 sf
SITE ELEMENTS	Trash Receptacles Drinking Fountains Timber Borders Age-appropriate Signage Engineered wood fiber mulch seating, shade, fence, bikeracks	All LOS 3 Site Elements Rest Rooms Bicycle Rack Shade structure, pavilions, or gazebo Picnic Tables Concrete Borders Rubber resilient surfacing Drinking fountain, picnic area with concrete pad, grills	All LOS 2 Site Elements
ACTIVITIES			
Ages 2-5	Climbing and Sliding Activities. Ground Based Sensory Play. Areas for Pretend/Imaginary Play (Stage, Theater, Storefront, Music, Playhouse, Train, etc.) Areas for Social Play (Tables, Chairs, Benches, Stumps, Rocks, etc.) Areas for Open Play (Grassy Areas, Places for Rolling, Crawling, Small Group Games, etc.) Areas for Individual Play.		
Ages 5-12	Climbing and Sliding Activities. Athletic. Exercise Equipment. Adventure Activities. Areas for Social Interaction (Tables, Chairs, Benches, Stumps Rocks, etc.) Areas for Individual Play.		
LOCATIONS	Neighborhood or Urban Parks	Local Public Park or Near Central Business District	Large Public Park
MINIMUM PLANTING	Two 2.5 inches - 3 inches Caliper Shade Trees	Four 2.5 inches - 3 inches Caliper Shade Trees	Reviewed by M-NCPPC
SETBACKS			

Table IV-3.1 Continued from previous page

	LEVEL OF SERVICE		
	3	2	1
Ages 2-5	30 feet from Buildings 30 feet from Curb		
Ages 5-12	50 feet from Buildings 30 feet from Curb		
All	25 feet from Dwelling Lot Line 30 feet from Subdivision Property Line 30 feet from Basketball Courts and Regional Hiker-Biker Trails 100 feet from Athletic Fields and Dog Exercise Areas 50 feet from Primary or Collector Roads 100 feet from Arterial Roads		
PATHWAYS	6 feet Minimum Accessible Pathway to all Activities		
COLORS	No More than 3 Dominant Colors	Can include more Colors	Can include more Colors

LEVEL OF SERVICE 3



Credit is owned by M-NCPPC

LEVEL OF SERVICE 2



Image source:
<https://marylandkidadventures.com/2021/06/28/fairwood-park/>

LEVEL OF SERVICE 1



Image source:
<https://recwest.com/playground-trends/>

*Multi-age playgrounds with a minimum combined area of 2-5 and 5-12 zones may be acceptable.

UNSTRUCTURED PLAY AREAS

A. DESCRIPTION

An unstructured/open play area is a facility without age limits. The open play area provides space for unstructured play (catch, Frisbee, tag, kite flying, etc.) or for more structured games like softball and football practices.

B. GENERAL GUIDELINES

- Open areas work well when located with other facilities as a central recreation area, capable of separating picnic areas from other active play areas. Site longest axis on North-South orientation.

C. FACILITY TYPES

- A rough recommended size is 100 feet x 200 feet but can be modified depending on available space.

D. DESIGN STANDARDS

- Overhead utility lines
- Avoid 100-year floodplains (if possible)
- Open play areas subgrade shall be compacted to 90%

E. DRAINAGE

- Slope of play areas shall be 1%, not including mounding features
- Play areas shall drain in one plane
- Provide spot elevations in all four corners
- Comply with drainage patterns shown on Detail C-6.7

F. BASIC FEATURES

- Seating

G. M-NCPPC STANDARDS

- A-8.1 Open Play Area
- G-1.1 Bench
- H-1.1 Dry Well
- F-1.3 Split Rail Fence

Storm Drainage and Stormwater Management
Section 308: Sediment and Erosion Control
Section 705: Turf Establishment

TABLE IV-3.2

	LEVEL OF SERVICE	
	2	1
SITE AREA	Based on Available Space	100 feet x 200 feet
ACTIVITIES	Unstructured Play Frisbee Catch Tag Kite Flying Softball Casual Football / Softball	
LOCATIONS	Residential Development or Dense Urban Area	Local Public Park or Near Central Business District
SETBACKS		
Courts	No specific standard	
Parking/Road	No specific standard	
Property Line	No specific standard	
EQUIPMENT	Picnic Benches or Bench Seating Drinking Water Shade Structure Irrigation Lighting Comfort Station	Picnic Benches or Bench Seating

PRINCE GEORGE
COUNTY EXAMPLE

Image source:
<https://parkrxamerica.org/m/1077/acredale-park>

BALL WALLS - HARD SURFACE COURT

A. DESCRIPTION

An outdoor ball wall may be used to bat, hit or throw against by one to four persons simultaneously. It can be used for structured games of handball and racquetball, or for practice in hitting or throwing any kind of a ball. It is particularly valuable for single players who wish to practice tennis, handball or racquetball.

B. GENERAL GUIDELINES

- Any orientation is allowable, with north-south preferred

C. DESIGN STANDARDS

- Standard sizes for these facilities are listed below. Sizes may be modified, depending on the available space.
- Single-side ball wall: 10 feet high with 24 feet x 64 feet court.
- Double-side ball wall: 24 feet high separating two 24 feet x 64 feet court plus walkways

D. DRAINAGE

- Slope of court shall be 1%
- Courts shall drain in one plane
- Provide spot elevations in all four corners
- Comply with drainage patterns shown on Detail C-6.7

E. BASIC FEATURES

- One 6 feet wide permanent bench should be provided for each court

F. ENHANCED FEATURES

- Spectator Seating

G. M-NCPPC STANDARDS

- A-9.1 Ball Wall
- B-6.4 Court Drainage Patterns
- B-6.1 Court Pavement Section
- G-1.1 Bench
- G-2.1 Trash Receptacle
- F-1.2 Chain Link Fence

Section 730: Tennis Court Color Coating

TABLE IV-3.3

	LEVEL OF SERVICE	
	2	1
COURT SIZE	Based on Available Space or Single Sided- 24 feet x 24 feet Wall 24 feet x 64 feet Court	Double Sided- 24 feet x 24 feet Wall Separating (2) 24 feet x 64 feet Courts
ACTIVITIES	Practice hitting/throwing Practice Tennis Structured Games of Handball Structured Games of Raquetball	
LOCATIONS	Residential Development, Dense Urban Area, or Local Public Park	Large Public Park or Near Central Business District
SETBACKS		
Courts	6 feet Between Courts	6 feet Between Courts
Parking/Road	30 feet	30 feet
Property Line	25 feet	25 feet
EQUIPMENT	One 6 feet wide permanent bench should be provided for each court Lighting Comfort Station	One 6 feet wide permanent bench should be pro- vided for each court Perimeter fencing

EXAMPLES:

LEVEL OF SERVICE 2



Image source:
<https://montgomeryparks.org/projects/directory/outdoor-tennis-court-renovation-program/>

LEVEL OF SERVICE 1



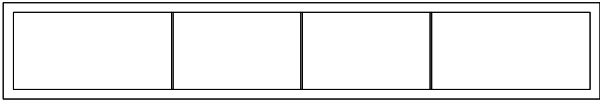
Image source:
<https://beyondthebaselines.com/2020/04/08/the-tennis-wall/>

BOCCE BALL - HARD SURFACE COURT

A. DESCRIPTION

Bocce courts are large, level, rectangular shaped courts made of several possible materials, enclosed in wood or concrete sidewalls. Bocce is popular amongst adults of all ages.

B. COURT DIAGRAM



C. GENERAL GUIDELINES

- Any orientation is allowable, with north-south preferred

D. DESIGN STANDARDS

- Standard backyard or casual-use court size is 60 feet x 12 feet. A competition-size court is 90 feet x 14 feet. Court materials can also vary, with recommended materials including clay, a sand/clay mix, oyster shell, artificial court surfacing, or artificial turf.

E. DRAINAGE

- Courts should be level. Provide weep holes or drainage structures within court to shed water when necessary.

F. BASIC FEATURES

- One 6 feet wide permanent bench should be provided for each court

G. ENHANCED FEATURES

- Spectator Seating

H. M-NCPPC STANDARDS

- C-2.1 Bocce Ball
- G-1.1 Bench
- G-2.1 Trash Receptacle
- C-6.7 Playground Underdrain

TABLE IV-3.4

	LEVEL OF SERVICE	
	2	1
COURT SIZE	Single Court 60 feet x 12 feet	Standard Single Court 90 feet x 14 feet
RUNOUT	2 feet 10 inches	2 feet 10 inches
PARKING	2	2
SEATING	1 Bench/Court	1 Bench/Court
COURT SURFACE	Clay 50%, Sand 50%	Clay 50%, Sand 50% or Artificial Turf
SETBACKS		
Courts	0	0
Parking/Road	30 feet	30 feet
Property Line	25 feet	25 feet
EQUIPMENT	Bench Seating Signage Storage Perimeter fencing	All LOS 2 Equipment Underdrainage Piping Drinking Water Shade Structure Lighting Comfort Station

EXAMPLES:

LEVEL OF SERVICE 2



Image source:
<https://patch.com/maryland/columbia/columbia-bocce-courts-now-open-public>

LEVEL OF SERVICE 1



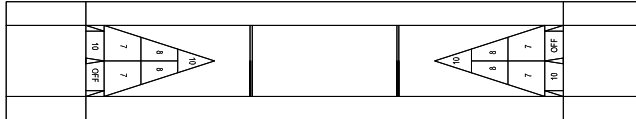
Image source:
<https://beyondthebaselines.com/2020/04/08/the-tennis-wall/>

SHUFFLE BOARD - HARD SURFACE COURT

A. DESCRIPTION

A rectangular, level court designed for playing shuffleboard, which involves pushing pucks the length of the court.

B. COURT DIAGRAM



C. GENERAL GUIDELINES

- Any orientation is allowable, with north-south preferred

D. DESIGN STANDARDS

- A standard court is 6 feet wide x 39 feet long, plus a 6 foot shooting area at each end. Provide a 2 foot 'runout' on either end. Courts are typically made of concrete, but shuffleboard lines could also be incorporated onto a multiuse court.

E. DRAINAGE

- Pitch courts to drain, 0.5-1%

F. BASIC FEATURES

- One 6 feet wide permanent bench should be provided for each court

G. ENHANCED FEATURES

- Spectator Seating

H. M-NCPPC STANDARDS

- C-3.1 Shuffle Board
- G-1.1 Bench
- G-2.1 Trash Receptacle
- D-8 Concrete Walk
- D-12 Concrete Ramp
- F-1 Underdrain

TABLE IV-3.5

	LEVEL OF SERVICE	
	2	1
COURT SIZE	6 feet wide x 39 feet long, plus 6 feet shooting area each end. Total dimensions: 6 feet wide x 51 feet long	
RUNOUT	2 feet	
PARKING	2	2
SEATING		
Player	1 Bench/Court	1 Bench/Court
COURT SURFACE	Painted/Coated Asphalt Multipurpose Court	Painted/Coated Concrete
SETBACKS		
Courts	0	0
Parking/Road	30 feet	30 feet
Property Line	25 feet	25 feet
EQUIPMENT	Bench Court Paving Signage Storage Perimeter fencing	All LOS 2 Equipment Drinking Water Shade Structure Lighting Comfot Station

EXAMPLES:

LEVEL OF SERVICE 2



Image source:
<https://www.versacourt.com/residential-shuffleboard-court-photos.html>

LEVEL OF SERVICE 1



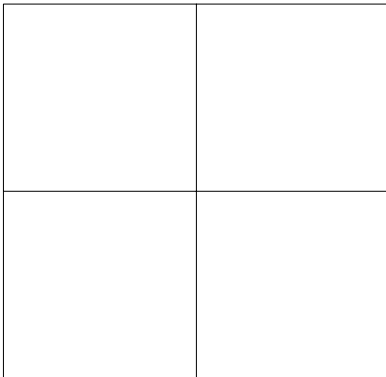
Credit is owned by M-NCPPC

FOUR SQUARE - HARD SURFACE COURT

A. DESCRIPTION

Square paved court divided by lines into four quadrants.

B. COURT DIAGRAM



G. ENHANCED FEATURES

- Spectator Seating

H. M-NCPPC STANDARDS

- C-4.1 Four Square
- G-1.1 Bench
- G-2.1 Trash Receptacle

C. GENERAL GUIDELINES

- Any orientation is allowable

D. DESIGN STANDARDS

- A standard court is 16'x16', with a minimum 5 feet runout. Courts should be paved, either concrete or asphalt, and painted with lines and numbers, and will commonly be placed within multi-use courts.

E. DRAINAGE

- Courts should be level. Provide weep holes or drainage structures within court to shed water when necessary.

F. BASIC FEATURES

- Slope of court shall be 1%.
- Courts shall be drained in one plane
- Provide spot elevations in all four corners

TABLE IV-3.6

	LEVEL OF SERVICE		
	3	2	1
COURT SIZE	Single Court 16 feet x 16 feet	Single Court 16 feet x 16 feet Double Court 32 feet x 32 feet	Single Court 16 feet x 16 feet Double Court 32 feet x 32 feet
RUNOUT	6 feet each side for Clearance	6 feet each side for Clearance	6 feet each side for Clearance
PARKING	2	2	2
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Court
COURT SURFACE	Asphalt	Painted/Coated Asphalt	Painted/Coated Asphalt
SETBACKS			
Courts	12 feet Between Courts	12 feet Between Courts	12 feet Between Courts
Parking/Road	30 feet	30 feet	30 feet
Property Line	25 feet	25 feet	25 feet
EQUIPMENT	Bench Court Paving Signage Storage Perimeter fencing	All LOS 3 Equipment Drinking Water Shade Structure Lighting	All LOS 2 Equipment Comfort Station

EXAMPLES:

LEVEL OF SERVICE 2



Image source:
<https://www.pinterest.com/pin/23855073013026254/>

LEVEL OF SERVICE 1



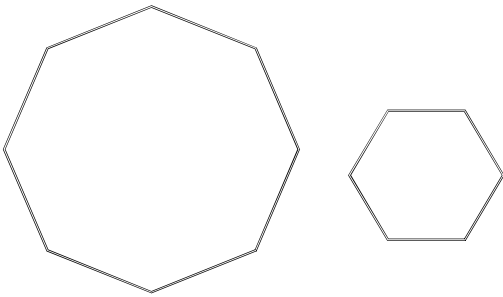
Image source:
<https://squarefour.org/>

GAGA PITS

A. DESCRIPTION

A ball game in an octagonal pit that doesn't limit player numbers. Players try to run, jump, strike, and dodge to avoid getting hit below the knees.

B. COURT DIAGRAM



C. GENERAL GUIDELINES

- Any orientation is allowable. Gaga pits can be directly accessible from a hard surfaced path in compliance with the Americans with Disabilities Act.

D. DESIGN STANDARDS

- Single hexagon or octagon: 14.5 foot - 26 foot diameter with at least 28 inches tall wall, ADA accessible.

E. DRAINAGE

- Slope of court shall be 1%.
- Courts shall be drained in one plane
- Provide spot elevations in four opposite corners

F. BASIC FEATURES

- One 6 foot wide permanent bench should be provided for each court

G. ENHANCED FEATURES

- Spectator Seating

H. M-NCPPC STANDARDS

- C-5.1 Gaga Pit layout and wall construction
- G-1.1 Bench
- G-1.2 Trash Receptacle

TABLE IV-3.7

	LEVEL OF SERVICE		
	3	2	1
COURT SIZE	Single Hexagon 15 feet diameter (for groups 6 - 8 kids) Court height: 24 inches - 36 inches	Single Hexagon 20 feet diameter (for groups of 8-12 kids) Single Octagon 20 feet - 25 feet (For more than 12 kids) Court height: 24 inches - 36 inches	Single Hexagon 20 feet diameter (for groups of 8-12 kids) Single Octagon 20 feet-25 feet (For more than 12 kids) Court height: 24 inches - 36 inches
PARKING	6	6	6
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Court
COURT SURFACE	Grass, Dirt (Soft surface)	Grass, Dirt (Soft surface) or Rubber	Grass, Dirt (Soft surface) or Rubber
SETBACKS			
Courts	0	0	0
Parking/Road	30 feet	30 feet	30 feet
Property Line	25 feet	25 feet	25 feet
EQUIPMENT	Bench Wall Enclosure Signage Storage	All LOS 3 Equipment Drinking Water Shade Structure	All LOS 2 Equipment Lighting Comfort Station

EXAMPLES:

LEVEL OF SERVICE 2



Image source:
<https://www.ci.new-prague.mn.us/memorial>

LEVEL OF SERVICE 1

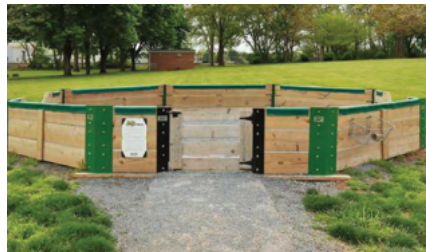


Image source:
<https://www.walkersvillemd.gov/parks-recreation/slideshows/walkersville-community-park>

SKATE PARK

A. DESCRIPTION

Dedicated area designed for skateboarding that can include formed concrete structures/terrain and freestanding equipment

B. SITE RESTRICTIONS

- 100-year floodplain
- Overhead utility lines and rights of way
- Easements
- Shrink-swell soils

C. DRAINAGE

- 1% minimum slope required for drainage
- Adequately drain features to prevent pooling water and safety hazards
- Can require stormwater management because of large amounts of pavement

D. REFERENCE STANDARDS

- MC Rec Guidelines
- Public Skate Park Development Guide
- American Society for Testing of Materials

E. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- F-1.2: Chain Link Fence
- G-1.1: Bench
- G-2.1: Trash Receptacle
- G-3.1: Bicycle Rack

TABLE IV-2.15

	LEVEL OF SERVICE		
	3	2	1
SIZE	±6,000 sf	±8,000 sf	±10,000 sf
PARKING¹	Limited Parking Acceptable	25	25
SEATING			
Skaters/Spectators	1-2 benches/picnic tables	3-5 benches/picnic benches	5+ benches/picnic tables
SURFACE	Concrete Paving	Concrete Paving	Stamped/Colored Concrete Paving
SETBACKS			
Parking/Road²	25 ft	25 ft	25 ft
Property Line	25 ft	25 ft	25 ft
EQUIPMENT	Sound buffering Smooth concrete skate surfaces Areas for different skill levels Flat areas between obstacles and transitions Benches	All LOS 3 Equipment Colored or stamped pavement Fence with gate Street courses with different types of events Trash receptacle and recycling bin Storage	All LOS 2 Equipment Drinking Water Shade Structure Bleachers Lighting Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source:
<https://patch.com/maryland/collegepark/skate-park-hosts-grand-opening>

LEVEL OF SERVICE 2



Image source:
<https://skatethestates.com/best-skateparks-in-maryland-melrose-skatepark-md-3/>

LEVEL OF SERVICE 1



Image source:
<https://skatethestates.com/best-skateparks-in-maryland-walker-mill-skatepark-3/>

DISC GOLF

A. DESCRIPTION

Series of baskets or posts used like the holes of a golf course. Disc golf incorporates terrain and natural obstacles, and can utilize unused land. Beginner courses can fit within 2 acres of land. A championship course uses 1-2 acres of land per hole.

B. SITE RESTRICTIONS

- Overhead utility lines
- Wetlands/Environmental Protection Areas

C. DRAINAGE

- Natural terrain and slopes can enhance the course
- Follow trail guidance for cross-slope and drainage recommendations

D. REFERENCE STANDARDS

- Professional Disc Golf Association

E. M-NCPPC STANDARDS

Refer to Section V: Construction Details for following Details.

- G-1.1: Bench
- G-2.1: Trash Receptacle
- G-3.1: Bicycle Rack

TABLE IV-2.16

	LEVEL OF SERVICE		
	3	2	1
COURSE SIZE	3-4 Acres (9 holes)	1-2 Acres Per Hole (12-18 holes)	1-2 Acres Per Hole (18 holes)
PARKING¹	1 per basket	1 per basket	2 per basket
SURFACE	Natural Terrain/ Trail Surface	Natural Terrain/ Trail Surface	Natural Terrain/ Trail Surface
SETBACKS			
Parking/Road²	30 ft	30 ft	30 ft
Occupied Building	30 ft	30 ft	30 ft
Property Line	30 ft	30 ft	30 ft
EQUIPMENT	Trail Surfacing, and other trail features Tee-Flat Earthen Tee Signage Targets -Posts	All LOS 1 Equipment Tee-Flat Concrete or Artificial Turf Targets -Basket	All LOS 2 Equipment Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

2. Where approved, provide fencing or other suitable barrier where site conditions do not allow safe protection.

EXAMPLES:

LEVEL OF SERVICE 3



Image source:
<https://www.pgparcs.com/4611/Disc-Golf>

LEVEL OF SERVICE 2



Image source:
<https://www.hannibalparks.org/facilities/don-crane-disc-golf-course/>

LEVEL OF SERVICE 1



Image source:
<https://udisc.com/blog/post/worlds-best-disc-golf-courses-diavolo>



05 PASSIVE OUTDOOR RECREATION

NATURAL AREAS

1. DESCRIPTION

Undeveloped landscapes featuring forested, wetland, pond and lake, and related ecological types. These provide opportunities for walking, hiking, watching wildlife, and experiencing natural conditions. Facilities may include pathways, outdoor recreation access routes (non-accessible or limited accessibility where existing conditions preclude such provisions), viewing areas, and trailheads.

2. GENERAL GUIDELINES

- Provide seating opportunities along paths, trails, and access routes.
- Provide informational signage near access points with notice of any facility limitations.
- Provide trash receptacles and similar elements at locations and in quantities to balance maintenance requirements with the needs anticipated from facility users.
- Provide guardrails or other barriers at platforms and other locations where adjacent conditions may be hazardous.
- Locate viewing areas to take advantage of unique vistas which may exist.

3. DESIGN STANDARDS

- Meet requirements which apply to Accessible Routes and otherwise maximize accessibility to the extent practicable.
- Where existing conditions may not facilitate accessible standards and requirements, the Access Board provides Conditions for Exceptions [1019]¹ which have no legal effect on local governments subject to ADA regulations but may provide useful guidance.

PICNIC AREAS

1. DESCRIPTION

A picnic area may be sited together with other facilities as part of a central recreation area or placed in a natural setting where picnickers may enjoy views of nature. A picnic area may be broken into two smaller picnic areas.

2. GENERAL GUIDELINES

Any wooded areas in which picnic areas are located should be selectively cleared. Safety is an important factor; therefore, the ability to see in and out of the area is important. Dead or injured trees which pose a risk of endangerment shall be removed. Avoid using plant materials whose leaves, flowers or fruit are poisonous, attract harmful insects, have thorns or create unsafe walking conditions.

3. DESIGN STANDARDS

Standard sizes for these facilities are listed below. Sizes may be modified, depending on the available space.

- 900 square feet with approximately 5-foot between tables and an 8-foot square feet area for a grill
- Three 6-foot anchored picnic tables
- One 8-foot anchored wheelchair accessible picnic table
- One grill with galvanized leg(s) anchored in concrete
- Grills to be anchored in concrete
- One trash receptacle with galvanized base
- The trash receptacle to be sited in proximity to the path for easy accessibility of trash pick-up
- Four 2.5 inches to 3 inches caliper shade trees unless sufficient shade trees exist
- If using existing trees the site plan should indicate the size, location and type of existing trees

4. SITE LOCATION

The picnic area is to be sited in a grove of existing trees, or shade trees are to be

provided per picnic area. Trees should be limbed up to 8-feet above the ground. Areas selected for picnic tables and grills should be conducive to picnicking and have enjoyable views.

Do not site picnic areas under overhead utility lines, within easements, or within 25-feet from parking lots and roads.

5. DRAINAGE

Comply with the following requirements:

- 1% to 2% slope
- Sitting areas shall be graded to ensure positive drainage
- Sitting areas shall be graded to ensure handicap accessibility

6. LANDSCAPING

Provide landscape buffering or screen planting between picnic areas and nearby adjacent homes or other incompatible park uses, provided screen plantings can be designed and located in a manner that would not create security issues for picnic users. Proposed plants adjacent to picnic areas shall have high branching patterns and shall not have thorns, messy fruits or nuts, attract bees, and shall be non-poisonous to humans.

7. M-NCPPC STANDARDS

- E-7.1 Timber Edge - Type 1
- E-7.2 Timber Edge - Type 2
- E-7.3 Timber Edge - Type 3
- G-1.1 Bench
- G-2.1. Trash Receptacle
- G-5.1 Informational Signage
- G-6.1. Picnic Shelter Slab and Footing

SITTING AREAS

1. DESCRIPTION

Sitting areas provide park visitors opportunities for socializing, rest during active recreation, supervision of children, and quiet contemplation. Featuring benches, tables and chairs, and other site furnishings, they are incorporated with all other facility types including trails and greenways, playgrounds, urban plazas, residential amenities, recreation fields, and natural areas. Sitting areas may be sited in an urban setting to enhance security by making people more visible. A sitting area may be divided into smaller seating groupings.

2. GENERAL GUIDELINES

Provide comfortable and accessible seating.

- Include at least one companion space for wheelchairs at seating areas within each distinct activity zone in a park.
- Provide space to place or store mobility devices safely while not in use.
- Distribute seating throughout the facility at regular intervals that can be anticipated. Include secluded and open areas to allow flexibility of use based on the kind of environment the user wants to experience.
- Where appropriate, provide a portion as movable seating.

3. DESIGN STANDARDS

- The standard for benches is 6 feet in length. Exceptions for 4-foot benches are allowed where necessary.
- Unless specifically discouraged in the project program, provide arm rests and seat backs for at least half of benches and chairs

4. SITE LOCATION

- Provide seating where people will logically congregate.
- Set at least 36-inches back from the path or trail edge.
- Arrange seating to encourage social

interaction. Benches should face each other, be side-by-side or at a 90-degree angle to each other. Also provide single benches.

- Provide seating in sun and shade locations. Consider the conductive properties of the materials accordingly.

5. M-NCPPC STANDARDS

- G-1.1 Bench
- G-2.1 Trash Receptacle

COMMUNITY GARDENS

1. DESCRIPTION

Community Gardens are typically a common area with a series of plots arranged in a grid (or other pattern), water source, and other shared facilities to provide local residents a place to create vegetable or flower gardens as a form of recreation or horticultural therapy. Occasionally, they may instead be specialized garden spaces providing sensory or other therapeutic value to those with disabilities.

2. GENERAL GUIDELINES

- Plots are allotted by the managing entity to users on a seasonal basis with a series of conditions for use.
- Raised plots are preferred for ease of soil management and improved accessibility.
- Provide seating within the garden area.
- Provide a potable water connection with one or more hose connections which can be winterized.
- Drip-type irrigation is optional. When not provided, locate hose connections to simplify and maximize access to all plots.

3. DESIGN STANDARDS

- Plot size is typically rectangular, 6 by 10, or 10 by 15 feet. Other sizes may be used to suit facility conditions.
- Edging to be provided for non-raised plots.
- Provide a minimum of 24-inches between plots, except for a minimum of 48-inches between accessible plots. 48-inches between all plots is preferred if space is available.
- Raised planter height is typically 18-inches, minimum 10-inches.
- Provide at least 20% of raised planters at 36-inches height for wheelchair access.
- Provide accessible primary path across the entire garden which is at least 6-feet wide. Provide other pathways at least 48-inches wide.

- Provide a 7-foot-high polypropylene deer fence with at least 80 grams per square meter weight and vehicular gate. The mesh in this type is generally difficult to see from 15-feet away or more.

4. SITE LOCATION

- Locate plots to receive at least 6 hours of direct sunlight daily.

5. DRAINAGE

- Provide for positive site drainage and design surface materials (such as stone dust) for ease of maintenance.
- Provide a drain near hose storage locations or otherwise prevent washout of soil and unpaved surfaces.

6. M-NCPPC STANDARDS

- G-4.1 Accessible Raised Planter Beds - Option 1
- G-4.2 Accessible Raised Planter Beds - Option 2

BOAT AND KAYAK LAUNCH

A. DESCRIPTION

Entrance for non-motorized boats (canoes, kayaks, rowboats, etc.) into a body of water.

B. SITE RESTRICTIONS

- Requires parking within 200'
- Environmental protection areas

C. DRAINAGE / TOPOGRAPHY

- Gently slope to water

D. REFERENCE STANDARDS

- Landscape Architect Graphic Standards

	LEVEL OF SERVICE		
	3	2	1
SERVING	Individuals who bring their own boats	Individuals/ small groups who bring their own boats	Individuals/ small groups who bring their own boats or guests who rent from park
SIZE	10 feet wide ramp	30 feet wide ramp	30 feet + wide ramp
PARKING¹	15 each ramp	15 each ramp	15 each ramp
SEATING	Min. 1 Bench	Min. 1 Bench	Min. 1 Bench
LAUNCH CONSTRUCTION	Existing Stable Slope (Sand, Earth, etc)	Stabalized Hardscape Slope (Concrete Slab, Riprap edges	Stabalized Hardscape Slope (Concrete Slab, Riprap edges, or Wood/ Metal Floating Dock
EQUIPMENT	Gently sloping ramp Bench seating	All LOS 3 Equipment Paved ramp	All LOS 2 Equipment Wood or metal floating dock Comfort Station

1. Quantities are for Unprogrammed / Programmed elements. Quantities here are for one park element only. Refer to parking narratives for additional considerations when calculating parking at park facilities.

EXAMPLES:

LEVEL OF SERVICE 3



Image source:
https://www.tripadvisor.com/Attraction_Review-g58313-d4522799-Reviews-Eco_Discovery_Park-Williamsburg_Virginia.html

LEVEL OF SERVICE 2



Image source:
<http://patuxentwatertrail.org/launches/queen-anne-canoe-launch-patuxent-river-park-2/>

LEVEL OF SERVICE 1



Image source:
<https://patuxentwatertrail.org/launches/greenwell-state-park-2/>



06 URBAN SPACES

PLAZAS & OPEN SPACES

1. DESCRIPTION

Closed Square

- Space shared by buildings, typically multi-family residential, inside the block with pedestrian or vehicular loop around a green area.
- 1/5 to 3/4-acre.

Attached Square

- Attached squares are green spaces primarily defined by tree plantings providing settings for civic buildings and monuments, which are located at the center or edge of the square.
- 1-1/2 to 2-acres.

Detached Square

- Squares detached on all sides by roads are particularly formal and less likely to be accessed than other types, with limited natural qualities.
- 1 to 1-1/2-acres.

Market Plaza

- Market plazas are public spaces that are primarily paved rather than green. Suitable for very heavy intense use by pedestrians and vehicles, and ideally multi-purpose.
- 1 acre and greater.

Civic Plaza

- A plaza with civic buildings with corresponding architectural expression, formal site lines, siting, and design of supporting elements such as parking to convey an elevated status.
- 1 acre and greater.

Green

- A naturalistic, urban open space with paths, benches, and possibly monuments that is small, civic, and surrounded by buildings but less formal than a square.
- 1 acre and greater.

2. SITE LOCATION

- Provide safe and accessible connections with adequate drainage.

- Within urban core, town centers, and more dense centers within suburban and rural areas.
- Co-location with transit stops is preferred.

3. DESIGN CRITERIA

- Integrate programmable gathering spaces.
- Integrate Crime Prevention Through Environmental Design (CPTED) principles.
- Incorporate passive features to protect pedestrians from errant vehicles, such as tree plantings, curbs, bollards, and decorative planters.
- Provide adequate seating in the form of benches, seat walls, and amphitheater-type terracing which may also serve as secondary elements and provide protection. Some seating will be permanent, while others may be designed to allow for flexible use during markets, festivals, concerts, etc.
- Include art pieces, shade structures, or fountains as central elements where appropriate in formal areas.
- Co-locate with housing (with buffering, if appropriate) and retail uses to provide greater activation of the space.
- Integrate play elements / playgrounds featuring multi-sensory focal elements if adequate protection and enclosure can be provided.
- Incorporate bike racks to allow greater accessibility. Provide adequate trash and recycle receptacles.
- Pedestrian-scale, dark-sky compliant lighting is essential to provide safe and secure use during evening hours, and enhanced visual value.



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07 DOG FACILITIES

DOG PARKS

1. DESCRIPTION

Fenced area where dogs can run off-leash while supervised.

2. SITE LOCATION

- Safe accessible location with adequate drainage.
- Close to parking area, unless located in a densely populated or urban area due to walkability.
- In lower density neighborhoods 10 to 20 parking spaces should be dedicated to dog park use.
- In higher density neighborhoods, which are generally more walkable, a dedicated parking lot may not be necessary.

3. DESIGN CRITERIA

Separate play areas for different sized dogs are recommended if space allows (LOS 2,3).

- The separate large dog area should be three quarters ($\frac{3}{4}$) of the site (minimum $\frac{3}{4}$ of an acre).
- The separate small dog area should be one quarter ($\frac{1}{4}$) of the site (minimum $\frac{1}{4}$ of an acre).
- Provide and rotate use between one to two redundant areas if space allows (natural turf).
- Dog Runs are not necessarily suitable in lieu of Dog Parks. However, if Dog Runs are provided then the minimum size must be 25 feet x 100 feet.

Fence (LOS 1,2,3)

- Minimum 5 feet-6 feet tall fence above finished grade.
- If a fence barrier is used, it should be buried a minimum of 6 inches between footings, except at access points, to prevent digging.
- Double gated entrance.
- A 10 feet x 10 feet minimum entry corral with two gates is recommended.
- Provided double gated entrances for both large and small dog areas, if provided.
- Opaque wall required between small and

large dog entrances.

- Double gated entrance be the same height as surrounding fence.
- Gate must open only one way, into the dog area.
- Both gates should be self-closing, self-latching, and lockable.
- The surface within and directly outside double gated entryways should be concrete for ease of maintenance, dog safety, and ADA accessibility.
- Placing gates in the corners of the fenced area is not recommended, as this allows new dogs entering the park to easily be cornered by other dogs as they rush to greet each other.
- A separate lockable 12-foot-wide double gate is recommended for maintenance access in designated dog areas.

Play Amenities (LOS 1)

- Can provide dog agility equipment or dry and wet stations for dog play.
- Activity Types: Jumping, Running, Agility practice.

Pathways (LOS 1,2,3)

- Accessible pathways that comply with ADA regulations should connect the dog park to parking areas and any existing public sidewalks if possible.
- A concrete, asphalt, or poured-in-place rubber pathway that forms a loop or multiple loops within a dog park provides enhanced accessibility and allows owners to interact with and monitor their dogs more closely. It also adds additional interest to the park.
- Pathways and walking loops should be provided if there is sufficient space and funding.
- A portion of open play areas in both large dog and small dog parks must be ADA accessible.

Signs (LOS 1,2,3)

Provide signs that specify park hours and rules with clear and consistent language. Display in a highly visible area.

Seating (LOS 1,2,3)

- Include benches and seating areas for owners with clear view of play areas.
- Provide shaded seating.
- To avoid entrapment of dog's heads, legs or paws, select bench with solid seating.
- Organize all shade and seating areas to accommodate long unobstructed running areas.
- Benches should generally be placed along perimeter fencing for safety to avoid canine/owner collisions.
- Benches should generally be placed along perimeter fencing for user safety, so as to avoid canine/owner collisions.

Water Stations (LOS 1,2,3)

- Provide watering stations for dogs and owners.
- Each separate large and small dog area must have a minimum of one drinking fountain which includes one standard bowl, one ADA compliant bowl, and one canine bowl (with pet strainer).
- Provide a hose bib for maintenance needs.
- Both the hose bib and the fountain should be placed on an accessible concrete pad that freely drains.

Cleaning Stations (LOS 1,2,3)

- Elevated stainless steel basin with drain and adjustable water spray.
- Alternative: at grade concrete floor with drain.
- Provide pet cleaning stations for every two thousand (2,000) square feet of dog park area.

Shade Areas (LOS 1,2,3)

- Include shade areas (gazebos, fabric shade structures, or shade trees).
- Tree canopy should provide a minimum of one hundred percent (100%) shade coverage in the seating areas within ten (10) years.

4. LANDSCAPE

- Provide perimeter landscape screening if space available.

- Plant material that is native, low maintenance, and not dangerous (low toxicity, no thorns, etc.) to dogs is recommended.
- Small rain gardens, bio-swales, or curbs surrounding the perimeter of the dog park are encouraged for capturing and treating runoff whenever feasible.

5. SURFACING**Types of Surfacing****Natural Turf:**

Pros: Soft/Clean

Cons: Wears quickly/High maintenance

Cost: Medium

Crusher Fines/Washed Stone Dust:

Pros: Drains Well, Longevity

Cons: Can erode if not on level surface

Cost: Medium

Wood Mulch:

Pros: Easy to Replace

Cons: Holds Dog waste, may require edging for containment

Cost: Low

Synthetic Turf:

Pros: Less Maintenance

Cons: Requires frequent cleaning/ high cost to replace every 8-10 years

Cost: High

6. REFERENCE STANDARDS

American Kennel Club "Establishing a Dog Park in Your Community" Guidelines.
 Fairfax County Park Authority Dog Park Study Report "Dog Park Design"
 County of Los Angeles "Park Design Guidelines and Standards"

TABLE IV-6.1

	LEVEL OF SERVICE					
	LOS 3			LOS 2		LOS 1
	Dog Run	Urban	Suburban	Urban	Suburban	Suburban
SITE AREA	4,000 square feet or less	4,000 - 8,000 square feet	16,000 - 20,000 square feet	8,000 - 16,000 square feet	20,000 - 43,000 square feet	43,000 square feet or more
SEPARATE LARGE AND SMALL DOG	Not Required	Not Required	Required	Required	Required	Required
FEATURES	Shade structure/trees, drinking fountain	Shade structure/trees, drinking fountain	Shade structure/trees, drinking fountain	Shade structure/trees, drinking fountain, Seating	Shade structure/trees, drinking fountain, Seating	Shade structure/trees, drinking fountain, Seating
PLAY AMENITIES	Not required	Hybrid seating/agility Objects	Hybrid seating/agility Objects	Agility Equipment	Agility Equipment	Agility Equipment, Specific defining feature
PARKING	No dedicated parking	Limited dedicated parking	Dedicated Parking	Limited dedicated parking	Dedicated Parking	Dedicated Parking
Naturalness	Few to no natural features	Some natural features/shade trees enough space for activity	Medium sized area with shade trees, within a neighborhood or community park	Some natural features/shade trees with enough space for activity	Large fields, ornamental vegetation or shade trees	Generous fields, ornamental vegetation and shade trees, likely located in a community or regional park

EXAMPLES:

LEVEL OF SERVICE 3 - DOG RUN



Credit is owned by M-NCPPC

LEVEL OF SERVICE 2 - URBAN



Credit is owned by M-NCPPC

LEVEL OF SERVICE 1 - SUBURBAN



Credit is owned by M-NCPPC

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08 SITE ELEMENTS

SHELTERS

1. DESCRIPTION

Shelters are open structures intended to provide protection from the elements and are often used as picnic and gathering areas. Pre-fabricated shelters are available in a variety of sizes and configurations, and can be constructed out of many different weather-proof materials including but not limited to: metal, wood, concrete, brick and fabric. Shade structures are typically the only structures built of fabric by nature of their purpose. Of primary concern is the permanence of the shelter. Design and planning with regards to eventual disposition of the shelter as well as the material of the shelter should be determined

2. SITE LOCATION

Shelters should be located on the site with consideration taken for views, access, and orientation. Proximity to other site features such as playgrounds, courts, boat launches, outdoor picnic parks, dog parks, etc. should also be considered. Shelters should be located on an ADA accessible route.

3. DESIGN STANDARDS

Whether the shelter is designed and constructed, or a pre-fabricated type is provided, the size, scale, and form of the shelter should be in keeping with the site and its surroundings. The colors, forms, and materials of small shelters in neighborhood parks should take into account the materials of the neighborhood. Shelters in natural areas can be natural in form, color, and material or be sculptural and unique in form and color. In any situation the design of the shelter should reflect the character of the community or park. In larger parks consider multiple shelters either grouped together or located throughout the site.

- Slope slab from center to perimeter to prevent water sheeting and ponding
- Minimum size of shelters is 20 foot x 20 foot unless otherwise approved by

M-NCPPC.

- Shelters are to be engineered for the loading and wind conditions of the area.
- All shelters should conform with the prevailing building code and Prince George's County regulations.
- Shelter materials are to be easily maintained; consider anti-graffiti coatings and hidden connections. Finishes to be factory applied.
- Suppliers and manufacturers that meet design criteria not limited to durability, availability and budget shall be considered for potential use.

4. LANDSCAPE

Landscape elements should complement the shelter and create visual interest. Landscaping elements should not be placed where they will obstruct views of play areas from within the shelter. Landscape elements can be used to prevent vehicles from entering the shelter where appropriate.

5. SURFACING

The preferred material for picnic shelters or park shelters is concrete. Alternate materials such as stamped concrete, coloured concrete, and stone paving on the concrete base can be considered in coordination with M-NCPPC. For shelters serving fitness equipment and playgrounds, provide impact attenuating surfacing per manufacturer's recommendation. Regardless of surface used, it should extend beyond the eave to prevent sheeting water from creating erosion at the perimeter of the shelter.

6. REFERENCE STANDARDS

Shelters to be designed and engineered to the standard appropriate to the material selected.

7. M-NCPPC STANDARDS

All work is subject to DIVISION 1. – BUILDING CODE, The Prince George's Building Code, as amended.

RESTROOM BUILDINGS

1. DESCRIPTION

Restroom buildings are typically located in LOS 1. If only one or two restrooms are available in a structure, they should be gender neutral restrooms. If three are provided, one is to be gender neutral and the other two binary. The family restroom component of a changing table should be available in all restrooms, when possible, but in one or both for single or double where binary designations are not in use, and in a gender neutral or family restroom when three or more are present.

2. SITE LOCATION

Locate restroom buildings near parking lots or public streets; buildings should be visible. Building should be proximate to uses such as playgrounds, sports fields, and courts. Restroom buildings are to have vehicle access surface compatible with other vehicle access on site.

3. DESIGN STANDARDS

The design of restroom buildings should be complimentary to other site structures and facilities including colors, materials, and roof forms. Buildings are to be ADA compliant. Interior walls of restrooms shall be CMU; smooth, ground or split faced with anti-graffiti coating; other materials will be considered such as precast concrete. Exterior materials (roof, wall) shall be in keeping with other site structures.

- Floors shall be reinforced concrete slab; sealed and sloped to drain. Integrate concrete curb at perimeter for cleaning; provide lockable hose bib.
- Provide natural ventilation and lighting, with interior electric lighting on photocell and vacancy sensors. Consider skylights, solar tubes, and clerestory windows for natural lighting. Light fixtures to be rated for wet location.

- All plumbing fixtures shall be wall hung and of heavy-duty construction (waterless or composting fixtures may be applicable where appropriate). All toilet accessories to be stainless steel, vandal resistant. Fixtures and accessories shall be ADA compliant, including baby changing station.
- Provide a secure area for maintenance supplies (minimum 25 square feet) with at least one duplex receptacle.
- Provide privacy walls or partitions; $\frac{3}{4}$ inches solid phenolic with stainless steel continuous privacy hinges.

4. LANDSCAPE

Landscape elements should complement the restroom building and create visual interest. Landscaping design should be low-maintenance and keep the user's security in mind, avoiding areas of concealment.

5. SURFACING

Provide minimum 5 feet wide concrete walkway at entrances, slope away from building. Consider including walkway around perimeter of building. Take into account water from roof if gutters and downspouts are not included.

6. REFERENCE STANDARDS

Restroom buildings shall comply with the codes currently adopted and in use by Prince George's County, including but not limited to Fire Protection, Life Safety, Electrical, Building/Structural, Accessibility, Energy, and Health Codes.

7. M-NCPPC STANDARDS

Restroom buildings are required at all parks with a level 3 amenity. They are recommended at parks with a level 2 amenity.

PEDESTRIAN TRAIL BRIDGES

1. DESCRIPTION

Trail bridges are used to cross bodies of water, protected or sensitive areas, or terrain that is otherwise impassible such as slopes, major roads, and highways.

2. SITE LOCATION

Trail bridges are located where needed; the design of trails should minimize the use of bridges where possible.

3. DESIGN CRITERIA

AASHTO recommend bridges be 4-feet wider than the trail, to allow for 2-foot shoulders. The Department of Parks and Recreation will compromise to allow bridges to be a minimum of 2 feet wider than the trail. Railings along the bridge entrance ramps should be flared to avoid creating a vertical crash hazard within the 2 feet shoulder clear zones. Railings should include a rub-rail and top railing. If vertical pickets are used, they should be spaced to be child safe. Railings must meet ADA design requirements.

Surface materials should be selected and designed to avoid settling and thus creating a lip that is a trip or crash hazard. Bridges over highways and RRs will likely require a protective “cage” or high fencing to prohibit users from dropping things on the road/RR below.

Concrete decking can be advantageous as it can be brushed to be anti-slip and channel rain water. Bridge design will be determined by the required bridge span, anticipated cost, maintenance requirements and service life.

Design specifics and other requirements shall be determined by a Professional Engineer.

4. LANDSCAPE

Landscape elements should complement the trail bridge and create visual interest. If appropriate, landscape elements can be placed to deter users from entering the area the trail bridge is spanning.

5. SURFACING

Wood/timber is a standard decking material. It should be treated to extend its life; treatment shall be EPA approved and preferably be waterborne to bond with the wood. Consider applying a wearing surface to increase traction on sloped bridges.

6. REFERENCE STANDARDS

Design of the trail bridge rail system must meet county, state, and national codes. The USDA Forest Service recommends safety requirements be determined by the needs of the expected trail users and identifies three types of risk areas with associated guidance. These categories can be found here: <https://www.fs.fed.us/eng/bridges/railsystems/index.htm>

7. M-NCPPC STANDARDS

Bridge design is very site specific with a range of considerations. Coordinate with M-NCPPC staff for the design of any crossings and bridges.



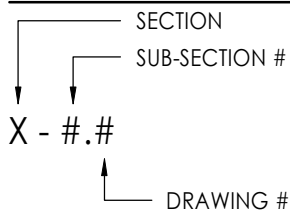
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V. CONSTRUCTION DETAILS

INDEX OF SECTIONS

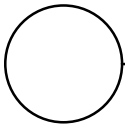
- A. SPORTS FIELDS
- B. SPORTS COURTS & EQUIPMENT
- C. PLAY SURFACES & EQUIPMENT
- D. SHARED USE PATHS (TRAILS)
- E. PAVEMENT AND EDGING
- F. FENCES AND RAILINGS
- G. FURNISHINGS, SIGNAGE & EQUIPMENT
- H. DRAINAGE AND SWM

NUMBERING SYSTEM



ABBREVIATION LEGEND

AC.	ACRES	FTG.	FOOTING	O.C.	ON CENTER
ASW	AMERICAN STEEL & WIRE	GALV.	GALVANIZED	OPT.	OPTIONAL
APPROX.	APPROXIMATE	GA.	GAUGE	OD.	OUTSIDE DIAMETER
BITUM.	BITUMINOUS	HT.	HEIGHT	PSI	POUNDS PER SQUARE INCH
CL	CENTERLINE	INCL.	INCLUDING	P.T.	PRESSURE TREATED
CIRCUM.	CIRCUMFERENCE	MNFR.	MANUFACTURER	REQ'S.	REQUIREMENTS
CLR.	CLEAR	MAX.	MAXIMUM	SCHED.	SCHEDULE
CONC.	CONCRETE	MIN.	MINIMUM	STDS.	STANDARDS
C.M.U.	CONCRETE MASONRY UNIT	NTL.	NATIONAL	SURF.	SURFACE
DIA.	DIAMETER	NOM.	NOMINAL	TYP.	TYPICAL
EA.	EACH	N.T.S.	NOT TO SCALE	WWF	WELDED WIRE FABRIC
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COVER SHEET



The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

JANUARY 2023

INDEX OF DRAWINGS - SPORTS FIELDS

A-1.1 SOCCER FIELD

A-2.1 FOOTBALL FIELD

A-2.2 FOOTBALL GOAL

A-3.1 COMBINATION FOOTBALL/SOCCER FIELD

A-4.1 RUGBY FIELD

A-5.1 BASEBALL FIELD

A-5.2 SOFTBALL FIELD

A-5.3 BALLFIELD DRAINAGE

A-6.1 CRICKET FIELD

A-7.1 ULTIMATE DISC FIELD

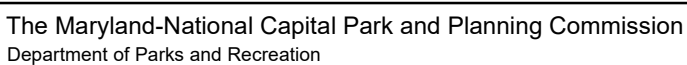
A-8.1 OPEN PLAY AREA

A-9.1 BALL WALL

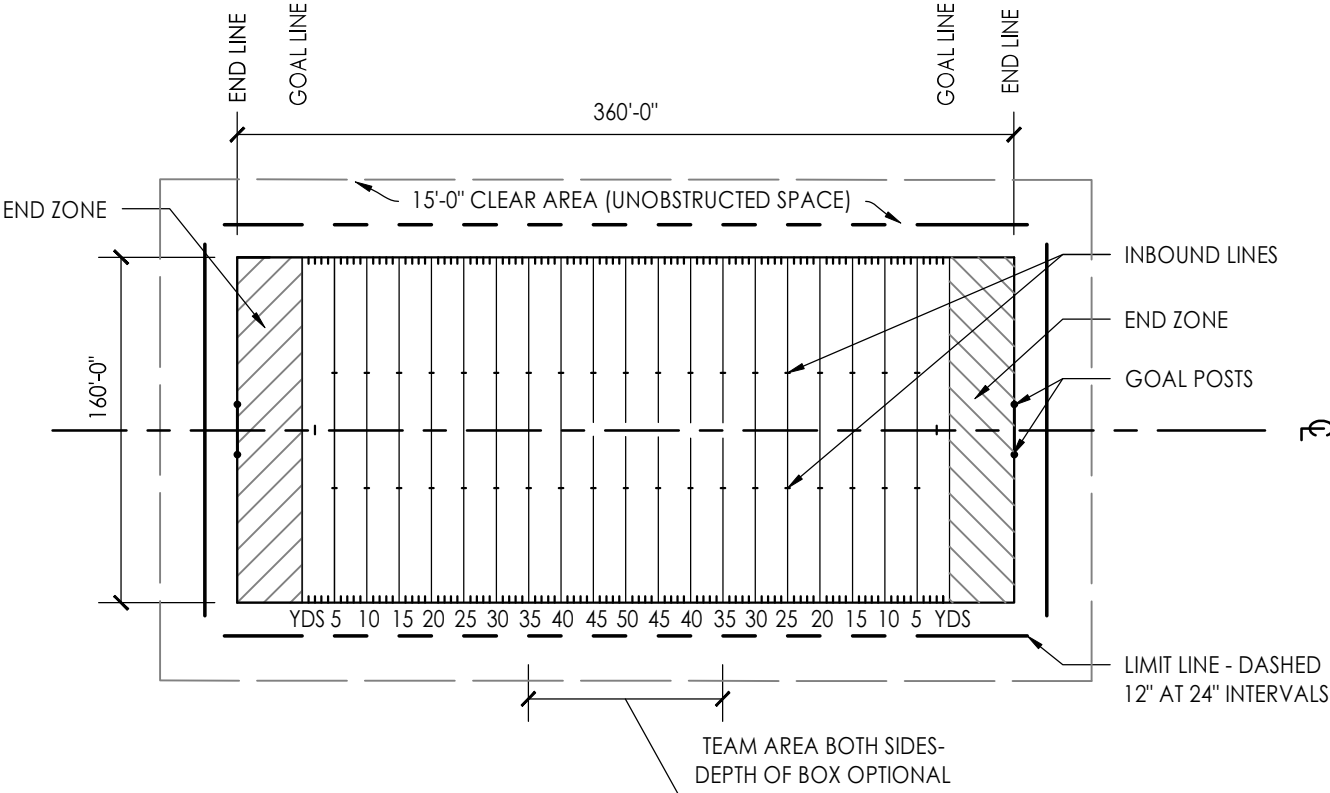
A-10.1 RECTANGULAR FIELD DRAINAGE PATTERN



1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. THE GOAL POST MUST BE IN COMPLIANCE WITH IFAB (INTERNATIONAL FOOTBALL ASSOCIATION BOARD) LAW #1, SECTION 10.

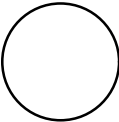


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TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

- NOTES:
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 2. REFERENCE: NTL. FEDERATION OF STATE HIGH SCHOOL ASSOC. (NFHS) STANDARDS.
 3. OPTIONAL: ONE SEMI-PERMANENT FOOTBALL GOAL INSTALLED IN A GROUND SLEEVE AT EACH END OF PLAYING FIELD. REFER DETL A-2.2.
 4. OPTIONAL: PERIMETER FENCE, 48" MAX. HT. LOCATED BEYOND THE UNOBSTRUCTED CLEAR ZONE.



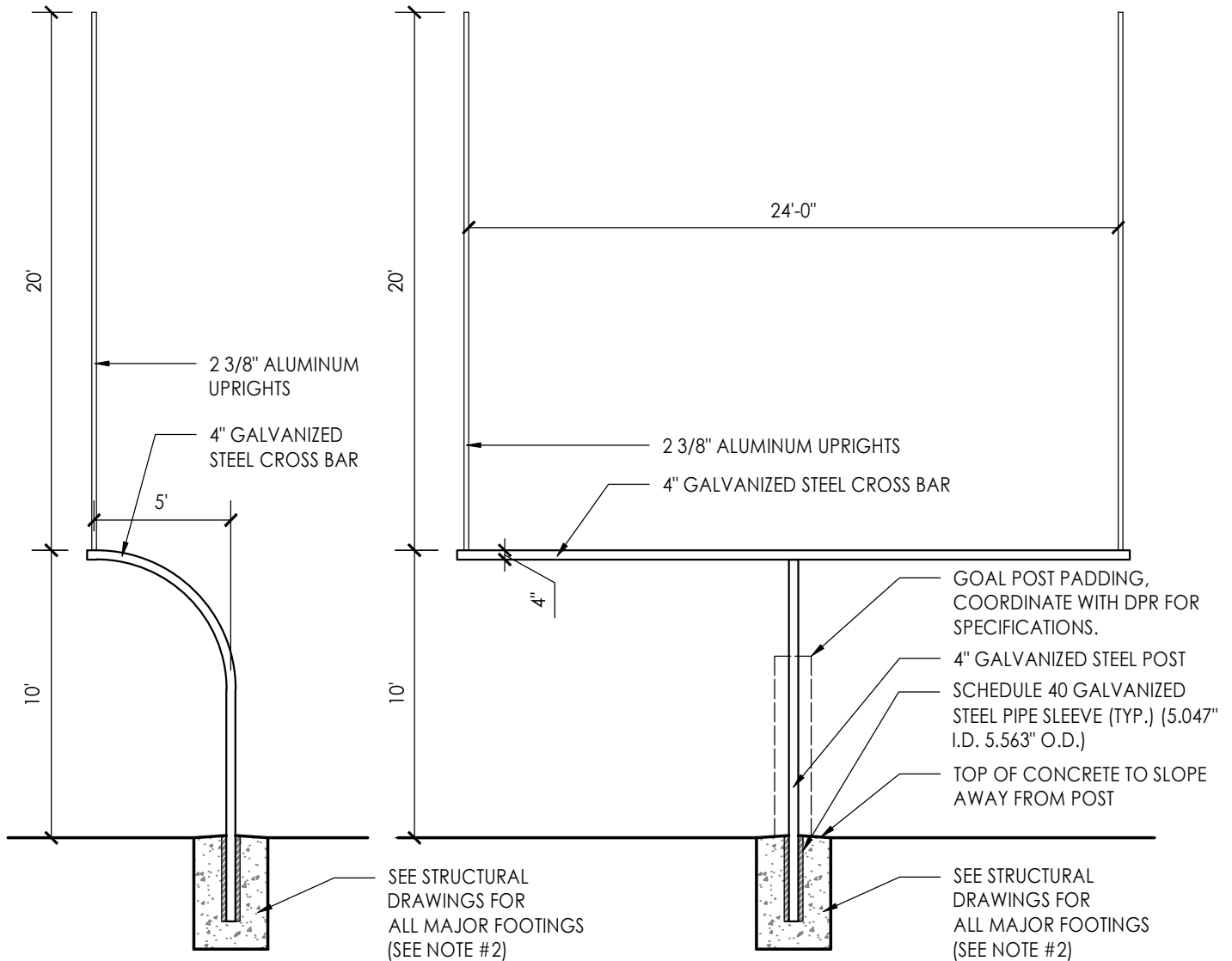
FOOTBALL FIELD: CONCEPT

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NUMBER

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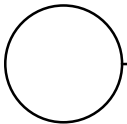


○ TYPICAL SIDE ELEVATION
N.T.S.

○ TYPICAL ELEVATION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. WELD ALL PIPE JOINTS.
4. ACID-ETCH ALL PIPE BEFORE PAINTING. THEN APPLY PRIMER, AND TWO COATS SEMI-GLOSS ALKYD ENAMEL PAINT, WHITE.
5. PROVIDE NETTING 50-FT HT. BY 50-FT. WIDTH BEHIND GOAL WHEN ADJACENT TO ROADWAY OR TRAFFIC AREA.



FOOTBALL GOAL: DETAIL

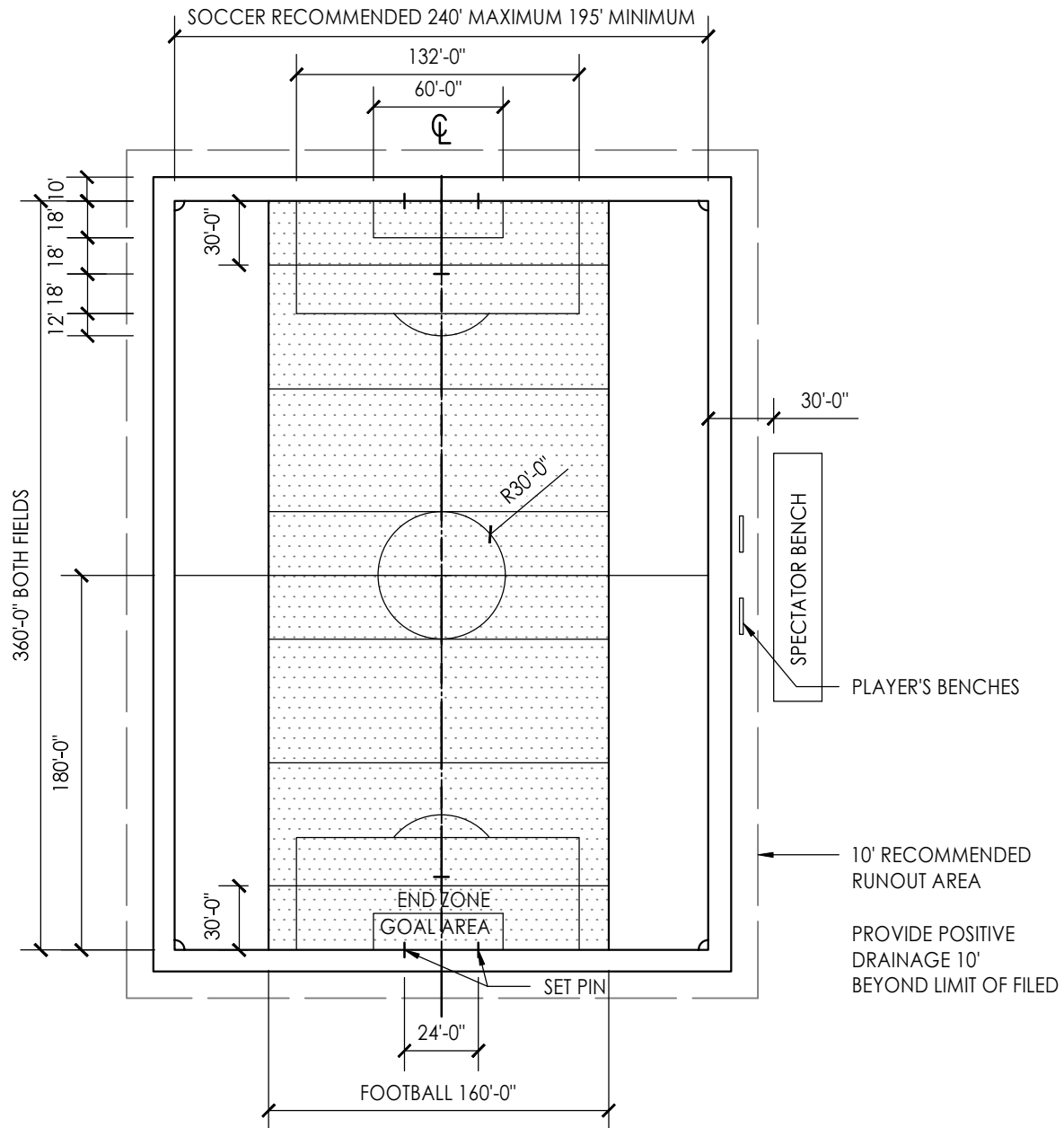


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NUMBER

A-2.2

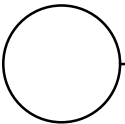
JANUARY 2023



○ TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. USE COMBINATION SOCCER/FOOTBALL GOAL.



COMBINATION FOOTBALL/SOCCER FIELD: CONCEPT

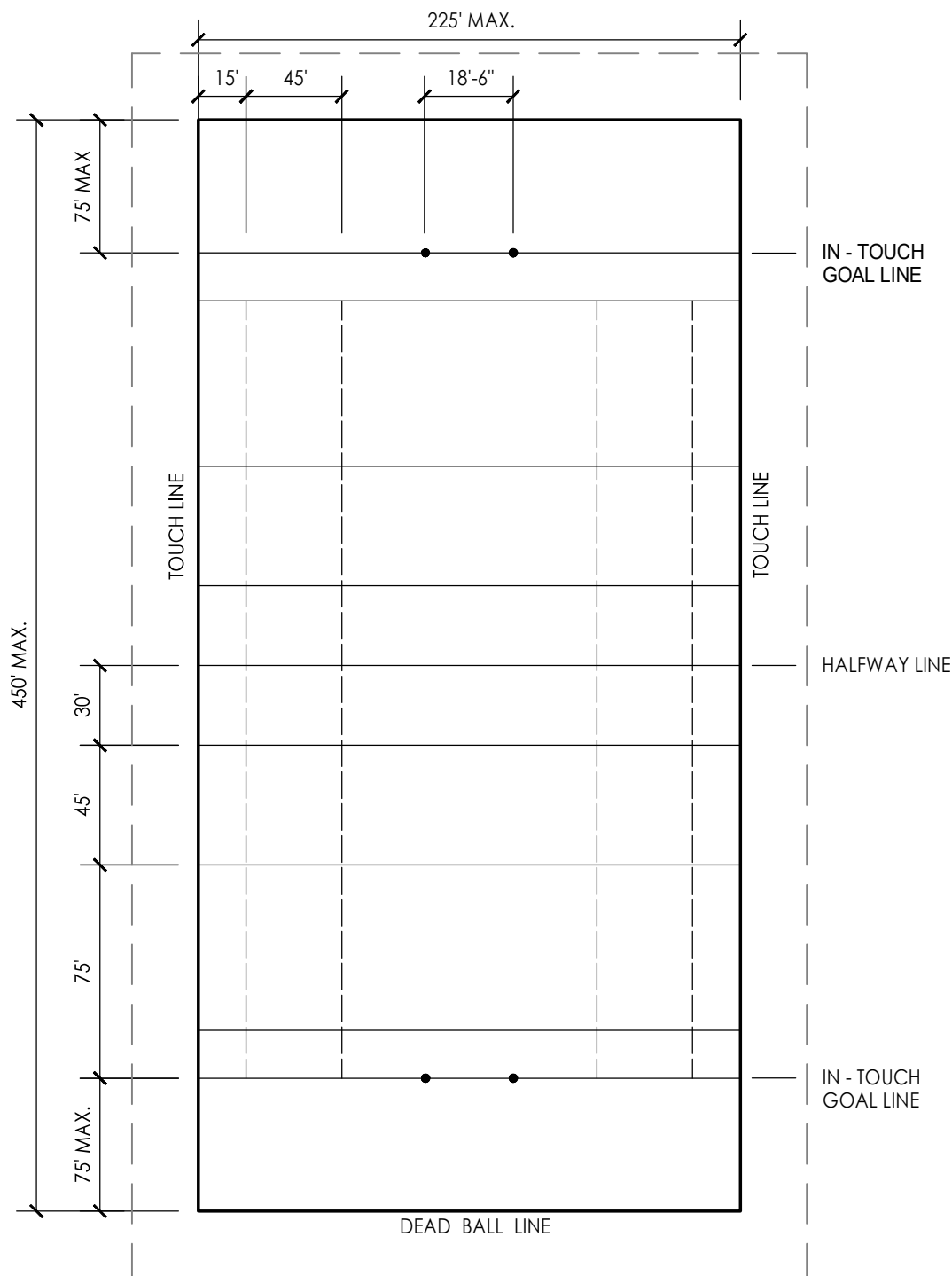


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NUMBER

A-3.1

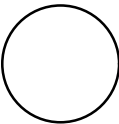
JANUARY 2023



 TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. PREFERRED SLOPE: 1.25%-1.5%. MAXIMUM SLOPE: 2%.
3. REFERENCE: NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS (NFHS) STANDARDS.



RUGBY FIELD: CONCEPT

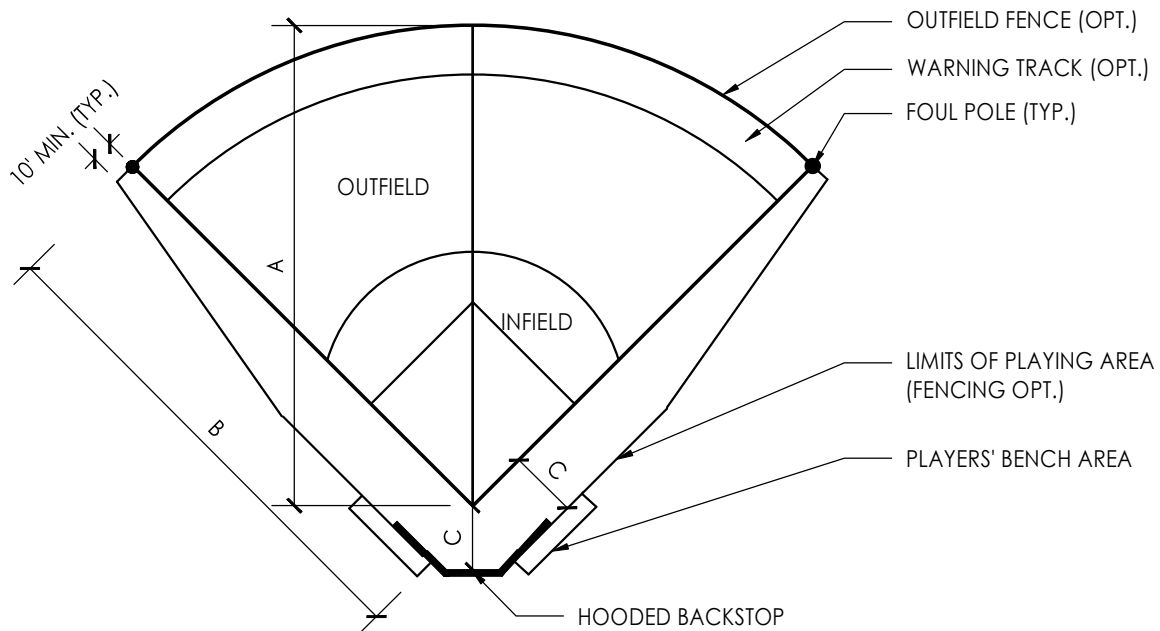
 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

A-4.1

JANUARY 2023

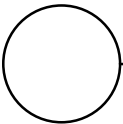
USE	AGE GROUP	A	B	C	TYP. APPROX. AREA
ADULT BABE RUTH HIGH SCHOOL	15 & UP	375' MIN. 400' PREF.	325' MIN. 350' PREF.	40' MIN. 60' PREF.	3 AC
PONY LEAGUE JUNIOR HIGH SCHOOL	13 - 14	300' MIN. 350' PREF.	275' MIN. 300' PREF.	25' MIN. 40' PREF.	2.5 AC
LITTLE LEAGUE	9 - 12	200' MIN. 225' PREF.	180' MIN. 200' PREF.	20' MIN. 25' PREF.	2.0 AC



○ TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. OUTFIELD & FOUL LINE FENCING ARE OPTIONAL. IF REQUESTED BY M-NCPPC, INSTALL WARNING TRACK AREA.
3. RISE OF PITCHERS MOUND TO BE 10" ABOVE FIELD.
4. REFER TO DETL. A-5.3 FOR GRADING. NO AREA SHOULD DRAIN ONTO SKINNED INFIEL. SLOPES ON BALL FIELD TO BE 1.00% MIN., 1.50% MAX., 1.25% PREFERRED. MINIMIZE DIFFERENCES IN ELEV. BETWEEN ANY TWO POINTS ON THE PLAY SURFACE.
5. REFERENCE: NTL. FEDERATION OF STATE HIGH SCHOOL ASSOC. (NFHS) STANDARDS.
6. BLEACHERS, WHEN PROVIDED, TO BE OUTSIDE PLAY AREA LIMITS ALONG 1ST AND 3RD BASE LINES.
7. FENCE TO BE CHAIN LINK. ALL POSTS, RAILS, AND FABRIC TO BE CHAIN LINK, ALUMINIZED STEEL MESH 9 GA, 2" MESH (UNLESS NOTED OTHERWISE).



BASEBALL FIELD: CONCEPT



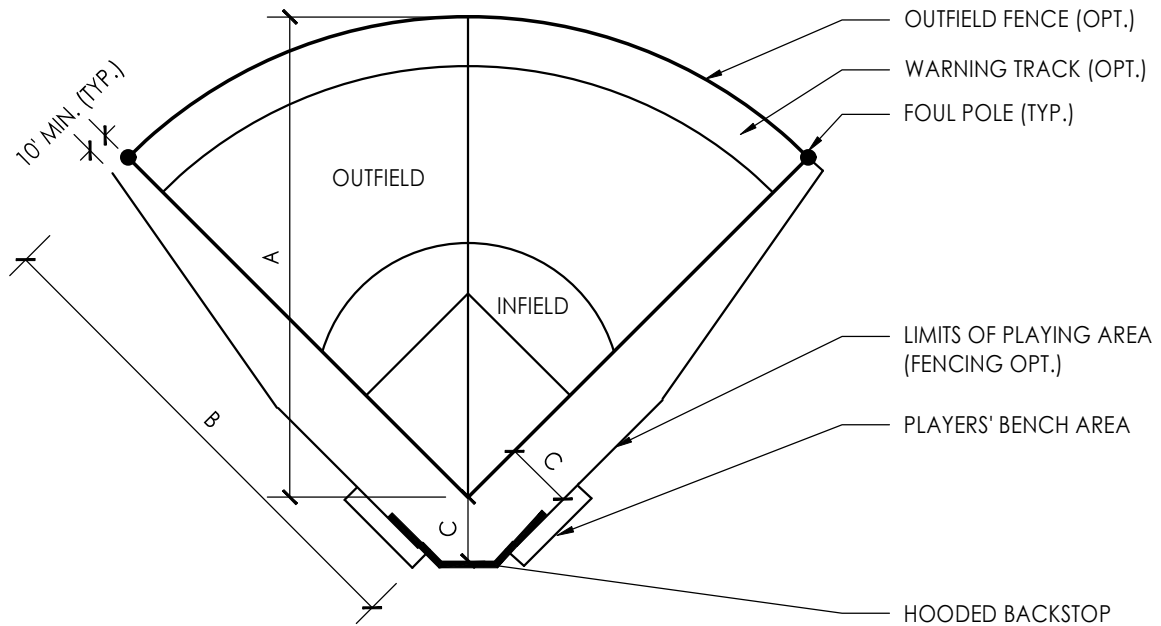
The Maryland-National Capital Park and Planning Commission
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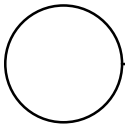
USE	A	B	C	APPROX. AREA
ADULT MEN OR ADULT WOMEN (AGE 15 OR OLDER)	275' 300' OPTION	275'	25'	WOMEN: 2.0 AC MEN: 2.5 AC
YOUTH-AGE 12 AND UNDER OR PRACTICE FIELD	200' MIN. 225' PREF.	200' MIN. 225' PREF.	20'	1.5 AC



○ TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. OUTFIELD & FOUL LINE FENCING ARE OPTIONAL. IF REQUESTED BY M-NCPPC, INSTALL WARNING TRACK AREA.
3. REFER TO DETL. A-5.3 FOR GRADING. NO AREA SHOULD DRAIN ONTO SKINNED INFIEL. SLOPES ON BALL FIELD TO BE 1.00% MIN., 1.50% MAX., 1.25% PREFERRED. MINIMIZE DIFFERENCES IN ELEV. BETWEEN ANY TWO POINTS ON THE PLAY SURFACE.
4. DIMENSIONS ARE FOR 12" (BALL CIRCUM.) SLOW PITCH SOFTBALL. FOR FAST PITCH OR OTHER, CONSULT THE NTL. SOFTBALL ASSOC. (NSA) REGULATIONS.
5. REFERENCE: NTL. FEDERATION OF STATE HIGH SCHOOL ASSOC. (NFHS) STANDARDS.
6. SOFTBALL INFIEL IS FULLY SKINNED W/ 3" SPECIAL INFIEL MIX (1/3 CLAY, 1/3 SAND, 1/3 TOPSOIL).
7. BLEACHERS, WHEN PROVIDED, TO BE OUTSIDE PLAY AREA LIMITS ALONG 1ST AND 3RD BASE LINES.
8. FENCE TO BE CHAINLINK. ALL POSTS, RAILS, AND FABRIC TO BE BLACK VINYL COATED (UNLESS NOTED OTHERWISE).



SOFTBALL FIELD: CONCEPT

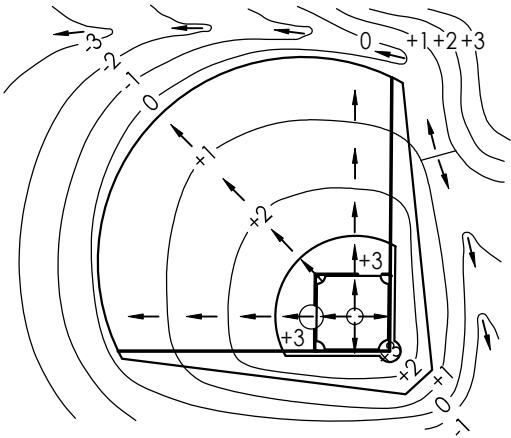


The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

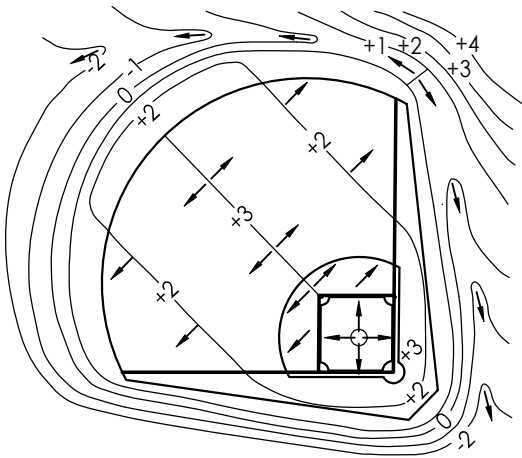
NUMBER

A-5.2

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PLAN LAYOUT - RADIAL
N.T.S.

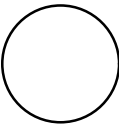


PLAN LAYOUT - SYMMETRICAL CROSS SLOPE
N.T.S.

 TYPICAL CONCEPT DRAINAGE PLAN LAYOUT
N.T.S.

NOTES:

- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
- 2. PITCHERS MOUND TO BE HIGHEST WITHIN FIELD.
- 3. PREFERRED: PITCHERS MOUND, BASES AND HOME PLATE ARE LEVEL.
- 4. IF NECESSARY, MAX. INFIELD SLOPE 2% FROM FIRST BASE TO THIRD BASE OR VICE-VERSA.
- 5. NO AREA SHOULD DRAIN ONTO SKINNED INFIELD. SLOPES ON BALL FIELD TO BE 1.00% MIN., 1.50% MAX., 1.25% PREFERRED. MINIMIZE DIFFERENCES IN ELEV. BETWEEN ANY TWO POINTS ON THE PLAY SURFACE.
- 6. DRAIN FIELD SYMMETRICALLY.



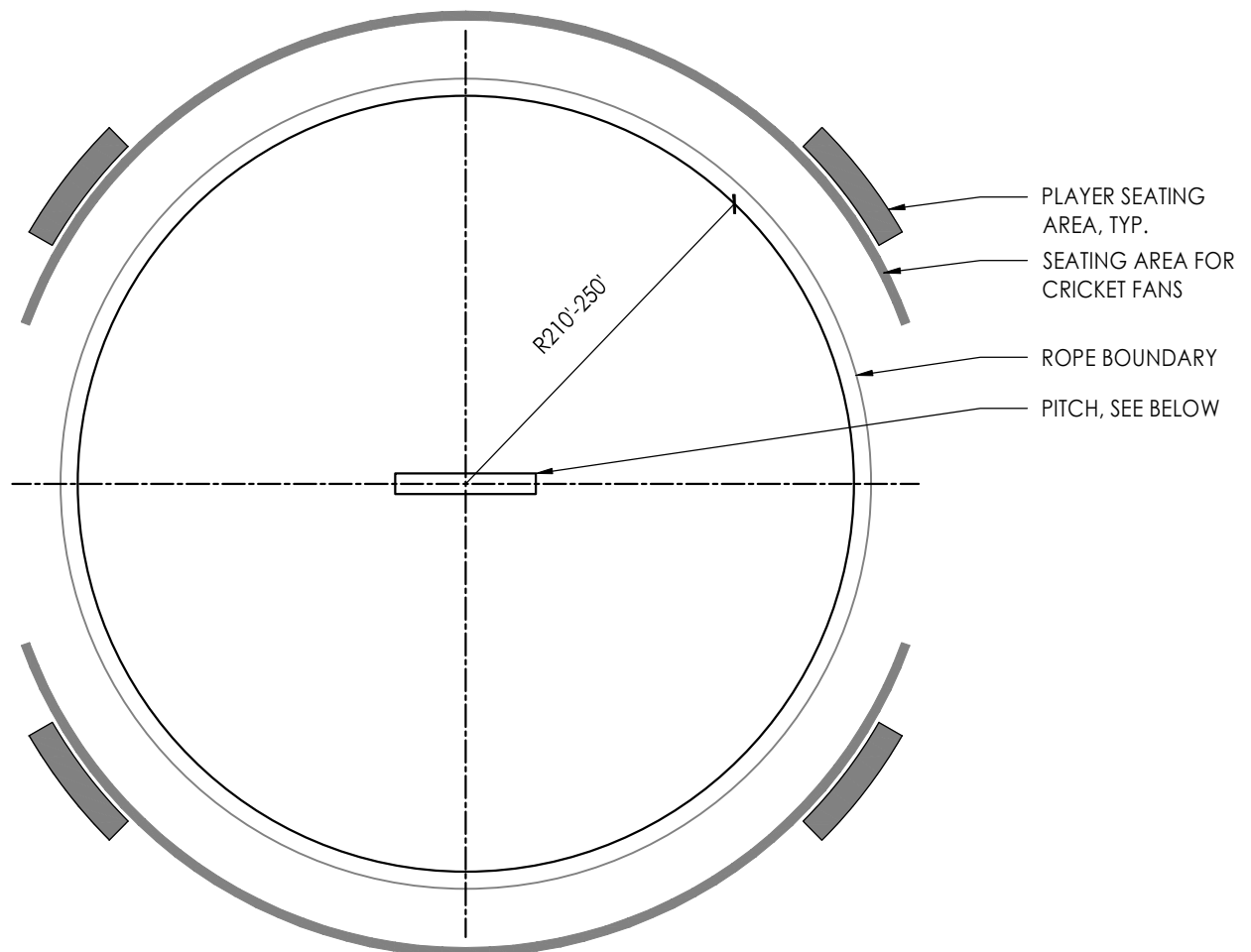
BALLFIELD DRAINAGE: CONCEPT

 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

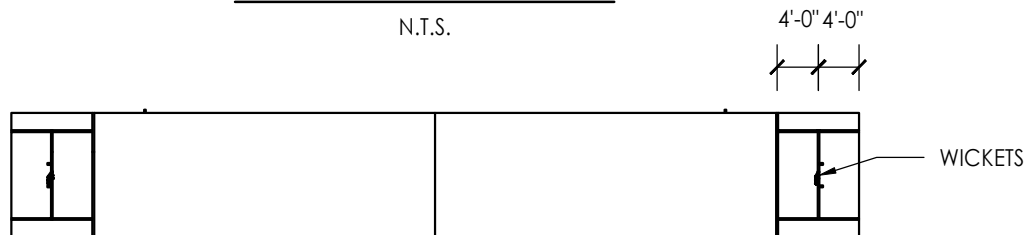
A-5.3

JANUARY 2023



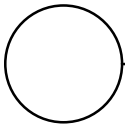
OVERALL CONCEPT LAYOUT

N.T.S.

PITCH PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. PITCH SURFACING TO BE NATURAL TURF OR ARTIFICIAL TURF.
3. PROVIDE BENCH SEATING FOR TEAM. SHOW ON PLAN.
4. COORDINATE WITH M-NCPPC FOR POTENTIAL STORAGE REQUIREMENTS.
5. PROVIDE ROPE BOUNDARY.
6. ALL LINES ARE 2" WIDE AND PAINTED WHITE.

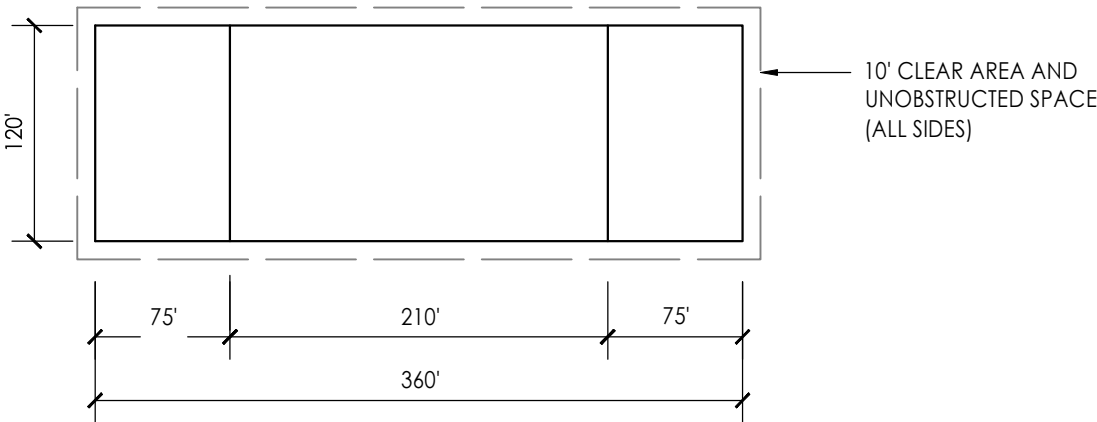
**CRICKET FIELD LAYOUT: CONCEPT**

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

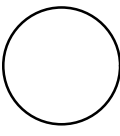
A-6.1

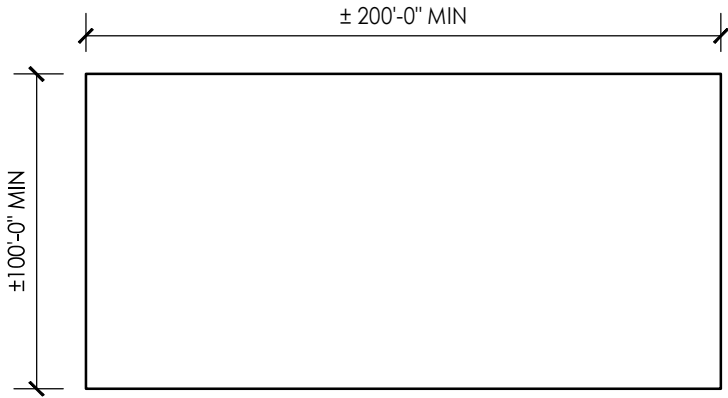
JANUARY 2023



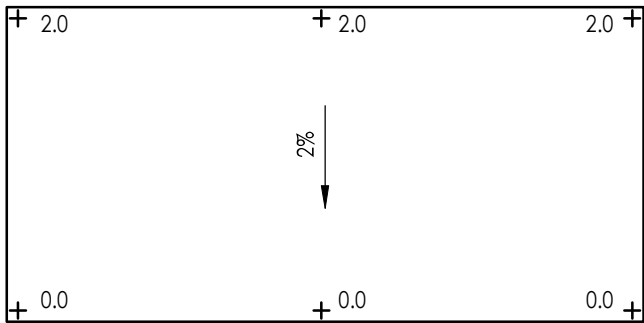
TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

- NOTES:
- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 - 2. PREFERRED SLOPE: 1.25%-1.5%. MAXIMUM SLOPE: 2%.
 - 3. REFERENCE: NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS (NFHS) STANDARDS.

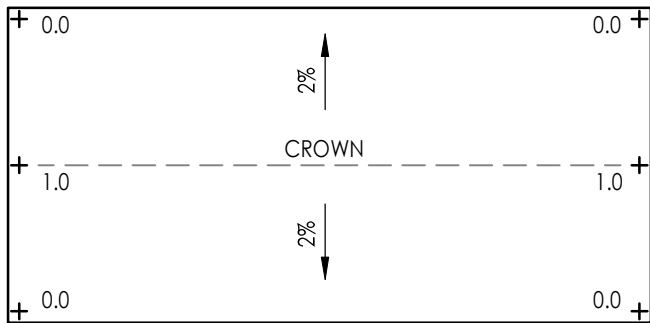
	ULTIMATE DISC FIELD: CONCEPT	NUMBER
		A-7.1
		JANUARY 2023
 The Maryland-National Capital Park and Planning Commission Department of Parks and Recreation		



○ CONCEPT PLAN LAYOUT
N.T.S.



ALTERNATIVE 1

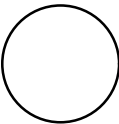


ALTERNATIVE 2

○ CONCEPT DRAINAGE
N.T.S.

NOTES:

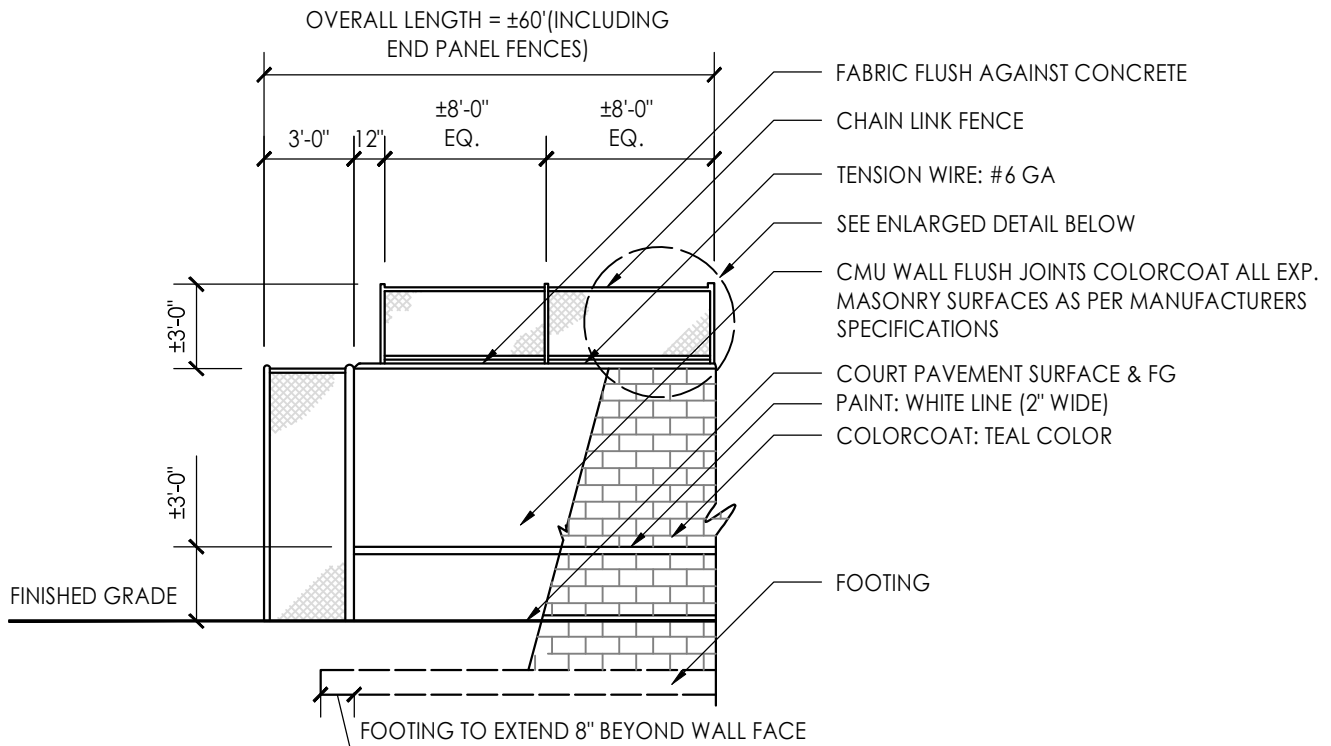
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



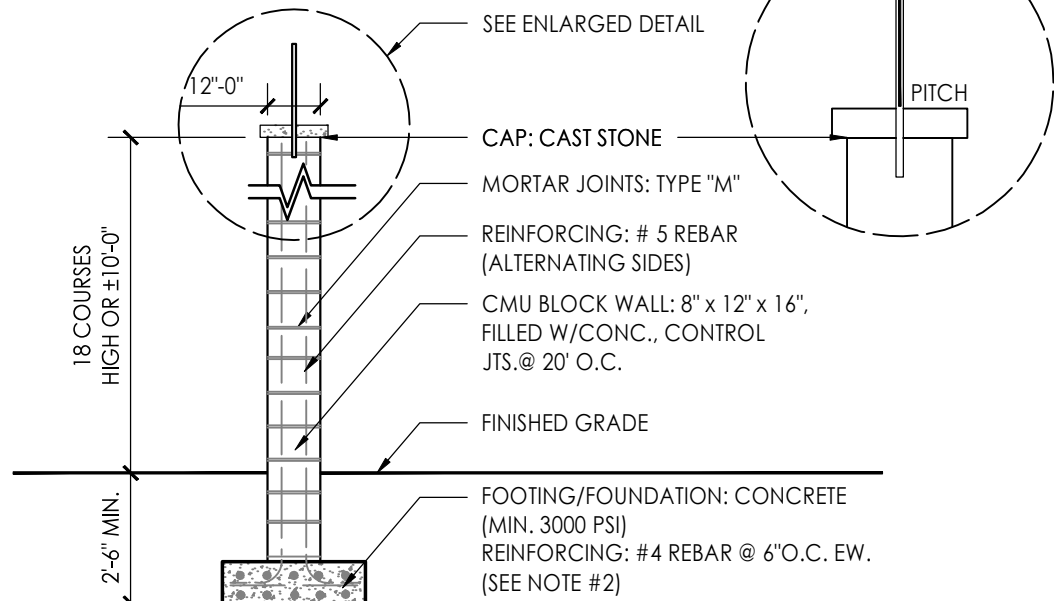
OPEN PLAY AREA: CONCEPT

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NUMBER
A-8.1
JANUARY 2023



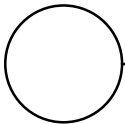
○ TYPICAL ELEVATION
N.T.S.



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.



BALL WALL: DETAIL

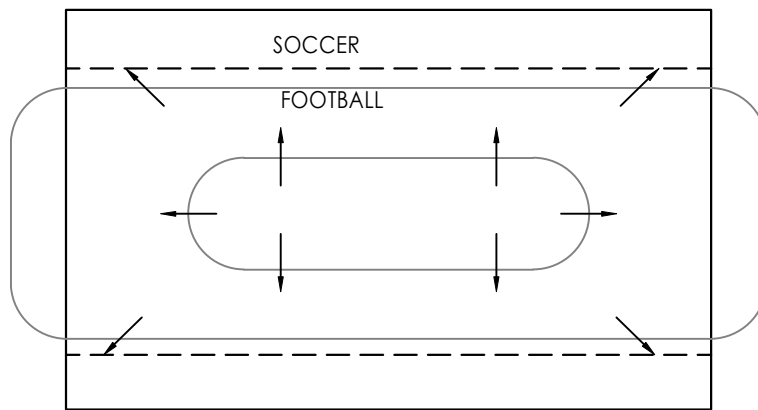


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Department of Parks and Recreation

NUMBER

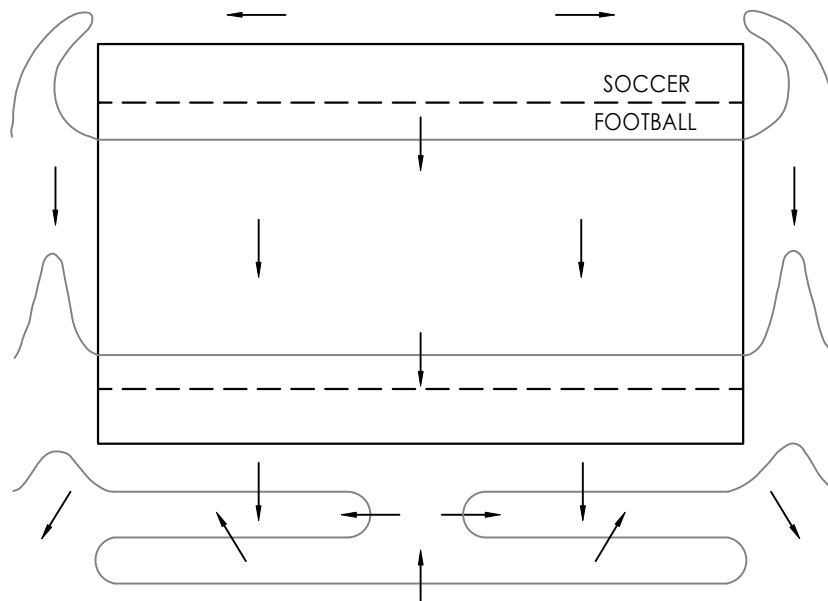
A-9.1

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PLAN LAYOUT - SYMMETRICAL CROSS SLOPE

N.T.S.



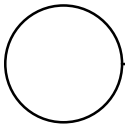
PLAN LAYOUT - ONE WAY CROSS SLOPE

N.T.S.

○ TYPICAL CONCEPT DRAINAGE PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. USE CROSSFIELD IN STEEP AREA AND ON COMBINATION FIELDS (SOFTBALL/SOCCER).
3. PROVIDE 1.5% SLOPE (2% MAX. SLOPE). SLOPING WITH CROWN/RIDGE IN THE CENTER IS PREFERRED.



RECTANGULAR FIELD DRAINAGE PATTERN: DETAIL



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NUMBER

A-10.1

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INDEX OF DRAWINGS - COURTS & EQUIPMENT

- B-1.1 HALF BASKETBALL COURT
- B-1.2 SINGLE BASKETBALL COURT
- B-1.3 DOUBLE BASKETBALL COURT
- B-1.4 BASKETBALL BACKBOARD

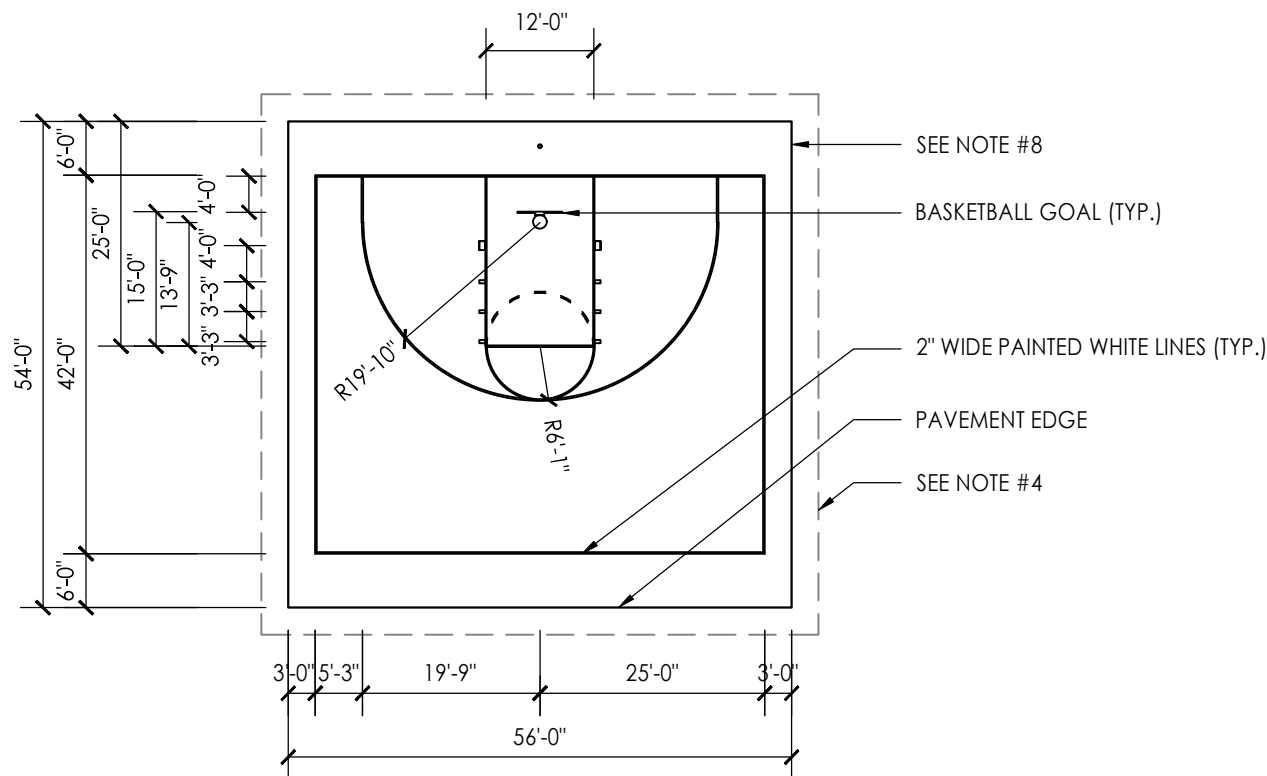
- B-2.1 SINGLE TENNIS COURT
- B-2.2 DOUBLE TENNIS COURT
- B-2.3 NET HOLD DOWN FOOTER
- B-2.4 NET POST ANCHORS - CENTER FOOTER
- B-2.5 NET POST ANCHORS - END FOOTER
- B-2.6 TENNIS COURT FENCE AND PLAYER'S GATE
- B-2.7 TENNIS COURT MAINTENANCE GATE

- B-3.1 PICKLE BALL COURT

- B-4.1 VOLLEYBALL COURT

- B-5.1 COMBINATION MULTI-PURPOSE COURT - TYPE 1
- B-5.2 COMBINATION MULTI-PURPOSE COURT - TYPE 2

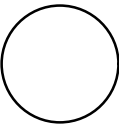
- B-6.1 COURT PAVEMENT SECTION
- B-6.2 COURT RENOVATION PAVEMENT REPLACEMENT
- B-6.3 COURT RENOVATION MODIFIED "SLIP SHEET" METHOD
- B-6.4 COURT DRAINAGE PATTERNS



 TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. DIMENSIONS ARE TO CENTERLINES OF PAINTED LINES.
3. PROVIDE PAVEMENT COLOR COATING (OPTIONAL) OR SEAL COAT AS DIRECTED BY M-NCPPC.
4. PROVIDE 10' MINIMUM UNOBSTRUCTED AREA BEYOND PAVEMENT IN ALL DIRECTIONS.
5. FOR BACKBOARD, POST DETAILS, AND PAVEMENT SECTION SEE DETAIL B-1.4 AND B-6.1.
6. FOR DRAINAGE PATTERNS SEE DETAIL B-6.4.
7. REFERENCE: NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS (NFHS).
8. ADA CLEAR SPACE REQUIREMENT SHALL BE MIN. 3'-0" OUTSIDE ALL PAINTED LINES. IF COURT IS FENCED OR INCLUDES SEATING THESE ELEMENTS SHALL BE LOCATED OUTSIDE OF THE 3'-0" ACCESSIBLE ROUTE.



HALF BASKETBALL COURT: CONCEPT

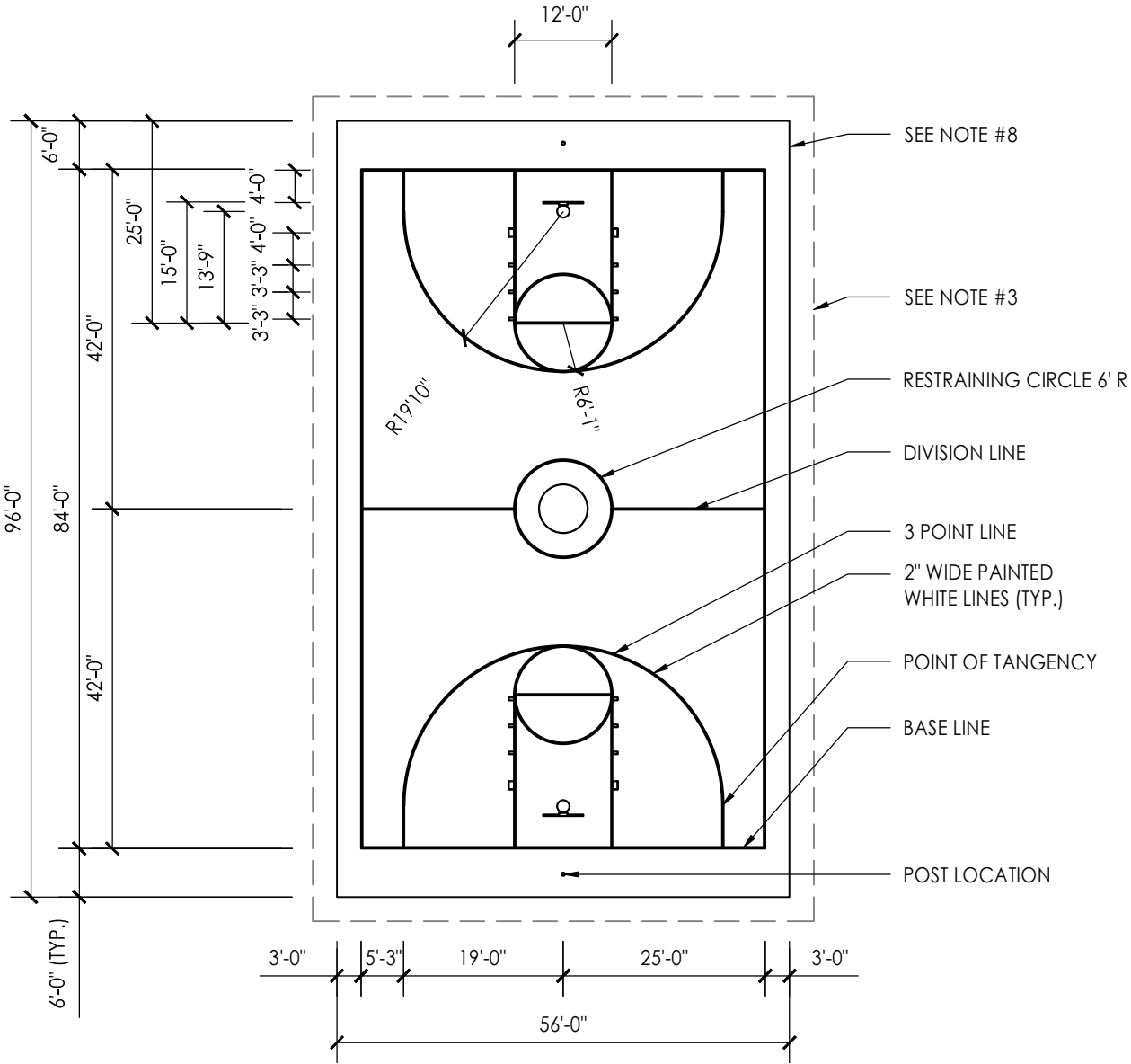


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Department of Parks and Recreation

NUMBER

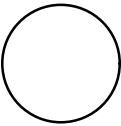
B-1.1

JANUARY 2023



 TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

- NOTES:
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 2. DIMENSIONS ARE TO CENTERLINES OF PAINTED LINES.
 3. PROVIDE PAVEMENT COLOR COATING (OPTIONAL) OR SEAL COAT AS DIRECTED BY M-NCPPC.
 4. PROVIDE 10' MINIMUM UNOBSTRUCTED AREA BEYOND PAVEMENT IN ALL DIRECTIONS.
 5. FOR BACKBOARD, POST DETAILS, AND PAVEMENT SECTION SEE DETAIL B-1.4 AND B-6.1.
 6. FOR DRAINAGE PATTERNS SEE DETAIL B-6.4.
 7. REFERENCE: NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS (NFHS).
 8. ADA CLEAR SPACE REQUIREMENTS SHALL BE MAINTAINED A MIN OF 3' BEYOND ALL PAINTED LINES. IF COURT IS FENCED OR INCLUDES SEATING THESE ELEMENTS SHALL BE LOCATED OUTSIDE OF THE 3'-0" ACCESSIBLE ROUTE.



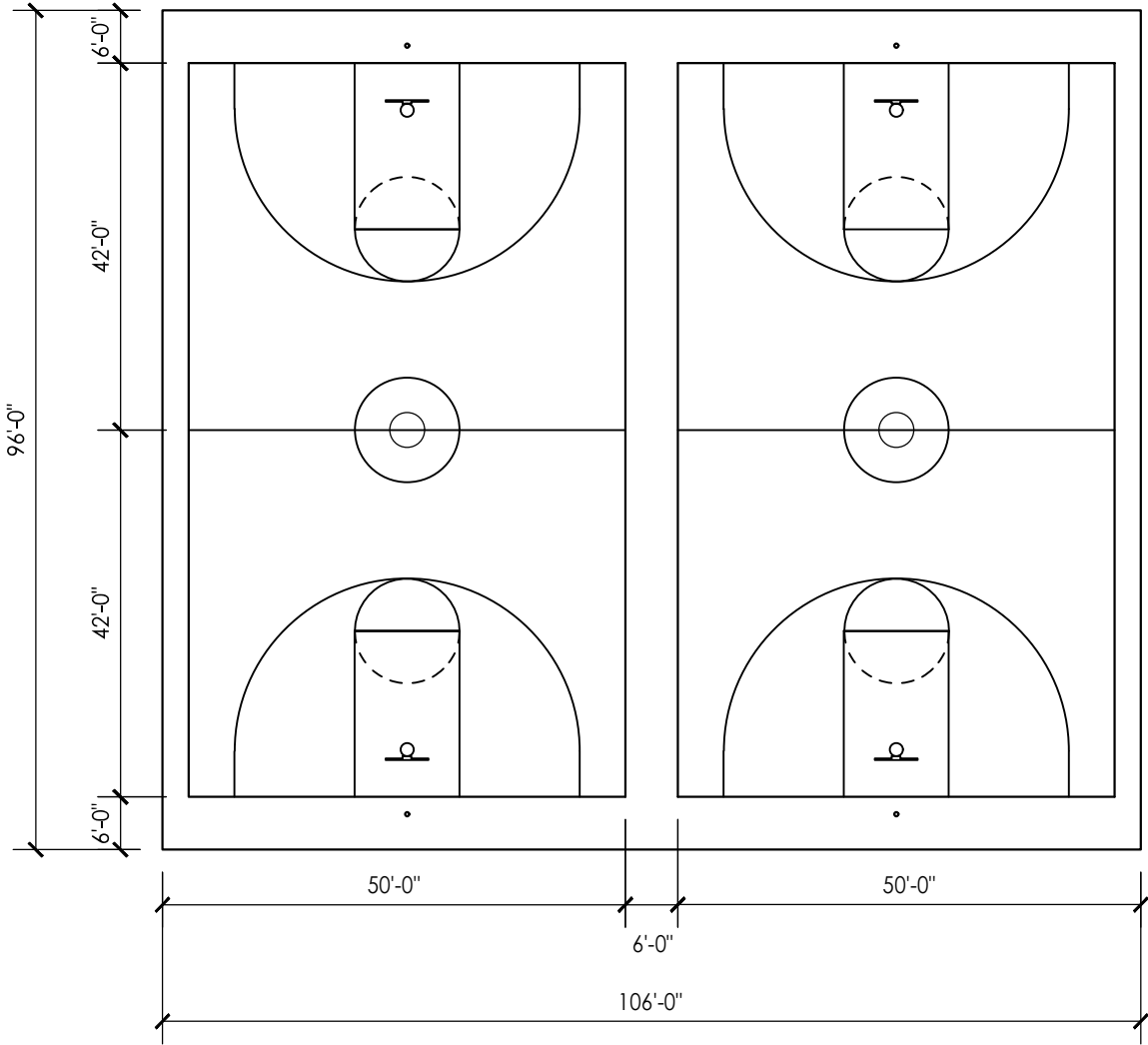
SINGLE BASKETBALL COURT: CONCEPT

 The Maryland-National Capital Park and Planning Commission
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NUMBER

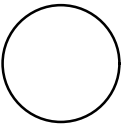
B-1.2

JANUARY 2023



NOTES:

- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
- 2. REFER TO DETAIL NO. B-1.2 FOR INTERIOR COURT DIMENSIONS AND ADDITIONAL NOTES.
- 3. REFERENCE: NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS (NFHS) STANDARDS.



DOUBLE BASKETBALL COURT: CONCEPT

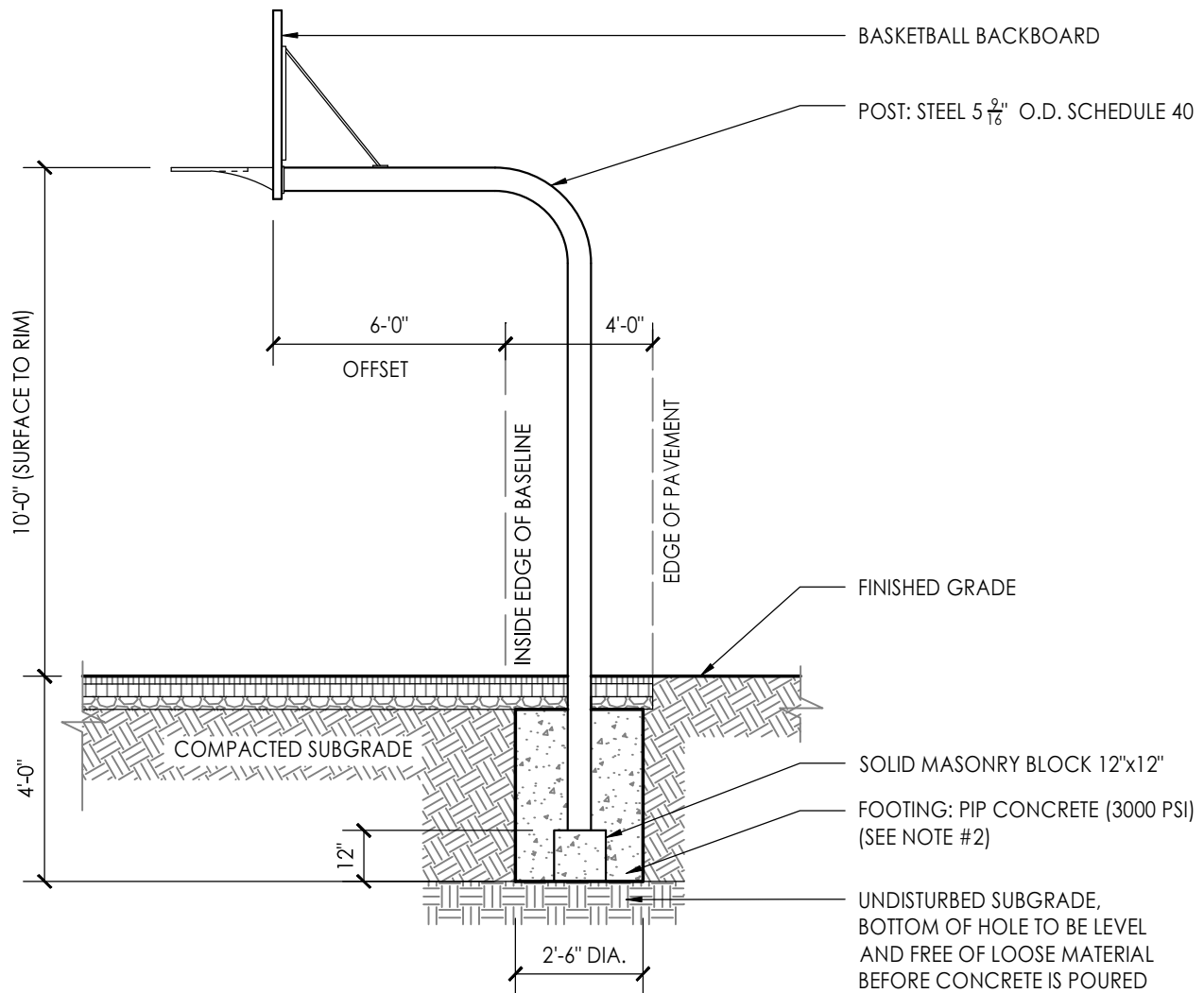


The Maryland-National Capital Park and Planning Commission
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NUMBER

B-1.3

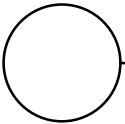
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. BACKBOARD MATERIAL TO BE APPROVED BY M-NCPPC.
4. RIMS SHALL BE DOUBLE GOAL RIMS WITH HEAVY DUTY FABRIC NETS.
5. CONTRACTOR MUST SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO ORDERING.
6. FOR PAVEMENT SECTION SEE DETAIL NO. B-6.1.



BASKETBALL BACKBOARD: DETAIL



The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

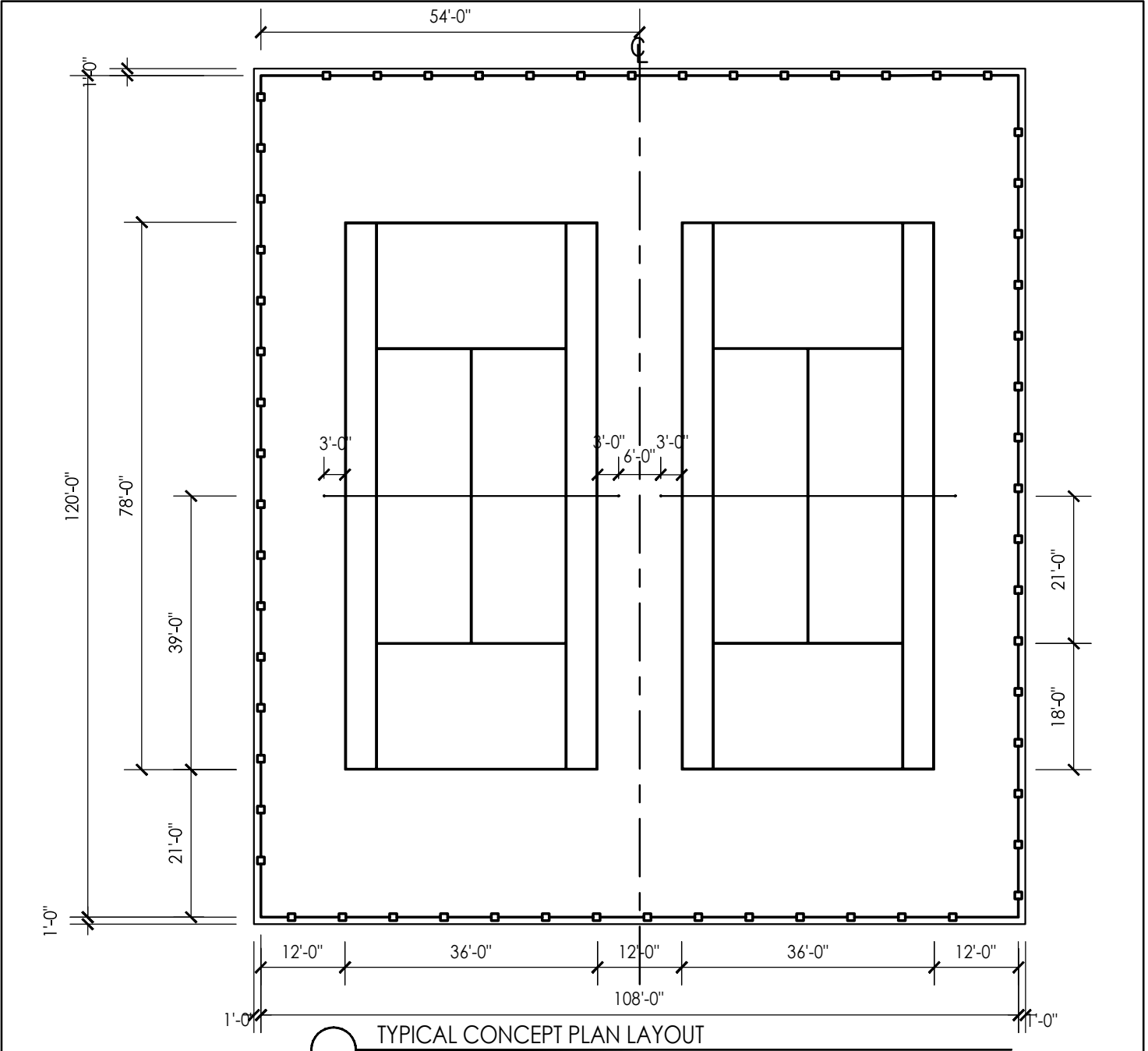
NUMBER

B-1.4

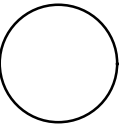
JANUARY 2023



1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. PROVIDE A MIN. 42" CLEAR WIDE USER GATE AND A 12' WIDE MAINTENANCE GATE. GATE LOCATION TO BE DETERMINED BY M-NCPPC.
3. ALL LINES ARE 2" WIDTH, WHITE.
4. MEASUREMENTS FOR LINE STRIPING ARE TO OUTSIDE OF LINE, EXCEPT THE CENTER SERVICE LINE WHICH IS EQUALLY DIVIDED BETWEEN LEFT AND RIGHT COURTS.
5. PROVIDE ONE PRACTICE BOARD FENCE-MOUNTED AT END OF ONE COURT.
6. REFER DETL. B-2.3 NET HOLD, B-2.4 AND B-2.5 NET POST ANCHORS, B-6.1 PAVEMENT SECTION.
7. REFER DETL. B-2.6 AND B-2.7 FOR FENCE AND GATE.
8. REFER DETL. B-6.4 FOR DRAINAGE PATTERNS.
9. REFERENCE: NTL. FEDERATION OF STATE HIGH SCHOOL ASSOC. (NFHS) STANDARDS.



- NOTES:
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 2. PROVIDE A MIN. 42" CLEAR WIDE USER GATE AND A 12' WIDE MAINTENANCE GATE. GATE LOCATION TO BE DETERMINED BY M-NCPPC.
 3. ALL LINES ARE 2" WIDTH, WHITE.
 4. MEASUREMENTS FOR LINE STRIPING ARE TO OUTSIDE OF LINE, EXCEPT THE CENTER SERVICE LINE WHICH IS EQUALLY DIVIDED BETWEEN LEFT AND RIGHT COURTS.
 5. PROVIDE ONE PRACTICE BOARD FENCE-MOUNTED AT END OF ONE COURT.
 6. REFER DETL. B-2.3 NET HOLD, B-2.4 AND B-2.5 NET POST ANCHORS, B-6.1 PAVEMENT SECTION.
 7. REFER DETL. B-2.6 AND C-7 FOR FENCE AND GATE.
 8. REFER DETL. B-6.4 FOR DRAINAGE PATTERNS.
 9. REFERENCE: NTL. FEDERATION OF STATE HIGH SCHOOL ASSOC. (NFHS) STANDARDS.



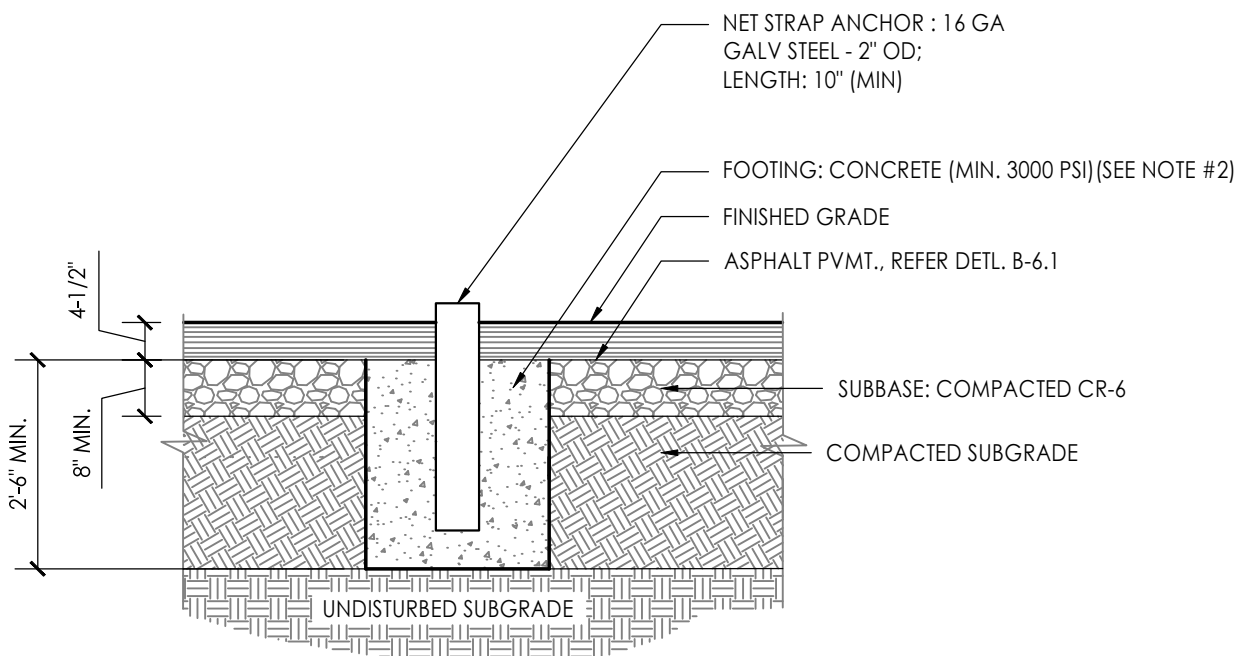
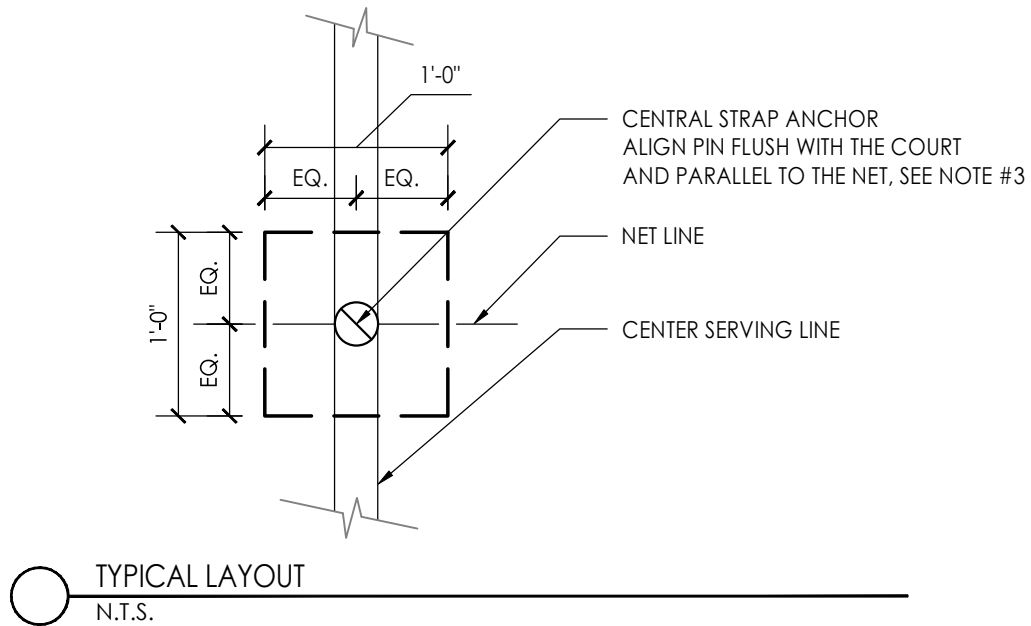
DOUBLE TENNIS COURT: CONCEPT

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

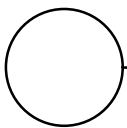
B-2.2

JANUARY 2023



NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. CENTER A NON-CORROSIVE PIN (1/4" O.D.) THROUGH THE PIPE 1/4" TO 3/8" BELOW OPENING TO ALLOW FOR CENTER STRAP NET HOOK.

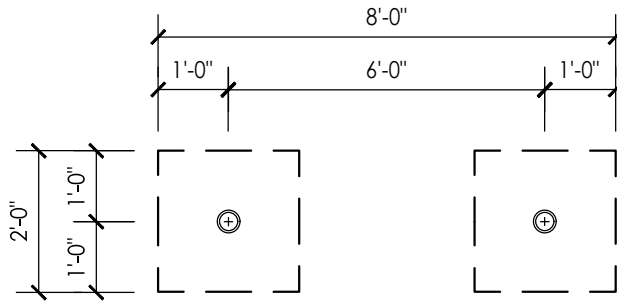
**NET HOLD DOWN FOOTER: DETAIL**

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

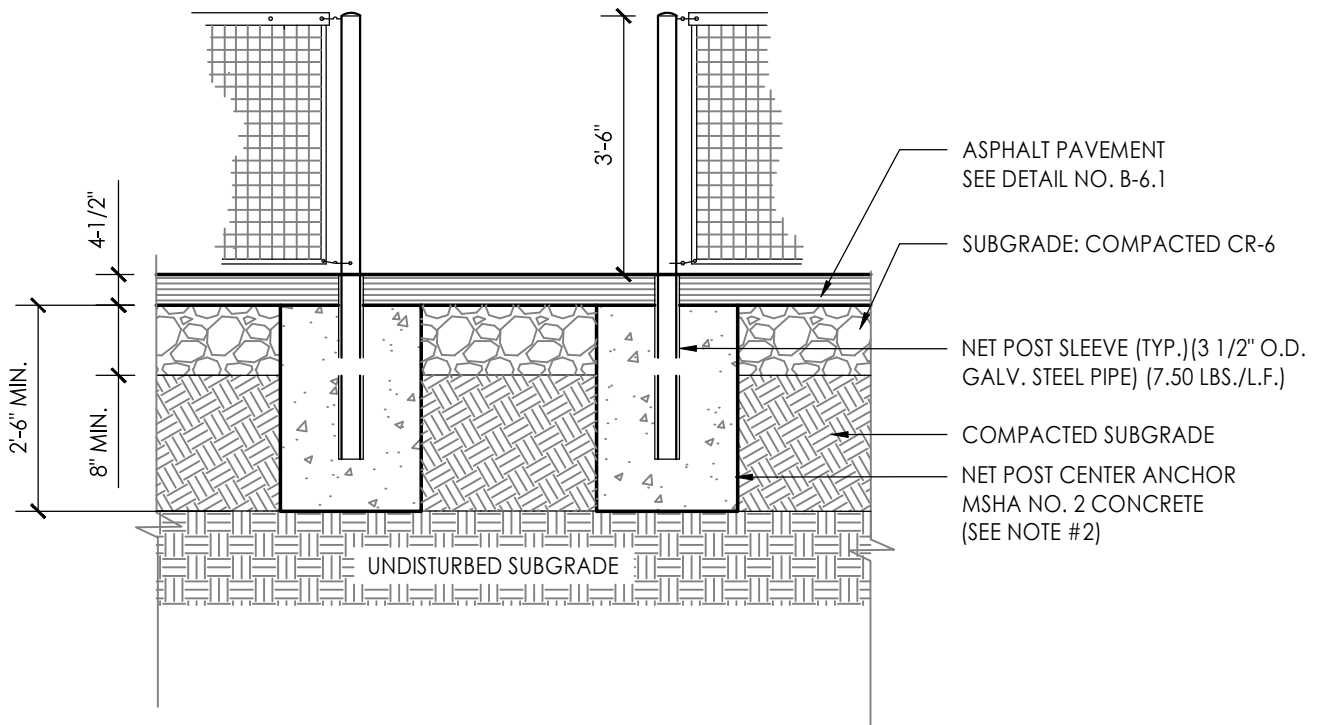
NUMBER

B-2.3

JANUARY 2023



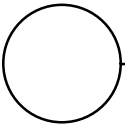
○ TYPICAL PLAN LAYOUT
N.T.S.



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.



NET POST ANCHORS - CENTER FOOTER: DETAIL

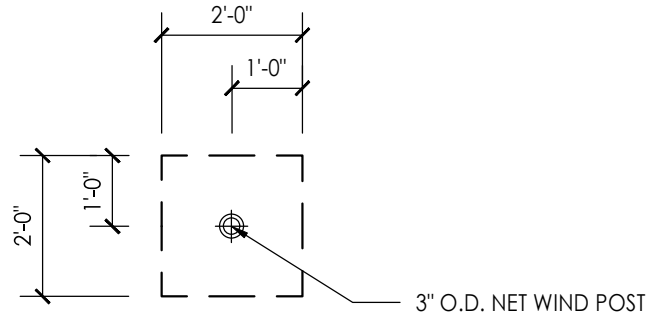


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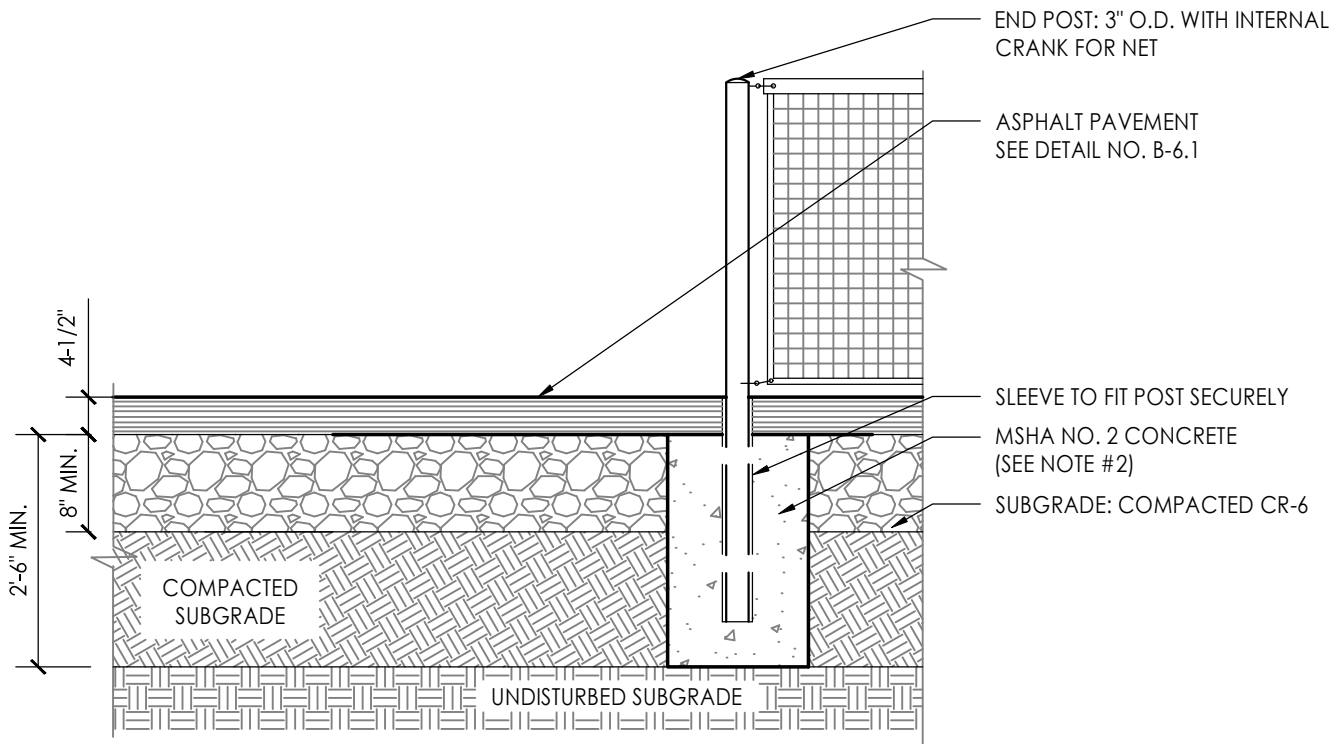
NUMBER

B-2.4

JANUARY 2023



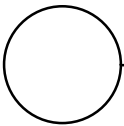
○ TYPICAL LAYOUT
N.T.S.



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. SUBMIT NET POST AND NET TYPE TO CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO ORDERING.



NET POST ANCHORS - END FOOTER: DETAIL



The Maryland-National Capital Park and Planning Commission
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NUMBER

B-2.5

JANUARY 2023



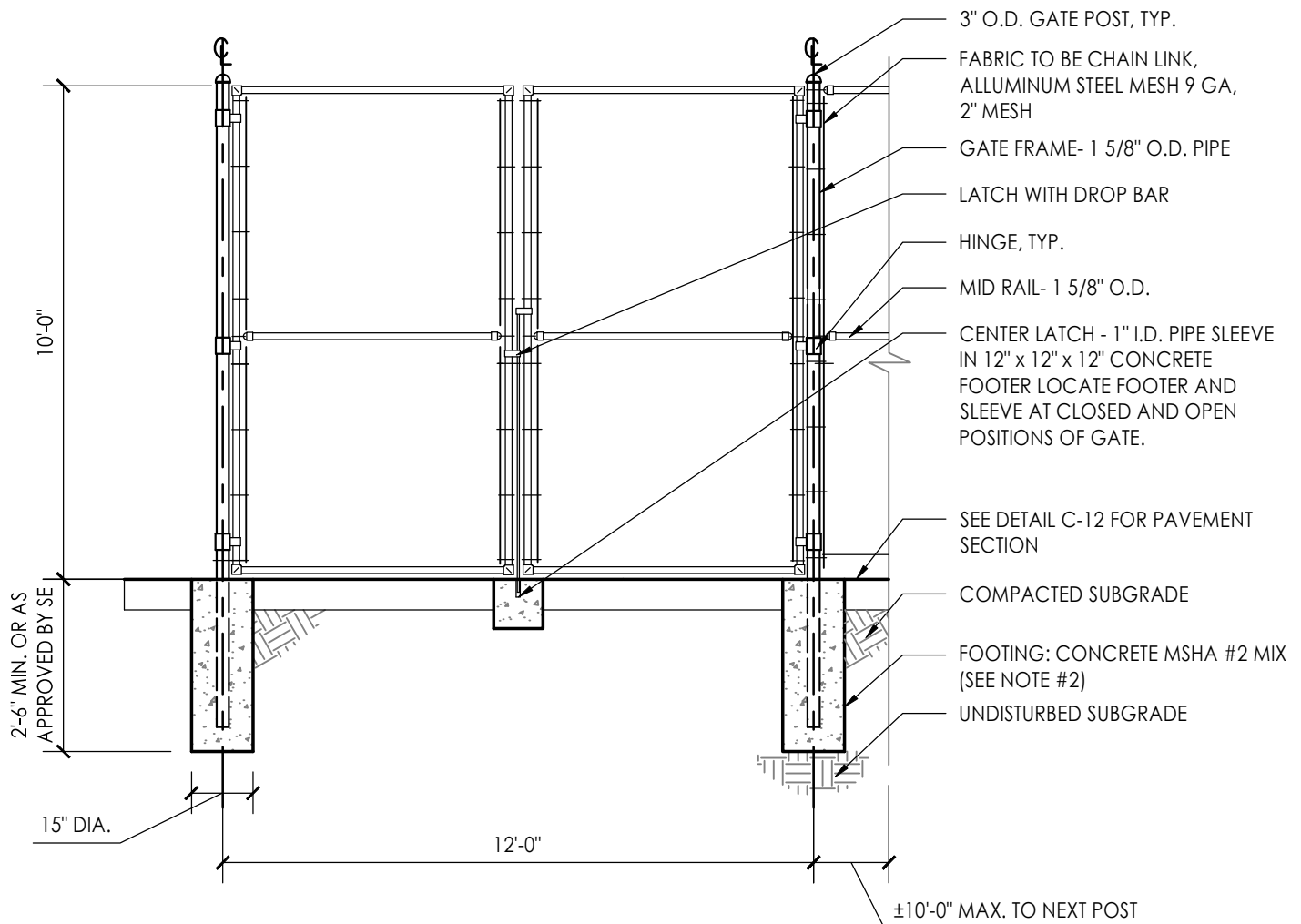
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY MNCPPC.
3. FENCE ELEVATION IS TYPICAL. REFER TO THE LOCATION AS SHOWN ON THE LAYOUT PLAN.
4. NO CONCRETE SHALL BE PLACED WITHOUT ONSITE INSPECTION AND APPROVAL OF THE COMMISSION CONSTRUCTION MANAGER.
5. FENCE TO BE CHAIN LINK. ALL POSTS, RAILS, AND FABRIC TO BE CHAIN LINK, ALUMINIZED STEEL MESH 9 GA, 2" MESH (UNLESS NOTED OTHERWISE).
6. ALL PAVEMENT SURFACES ARE TO BE COLOR COATED INCLUDING EDGES OUTSIDE THE FENCE.
7. FOR TENNIS COURT PAVEMENT SECTIONS SEE DETAIL B-6.1.
8. SHOW FENCE GATE ON PLAN. FENCE GATE LOCATION TO BE REVIEWED AND APPROVED BY M-NCPPC.



The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

B-2.6

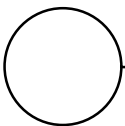
JANUARY 2023



○ TYPICAL ELEVATION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. SHOW MAINTENANCE ACCESS GATE ON PLAN. FENCE GATE LOCATION TO BE REVIEWED AND APPROVED BY M-NCPPC.
4. FOR FENCING AND CONCRETE FOOTING SEE DETAIL B-2.6.
5. FOR TENNIS COURT PAVEMENT SECTION SEE DETAIL B-6.1.



TENNIS COURT MAINTENANCE GATE: DETAIL

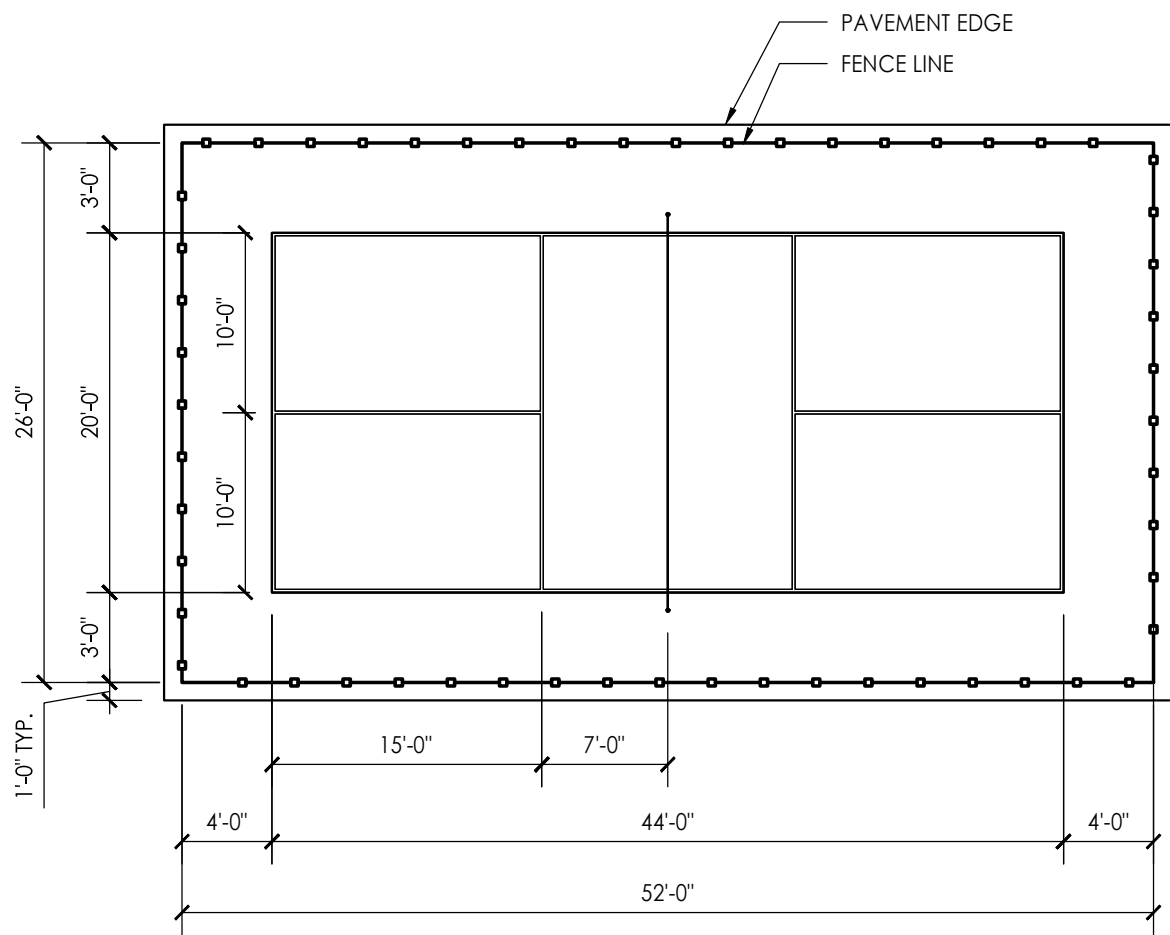


The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

B-2.7

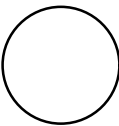
JANUARY 2023



 TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. PROVIDE A MIN. 42" CLEAR WIDE USER GATE AND A 12' WIDE MAINTENANCE GATE. GATE LOCATION TO BE DETERMINED BY M-NCPPC.
3. ALL LINES ARE 2" WIDE AND PAINTED WHITE.
4. ALL MEASUREMENTS FOR LINE STRIPPING OF COURTS ARE TO THE OUTSIDE OF LINES, EXCEPT THOSE INVOLVING THE CENTER SERVICE LINE WHICH IS EQUALLY DIVIDED BETWEEN LEFT AND RIGHT COURTS.
5. SEE DETAILS FOR NET HOLD (B-2.3), NET POST ANCHORS (B-2.4, B-2.5), AND PAVEMENT SECTION(C-12).
6. FOR FENCE AND GATE DETAILS SEE DETAIL B-2.6 AND DETAIL B-2.7.
7. FOR PICKLEBALL COURT DRAINAGE PATTERNS SEE DETAIL B-6.4.

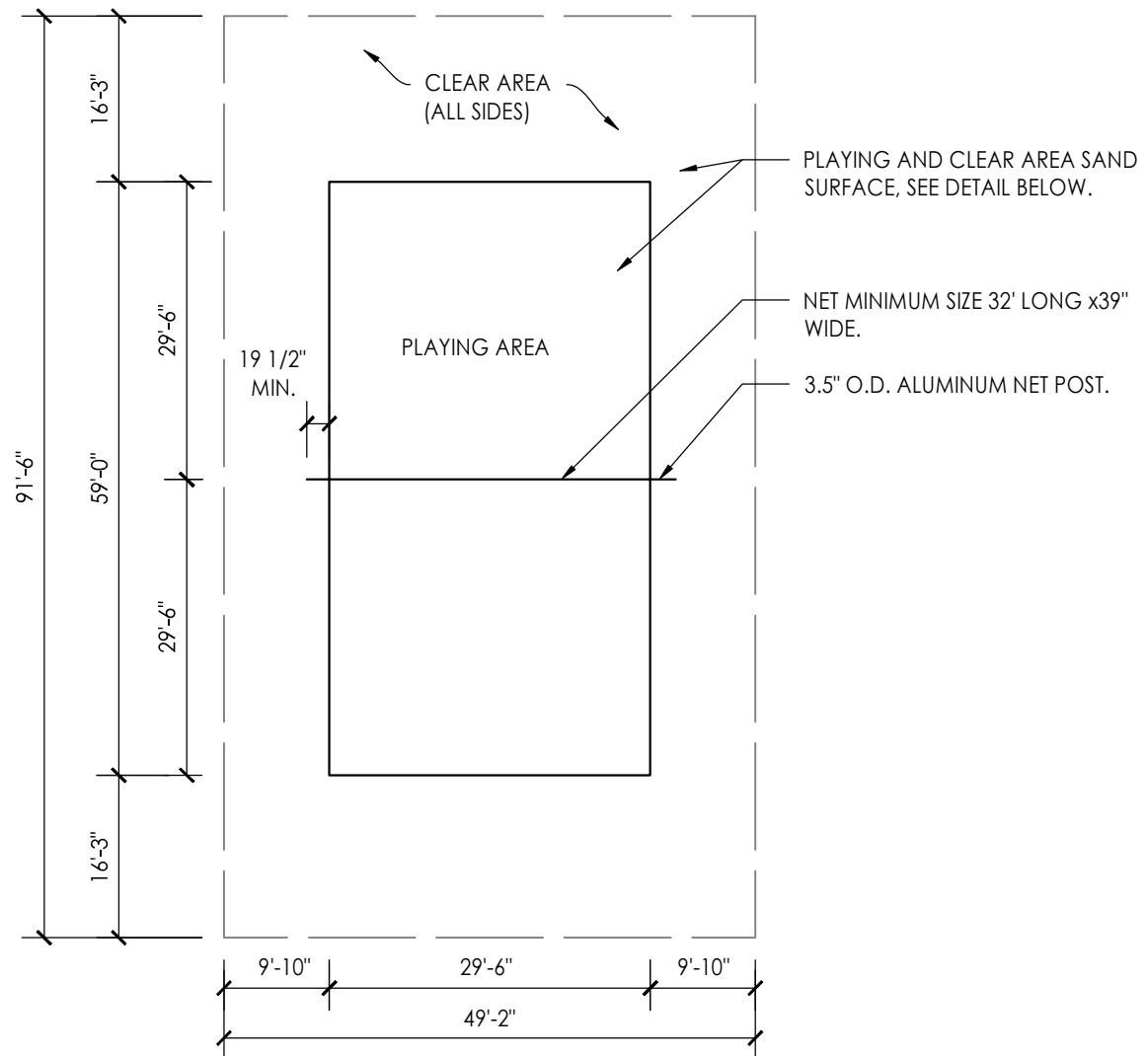


PICKLEBALL COURT LAYOUT: CONCEPT

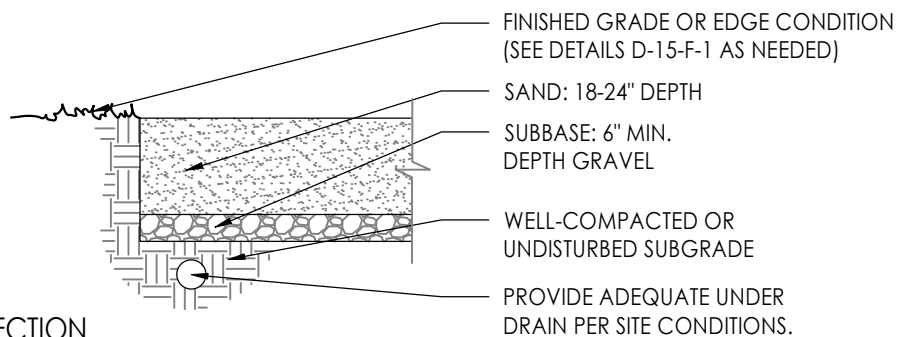


The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER
B-3.1
JANUARY 2023



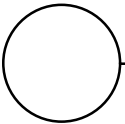
○ TYPICAL PLAN LAYOUT
N.T.S.



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. NET HEIGHT MEASURED FROM THE CENTER OF THE COURT SHALL BE 7'-11 ⁵/₈" FOR MEN AND 7'-4 ¹/₈" FOR WOMEN. NET POST SHALL BE HIGHER THAN THE NET THAT ALLOWS THE NET TO BE FIXED ABOVE THE PLAYING SURFACE.



VOLLEYBALL COURT: CONCEPT

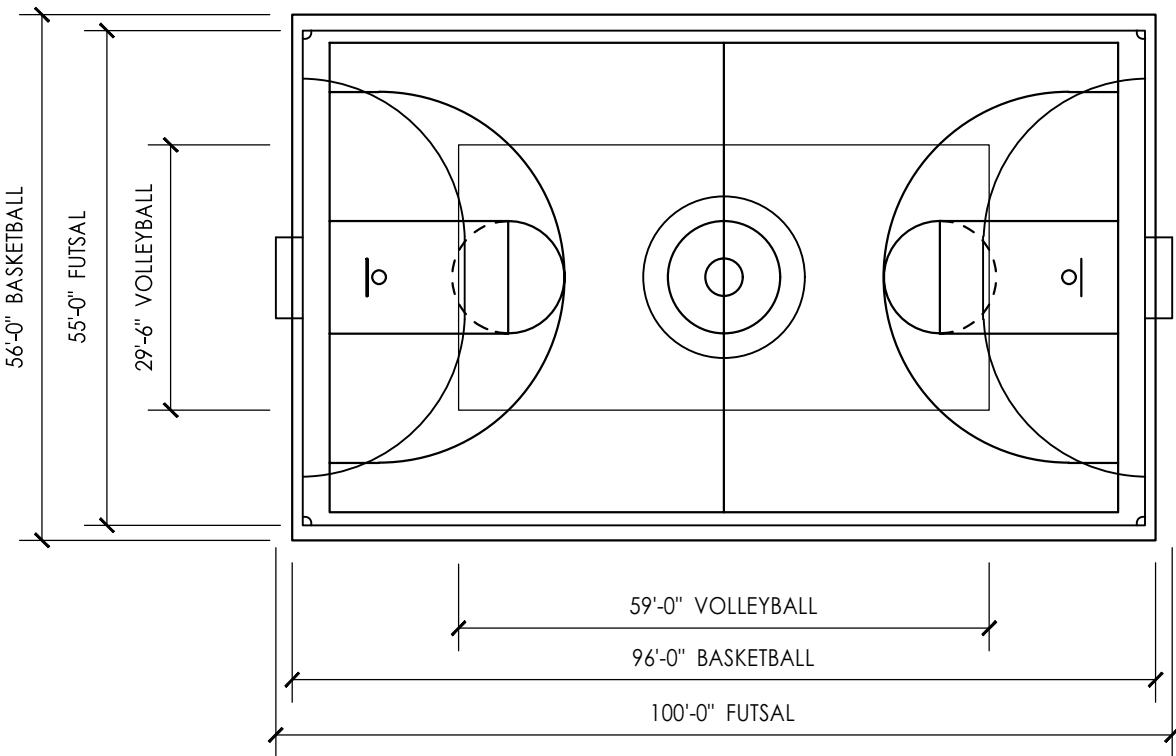


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Department of Parks and Recreation

NUMBER

B-4.1

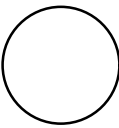
JANUARY 2023



 TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL LINES ARE 2" WIDE AND PAINTED WHITE.
3. ALL MEASUREMENTS FOR LINE STRIPING OF COURTS ARE TO THE OUTSIDE OF LINES, EXCEPT THOSE INVOLVING THE CENTER SERVICE LINE WHICH IS EQUALLY DIVIDED BETWEEN LEFT AND RIGHT COURTS.
4. REFER TO DETAIL A-1.1, B-1.2, AND B-4.1 FOR INTERIOR COURT DIMENSIONS AND ADDITIONAL NOTES.



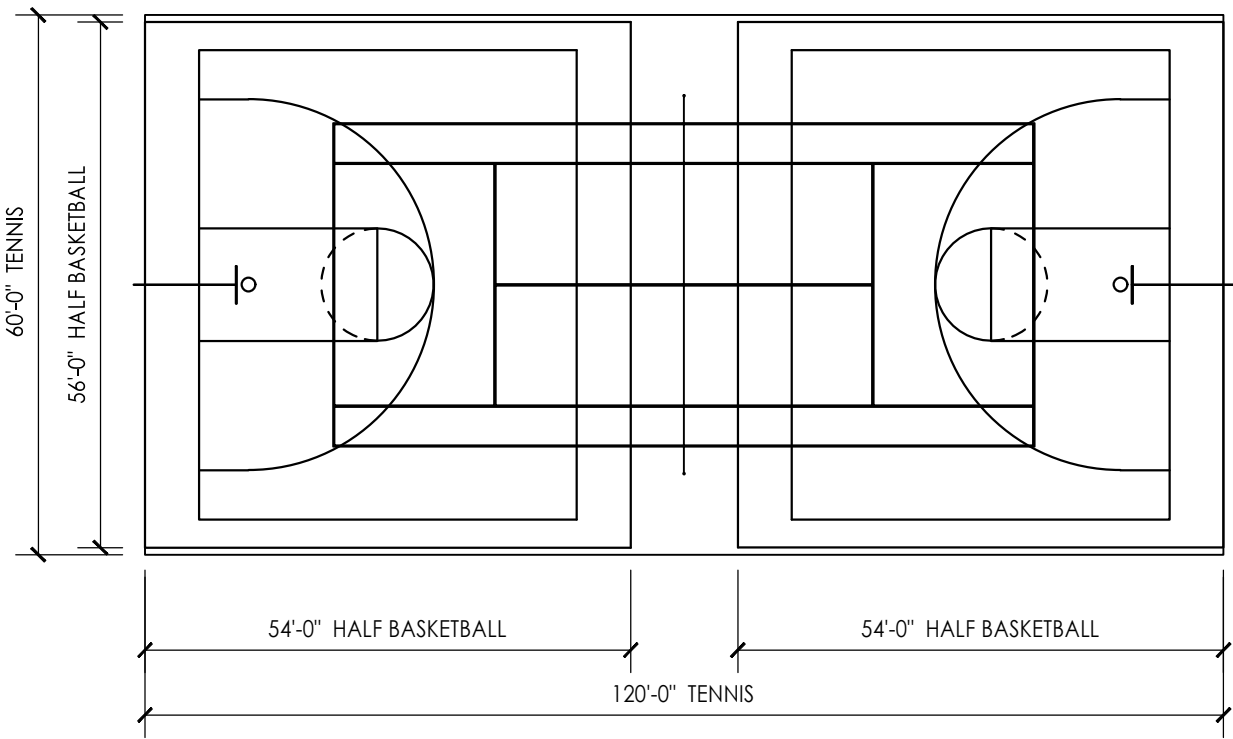
COMBINATION MULTI-PURPOSE COURT - TYPE 1: CONCEPT

 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

B-5.1

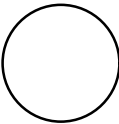
JANUARY 2023



 TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL LINES ARE 2" WIDE AND PAINTED WHITE.
3. ALL MEASUREMENTS FOR LINE STRIPING OF COURTS ARE TO THE OUTSIDE OF LINES, EXCEPT THOSE INVOLVING THE CENTER SERVICE LINE WHICH IS EQUALLY DIVIDED BETWEEN LEFT AND RIGHT COURTS.
4. REFER TO DETAIL B-1.1 AND B-2.1 FOR INTERIOR COURT DIMENSIONS AND ADDITIONAL NOTES.



COMBINATION MULTI-PURPOSE COURT - TYPE 2: CONCEPT

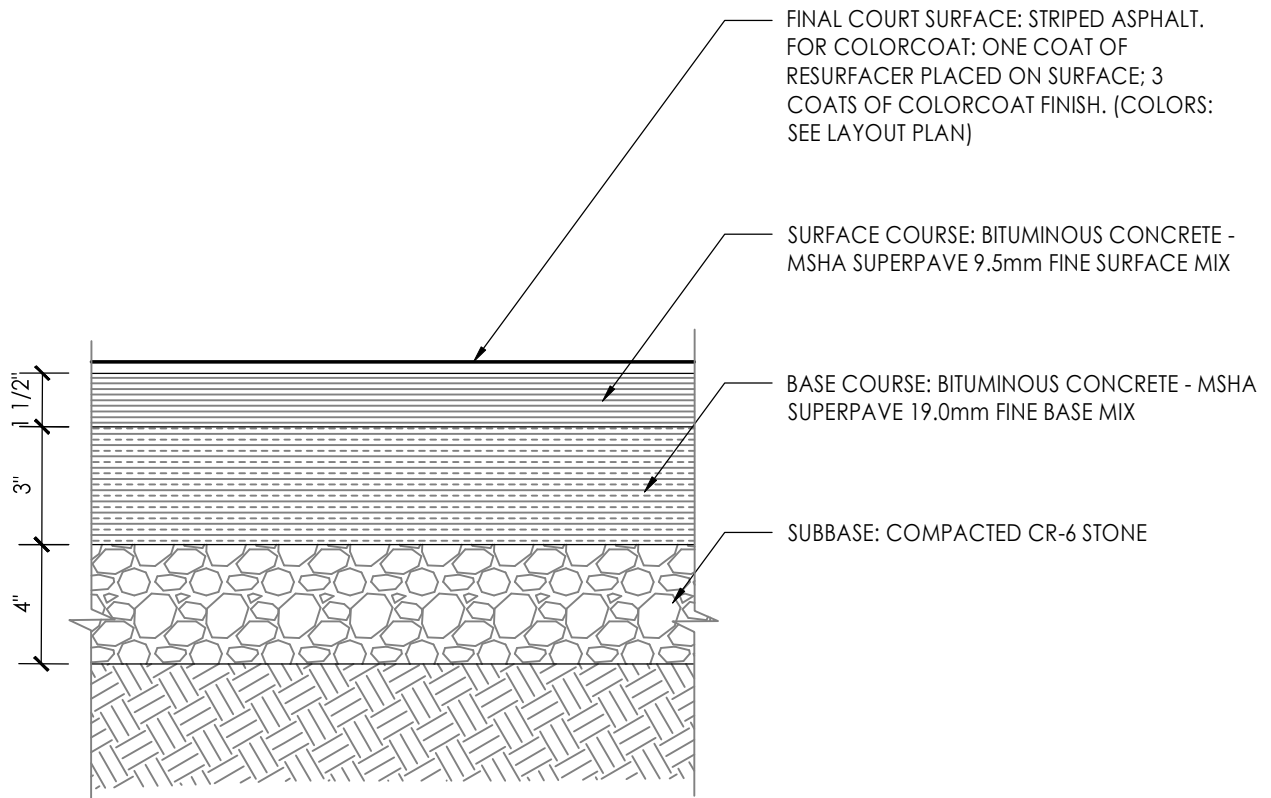


The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

B-5.2

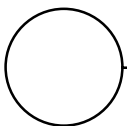
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



COURT PAVEMENT SECTION: DETAIL

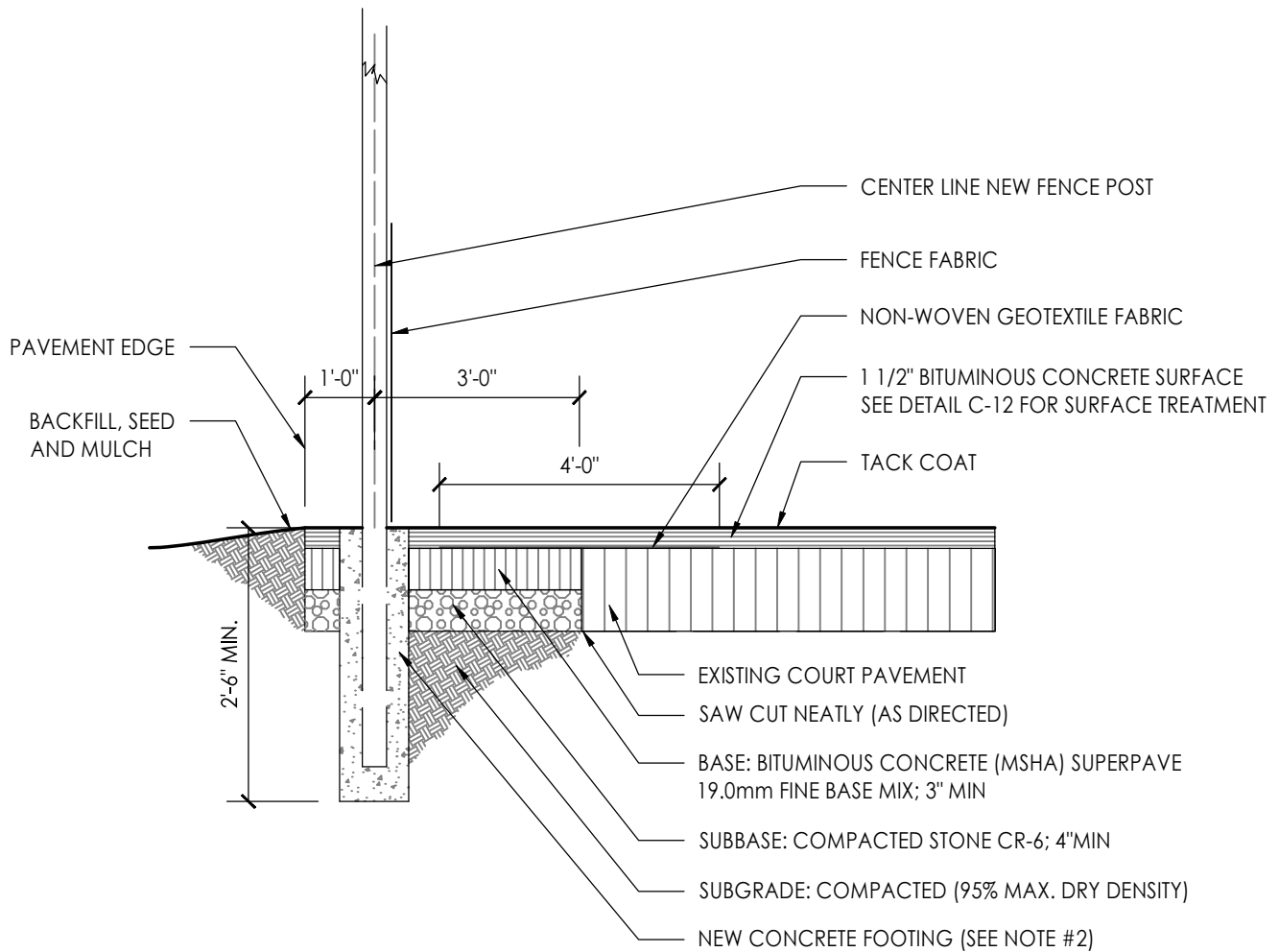


The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

B-6.1

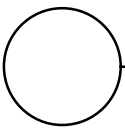
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. SEE DETAIL B-6.3 FOR ADDITIONAL DETAIL INFORMATION.



COURT RENOVATION PAVEMENT REPLACEMENT: DETAIL

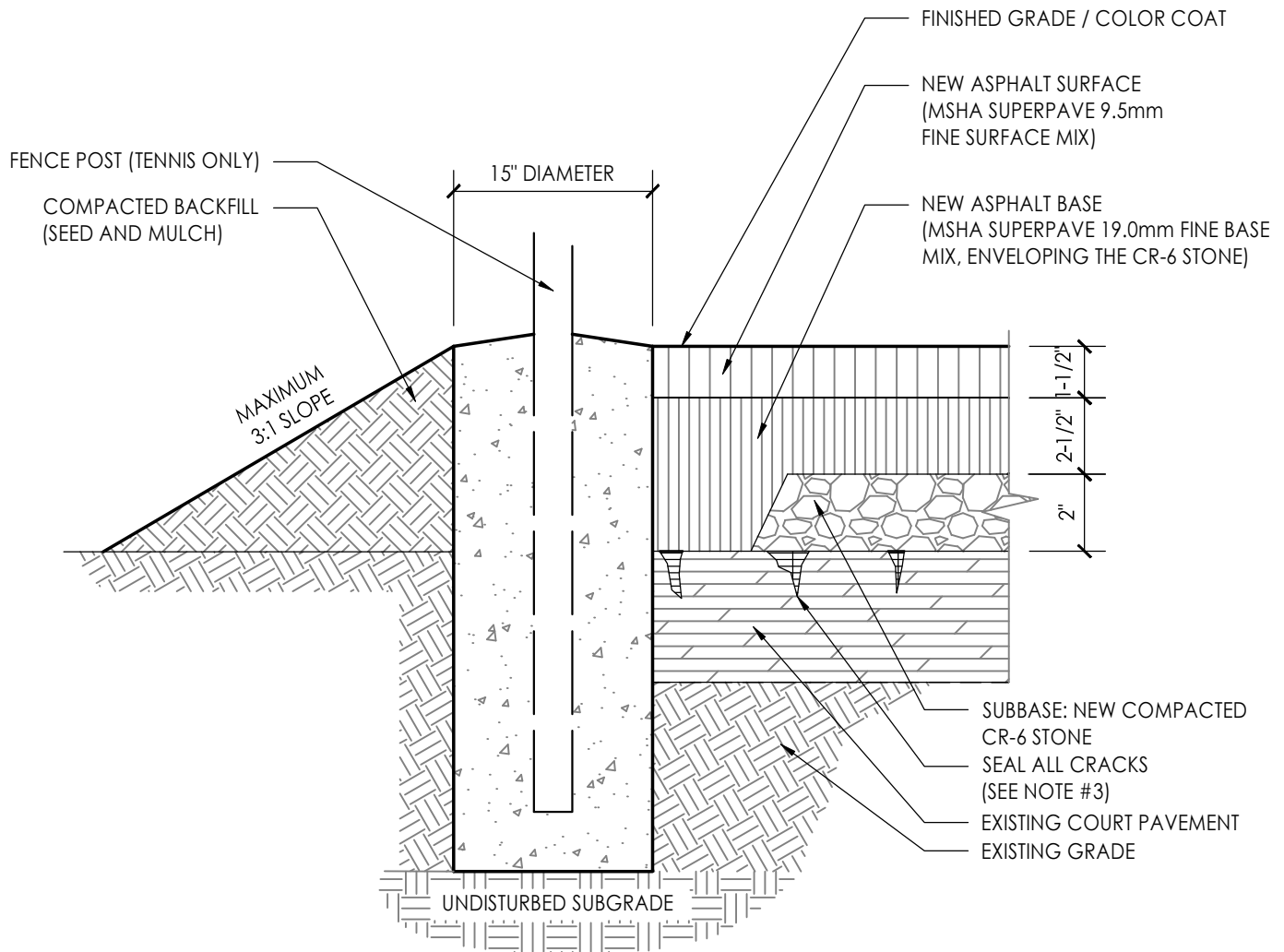


The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

B-6.2

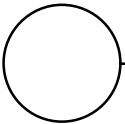
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. BLOW OUT ALL CRACKS WITH COMPRESSED AIR AND SEAL WITH LIQUID BITUMINOUS FILLER BEFORE PLACING CR-6 STONE.
4. COLOR COAT IS STANDARD FOR TENNIS COURTS AND IS OPTIONAL FOR BASKETBALL COURTS (OR AS SPECIFIED). COLOR COAT SHALL BE:
 - ONE COAT OF RESURFACER PLACED ON SURFACE
 - THREE COATS OF COLOR FINISH (COLORS: SEE LAYOUT PLAN)



COURT RENOVATION MODIFIED "SLIP SHEET" METHOD: DETAIL

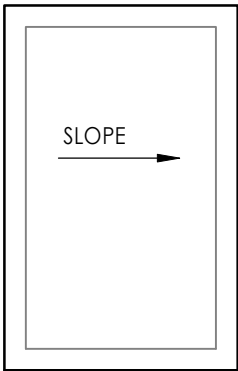


The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

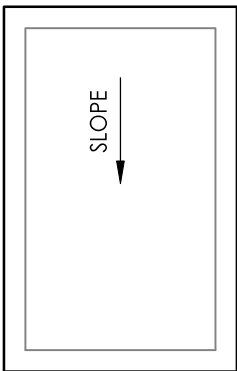
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B-6.3

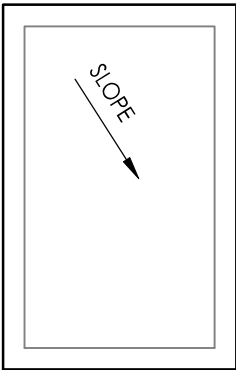
JANUARY 2023



CONCEPT DRAINAGE -
SIDE GRADED
N.T.S.



CONCEPT DRAINAGE -
END GRADED
N.T.S.

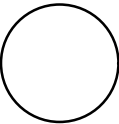


CONCEPT DRAINAGE -
CROSS GRADED
N.T.S.

 TYPICAL CONCEPT DRAINAGE PLAN LAYOUT
N.T.S.

NOTES:

- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
- 2. COURTS SHALL BE GRADED TO MAX. 1% SLOPE IN ONE PLANE.
- 3. ALL SURFACES MUST BE UNIFORM AND FREE OF STANDING WATER.
- 4. THIS DETAIL APPLIES TO TENNIS, BASKETBALL, AND MULTI-PURPOSE COURTS.



COURT DRAINAGE PATTERNS: DETAIL

 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

B-6.4

JANUARY 2023

INDEX OF DRAWINGS - PLAY SURFACES & EQUIPMENT

C-1.1 DISC GOLF BASKET FOOTING

C-2.1 BOCCE BALL

C-3.1 SHUFFLEBOARD

C-4.1 FOUR-SQUARE

C-5.1 GAGA PIT LAYOUT AND WALL CONSTRUCTION

C-6.1 PLAY EQUIPMENT FOOTING - TYPICAL

C-6.2 SAFETY SURFACE - POURED-IN-PLACE

C-6.3 SAFETY SURFACE - RESILIENT TILE (GRANULAR BASE)

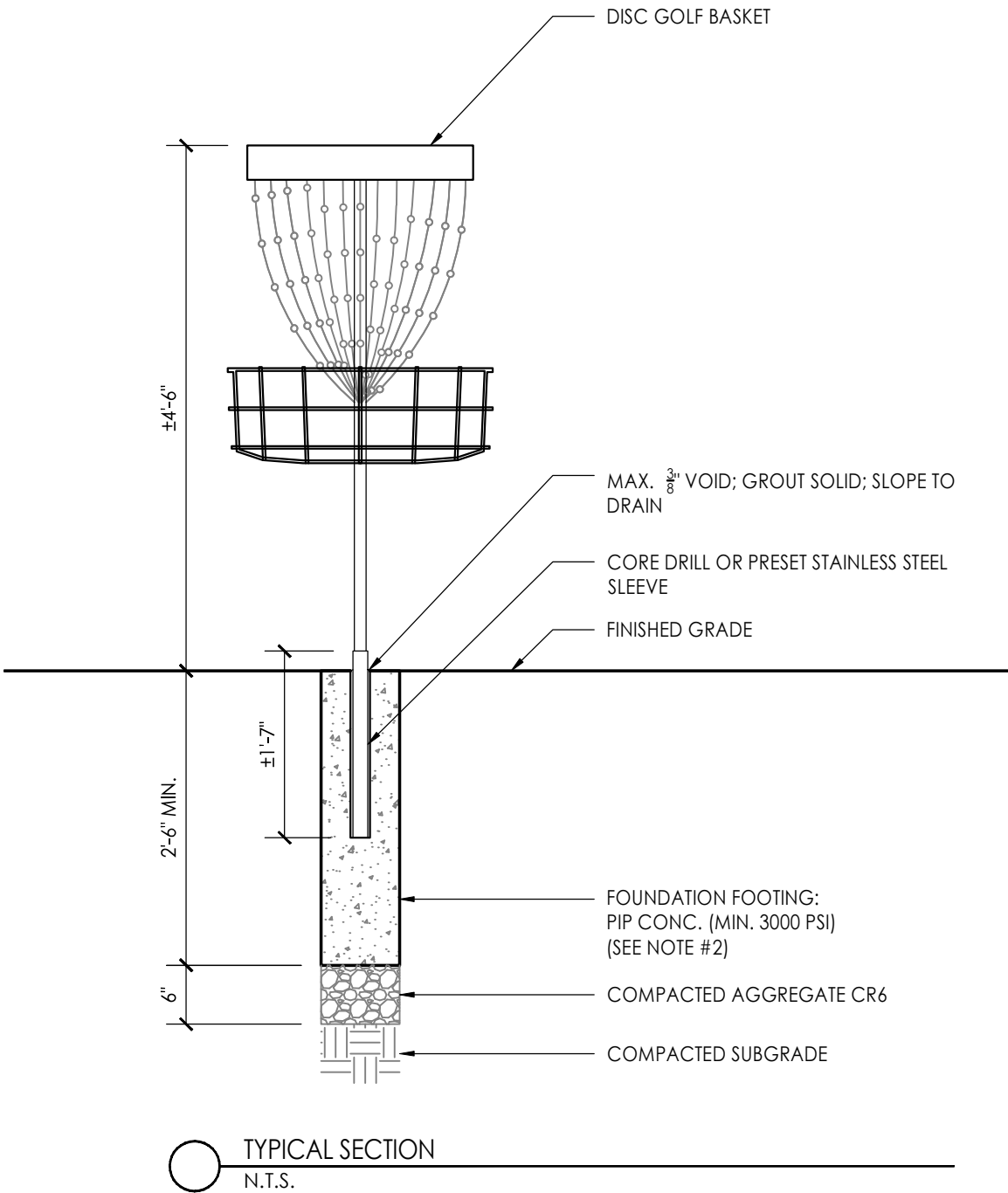
C-6.4 SAFETY SURFACE - WEAR MAT

C-6.5 SAFETY SURFACE - WOOD FIBER

C-6.6 SAFETY SURFACE - CONCRETE EDGE

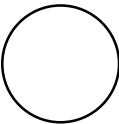
C-6.7 PLAYGROUND UNDERDRAIN

C-6.8 STONE BOULDER



NOTES:

- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
- 2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
- 3. ALL DIMENSIONS AND DETAILS TO BE APPROVED BY M-NCPPC.



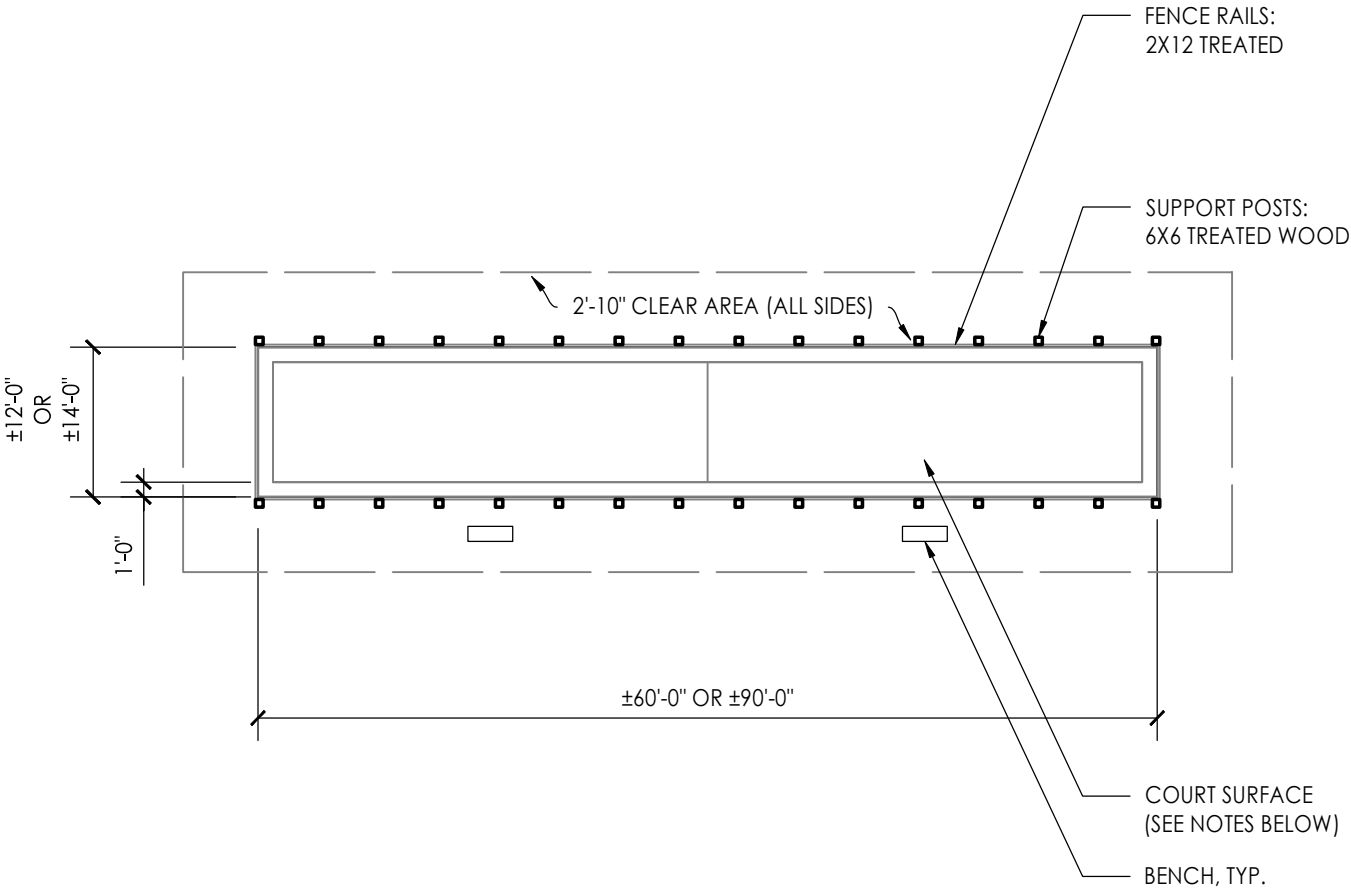
DISC GOLF BASKET FOOTING: DETAIL

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

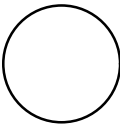
C-1.1

JANUARY 2023



○ CONCEPT PLAN LAYOUT
N.T.S.

- NOTES:
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 2. COURT SURFACING TO BE MIX 50% CLAY/ 50% SAND, OR ARTIFICIAL TURF.
 3. PROVIDE (1) BENCH MIN. PER COURT.
 4. PROVIDE STORAGE FOR EQUIPMENT.
 5. PROVIDE DRAINAGE PLAN TO BE REVIEWED AND APPROVED BY M-NCPPC.



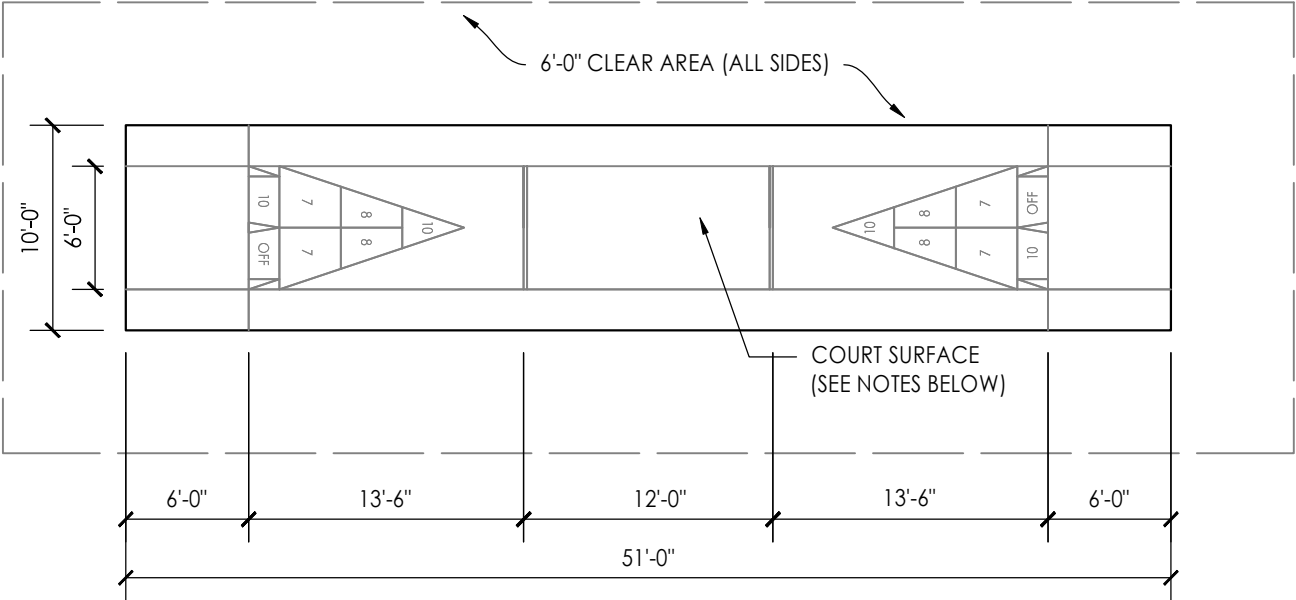
BOCCE BALL LAYOUT: DETAIL

 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

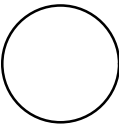
C-2.1

JANUARY 2023



○ CONCEPT PLAN LAYOUT
N.T.S.

- NOTES:
- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 - 2. ALL LINES ARE 2" WIDE AND PAINTED WHITE.
 - 3. ALL MEASUREMENTS FOR LINE OF COURTS ARE TO THE OUTSIDE OF LINES.
 - 4. PROVIDE PAVEMENT COLOR COATING OR SEAL COAT AS DIRECTED BY M-NCPPC.



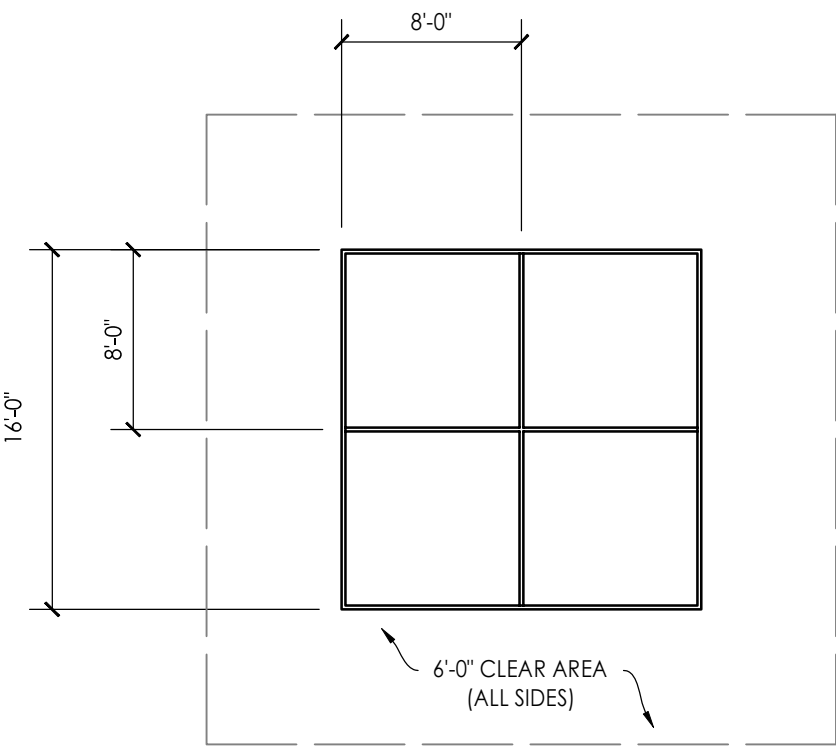
SHUFFLEBOARD COURT LAYOUT: DETAIL

 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

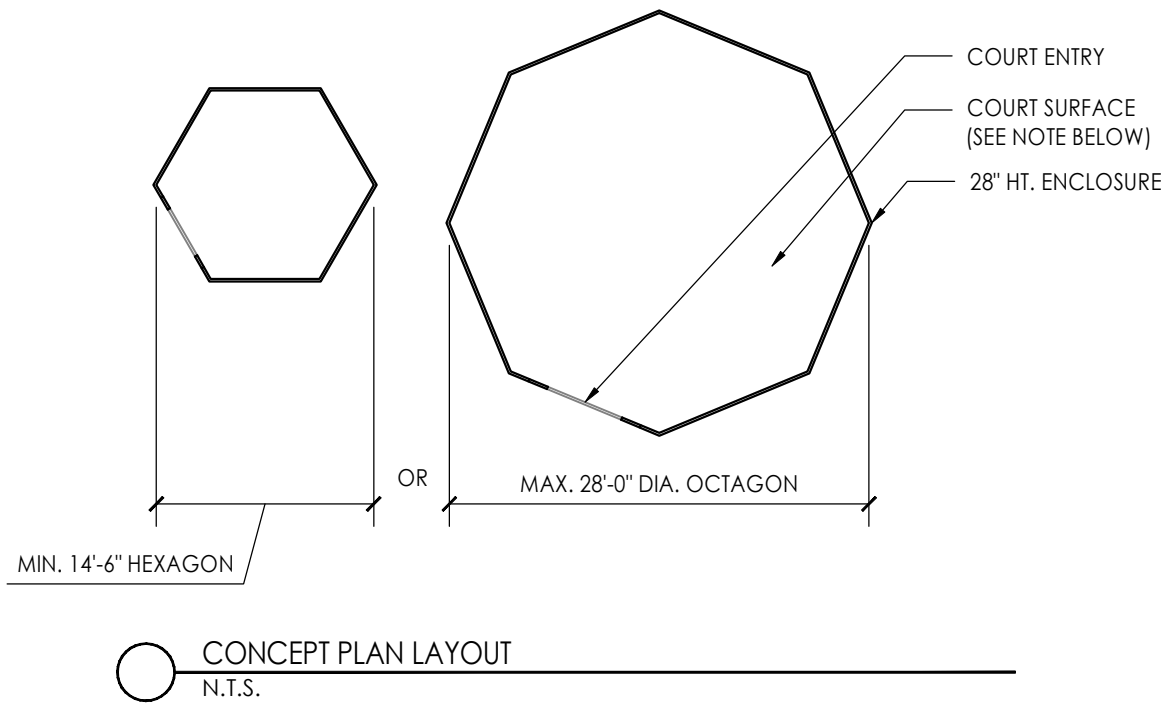
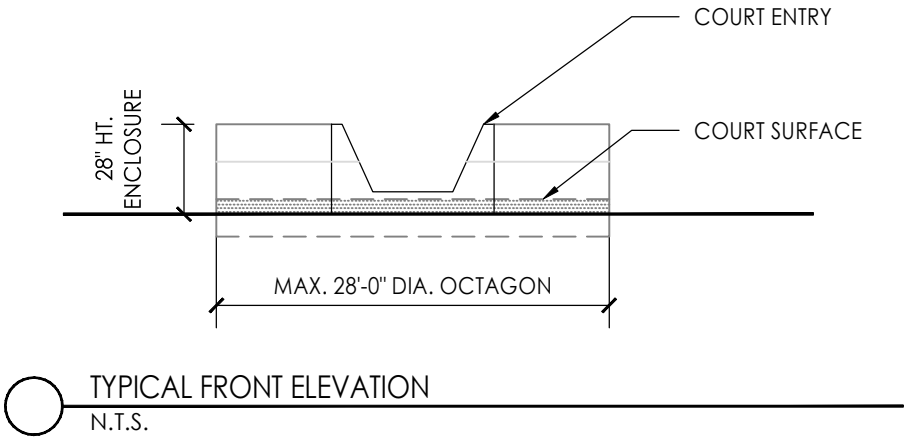
C-3.1

JANUARY 2023



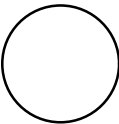
○ CONCEPT PLAN LAYOUT
N.T.S.

- NOTES:
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 2. SURFACE TO BE ASPHALT, CONCRETE, OR SIMILAR MATERIAL.
 3. DIMENSIONS ARE TO CENTER OF PAINTED LINES.
 4. COLOR SHOULD BE CONTRASTING TO UNDERLAYING PAVEMENT. COLOR COAT MANUFACTURER & COLORS TO BE APPROVED BY M-NCPPC.
 5. ALL LINES ARE 2" WIDE AND PAINTED WHITE.
 6. ALL MEASUREMENTS FOR LINE STRIPING OF COURTS ARE TO THE OUTSIDE OF LINES.



NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. SURFACING TO BE GRASS, WOOD MULCH, OR OTHER SOFT SURFACE.
3. PROVIDE (1) BENCH PER COURT.
4. PERMANENT WALLS 28" TALL.
5. DO NOT INSTALL LARGE POSTS AT PLAY AREA ON INSIDE EDGE.



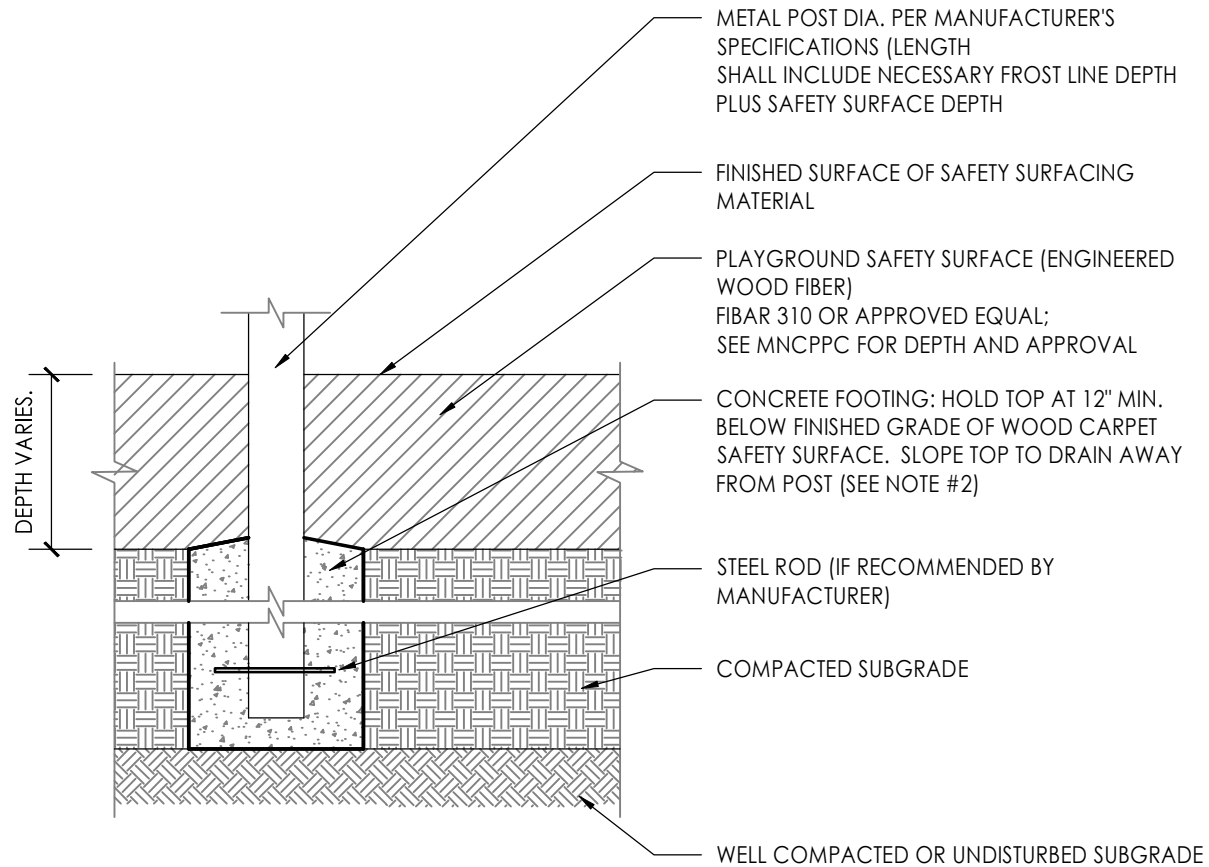
GAGA PIT LAYOUT AND WALL CONSTRUCTION: DETAIL

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

C-5.1

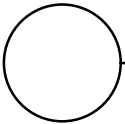
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. TYPICALLY, PLAYGROUND EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS AND CONSTRUCTION DETAILS.
4. THE FOOTER DEPTH AND WIDTH SHALL BE AS PER THE MANUFACTURER'S REQUIREMENT.
5. CONTRACTOR SHALL INDICATE PROPOSED DIMENSIONS ON THE SHOP DRAWINGS.



PLAY EQUIPMENT FOOTING - TYPICAL: CONCEPT

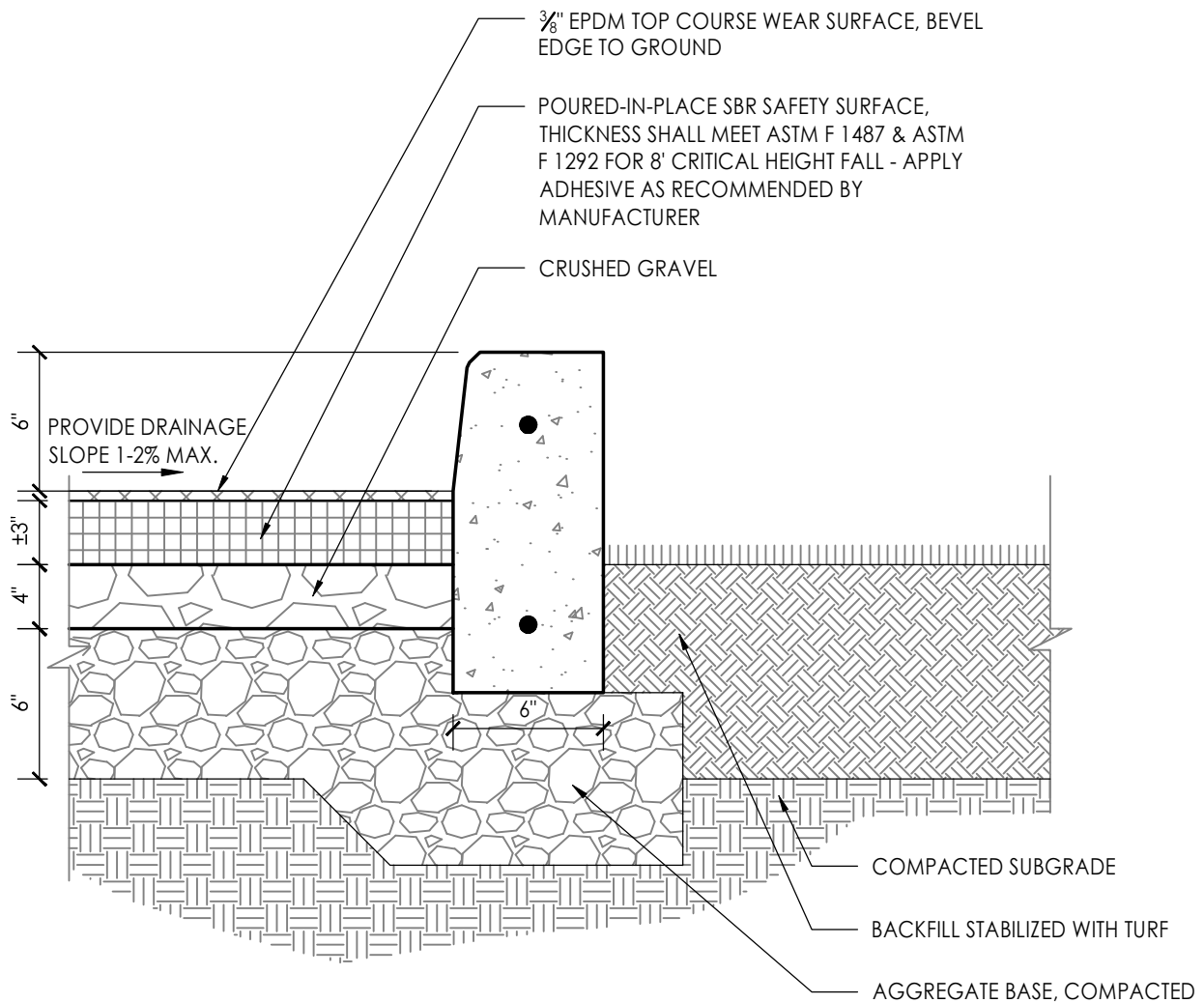


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NUMBER

C-6.1

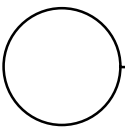
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. POURED-IN-PLACE SURFACE TO BE INSTALLED BY SURFACING MANUFACTURER'S APPROVED CONTRACTOR IN ACCORDANCE WITH MANUFACTURER'S DETAILS AND SPECIFICATIONS.



SAFETY SURFACE - POURED-IN-PLACE: DETAIL

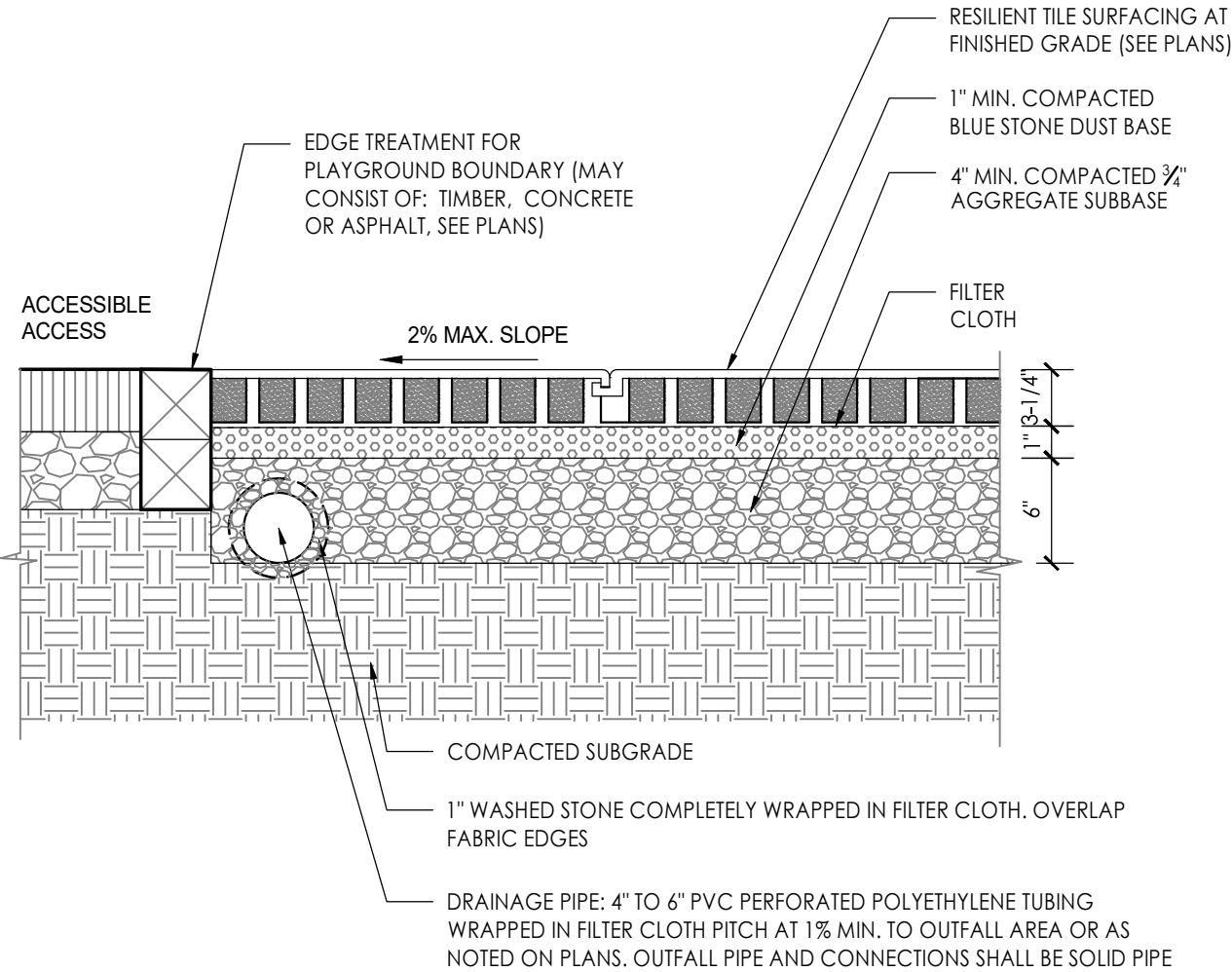


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Department of Parks and Recreation

NUMBER

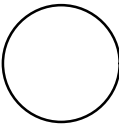
C-6.2

JANUARY 2023



TYPICAL SECTION
N.T.S.

- NOTES:
- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 - 2. REFER TO MANUFACTURE FOR FALL HEIGHT REQUIREMENTS.
 - 3. REFER TO MANUFACTURE FOR INSTALLATION PROCESS.
 - 4. PROVIDE SUBSOIL DRAINS PER MANUFACTURE'S REQUIREMENTS AND PERCOLATION TESTING.
 - 5. INSTALL PERFORATED DRAIN TILE AT 16" ON CENTER AS WELL AS AROUND THE PERIMETER OF RESILIENT TILE INSTALLATION.
 - 6. BACK FILL AROUND PERFORATED DRAIN TILE WITH 1" WASHED STONE TO 6" RADIUS AROUND DRAIN TUBING. WRAP WITH FILTER CLOTH TO PERVENT THE STONE FROM OBSTRUCTING THE DRAIN.



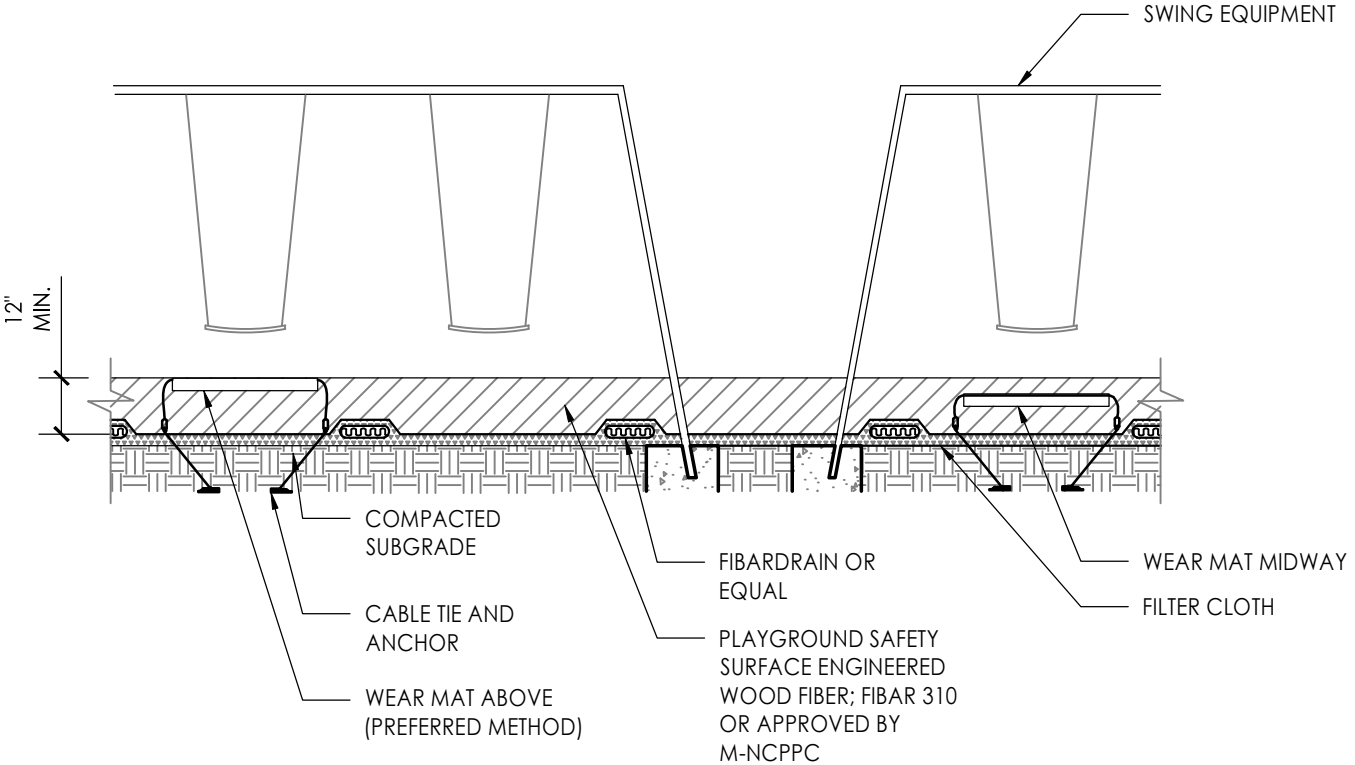
SAFETY SURFACE - RESILIENT TILE (GRANULAR BASE): CONCEPT

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

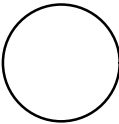
C-6.3

JANUARY 2023



 TYPICAL SECTION
N.T.S.

- NOTES:
- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 - 2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
 - 3. WEAR MATS SHALL BE INSTALLED UNDER ALL SWINGS, TIRE SWINGS, AND SLIDE EXITS. WEAR MATS SIZE SHALL BE REVIEWED AND APPROVED BY M-NCPPC.



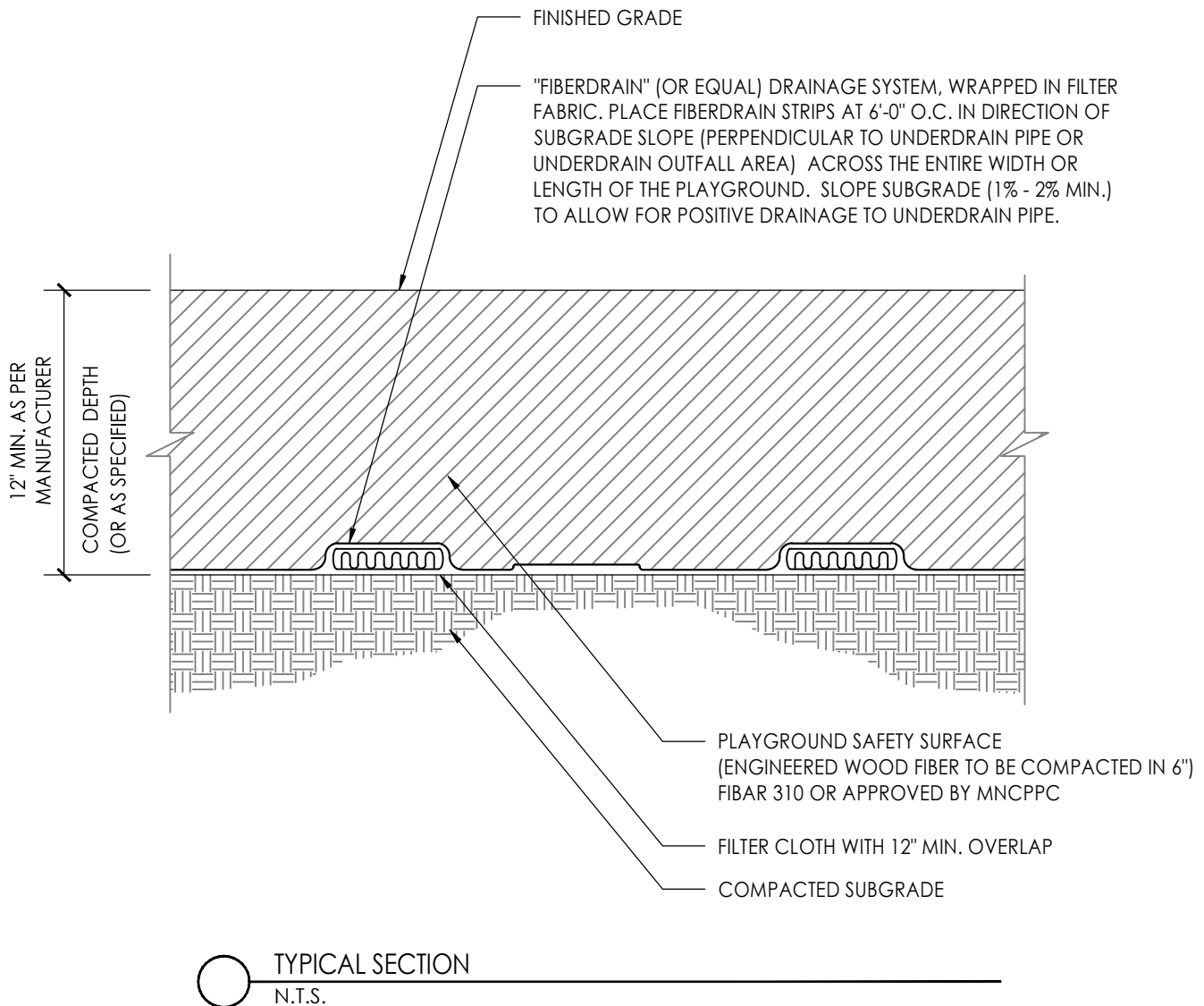
SAFETY SURFACE - WEAR MAT: DETAIL

 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

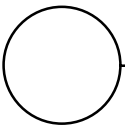
C-6.4

JANUARY 2023



NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. INSTALL SAFETY SURFACE AND UNDERDRAINAGE SYSTEM PER MANUFACTURER'S SPECIFICATIONS.
3. DEPTH OF THE SAFETY SURFACE SHALL BE AS PER MANUFACTURER'S WRITTEN SPECIFICATIONS AS WELL AS THE FALL HEIGHT OF THE PLAY EQUIPMENT.
4. AN ALTERNATIVE TO THE FIBER DRAIN SYSTEM IS TO INSTALL A 4" MINIMUM DEPTH LAYER OF #57 STONE UNDER THE ENTIRE SAFETY SURFACE. IT SHALL BE SLOPED TOWARDS THE UNDERDRAIN PIPE. CLOTH WITH A 12" SUBGRADE AT THE BOTTOM OF THE GRAVEL BED. GRAVEL SHALL BE WRAPPED COMPLETELY IN FILTER MINIMUM OVERLAP.
5. WEAR MATS SHALL BE INSTALLED UNDER ALL SWINGS, TIRE SWINGS, AND SLIDE EXITS AS SPECIFIED PER MANUFACTURES SPECIFICATIONS. SEE M-NCPPC DETAIL FOR WEAR MAT SAFETY SURFACING.

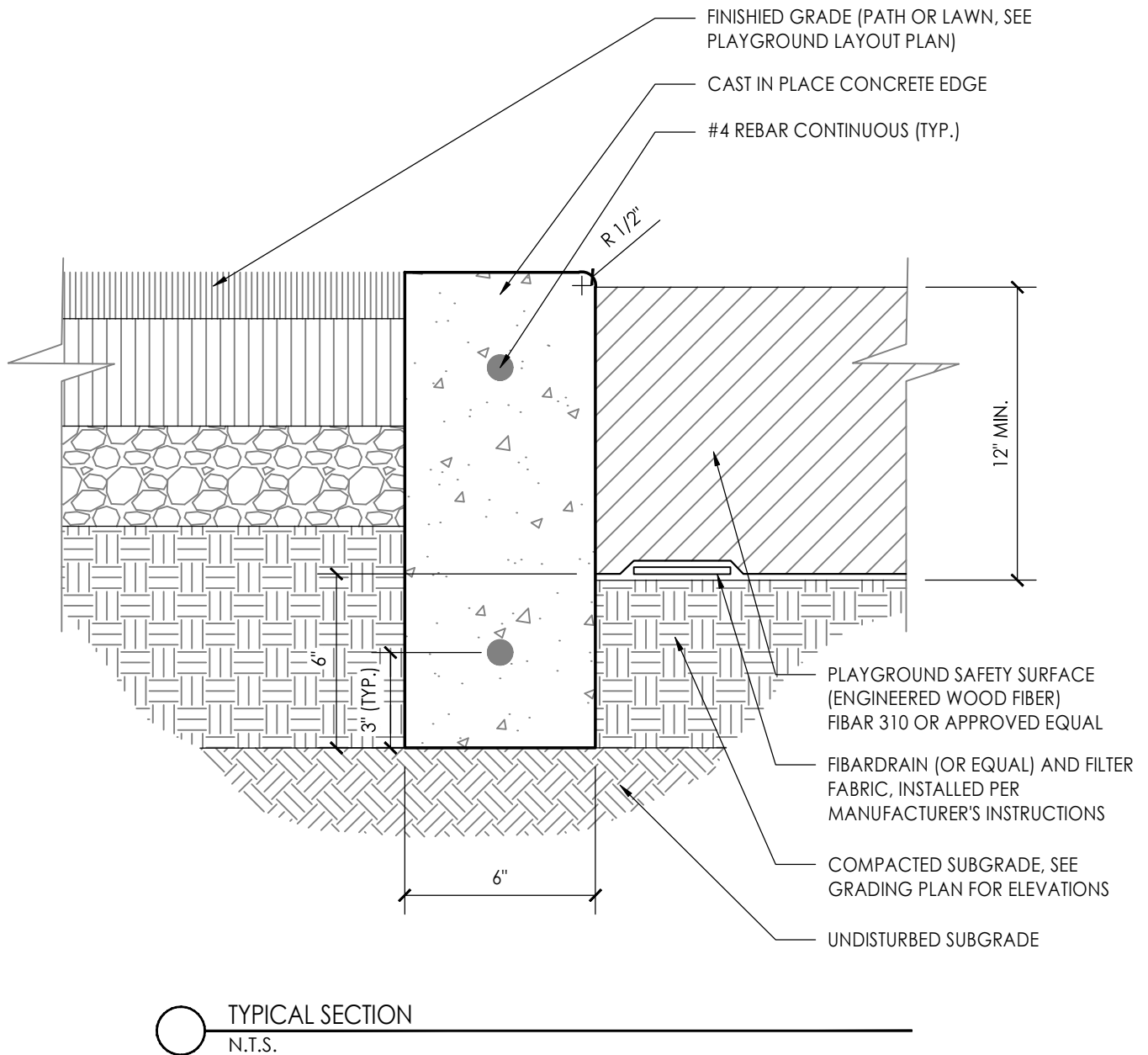
**SAFETY SURFACE - WOOD FIBER: DETAIL**

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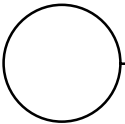
NUMBER

C-6.5

JANUARY 2023

**NOTES:**

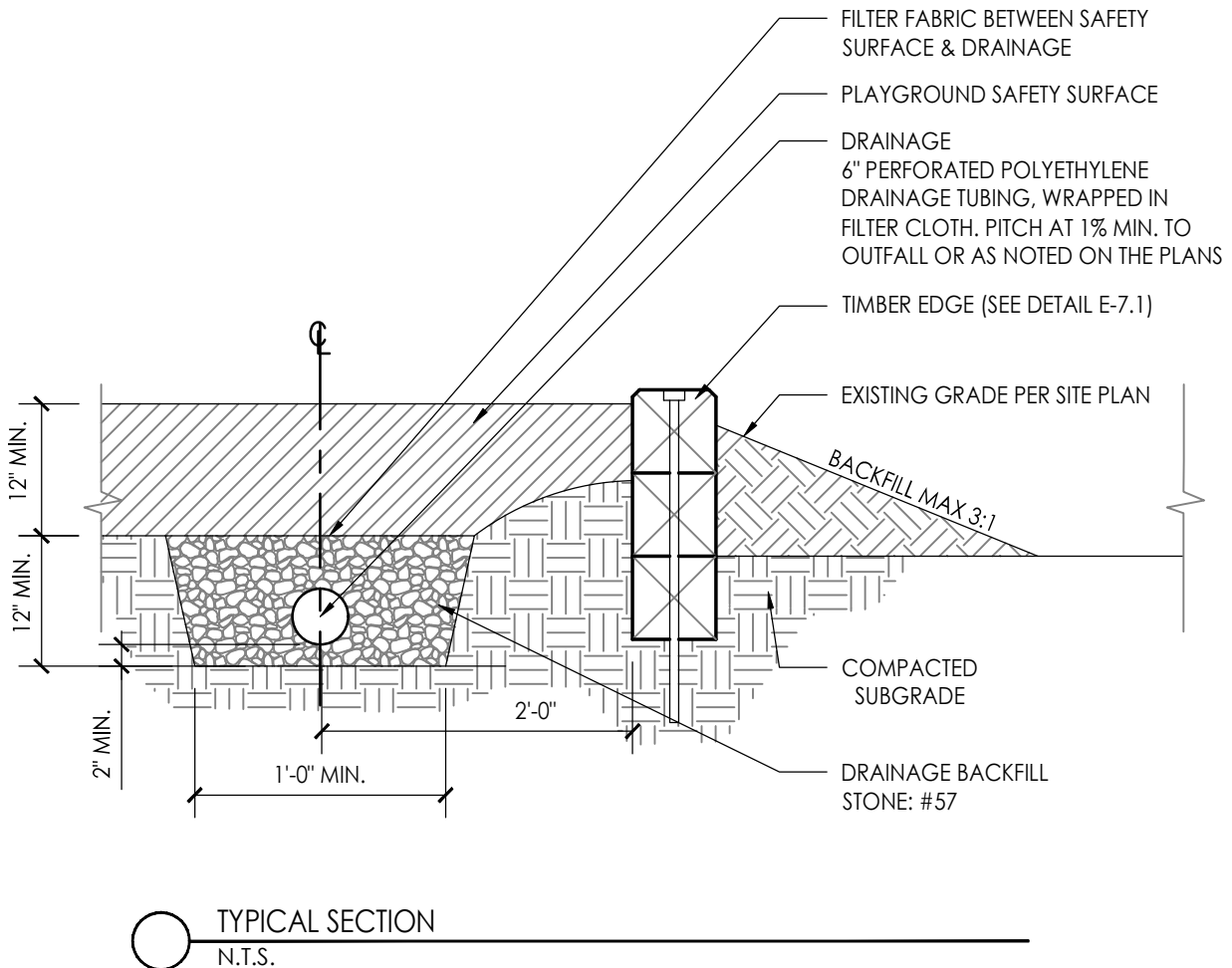
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. EXPANSION JOINTS TO BE PROVIDED EVERY 30'. CONSTRUCTION JOINTS TO BE PROVIDED EVERY 10'.

**SAFETY SURFACE - CONCRETE EDGE: DETAIL**

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Department of Parks and Recreation

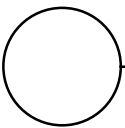
NUMBER**C-6.6**

JANUARY 2023



NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. OUTFALL PIPE SHALL BE SOLID, NOT PERFORATED.
3. ENSURE SUBGRADE DRAINS TOWARDS DRAIN.
4. ENGINEERED WOOD FIBER (EWF) SHOULD BE COMPACTED IN 6" LIFTS.



PLAYGROUND UNDERDRAIN: CONCEPT

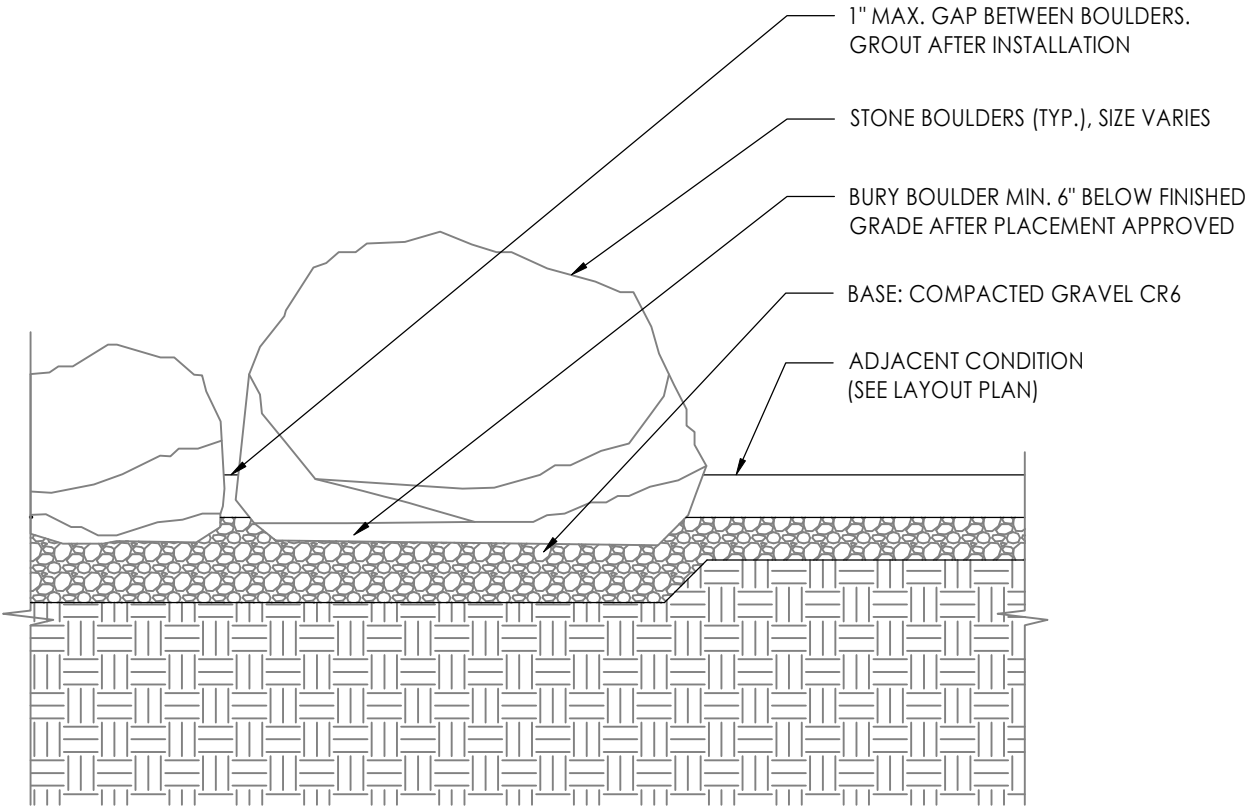


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NUMBER

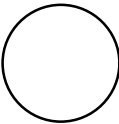
C-6.7

JANUARY 2023



TYPICAL SECTION
N.T.S.

NOTES:
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



STONE BOULDER: CONCEPT

The Maryland-National Capital Park and Planning Commission
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NUMBER

C-6.8

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INDEX OF DRAWINGS - SHARED USE PATHS (TRAILS)

D-1.1 PRIMARY SHARED USE PATH - GREEWAY CORRIDOR

D-1.2 PRIMARY SHARED USE PATH IN ROAD CORRIDOR

D-2.1 SECONDARY SHARED USE PATH IN ROAD CORRIDOR

D-3.1 SHARED USE PATH PAVEMENT CROSS SECTION

D-3.2 CRUSHED GRAVEL PATH CROSS SECTION

D-3.3 RE-INFORCED SHOULDER CROSS SECTION

D-4.1 TRAIL INTERSECTION DESIGN CONCEPTS

D-4.2 CONCEPTUAL TRAIL/ROADWAY CROSSINGS

D-4.3 EQUESTRIAN TRAIL CROSSING

D-5.1 HORIZONTAL TRAIL CLEARANCE

D-5.2 SIGN PLACEMENT ON TRAILS

D-5.3 TRAIL FURNITURE OFFSET

D-5.4 TRAIL RAILING OR PROTECTIVE FENCE

D-6.1 TRAIL ACCESS CONTROLS

D-6.2 STEEL BOLLARD INSTALL

D-7.1 BOARDWALK A

D-7.2 BOARDWALK B

D-8.1 TRAILHEADS

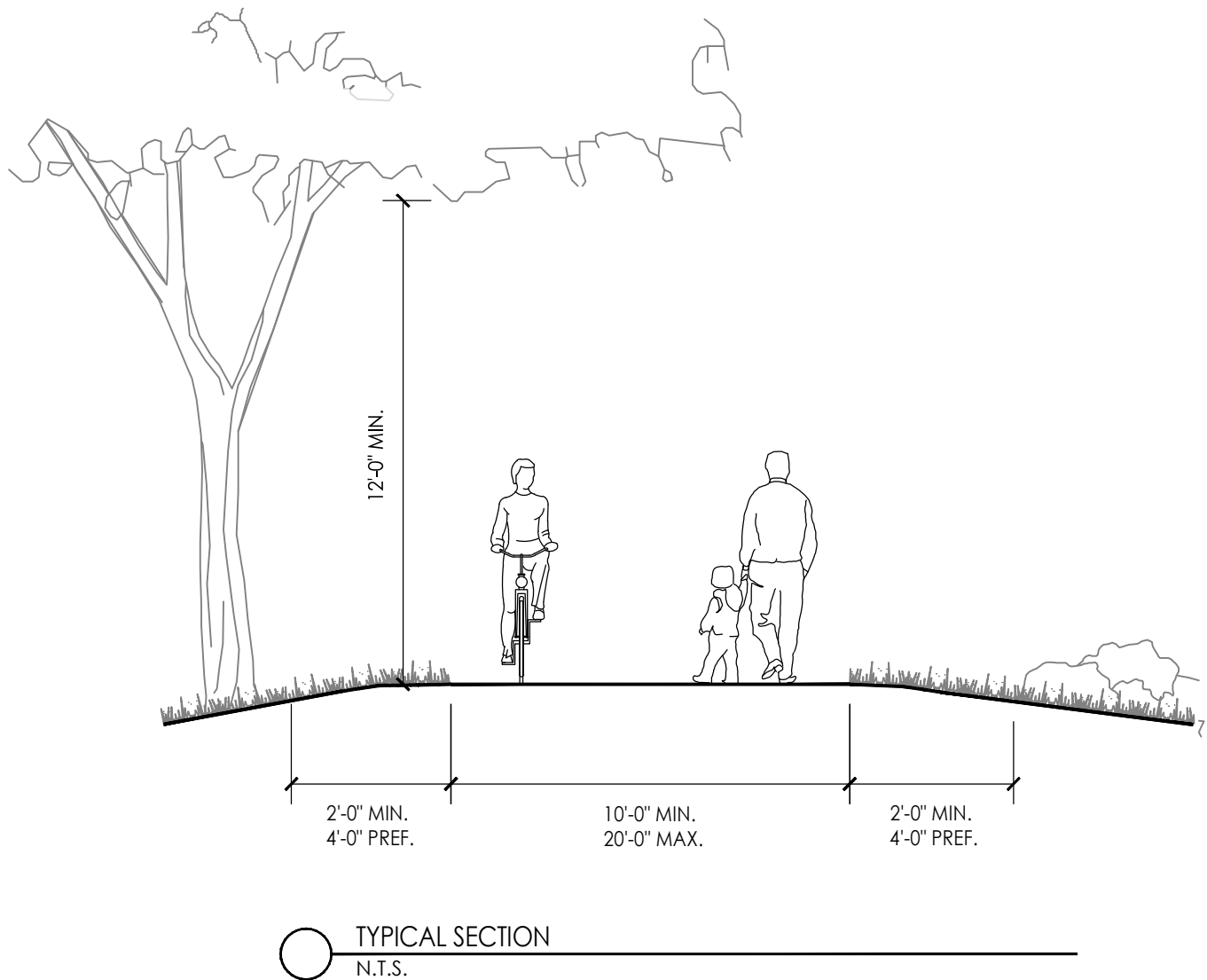
D-8.2 TRAIL CONNECTIVITY AT PUBLIC FACILITIES

D-8.3 MID-BLOCK TRAIL CROSSINGS

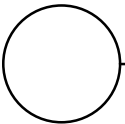
D-8.4 WAYSIDES

* SEE SECTION F FOR MORE FENCING OPTIONS

* SEE SECTION G FOR SITE FURNITURE & SIGNAGE

**NOTES:**

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. REMOVE ALL BRANCHES AND LIMBS TO 12' ABOVE FINISHED GRADE.
3. SLOPE TRAIL AS PER PLAN.
4. SHOULDER SHALL BE CLEAR OF VEGETATION AND HAVE A MAXIMUM OF 2% CROSS SLOPE.
5. TRAIL SHALL BE SLOPED IN THE DIRECTION OF POSITIVE DRAINAGE.

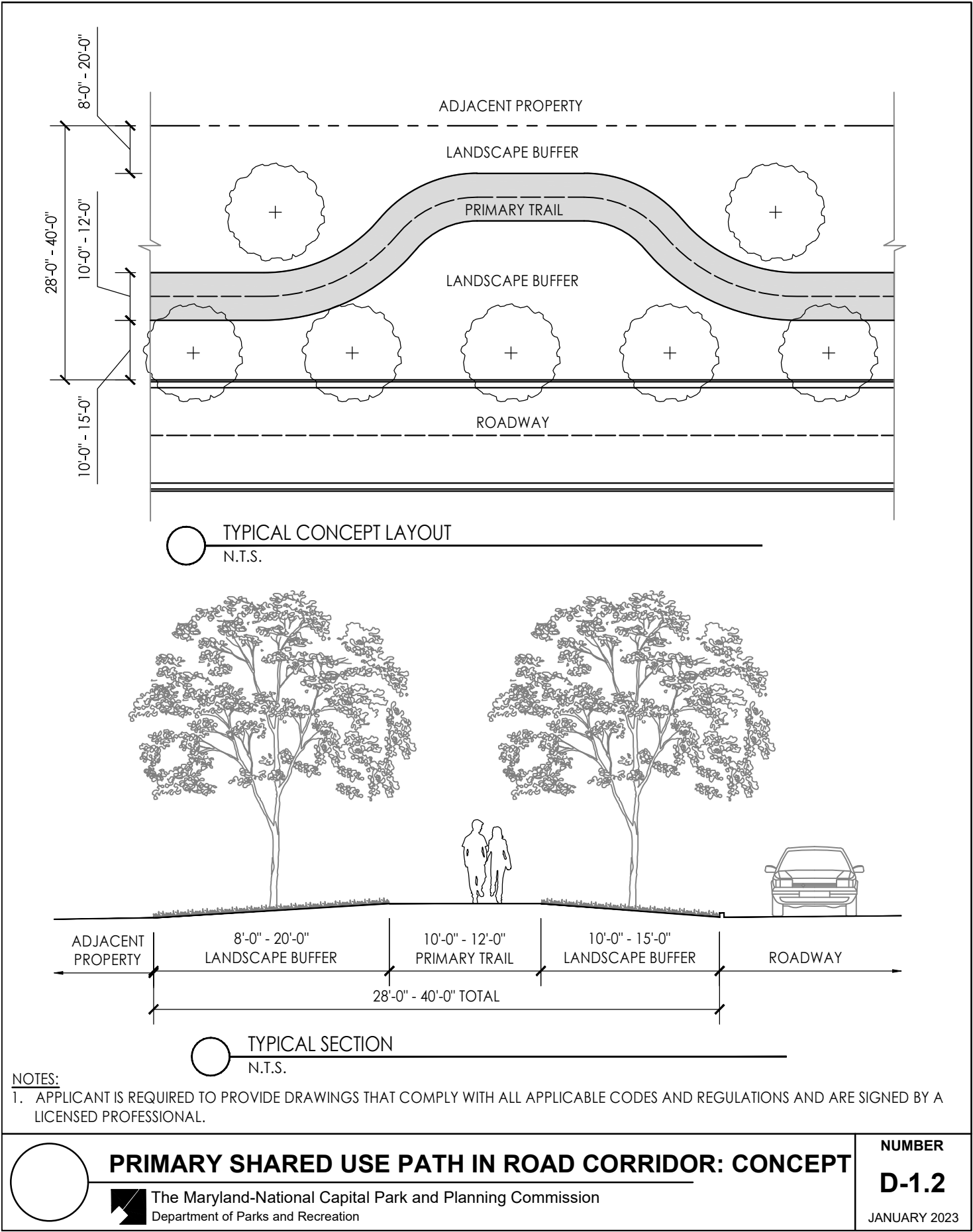
**PRIMARY SHARED USE PATH - GREENWAY CORRIDOR: CONCEPT**

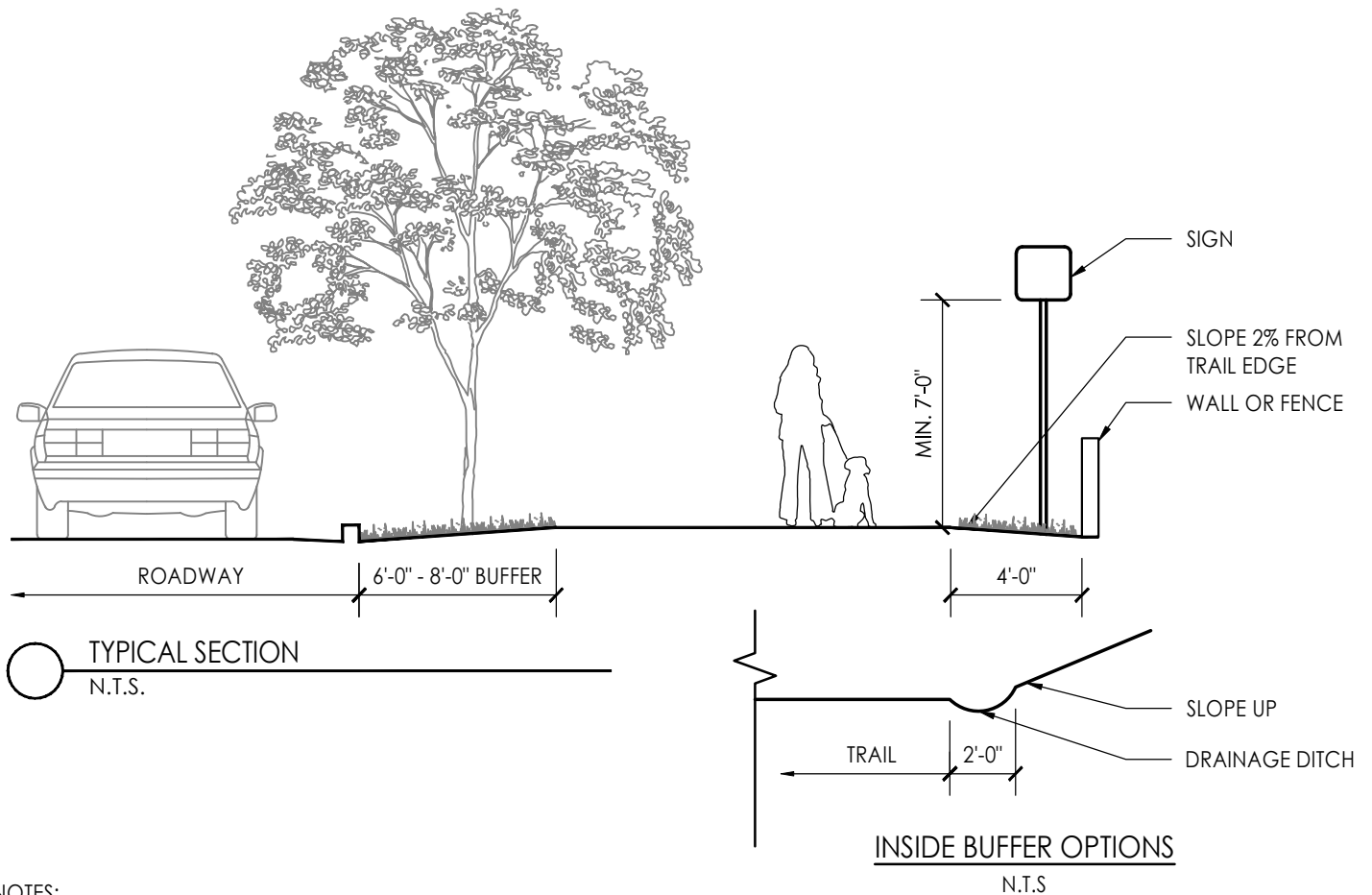
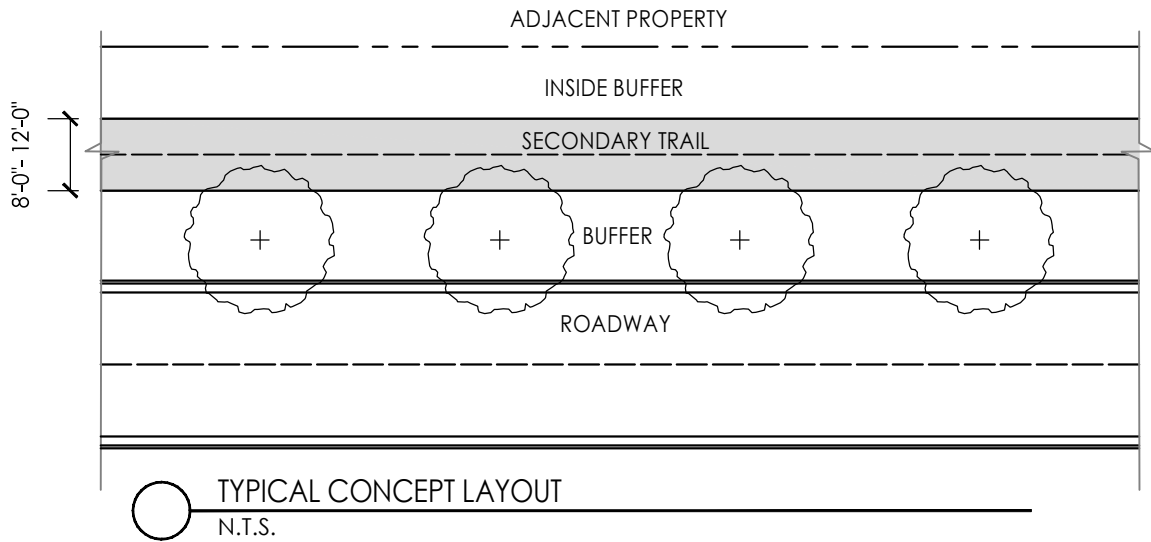
The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

D-1.1

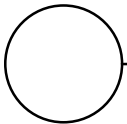
JANUARY 2023





NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. 5' MIN. GRASS BUFFER.
3. 6' MIN. REGULAR BUFFER WITH TREES, 8' PREFERRED.
4. 4' STANDARD INSIDE BUFFER.
5. COMPLY WITH AASHTO GUIDANCE IN PLANNING AND DESIGN FOR BICYCLE FACILITIES.

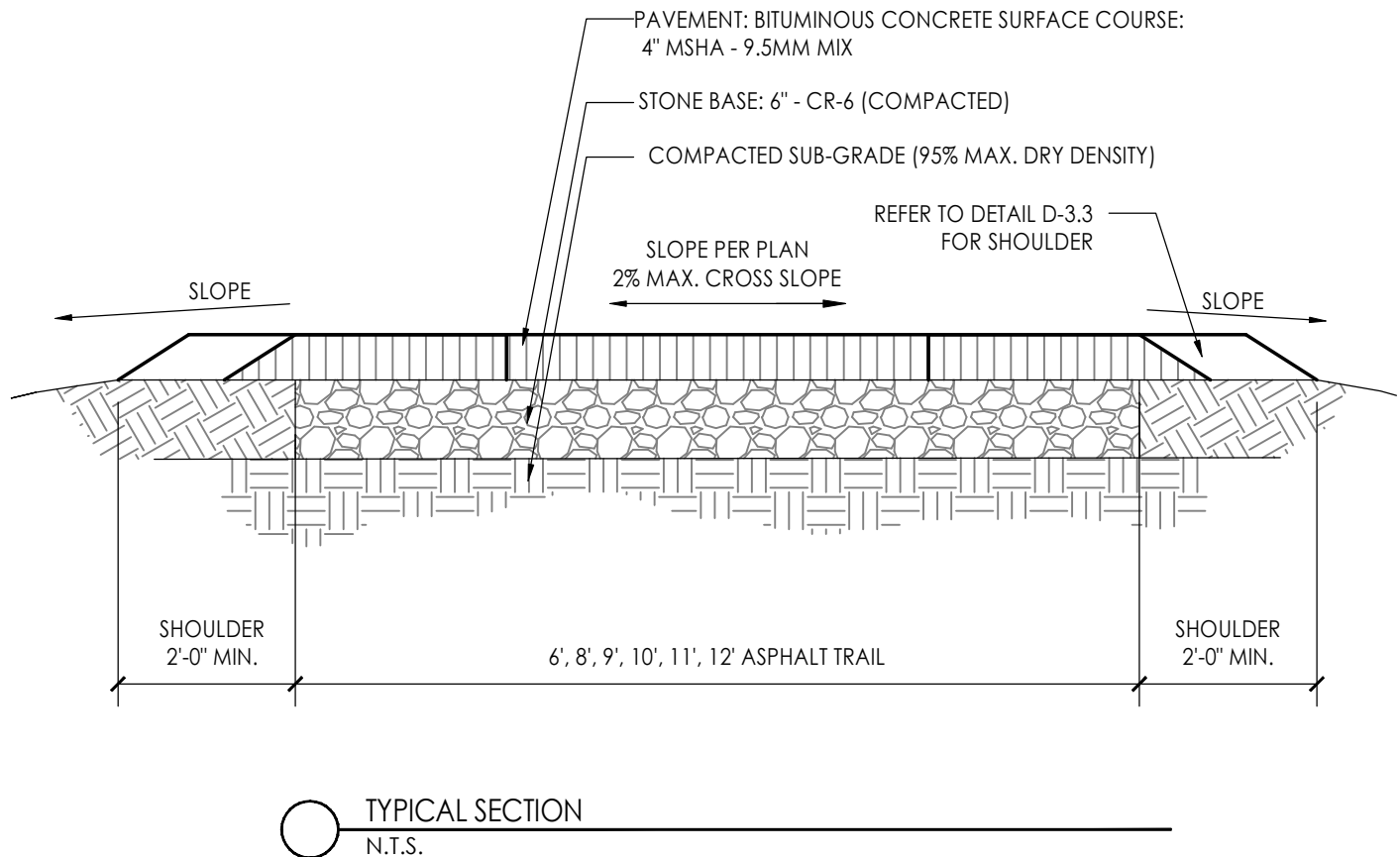
**SECONDARY SHARED USE PATH IN ROAD CORRIDOR: CONCEPT**

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

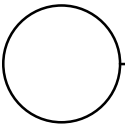
NUMBER

D-2.1

JANUARY 2023

**NOTES:**

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. BACKFILL WITH CLEAN TOPSOIL, SEED, AND MULCH (AS REQUIRED).
3. SLOPE ASPHALT TRAIL AS PER PLAN, SHOULDER SHALL BE CLEAR OF OBSTRUCTIONS, TREES, ETC. (MAXIMUM OF 2% CROSS SLOPE.)
4. TRAIL SHALL BE SLOPED IN THE DIRECTION OF POSITIVE DRAINAGE; TRAIL MAY BE CROWNED IN THE MIDDLE.
5. OPTIONAL FILTER CLOTH MAY BE PROVIDED BETWEEN THE GRAVEL SUBBASE AND THE COMPACTED SUBGRADE DEPENDING ON THE SOIL TYPE PROPERTIES AND AS REQUESTED BY M-NCPPC.
6. IF TRAIL IS LOCATED WITHIN A ROAD RIGHT-OF-WAY, THE TRAIL SHALL BE DESIGNED TO MEET THE STANDARDS OF THE AGENCY ASSUMING MAINTENANCE RESPONSIBILITY.



SHARED USE PATH PAVEMENT CROSS SECTION: DETAIL

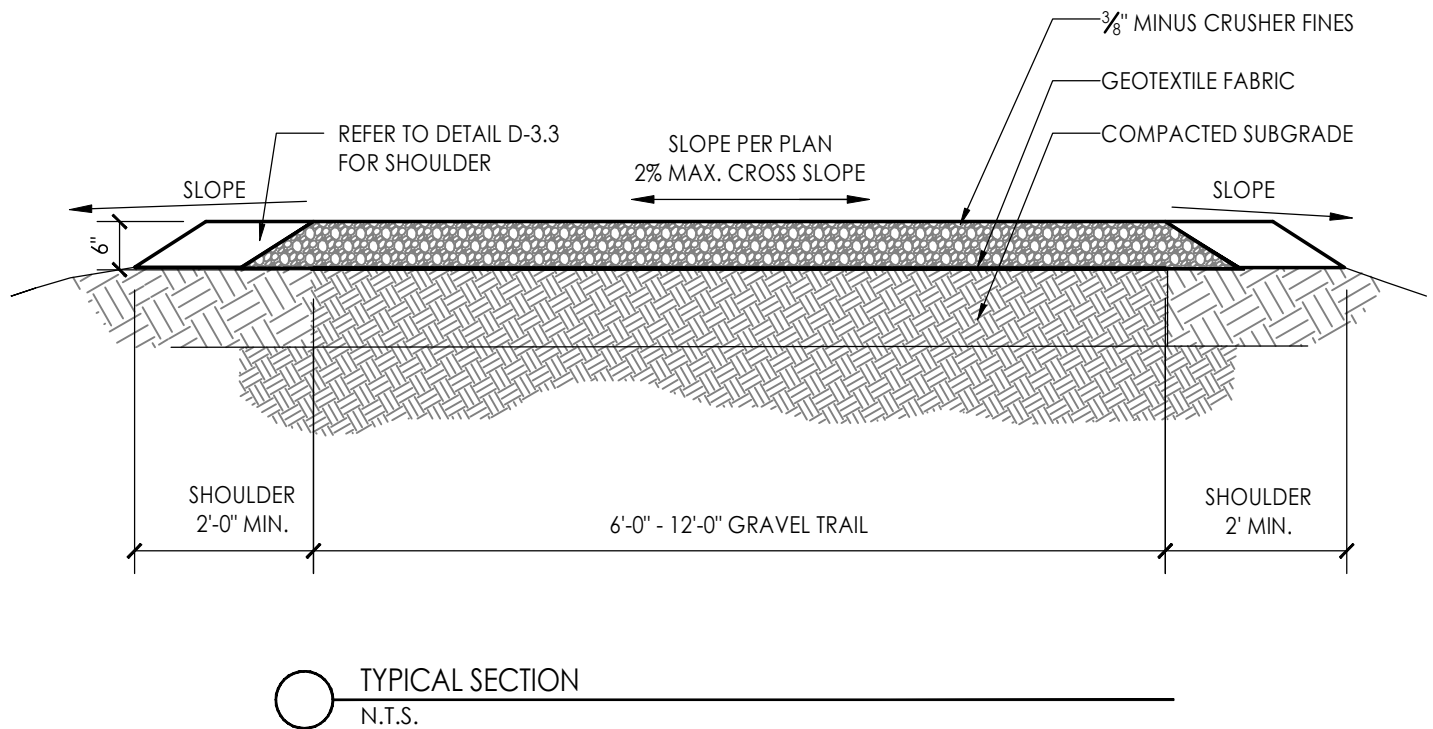


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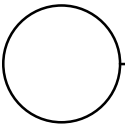
NUMBER

D-3.1

JANUARY 2023

**NOTES:**

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. BACKFILL WITH CLEAN TOPSOIL, SEED, AND MULCH (AS REQUIRED).
3. SLOPE ASPHALT TRAIL AS PER PLAN.
4. SHOULDER SHALL BE CLEAR OF VEGETATION AND HAVE A MAXIMUM OF 2% CROSS SLOPE.
5. TRAIL SHALL BE SLOPED IN THE DIRECTION OF POSITIVE DRAINAGE.



CRUSHED GRAVEL PATH CROSS SECTION: DETAIL

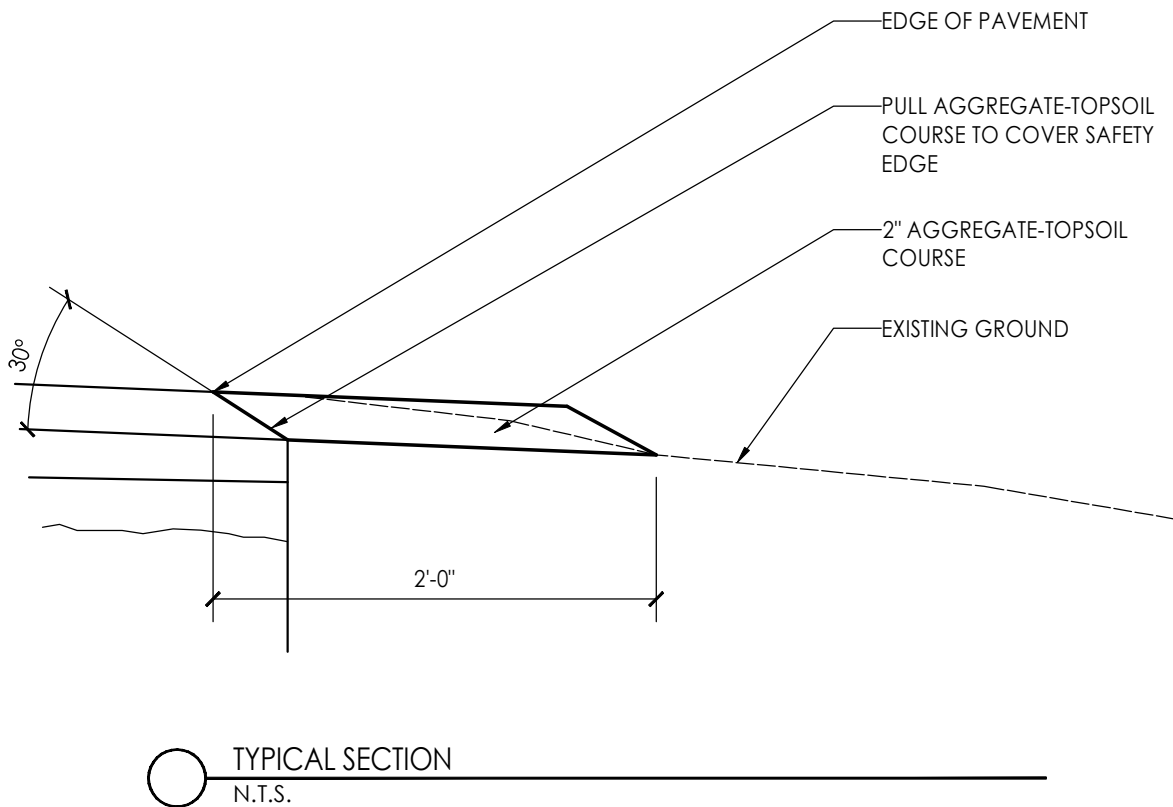


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Department of Parks and Recreation

NUMBER

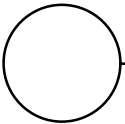
D-3.2

JANUARY 2023



NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. COMPLETE THE ADJOINING PAVEMENT BEFORE PLACING AN AGGREGATE-TOPSOIL MIXTURE ON THE SHOULDER. SCARIFY THE AREA WHERE THE MIXTURE IS TO BE PLACED TO A DEPTH OF 3". REDUCE ALL CLODS AND SOD TO A MAXIMUM SIZE OF 4".
3. FURNISH A MIXTURE OF 50±10 PERCENT AGGREGATE AND 50±10 PERCENT TOPSOIL BY VOLUME WITH SUFFICIENT WATER FOR COMPACTION. MIX THE COMPONENTS INTO A UNIFORM MIXTURE. SPREAD THE MIXTURE ON THE PREPARED SURFACE IN A UNIFORM LAYER. SHAPE THE MIXTURE TO THE LINE, GRADE, AND CROSS-SECTION. REMOVE ALL CLODS AND STONES GREATER THAN 2" IN DIAMETER. BEFORE COMPACTION, DRY SEED THE MIXTURE SURFACE AT A RATE OF 85 KILOGRAMS PER HECTARE.
4. UNIFORMLY COMPACT THE MIXTURE SO THAT IT DOES NOT EXHIBIT HEAVING, PUMPING, RUTTING, OR SHEARING. AFTER COMPACTION, DRY SEED THE SURFACE AGAIN AT A RATE OF 85 KILOGRAMS PER HECTARE.

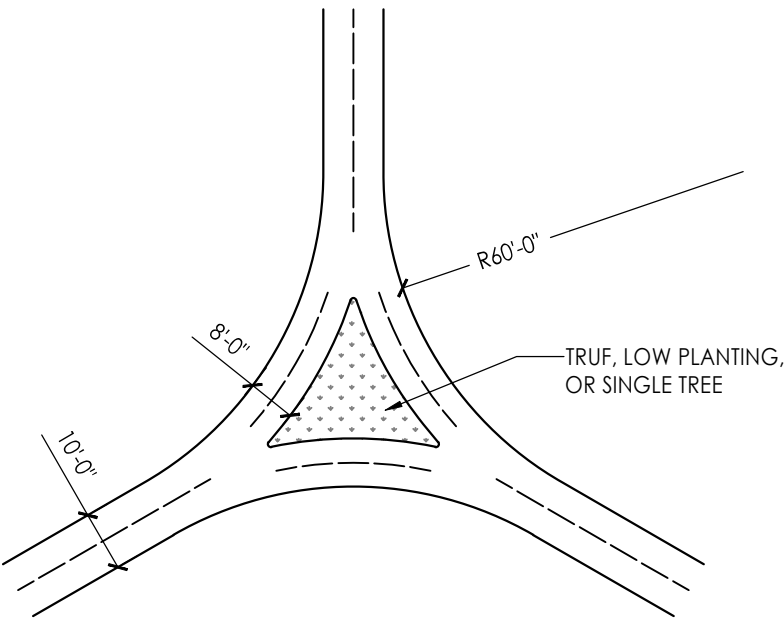
**RE-INFORCED SHOULDER CROSS SECTION: DETAIL**

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

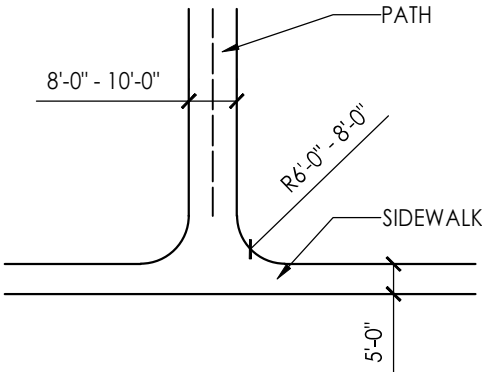
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D-3.3

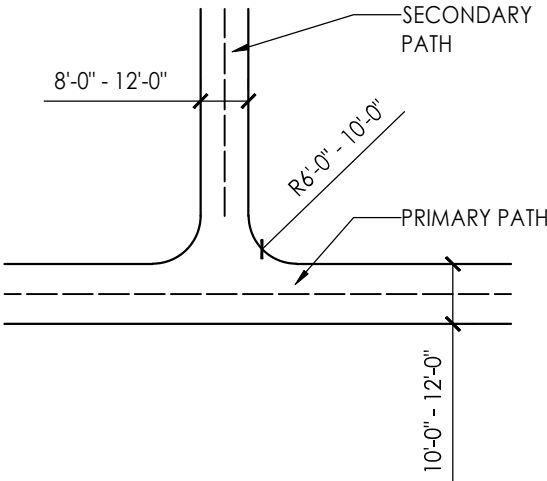
JANUARY 2023



PRIMARY PATH MEETS PRIMARY PATH
N.T.S



PATH MEETS SIDEWALK
N.T.S

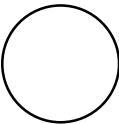


SECONDARY PATH MEETS
PRIMARY PATH
N.T.S

○ TYPICAL CONCEPT PLAN LAYOUTS
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



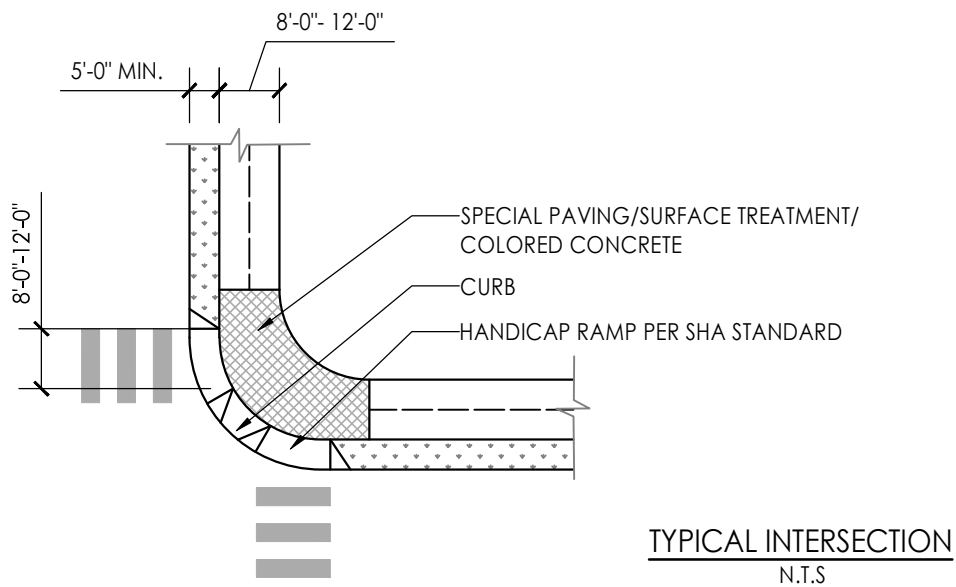
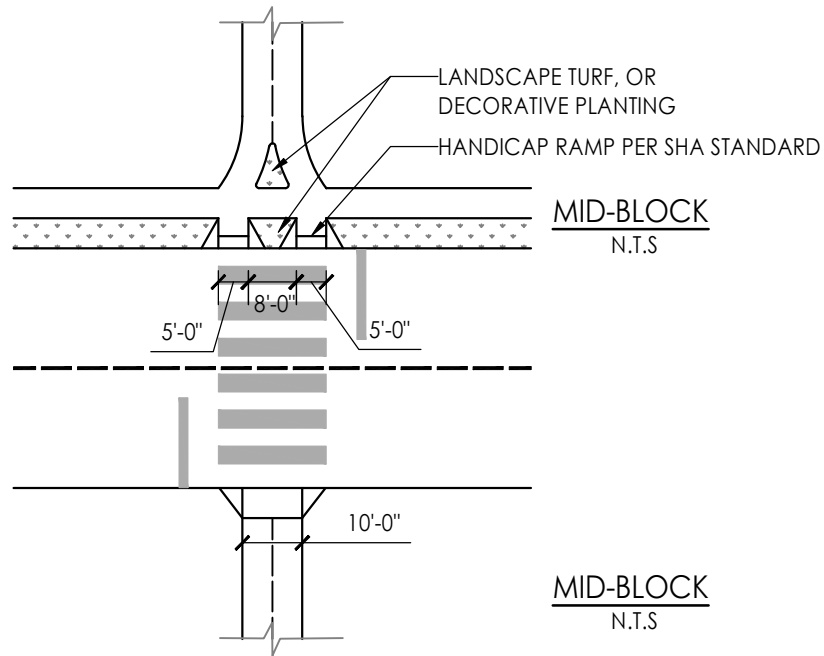
TRAIL INTERSECTION DESIGN CONCEPTS: CONCEPT

The Maryland-National Capital Park and Planning Commission
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NUMBER

D-4.1

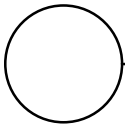
JANUARY 2023



○ TYPICAL CONCEPT PLAN LAYOUTS
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



CONCEPTUAL TRAIL/ROADWAY CROSSINGS: CONCEPT

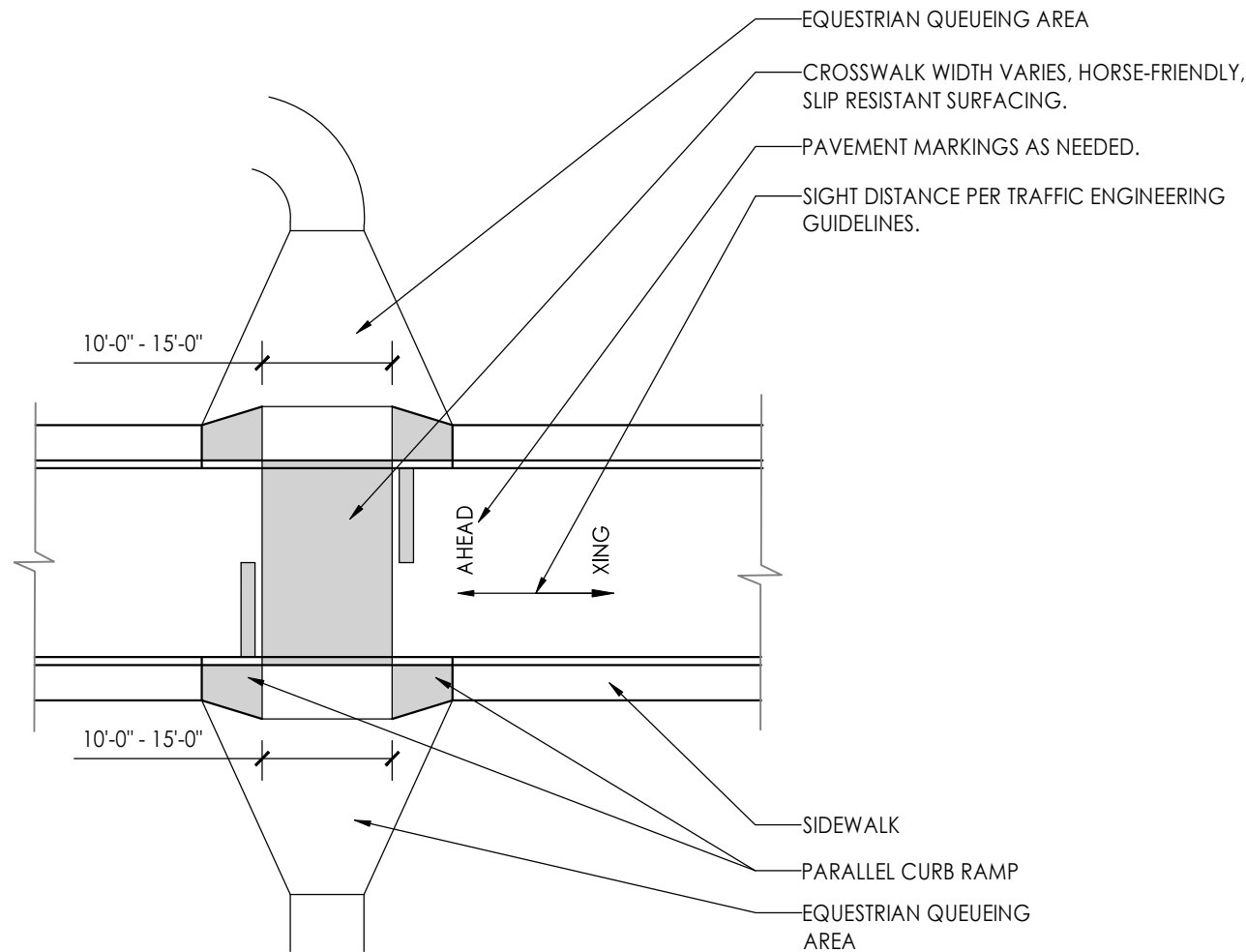


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NUMBER

D-4.2

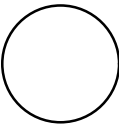
JANUARY 2023



 TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. CROSSWALK LINES, PAVEMENT MARKINGS, TRAFFIC CONTROL DEVICES, AND SIGNS MUST MEET THE MUTCD AND OTHER APPLICABLE REQUIREMENTS .
3. USE EQUESTRIAN CROSSING WARNING SIGN FROM MUTCD.



EQUESTRIAN TRAIL CROSSING: CONCEPT

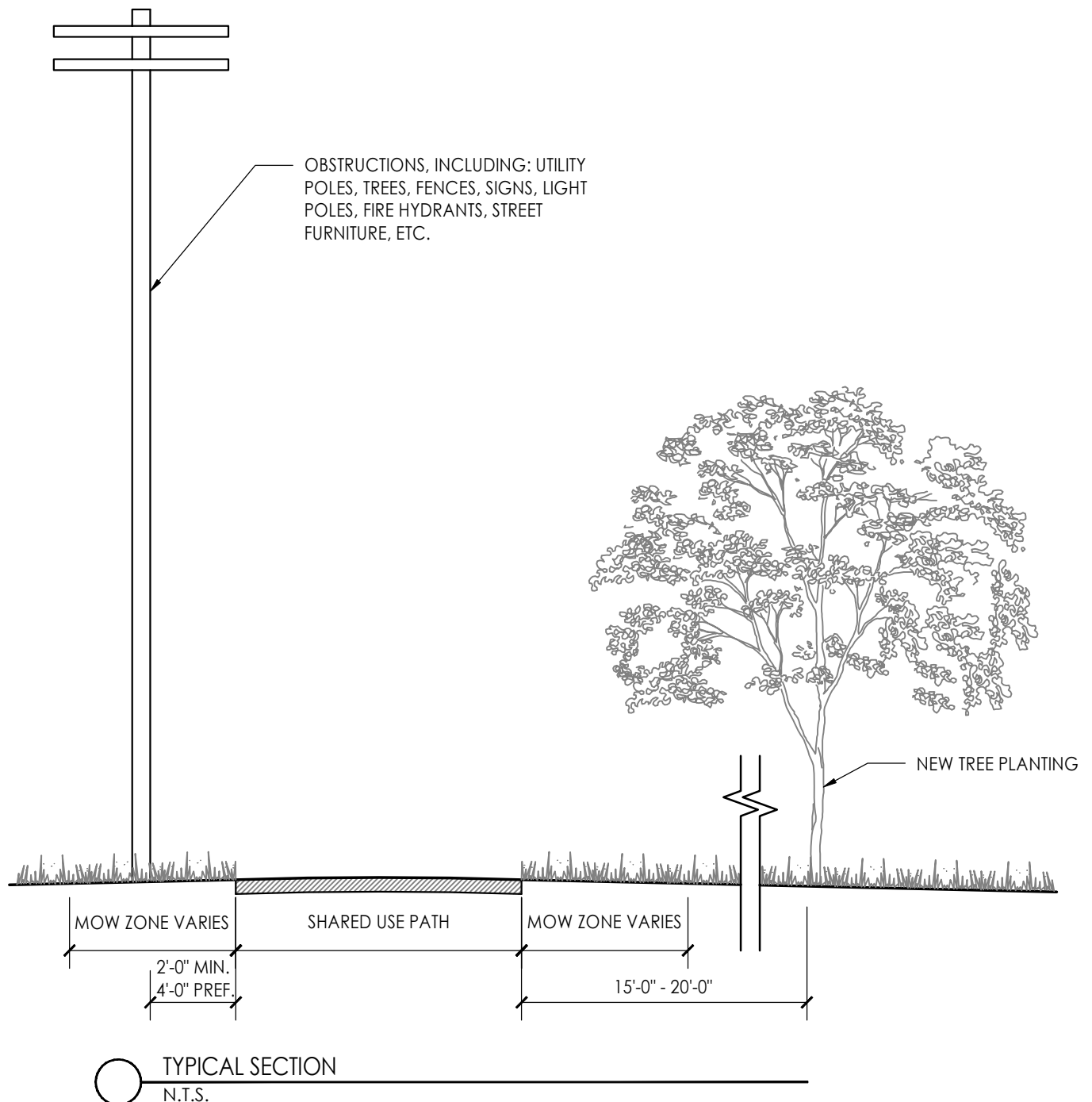


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Department of Parks and Recreation

NUMBER

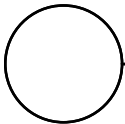
D-4.3

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NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. DISTANCE OF TREE FROM TRAIL DEPENDS ON TYPE OF TREE. COORDINATE WITH M-NCPPC STAFF.

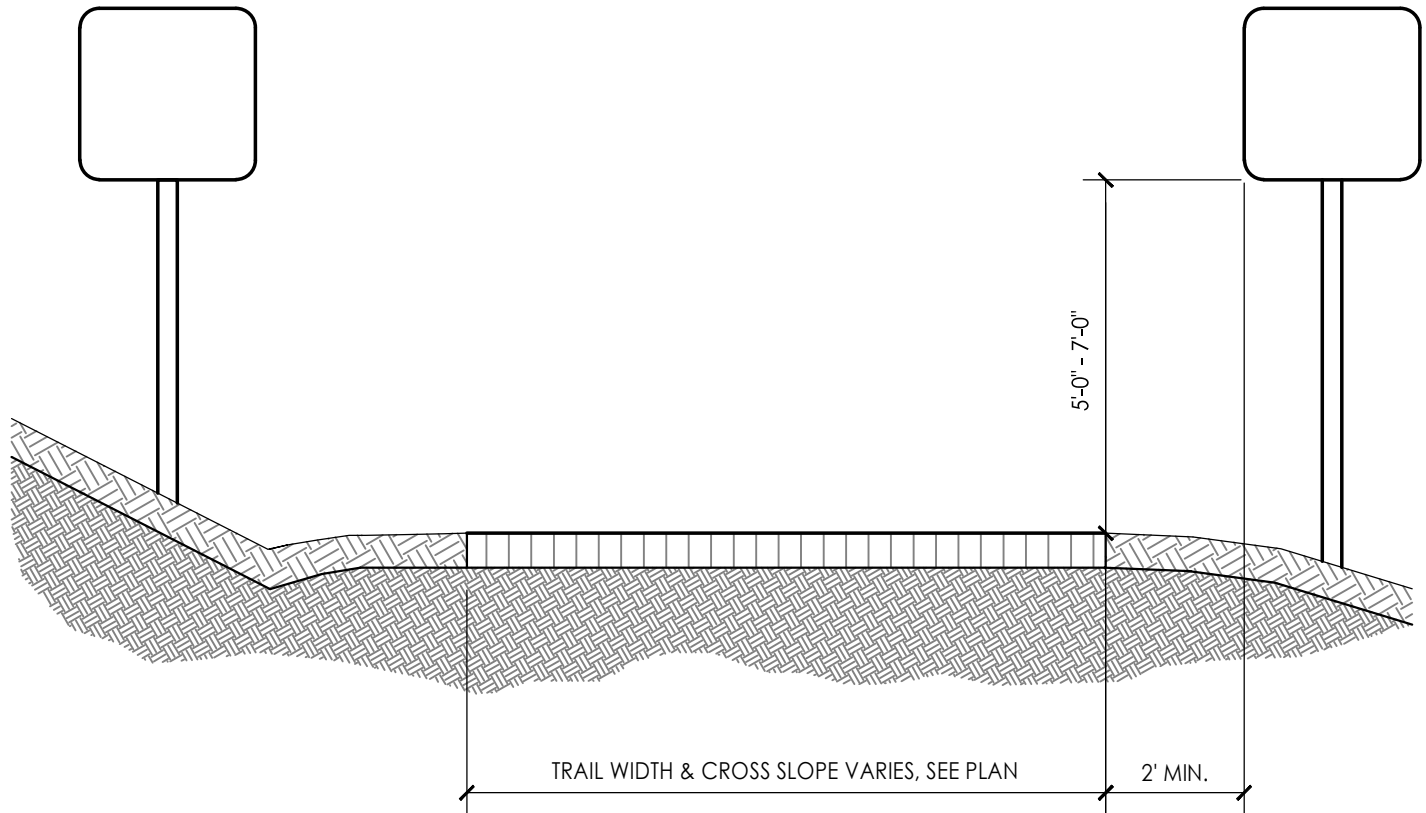
**HORIZONTAL TRAIL CLEARANCE: CONCEPT**

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

D-5.1

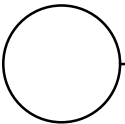
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. SIGN PANEL SHALL HAVE ROUNDED CORNERS.
3. SHOULDER SHALL BE CLEAR OF VEGETATION AND HAVE A MAXIMUM OF 2% CROSS SLOPE.
4. TRAIL SHALL BE SLOPED IN THE DIRECTION OF POSITIVE DRAINAGE.
5. WARNING, OPERATIONAL AND REGULATORY SIGNS SHALL BE RETRO-REFLECTIVE AND SIZED FOR TRAILS PER THE MUTCD.
6. IN A ROADWAY SETTING BOTTOM OF ALL SIGNS SHOULD BE MIN. 7'-0" ABOVE THE TRAIL.



SIGN PLACEMENT ON TRAILS: CONCEPT

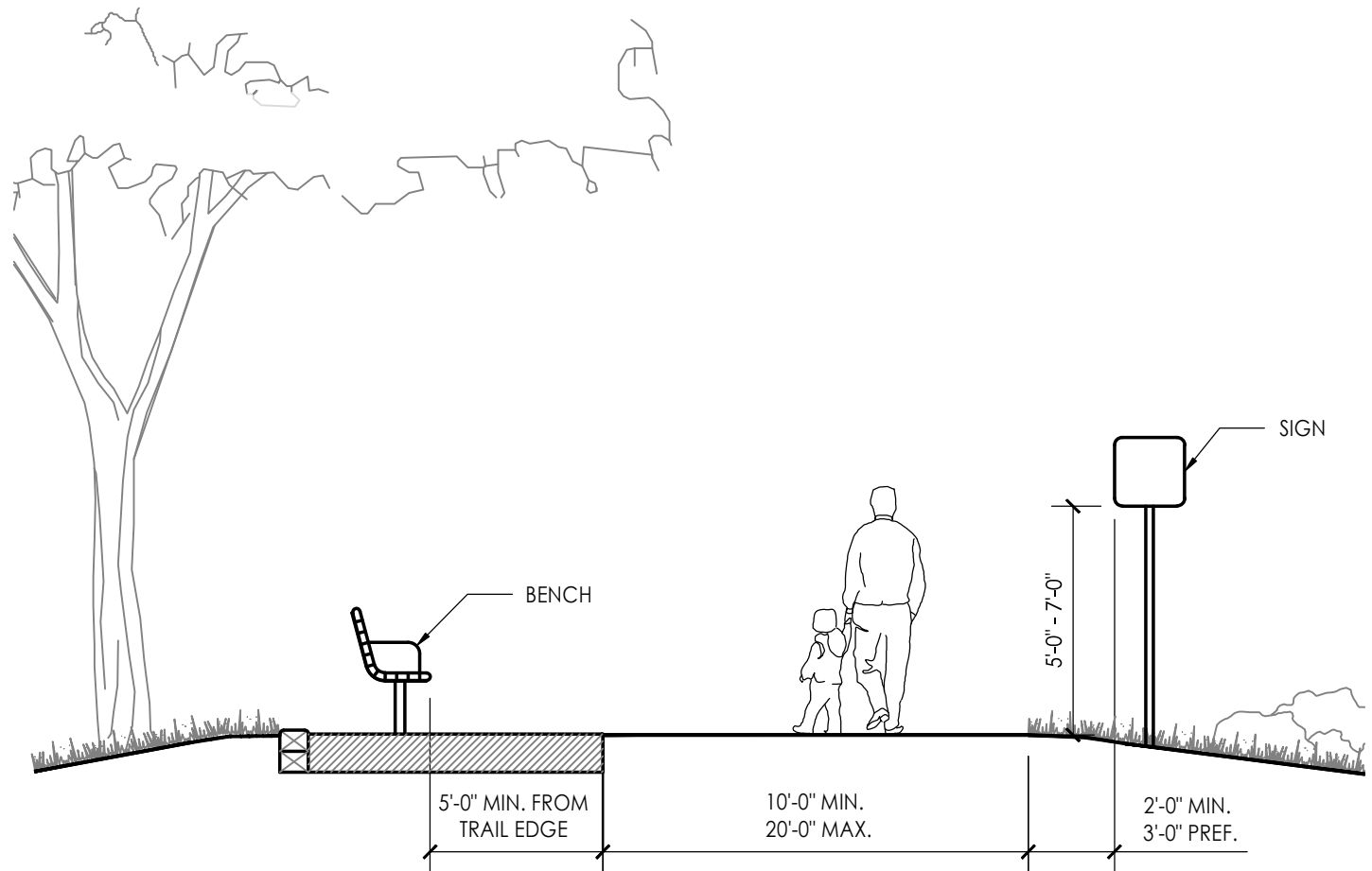


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NUMBER

D-5.2

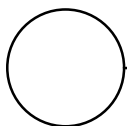
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



TRAIL FURNITURE OFFSET: CONCEPT

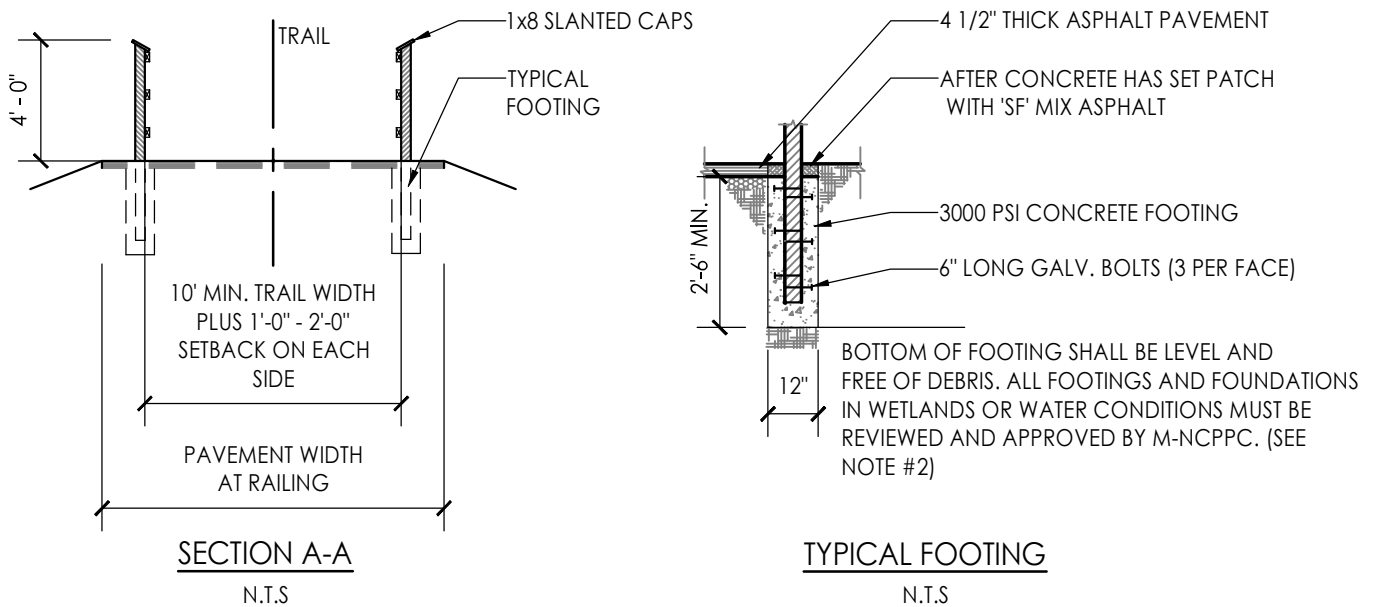
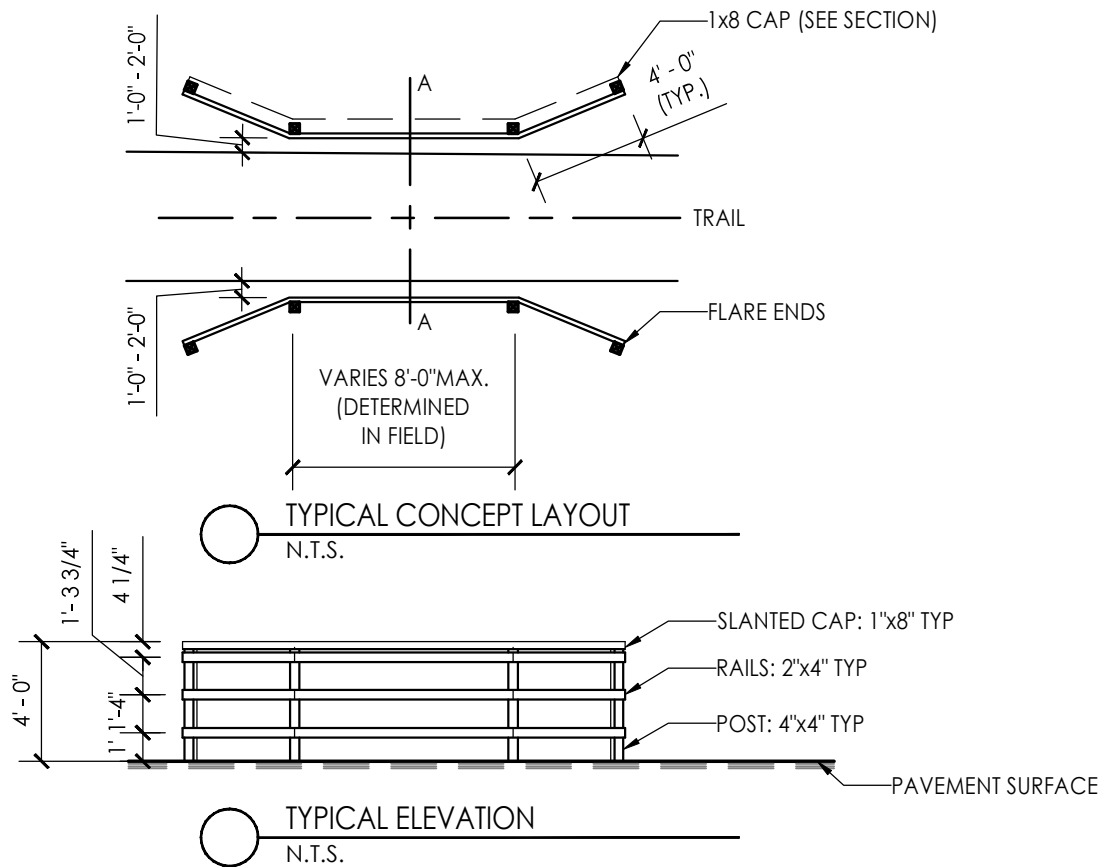


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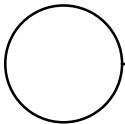
NUMBER

D-5.3

JANUARY 2023

**NOTES:**

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. FOOTINGS MAY BE PLACED OUTSIDE THE EDGE OF PAVEMENT.



TRAIL RAILING OR PROTECTIVE FENCE: CONCEPT

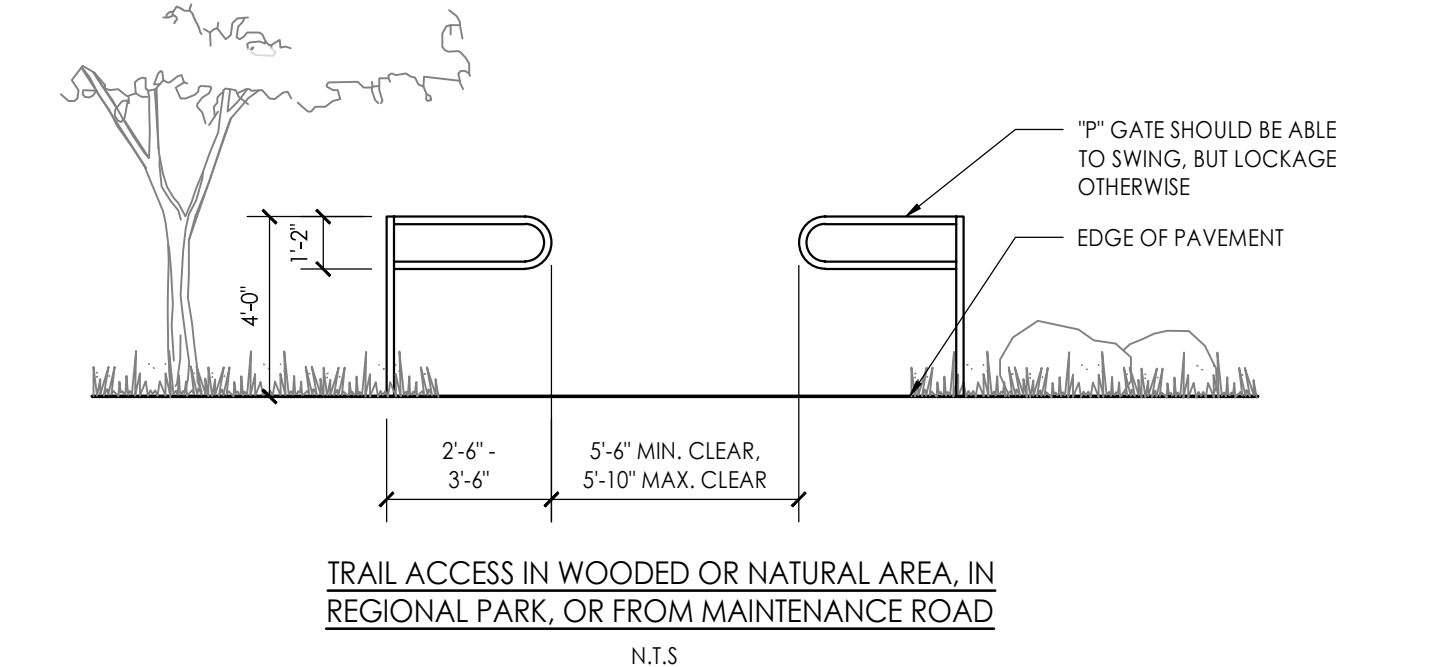
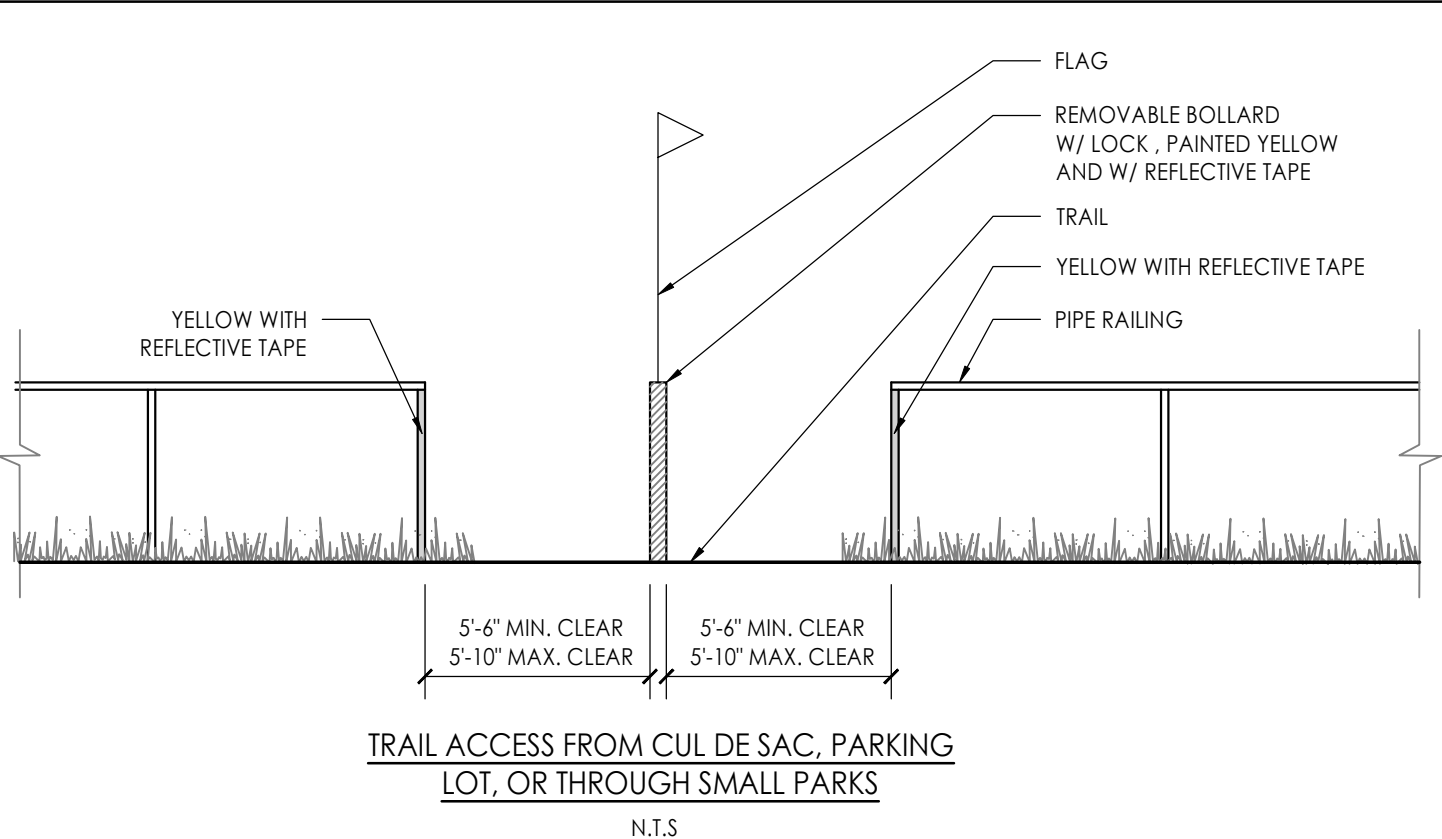


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NUMBER

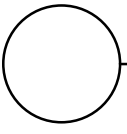
D-5.4

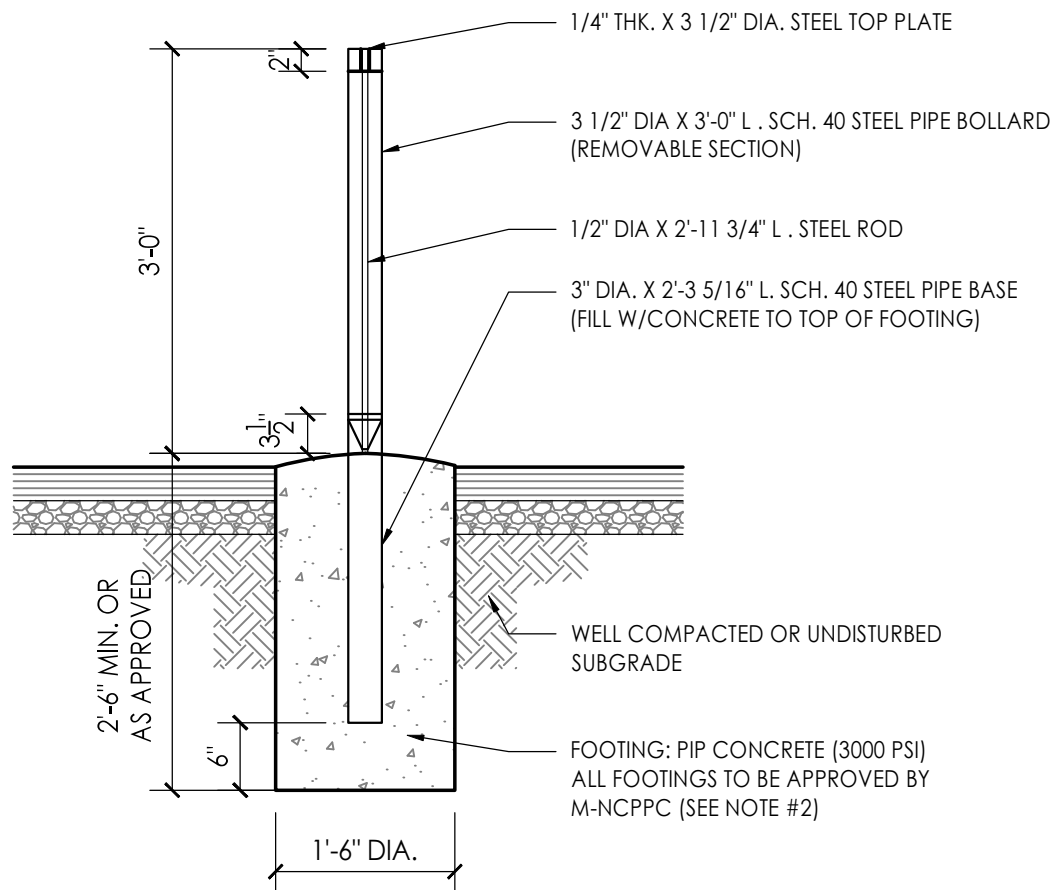
JANUARY 2023



 TYPICAL ELEVATIONS
N.T.S.

NOTES:
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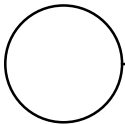
	TRAIL ACCESS CONTROLS: CONCEPT	NUMBER
 The Maryland-National Capital Park and Planning Commission Department of Parks and Recreation	D-6.1	JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. REMOVABLE BOLLARD SHALL BE PAINTED WITH ONE(1) COAT OF METAL PRIMER AND TWO(2) COATS OF "WHITE" RUST INHIBITIVE PAINT (PER THE NATIONAL FIRE PROTECTION ASSOCIATION).
4. APPLY A SIX INCH(6") WIDE BAND OF "SILVER REFLECTIVE" TAPE STARTING AT 2 1/2" FROM TOP OF BOLLARD. REFLECTIVE TAPE BY 3M , COLOUR "SILVER" PRODUCT #6870.



STEEL BOLLARD INSTALL: DETAIL

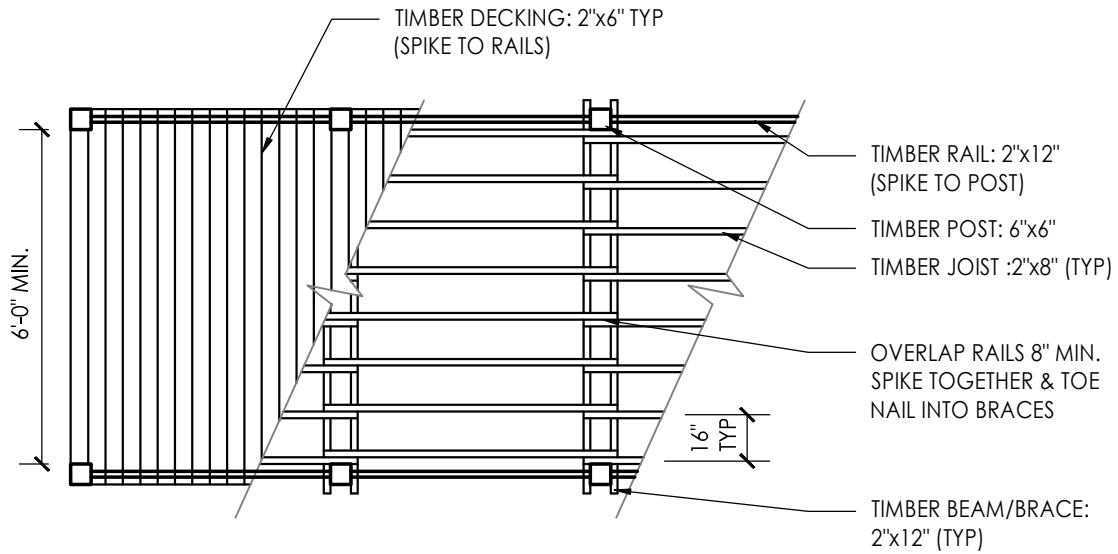


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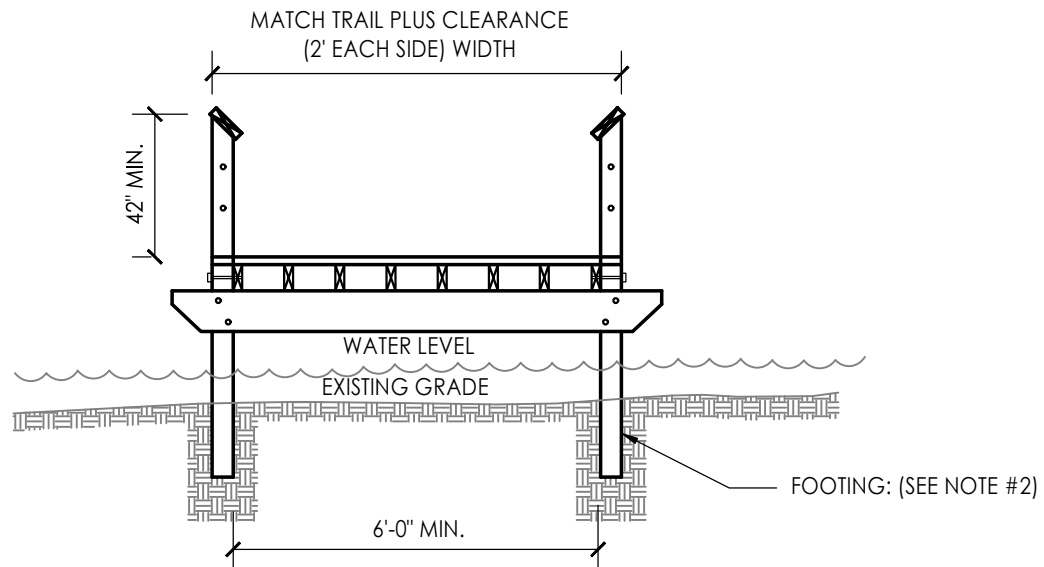
NUMBER

D-6.2

JANUARY 2023



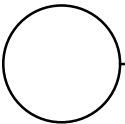
○ TYPICAL SECTION
N.T.S.



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. ALL TIMBERS SHALL BE #2 PRESSURE TREATED. ALL FASTENERS SHALL BE GALVANIZED.
4. CONSTRUCTION DRAWINGS AND SPECIFICATIONS SHALL BE REVIEWED AND APPROVED BY M-NCPPC.



BOARDWALK A: CONCEPT



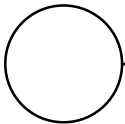
The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

D-7.1

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1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.



BOARDWALK B: CONCEPT



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INDEX OF DRAWINGS - SHARED USE PATHS (TRAILS)

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D-1.2 PRIMARY SHARED USE PATH IN ROAD CORRIDOR

D-2.1 SECONDARY SHARED USE PATH IN ROAD CORRIDOR

D-3.1 SHARED USE PATH PAVEMENT CROSS SECTION

D-3.2 CRUSHED GRAVEL PATH CROSS SECTION

D-3.3 RE-INFORCED SHOULDER CROSS SECTION

D-4.1 TRAIL INTERSECTION DESIGN CONCEPTS

D-4.2 CONCEPTUAL TRAIL/ROADWAY CROSSINGS

D-4.3 EQUESTRIAN TRAIL CROSSING

D-5.1 HORIZONTAL TRAIL CLEARANCE

D-5.2 SIGN PLACEMENT ON TRAILS

D-5.3 TRAIL FURNITURE OFFSET

D-5.4 TRAIL RAILING OR PROTECTIVE FENCE

D-6.1 TRAIL ACCESS CONTROLS

D-6.2 STEEL BOLLARD INSTALL

D-7.1 BOARDWALK A

D-7.2 BOARDWALK B

D-8.1 TRAILHEADS

D-8.2 TRAIL CONNECTIVITY AT PUBLIC FACILITIES

D-8.3 MID-BLOCK TRAIL CROSSINGS

D-8.4 WAYSIDES

* SEE SECTION F FOR MORE FENCING OPTIONS

* SEE SECTION G FOR SITE FURNITURE & SIGNAGE

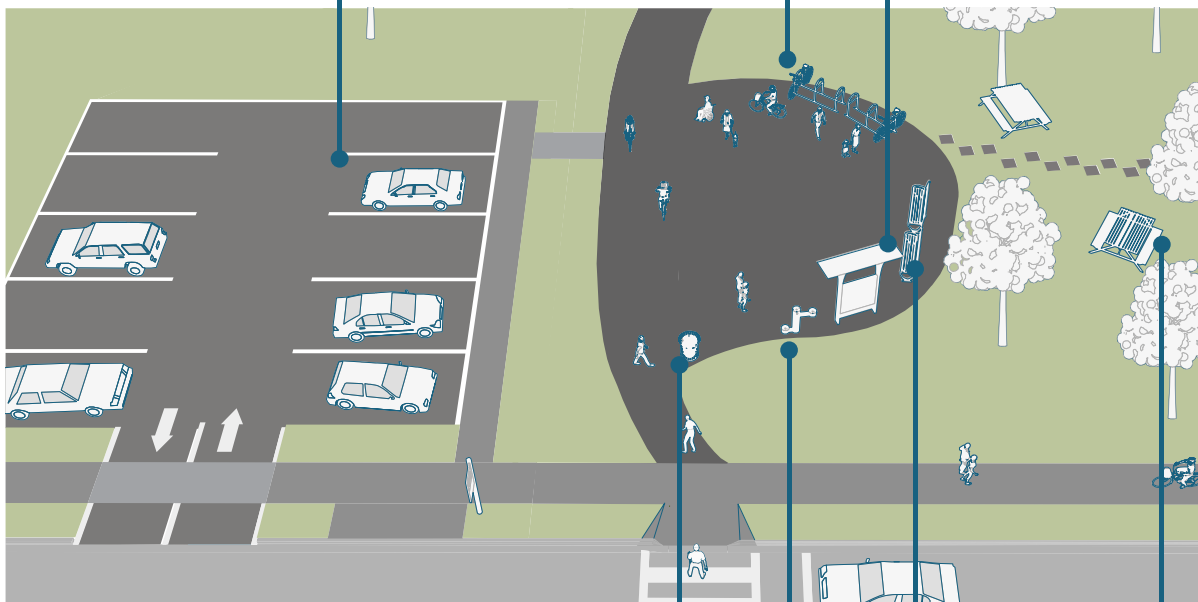
Trailheads

Trailheads serve as major gateways that provide access to the trail system. Most commonly a trailhead provides a motor vehicle parking area, bicycle parking, seating areas, bathroom facilities, water, and a kiosk map to provide guidance and other information about the trails system.

VEHICULAR PARKING. The number of parking spaces should be based on the expected number of users who are likely to need to drive to access the trail. Parking areas should be built with pervious material where possible such as crushed stone or pervious asphalt. Back in parking with a clear area behind the vehicle is ideal for bicycle loading and unloading.

BICYCLE RACKS. Trailheads serve people accessing a trail via all modes, including bicycling. Bicycle racks are especially important at hiking trails that may be accessed by people arriving by bicycle.

INFORMATIONAL KIOSKS AND BULLETIN BOARDS. Information provided should include the trail name, trail maps, park operating hours, contact information to report problems, emergency response information—such as contact information and trailhead identification—and trail regulations.



Create access for all modes. Design the trailhead to serve all modes including bicycling, walking, transit and motor vehicles.

Consider Bike Repair Stands and an Air Pump which are attractive amenities for trails heavily used by bicyclists.

TRASH CANS. Trash cans at trailheads are typically easy to maintain because trailheads are usually located near roadways.

LIGHTING. Lighting provides safety and security at trailheads that will be used after dusk or dark.

WATER FOUNTAINS. Use water fountains that are accessible and provide a water source for pets. At high use trailheads, use fountains that include bottle filling taps.

BENCHES. Trailheads often act as meeting places and benches allow visitors to rest while waiting for other trail users. Trail users may also wish to rest after a long walk or bicycle ride.

PICNIC TABLES. People who use trails often start or end their journey with a meal.

TRAILHEADS: CONCEPT



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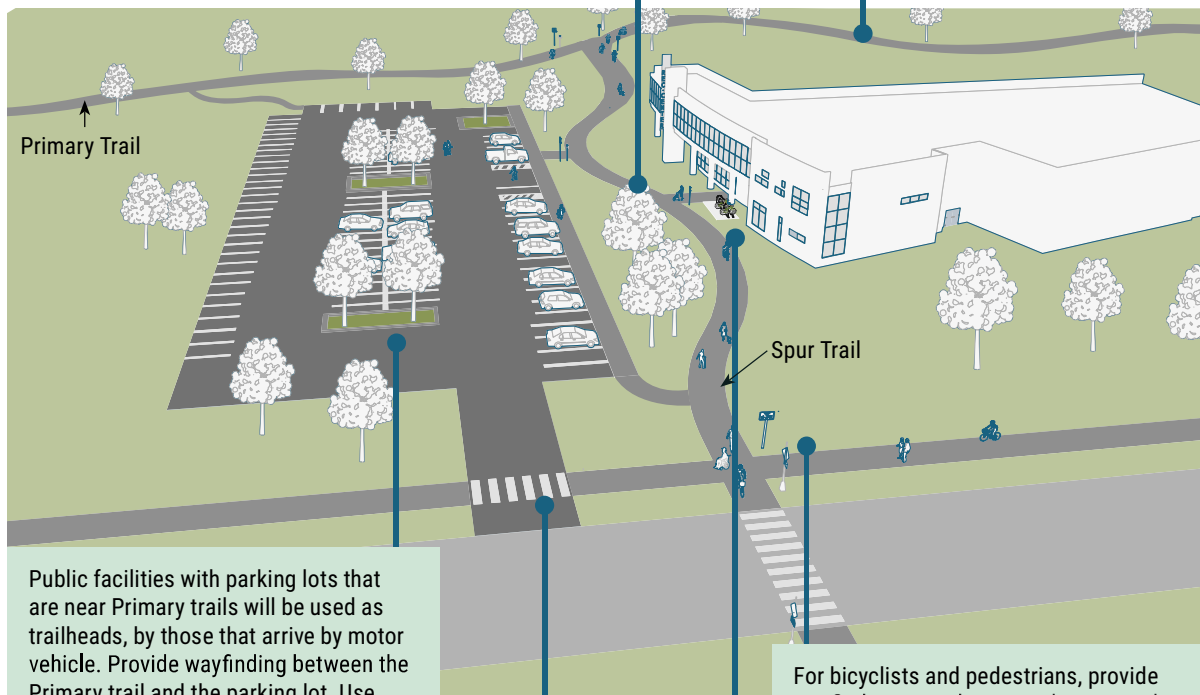
JANUARY 2023

Trail Connectivity at Public Facilities

Use spur trails to connect the Primary trail to public facilities and nearby communities. Spur trails should connect directly to building entrances, neighborhood sidewalks and on-road bicycle facilities.

Where ever possible avoid using driveways, access roads and parking lots as routes between public facilities and Primary and Secondary trails. Access routes need to consider safety for the most vulnerable trail users, such as children and people with disabilities.

Connect secondary and spur trails into the larger trail network. Design considerations include avoiding sharp turns, which are difficult for people especially novice bicyclists, to navigate. Adequate sight lines should also be provided.

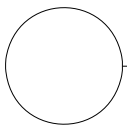


Public facilities with parking lots that are near Primary trails will be used as trailheads, by those that arrive by motor vehicle. Provide wayfinding between the Primary trail and the parking lot. Use signs to guide trail users to select parts of large parking lots where trail access is most convenient.

Minimize the number of roadway, driveway, and parking lot crossings. Intersections of trails and vehicular travelways should be limited to the extent possible. Where crossings do occur, provide appropriate crosswalk markings, warning signs and traffic calming measures.

For bicyclists and pedestrians, provide wayfinding signs between the street, the facility entrance and the Primary trail; and if needed, other park activity areas. Provide a map and information kiosk about the trail network. Locate kiosks near the building entrance and/or near the trailhead parking area.

Place bicycle parking at building entrances where it is visible and convenient (and near other major park activity areas, as needed). Bicycle parking at high use community centers should be covered.



TRAIL CONNECTIVITY AT PUBLIC FACILITIES: CONCEPT



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Mid-block Trail Crossings

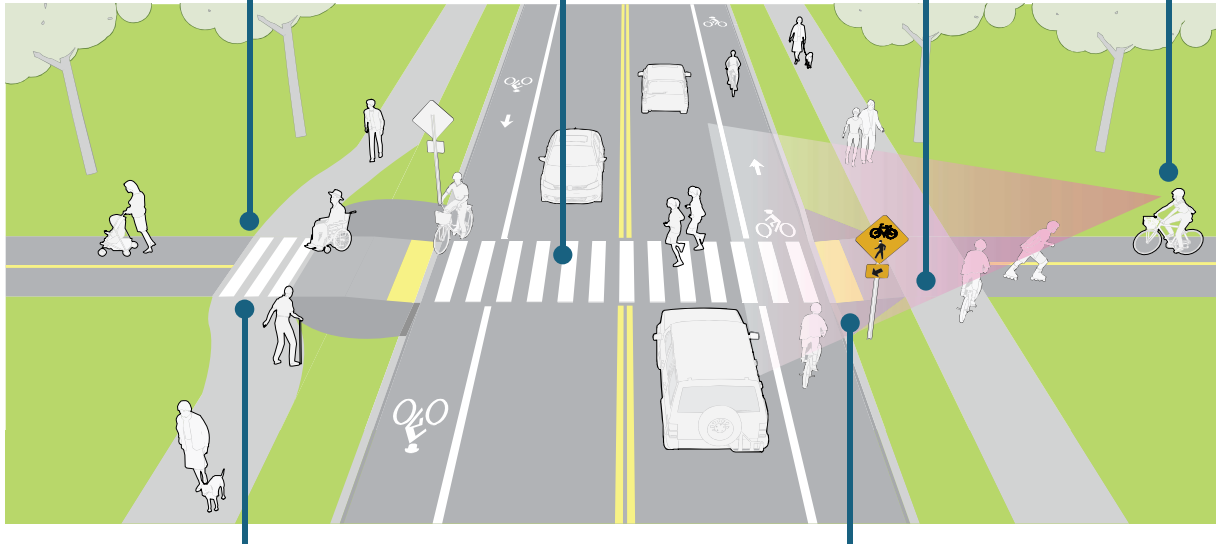
Mid-Block trail crossings can be highly advantageous to trail users by eliminating detours to the nearest existing intersection. Evaluation of the roadway geometry and traffic operations is required to ensure that a safe crossing can be installed at the candidate location. Determining appropriate priority and assessing stopping distances and sight lines can create a safer and more enjoyable experience for all users. Additionally, design and construction of a crossing that works for motorists, bicyclists and pedestrians is essential.

Design trail and roadway intersections to meet as close to 90° as possible. Skewed intersections reduce visibility, maneuverability, and increase crossing distances.

Minimize objects at intersections that may distract trail users. Elements such as sharp curves, barriers, vegetation, and signs that may destabilize or distract trail users should be avoided. At intersections, trail users need to focus their attention on intersecting traffic.

Design trails for access from the roadway and sidewalk. Pedestrians, children and novice cyclists will often access a trail via the sidewalk while experienced cyclists will access a trail via the roadway. Providing wide ramps and turning space will create better connectivity.

Provide clear sight lines. Ensure that both motor vehicles and bicyclists can see each other in time to yield or stop.



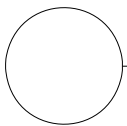
PRIORITIZE USERS BASED ON VOLUME AND NETWORK IMPORTANCE.

Are there more people using the trail or the street? While posted and actual speed of traffic is an important consideration, the MUTCD states, “*Speed should not be the sole factor used to determine priority, as it is sometimes appropriate to give priority to a high-volume shared use path crossing a low-volume street, or to a regional shared use path crossing a minor collector street.*” (Manual on Uniform Traffic Control Devices (MUTCD), 2009, p. 794, Sec. 9B.03)

CHOOSE YIELD OR STOP CONTROL. Over-use of stop signs on trails has led to a lack of compliance and may diminish safety if ignored when truly needed. “*At intersections... consideration should first be given to using less restrictive measures such as YIELD signs.*” (MUTCD, p. 52, Sec. 2B.06). Use STOP controls when a lack of sight lines, motor vehicle speeds and volumes warrant it.

Other mid-block trail crossing treatments may include:

- Raised crossings to slow traffic and clarify priority.
- Median refuge islands to break up longer crossing distances.
- Curb extensions to improve visibility and shorten crosswalk distances.
- High-visibility crosswalks and advance stop or yield lines to improve visibility.
- Warning signs, rectangular rapid flashing beacons, or pedestrian hybrid beacons to improve motorist yielding/stopping compliance.



MID-BLOCK TRAIL CROSSINGS: CONCEPT



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Waysides

Trail waysides provide a place for trail users to rest, meet other trail users, take in the view, or to orient themselves. They serve both practical and aesthetic purposes and greatly enhance trail experiences. Waysides come in many shapes and sizes from a bench along a trail, to kiosks and waiting areas or gateway waysides at a community entrance.

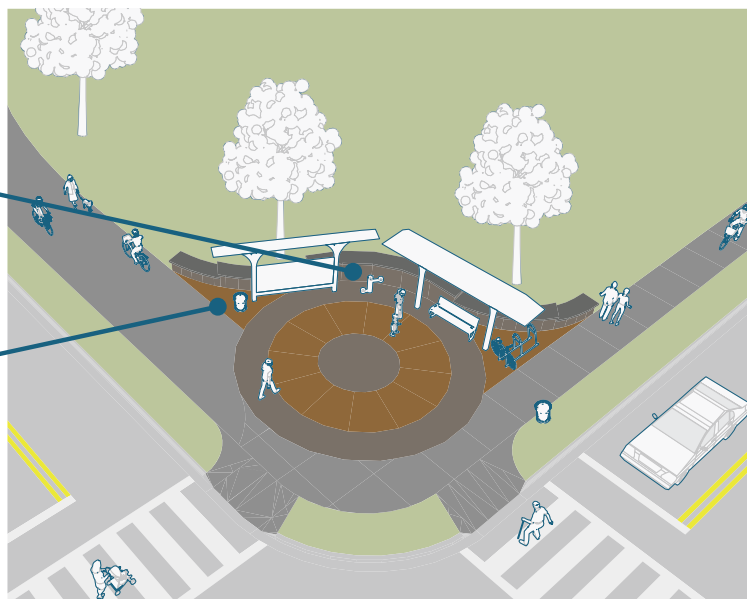
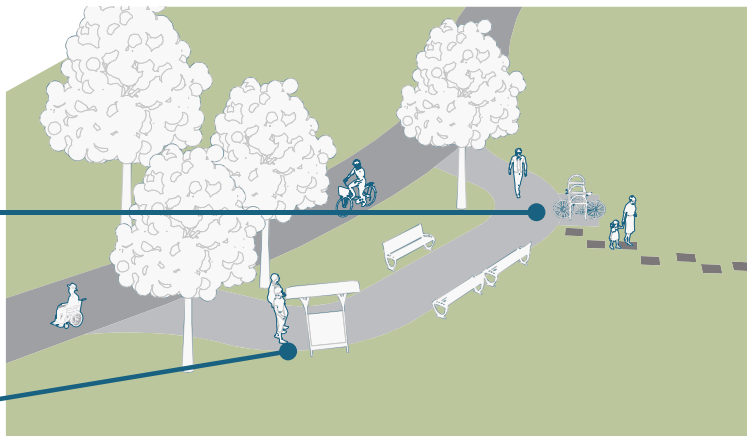
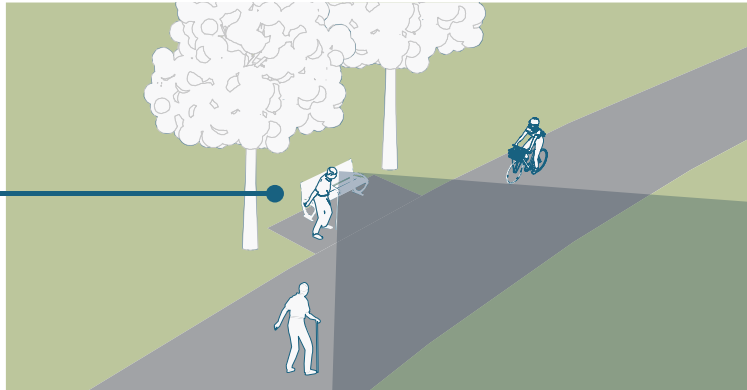
BENCHES. Benches provide a place to rest and are especially important for people who need frequent breaks. Benches also provide a place for people to wait for others, to socialize, or for individual contemplation. They should be located far enough away from the trail so as not to create conflict with trail users. A minimum distance of 5 feet is recommended. They should be positioned to create the most enjoyable experience for the trail user – either by being located along the trail to accommodate people-watching or placed to enjoy a particular viewshed such as a lake, stream, or natural area.

BIKE RACKS. Bike parking is often needed as many bikes do not have kickstands or a trail user may leave their bike to continue along a hiking path.

INTERPRETIVE SIGNAGE, MESSAGE BOARDS, TRAIL SYSTEM MAPS AND EXHIBIT STRUCTURES. Waysides are often placed at locations of interest where interpretive signs are especially important and can help educate users.

WATER FOUNTAINS. Use water fountain designs that are accessible. Consider fountains that allow for use by pets as well.

TRASH CANS AND PICNIC TABLES. Waysides may accommodate more active uses, such as picnicking, or serve predominately as a place to take a short break. Trash cans should be placed at waysides, depending on an expected need, and maintenance staff's ability to service them at regular intervals.



WAYSIDES: CONCEPT



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E-1.1 ACCESSIBLE PARKING

E-2.1 BITUMINOUS CONCRETE PAVEMENT SECTION

E-3.1 UNIT PAVERS ON SAND BED WITH METAL EDGING

E-3.2 UNIT PAVERS ON SAND BID WITH UNIT EDGING

E-4.1 FLAGSTONE WALK

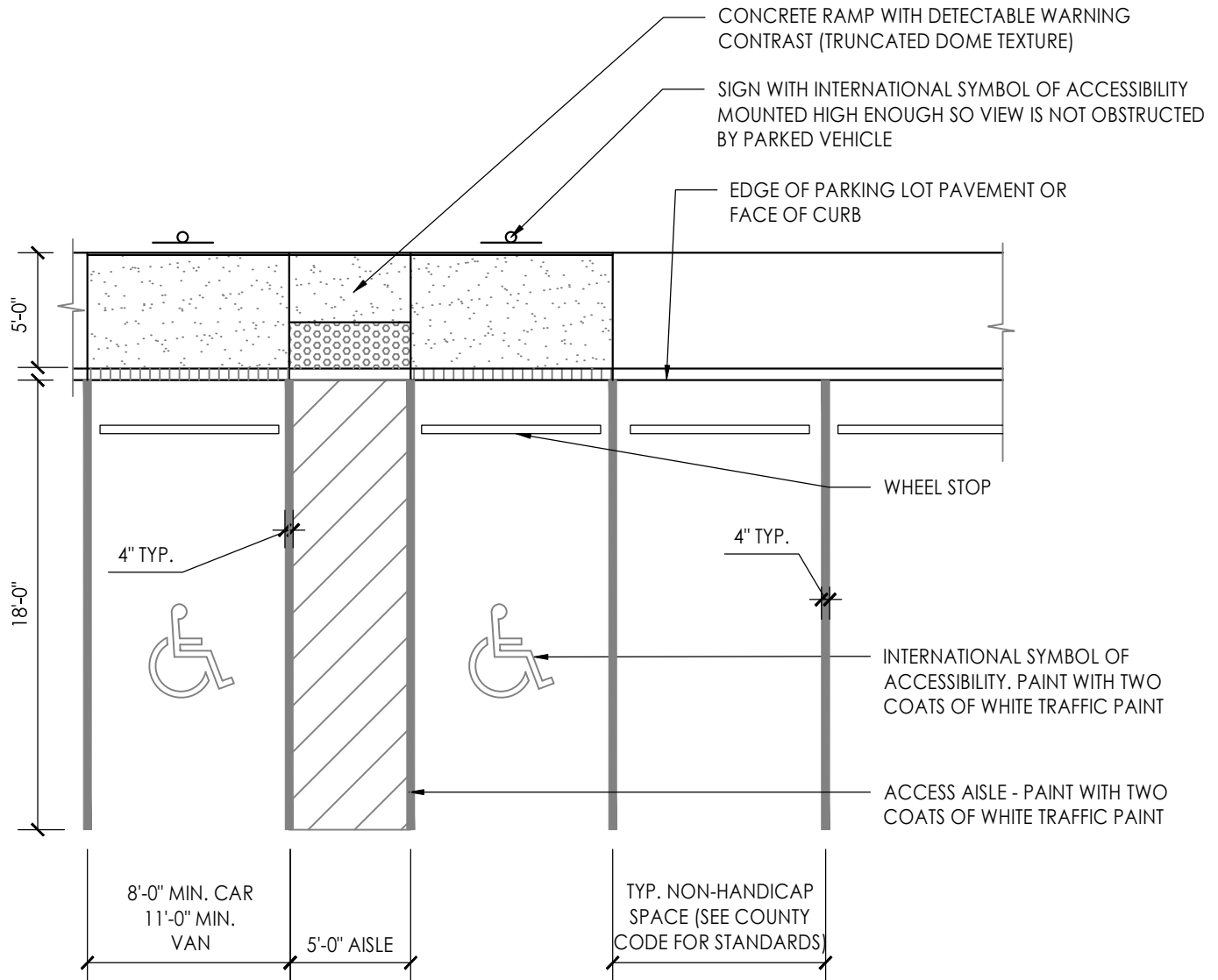
E-5.1 PERVIOUS CONCRETE

E-6.1 TURF PAVERS

E-7.1 TIMBER EDGE - TYPE 1

E-7.2 TIMBER EDGE - TYPE 2

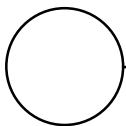
E-7.3 TIMBER EDGE - TYPE 3



○ TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. THE STANDARDS OF THE MOST CURRENT AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) SUPERCEDES THIS DETAIL.
3. ACCESSIBLE SPACES SHALL BE LOCATED THE SHORTEST ACCESSIBLE ROUTE FROM THE FACILITY ENTRANCE.
4. ONE OUT OF EVERY EIGHT ACCESSIBLE PARKING SPACES PROVIDED MUST BE A VAN ACCESSIBLE PARKING SPACE. WHEN ONLY ONE ACCESSIBLE PARKING SPACE IS REQUIRED, THE SPACE PROVIDED MUST BE A VAN ACCESSIBLE PARKING SPACE.
5. TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE.
6. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES DESIGN TO 1.5% (NOT EXCEEDING 2%) IN ALL DIRECTIONS. THE RUNNING SLOPE OF ADJACENT WALKWAYS SHALL BE DESIGNED TO 4.5% (NOT EXCEED 5%).
7. REFERENCE: STATE HIGHWAY ADMINISTRATION (SHA) FOR MORE INFORMATION.



ACCESSIBLE PARKING: CONCEPT

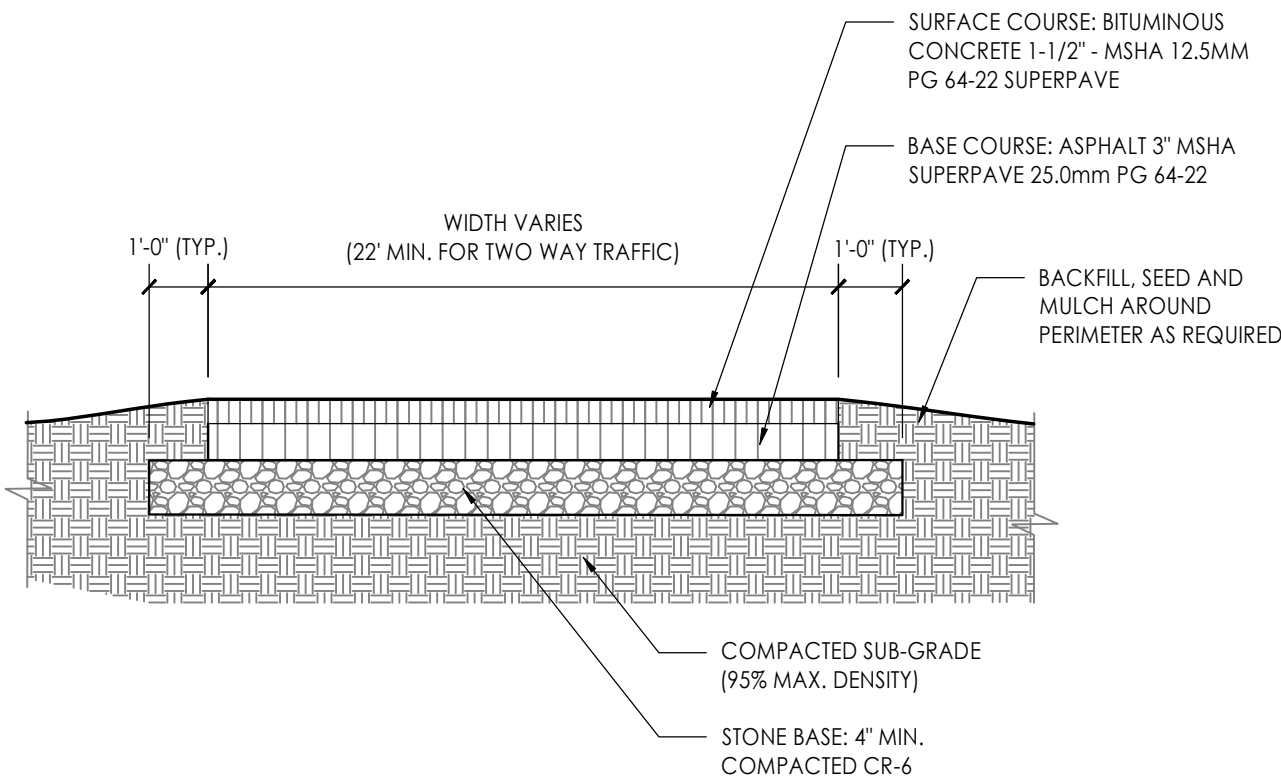


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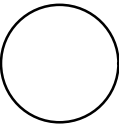
E-1.1

JANUARY 2023



TYPICAL SECTION
N.T.S.

- NOTES:
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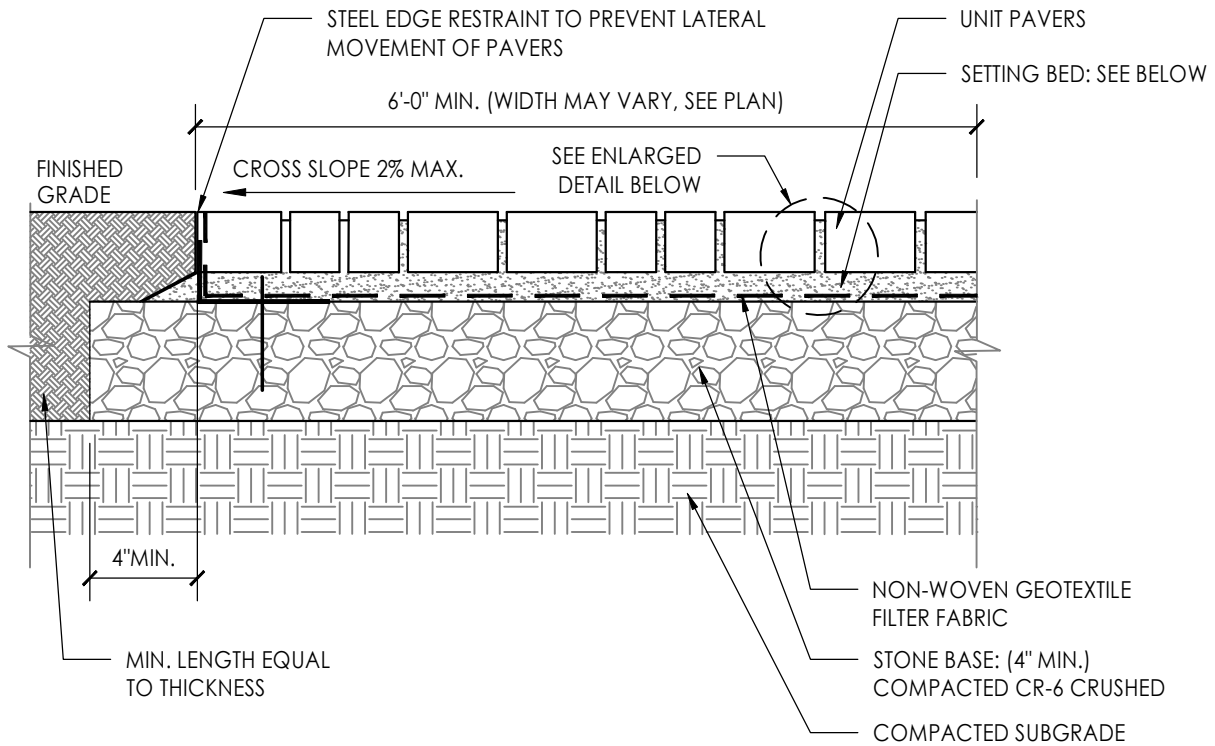
BITUMINOUS CONCRETE PAVEMENT SECTION: DETAIL

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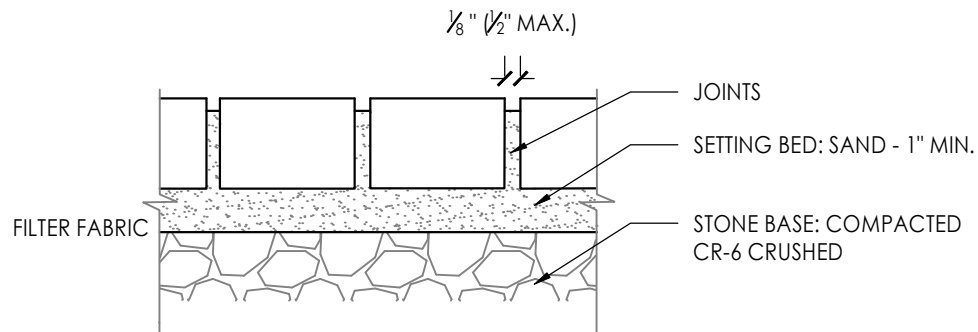
NUMBER

E-2.1

JANUARY 2023



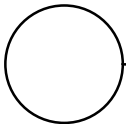
○ TYPICAL SECTION
N.T.S.



○ TYPICAL ENLARGED SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. CONCRETE PAVERS MAY BE SET ON A 1" MORTAR SETTING BED WITH $\frac{1}{2}$ " MAXIMUM MORTAR JOINTS. HOWEVER, CONCRETE PAVERS SHALL BE REDUCED IN SIZE TO A MODULAR BRICK ($2\frac{1}{4}" \times 3\frac{5}{8}" \times 7\frac{5}{8}"$) TO ACCOMMODATE FOR THE MORTAR JOINT SPACING AND PAVER ALIGNMENT.
3. THE DETAIL IS FOR PEDESTRIAN TRAFFIC; IF VEHICULAR TRAFFIC IS REQUIRED THE STONE BASE SHALL BE INCREASED TO A 6" BASE. FOR INCREASED STABILITY USE A 6" REINFORCED CONCRETE SLAB BASE WITH A 4" CR-6 STONE SUBBASE (AS SPECIFIED BY M-NCPPC).



UNIT PAVERS ON SAND BED WITH METAL EDGING: DETAIL

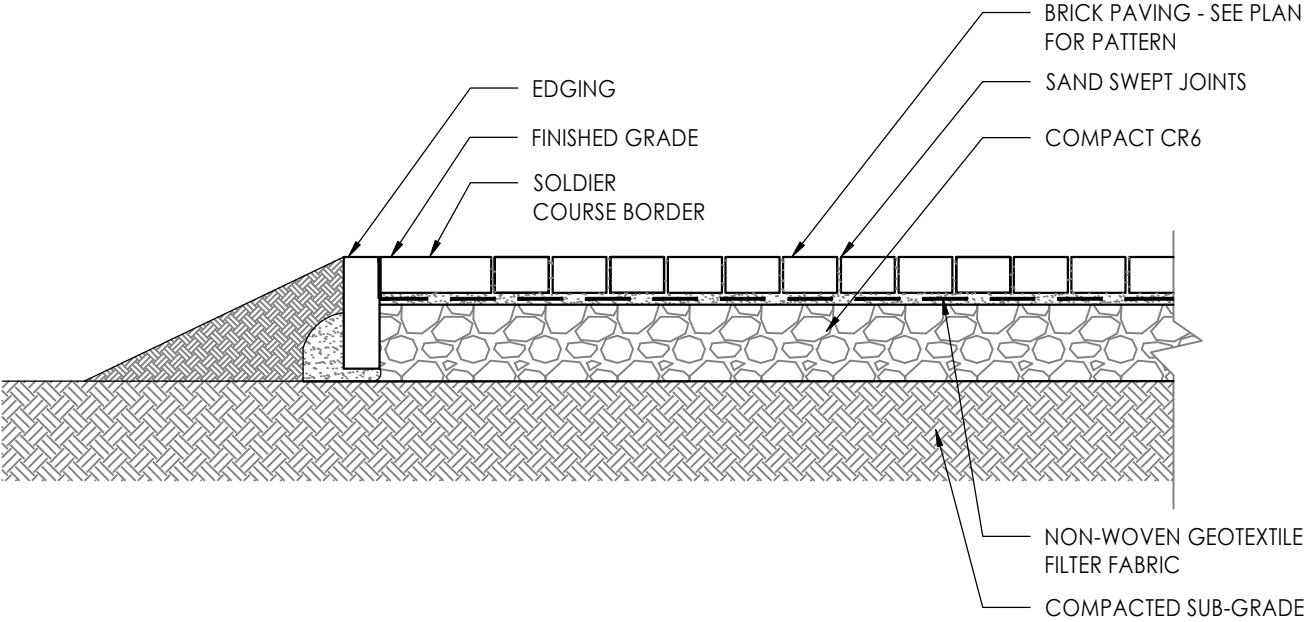


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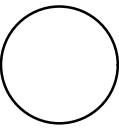
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○ TYPICAL SECTION
N.T.S.

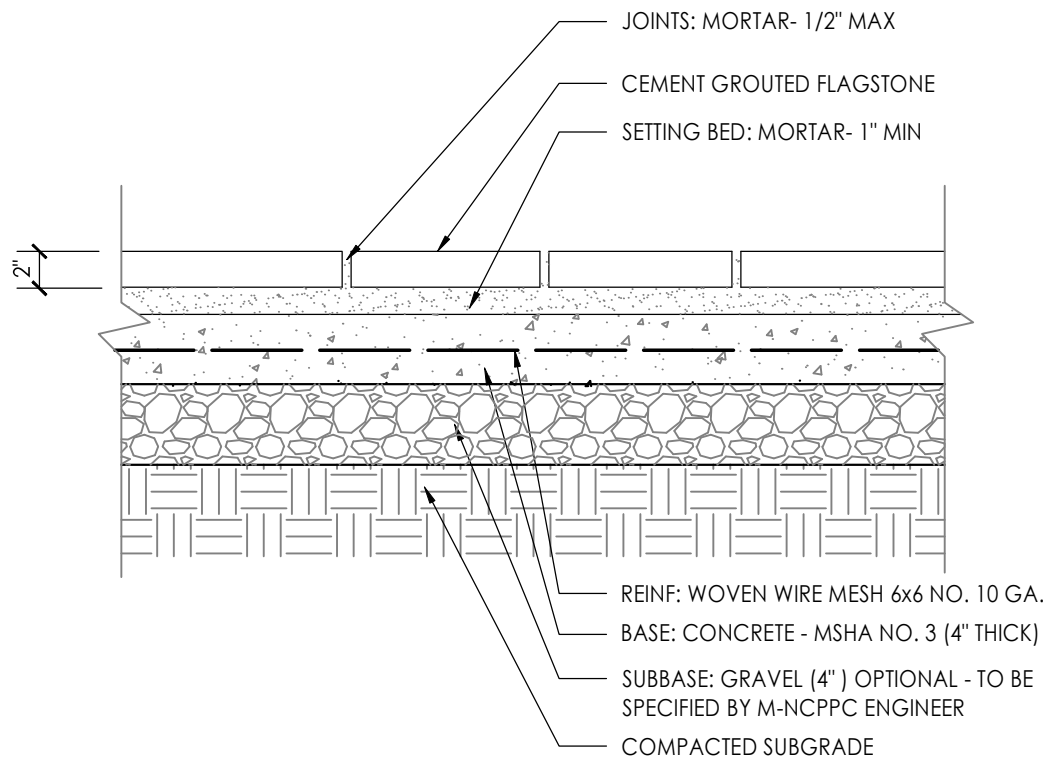
NOTES:
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UNIT PAVERS ON SAND BED WITH UNIT EDGING: DETAIL

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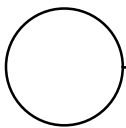
NUMBER
E-3.2
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



FLAGSTONE WALK: DETAIL

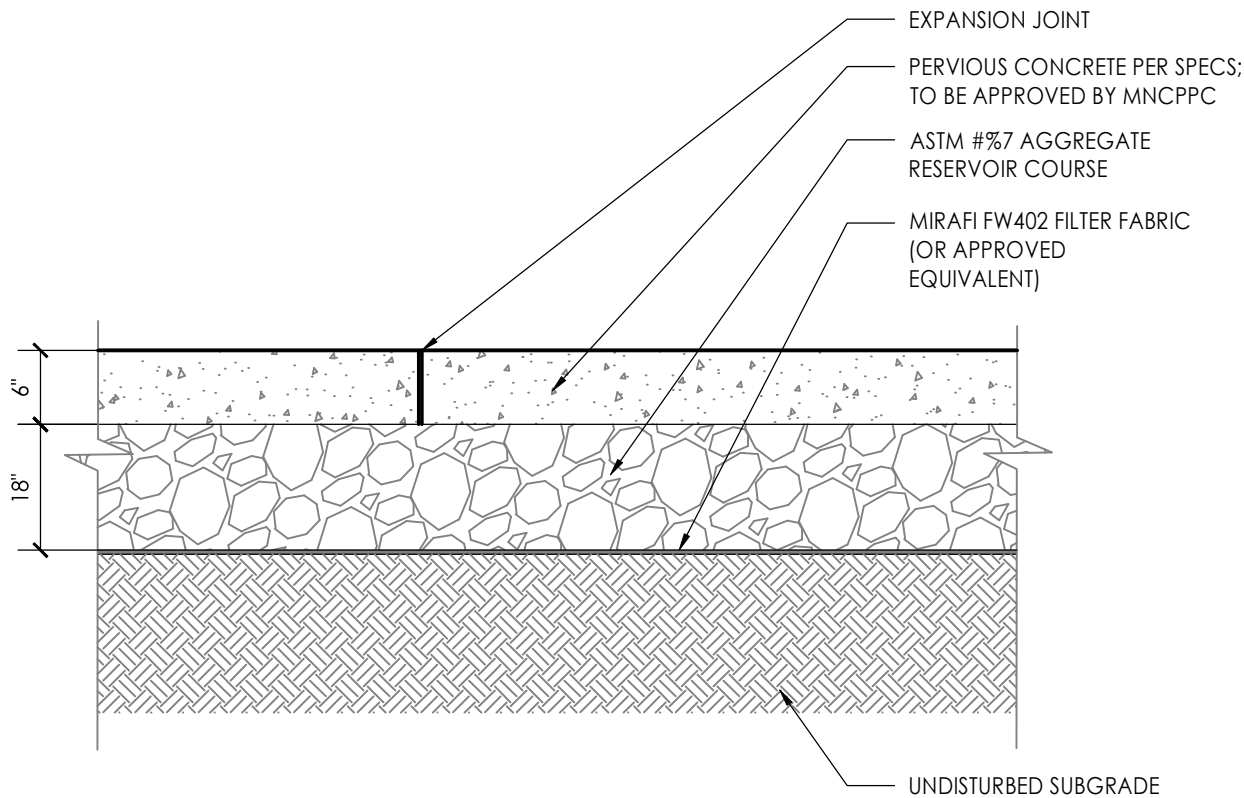


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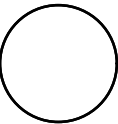
E-4.1

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TYPICAL SECTION
N.T.S.

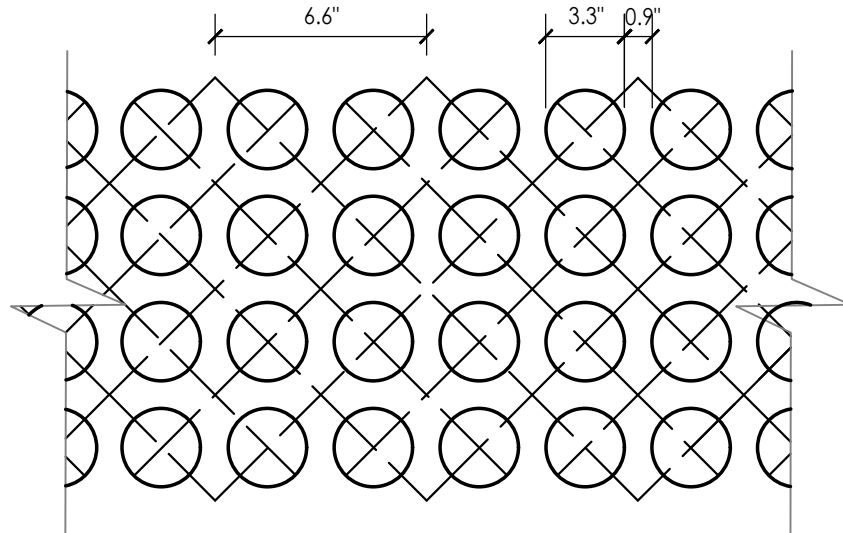
- NOTES:
- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 - 2. APPLICANT TO ENSURE THAT SOILS ARE SUITABLE FOR PERVIOUS CONCRETE PAVEMENT SYSTEM.
 - 3. SPECIAL DESIGN PROVISIONS SHOULD BE CONSIDERED IN THE DESIGN OF PERVIOUS CONCRETE PAVEMENT FOR AREAS WITH SOILS CONTAINING SIGNIFICANT AMOUNTS OF CLAY, SILTS OF HIGH COMPRESSIBILITY, MUCK, AND EXPANSIVE SOILS.



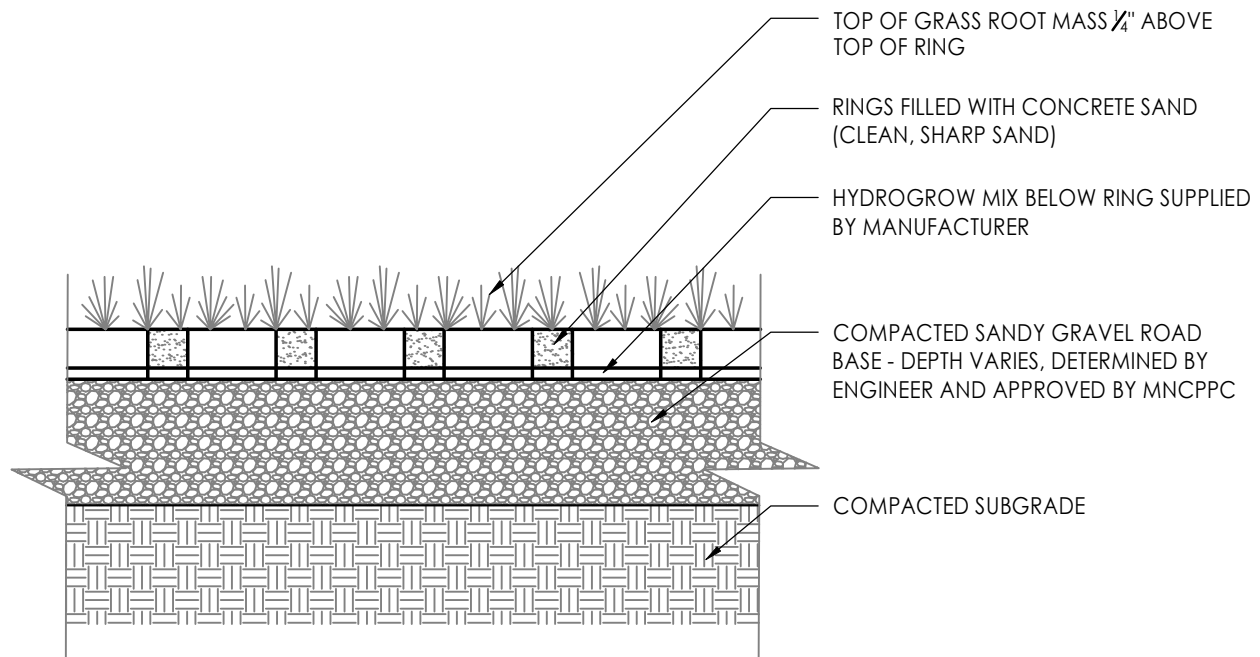
PERVIOUS CONCRETE: DETAIL

The Maryland-National Capital Park and Planning Commission
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NUMBER
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JANUARY 2023



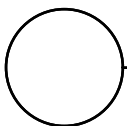
○ TYPICAL LAYOUT
N.T.S.



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



TURF PAVERS: DETAIL

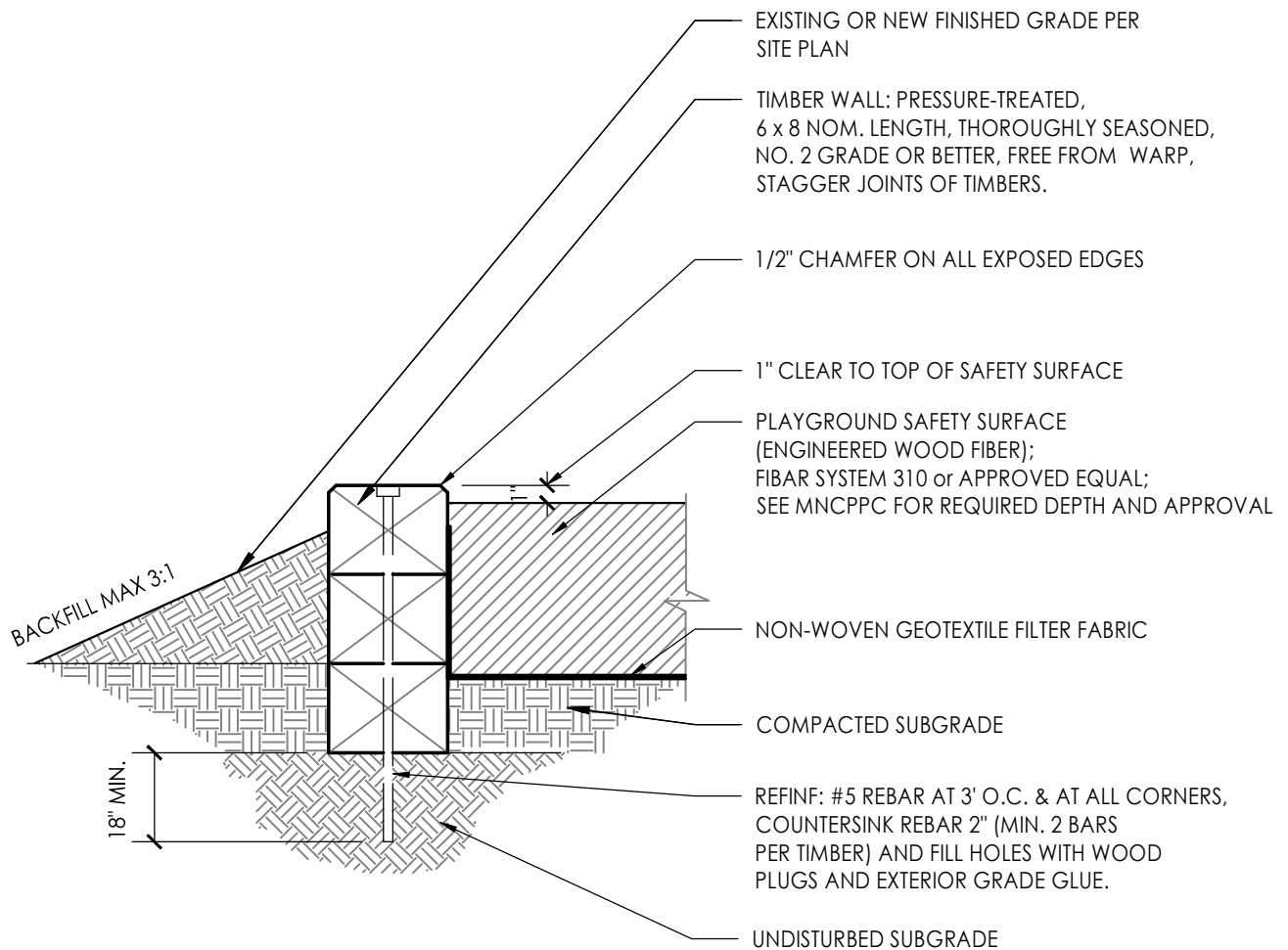


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NUMBER

E-6.1

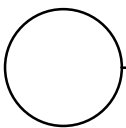
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. DO NOT USE TIMBER EDGING IN FLOOD PLAIN OR PLACES THAT MAY BE IN CONSTANT CONTACT WITH WATER.



TIMBER EDGE - TYPE I: DETAIL

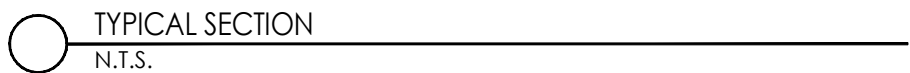


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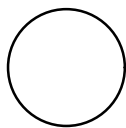
NUMBER

E-7.1

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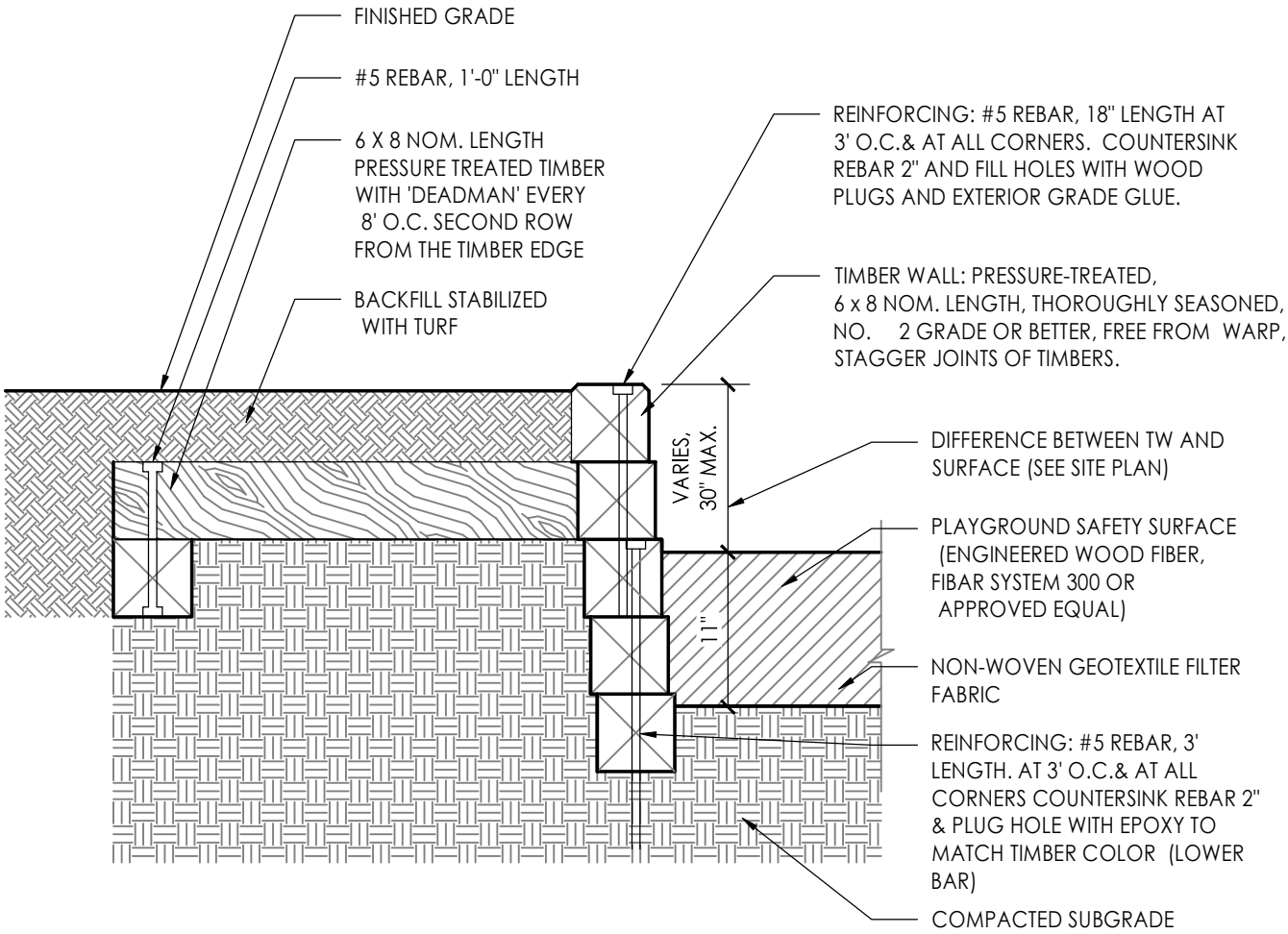
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



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E-7.2

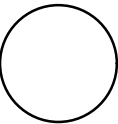
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

DETAIL NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



TIMBER EDGE - TYPE III: DETAIL

 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

E-7.3

JANUARY 2023

INDEX OF DRAWINGS

F-1.1 ORNAMENTAL FENCE

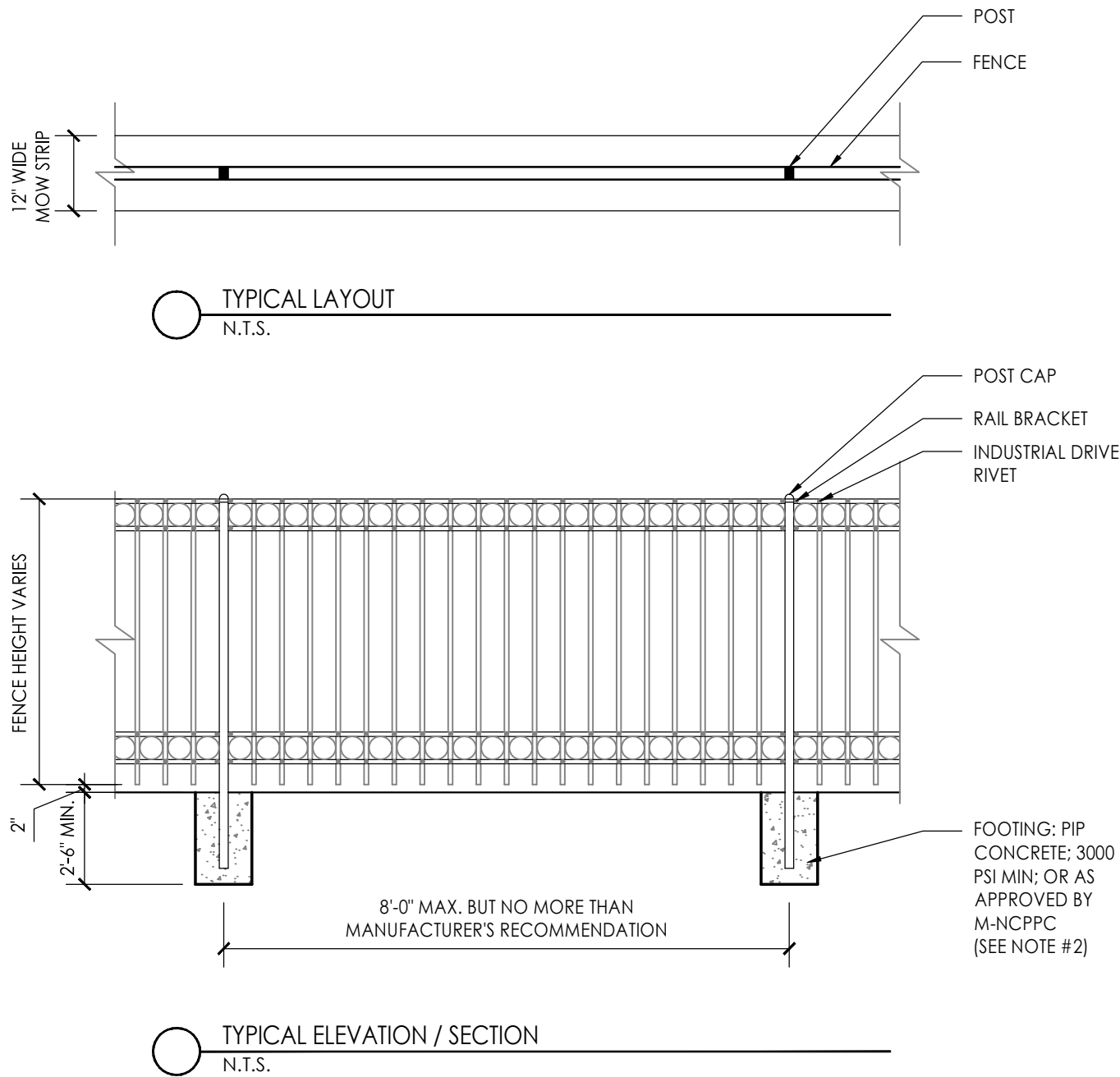
F-1.2 CHAIN LINK FENCE

F-1.3 SPLIT RAIL FENCE

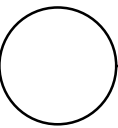
F-2.1 STEEL PIPE RAILING

F-3.1 CONCRETE MOW STRIP

F-4.1 MAINTENANCE ACCESS PIPE GATE



- NOTES:
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
 3. FOOTING WIDTH TO BE FOUR TIMES THE POST WIDTH.
 4. THIS IS A TYPICAL ORNAMENTAL FENCE DETAIL. IT IS MEANT TO SERVE AS AN EXAMPLE. OTHER ORNAMENTAL FENCING CAN BE USED IF APPROVED BY M-NCPPC STAFF.
 5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS.



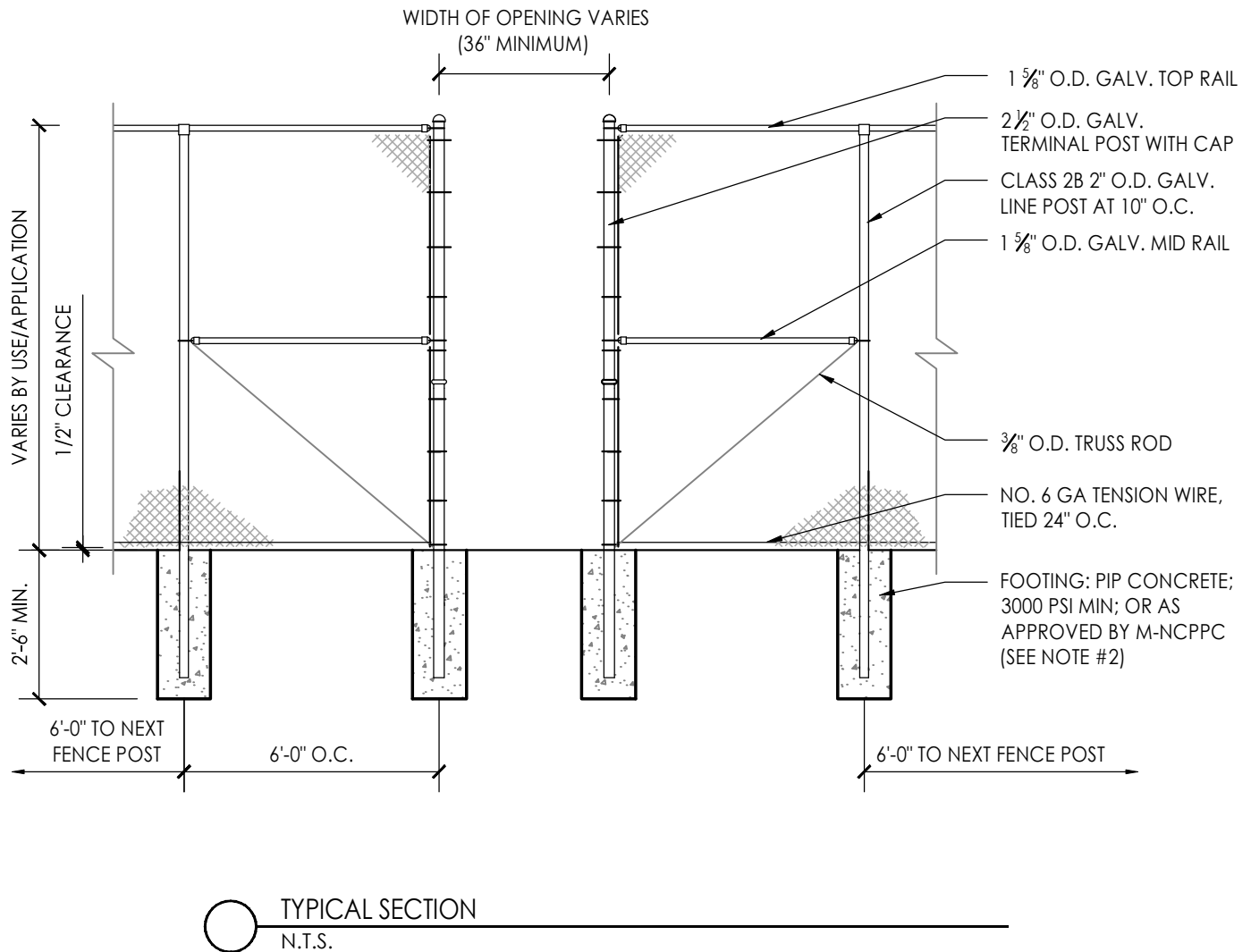
ORNAMENTAL FENCE: DETAIL

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Department of Parks and Recreation

NUMBER

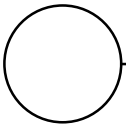
F-1.1

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NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. POSTS TO BE SCHEDULE 40, HOT-DIPPED GALV.
4. FABRIC IS STEEL CORE CHAIN LINK 2" DIAMOND MESH, 9 GA. ASW EXCEPT WHERE NOTED OTHERWISE.
5. POST, RAIL, FABRIC, AND HARDWARE FINISH: CLASS 2B FUSED & ADHERED VINYL-COATING (ASTM 668), BLACK.
6. FENCES 4-FT. HT. OR LESS, DELETE MID RAIL AND TRUSS ROD.

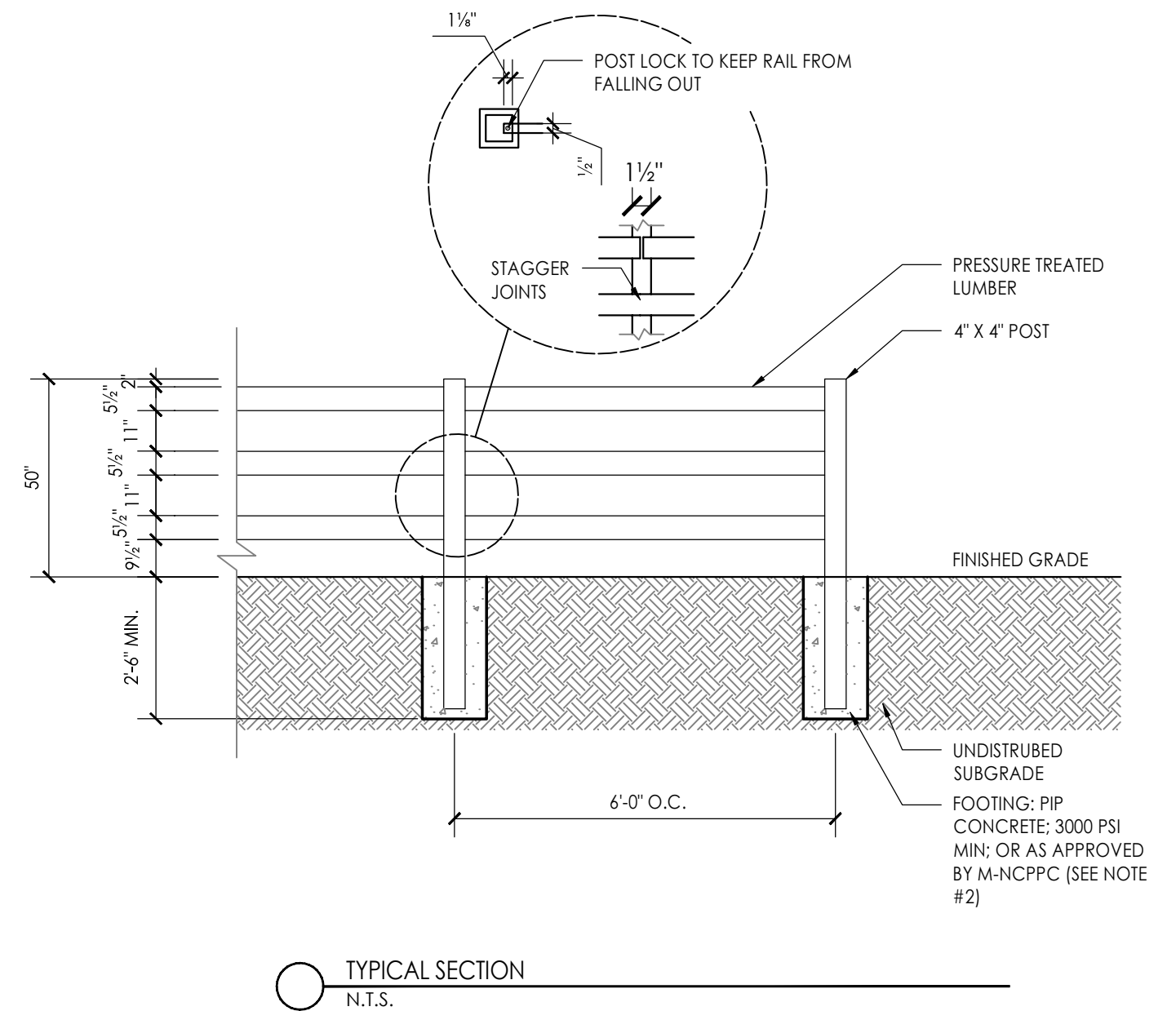
**CHAIN LINK FENCE - 10' HIGH: DETAIL**

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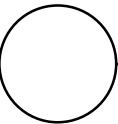
F-1.2

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NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.



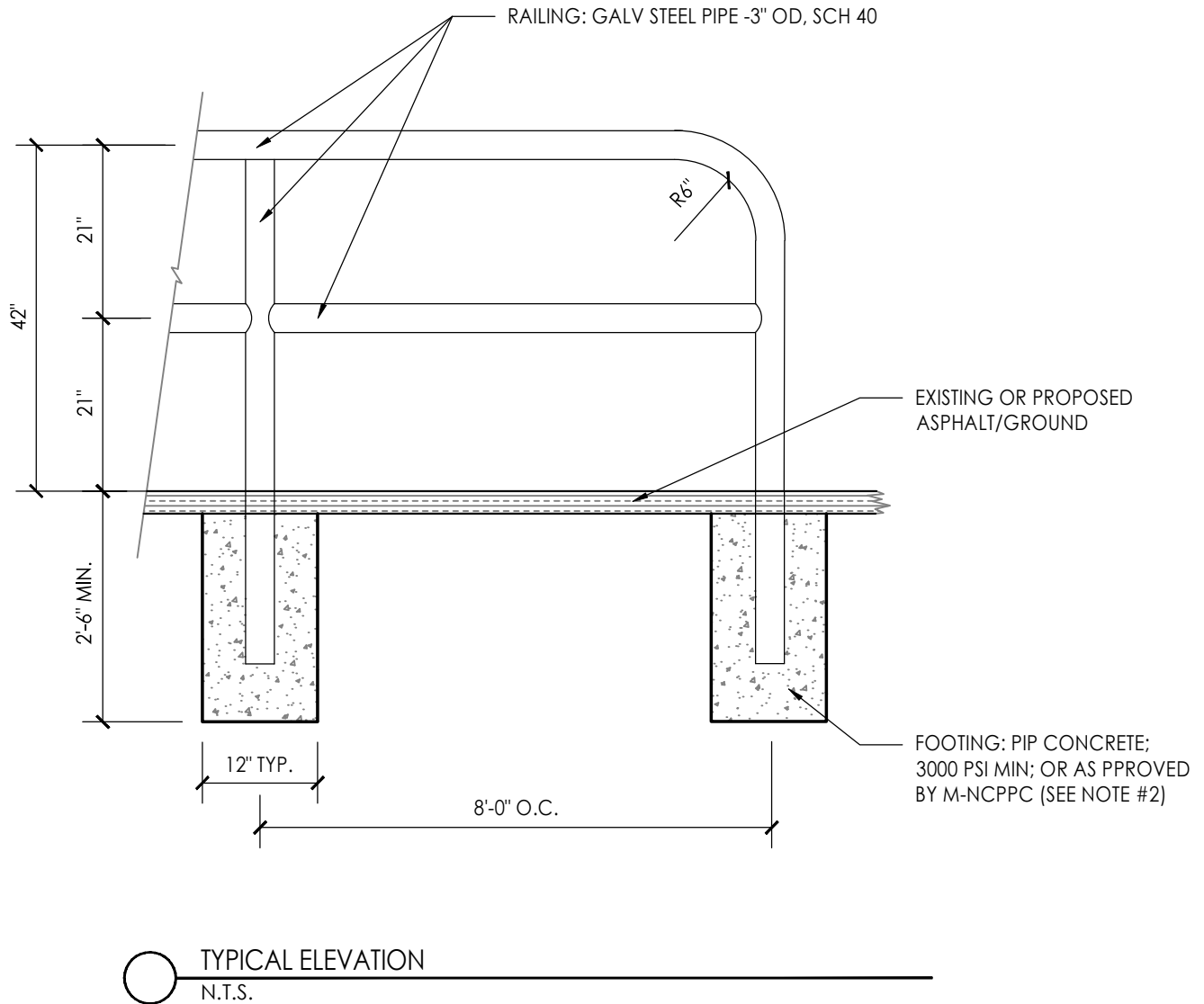
SPLIT RAIL FENCE: DETAIL

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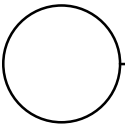
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**NOTES:**

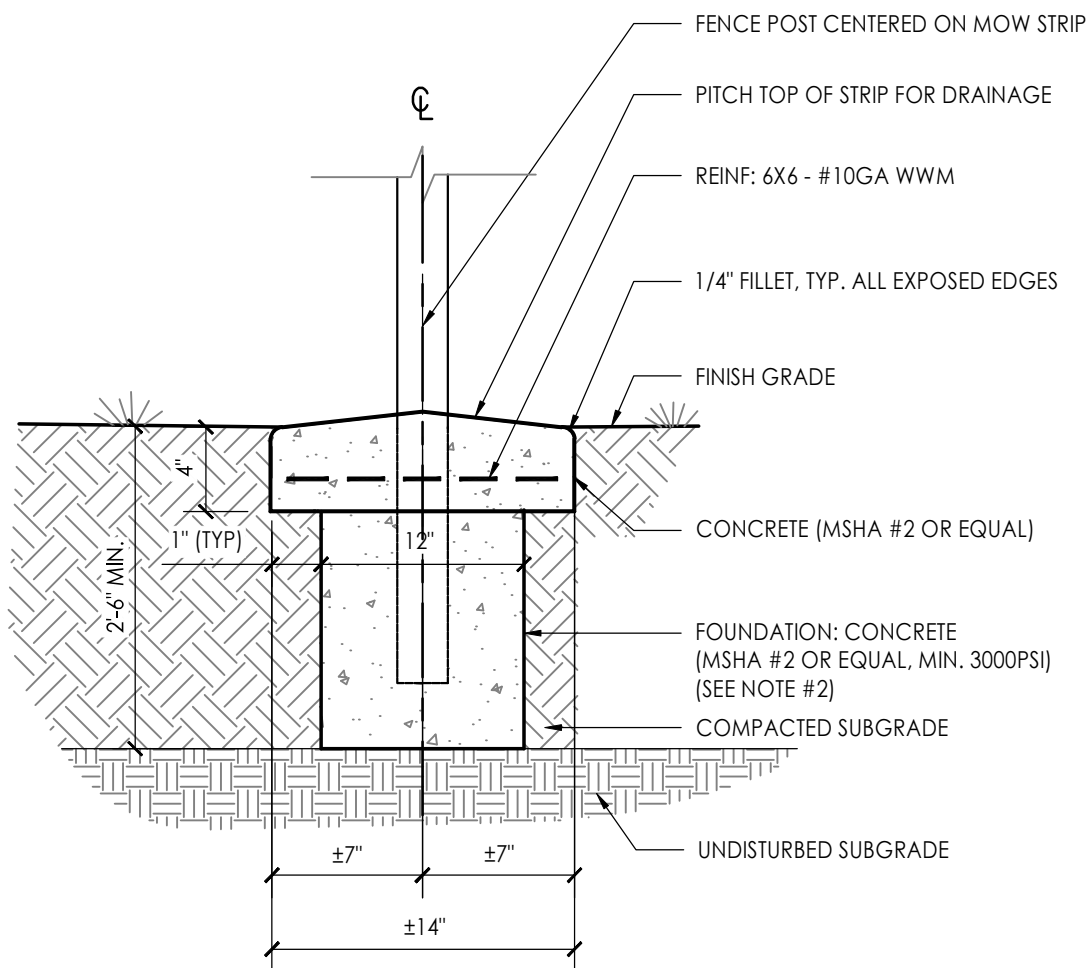
1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. ALL PIPE JOINTS TO BE WELDED AND GROUND SMOOTH.
4. ALL PIPE SHALL BE CLEAN THE METAL SURFACE, GET RID OF RUST DEPOSITS, APPLY THE RIGHT PRIMER AND THEN PAINT 2 COATS OF ALKALINE ENAMEL PAINT.

**STEEL PIPE RAILING: DETAIL**

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER**F-2.1**

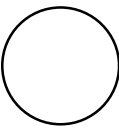
JANUARY 2023



○ TYPICAL DETAIL: FENCE & MOW STRIP
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. SET FENCE POSTS PRIOR TO PLACING MOW STRIP.
4. SUBGRADE TO BE DRY, FIRM, AND WELL TAMPED AT TIME OF INSTALLATION.
5. TROWEL FINISH EXPOSED CONCRETE.
6. PROVIDE EXPANSION JOINTS AT 20-FT. INTERVALS.



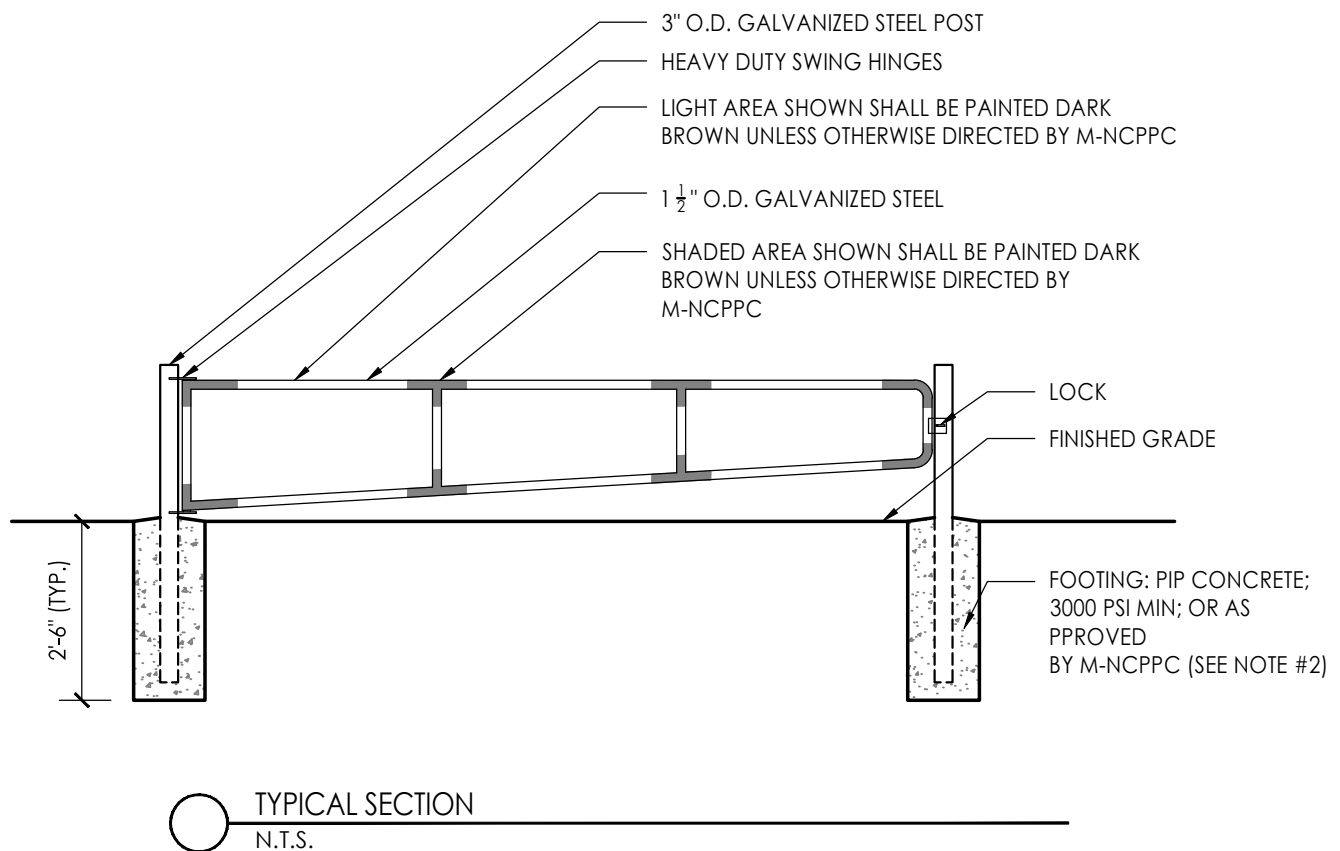
CONCRETE MOW STRIP: DETAIL

The Maryland-National Capital Park and Planning Commission
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NUMBER

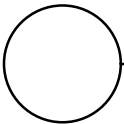
F-3.1

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NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. ALL PIPE JOINTS TO BE WELDED AND GROUND SMOOTH.
4. ALL PIPE SHALL BE CLEAN THE METAL SURFACE, GET RID OF RUST DEPOSITS, APPLY THE RIGHT PRIMER AND THEN PAINT 2 COATS OF ALKALINE ENAMEL PAINT.

**MAINTENANCE ACCESS PIPE GATE: DETAIL**

The Maryland-National Capital Park and Planning Commission
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NUMBER

F-4.1

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G-2.1 TRASH RECEPTICAL

G-3.1 BICYCLE RACK

G-4.1 ACCESSIBLE RAISED PLANTER BEDS - OPTION 1

G-4.2 ACCESSIBLE RAISED PLANTER BEDS - OPTION 2

G-5.1 GENERAL INFORMATION SIGNAGE

G-5.2 INTERPRETIVE SIGNAGE

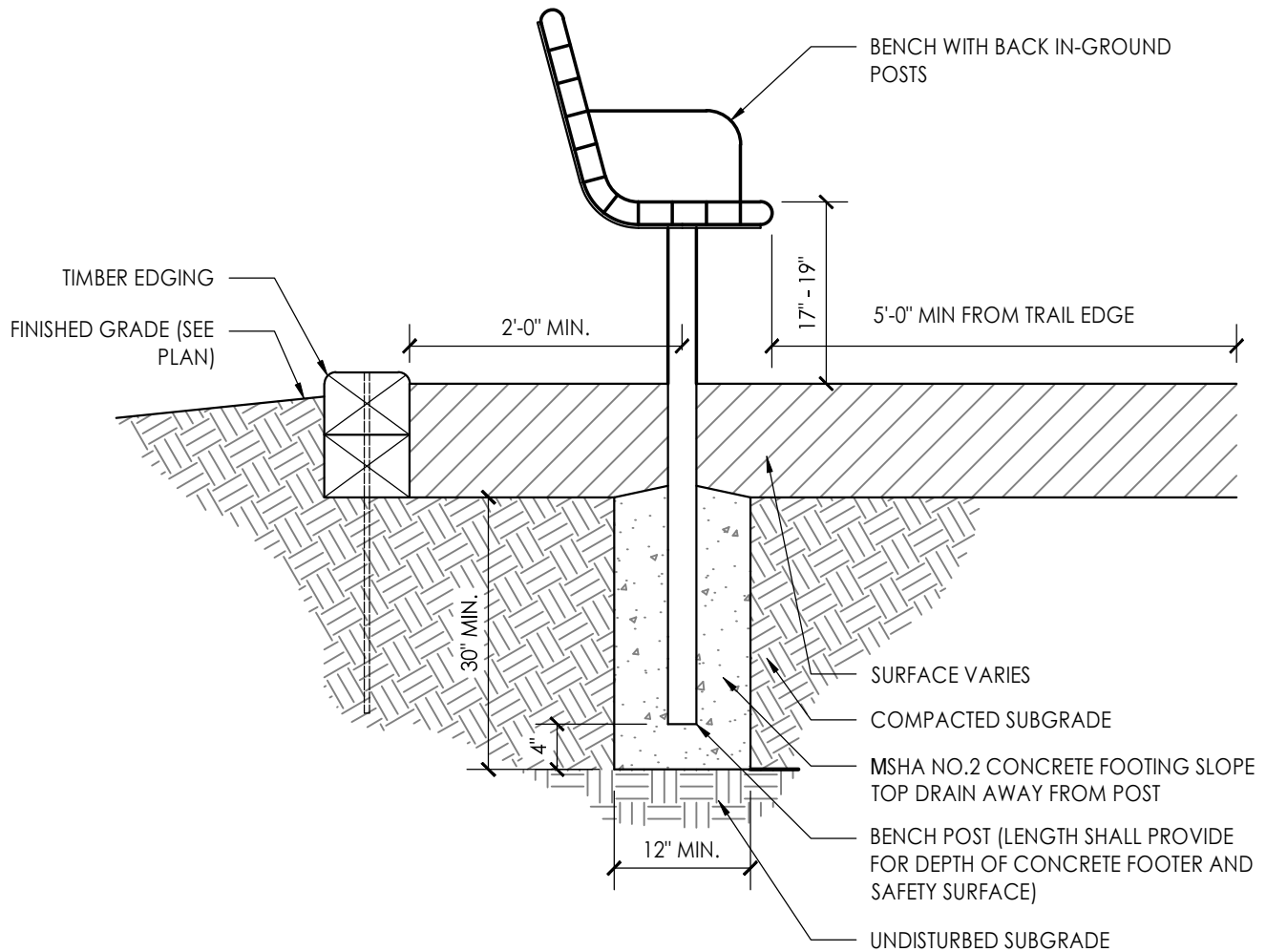
G-5.3 EXHIBIT STRUCTURE

G-5.4 TRAIL MARKER

G-6.1 PICNIC SHELTER, SLAB, AND FOOTING

G-7.1 METAL BULLETIN BOARD KIOSK

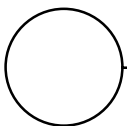
G-8.1 PARK PROPERTY LINE POLE



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. BENCH PRODUCT VARIES.
3. SEE PLANS FOR INSTALLATION CONDITIONS.
4. MANUFACTURERS MUST BE REVIEWED AND APPROVED BY M-NCPPC.
5. CRITERIA FOR BENCH
 - 5.1. COMMERCIAL GRADE & TAMPER-RESISTANT MINIMUM 6' LENGTH
 - 5.2. MINIMUM 6' LENGTH
 - 5.3. SEAT HEIGHT 17"-19" ABOVE GROUND
 - 5.4. ALL METAL BENCH COMPONENTS TO BE POWDER COAT FINISH.
 - 5.5. INSTALL BENCH W/IN 3.5% OF LEVEL. SHIM UNDER LEGS W/ CONCEALED STAINLESS STEEL WASHERS AS REQ'D. SEAL W/EXPANSION JOINT SEALANT.
6. ALL HARDWARE TO BE GALVANIZED OR STAINLESS STEEL. PAINT TO MATCH LEG.
7. PROVIDE (1) ANCHOR & WASHER PER ANCHOR HOLE, AS REQUIRED BY BENCH MFR; DROP-IN ANCHOR OR SLEEVE ANCHOR W/ ACORN NUT.



BENCH: DETAIL

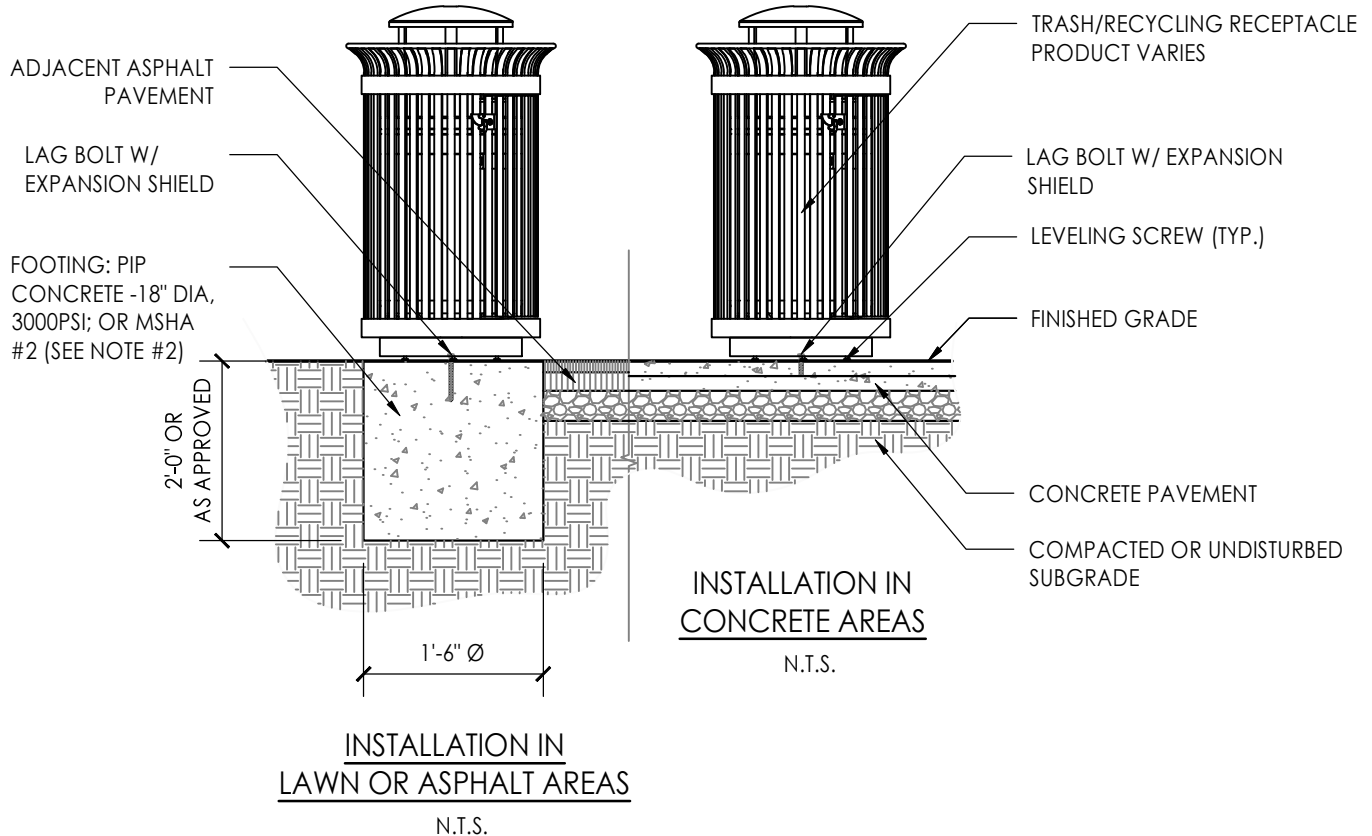


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G-1.1

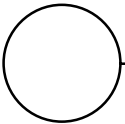
JANUARY 2023



○ TYPICAL ELEVATIONS / SECTIONS
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. SEE PLANS FOR INSTALLATION CONDITIONS.
4. SEE APPROPRIATE DETAILS FOR CONCRETE PAVING AND/OR ASPHALT PAVING.
5. CRITERIA FOR TRASH AND RECYCLING RECEPTACLES
 - 5.1. COMMERCIAL GRADE & TAMPER-RESISTANT
 - 5.2. SIDE-OPENING
 - 5.3. 35-42 GAL
 - 5.4. ALL METAL COMPONENTS TO BE POWDER COAT FINISH.



TRASH RECEPTICAL LAYOUT: DETAIL

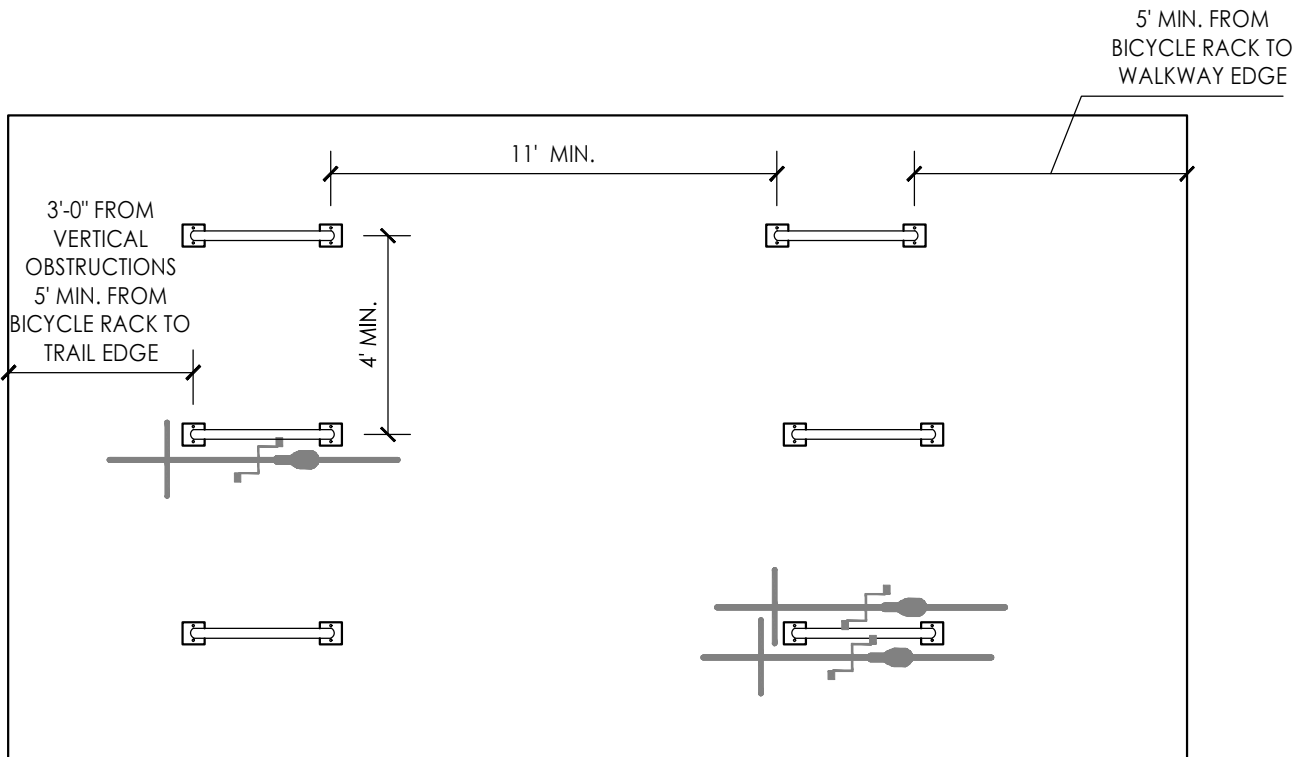


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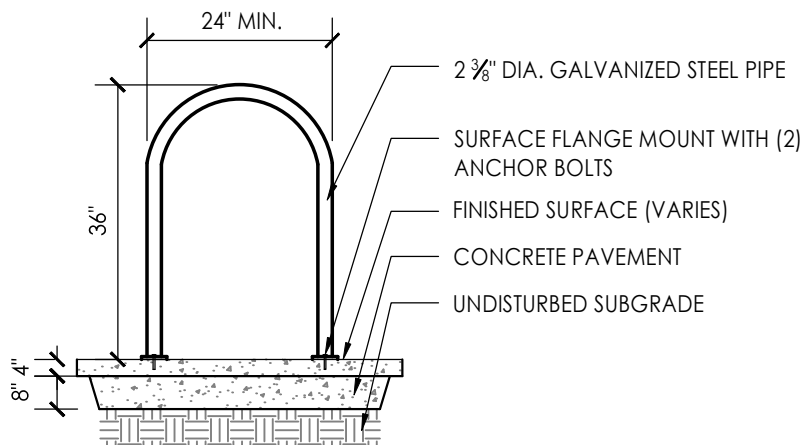
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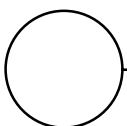
○ TYPICAL CONCEPT PLAN LAYOUT
N.T.S.



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. RACK SHALL BE CONSTRUCTED FROM 2 3/8" GALVANIZED PIPE WITH BLACK POWDER COAT.
3. RACK SHALL BE PLACED IN VISIBLE PUBLIC AREAS AND AVOID CONFLICTS WITH PEDESTRIANS AND PARKED VEHICLES, USUALLY NEAR AND VISIBLE TO A BUILDING ENTRANCE OR AT A PUBLIC DESTINATION.
4. RACK SHALL NOT BE PLACED NEAR IRRIGATION SYSTEMS.
5. REFER TO ASSOCIATION OF BICYCLE AND PEDESTRIAN PROFESSIONALS.



BICYCLE RACK: CONCEPT

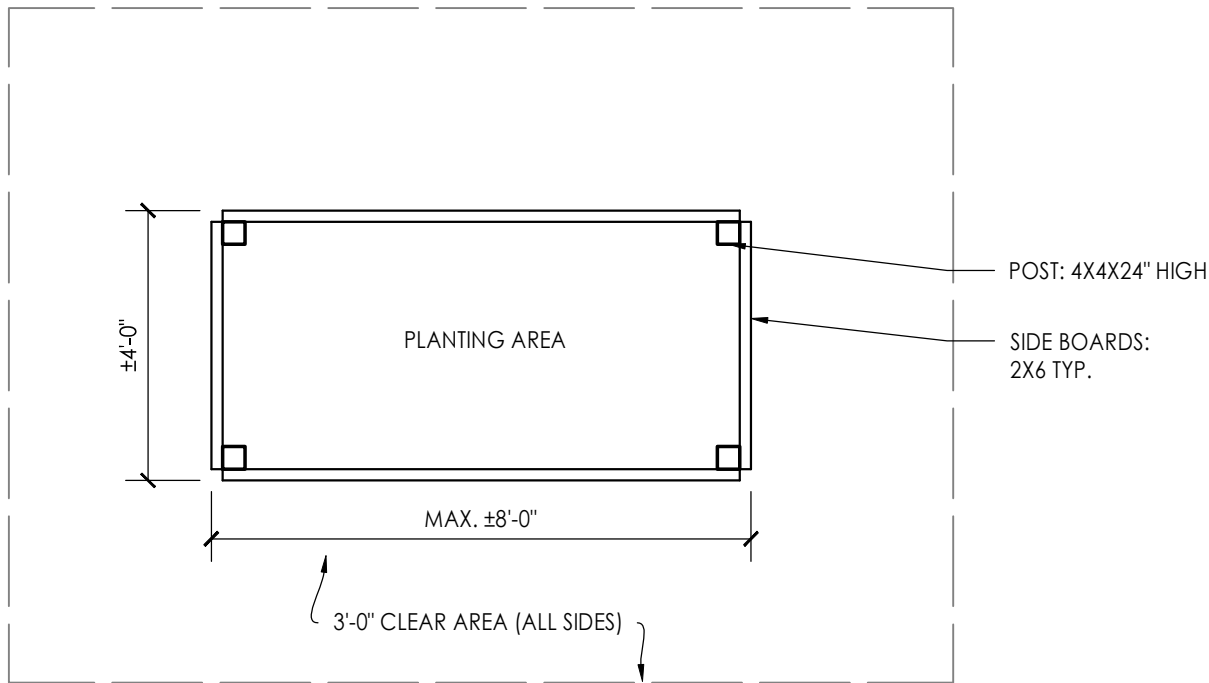


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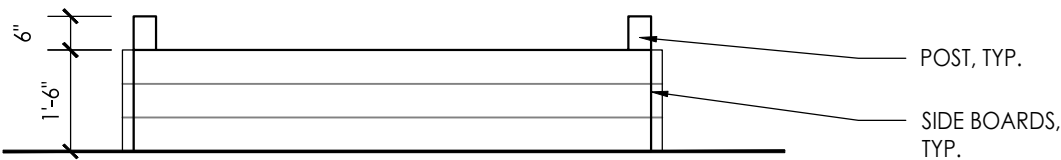
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G-3.1

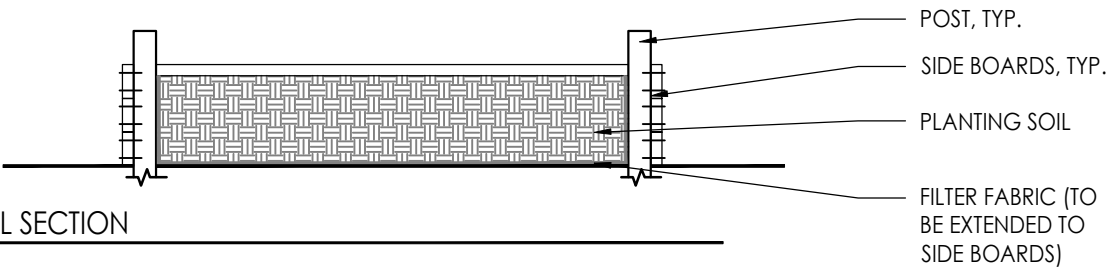
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 TYPICAL CONCEPT PLAN LAYOUT
N.T.S.



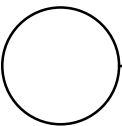
 TYPICAL ELEVATION
N.T.S.



 TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. WOOD TO BE CEDAR OR COMPOSITE LUMBER FOR EDIBLE GARDENS. DO NOT USE TREATED LUMBER.



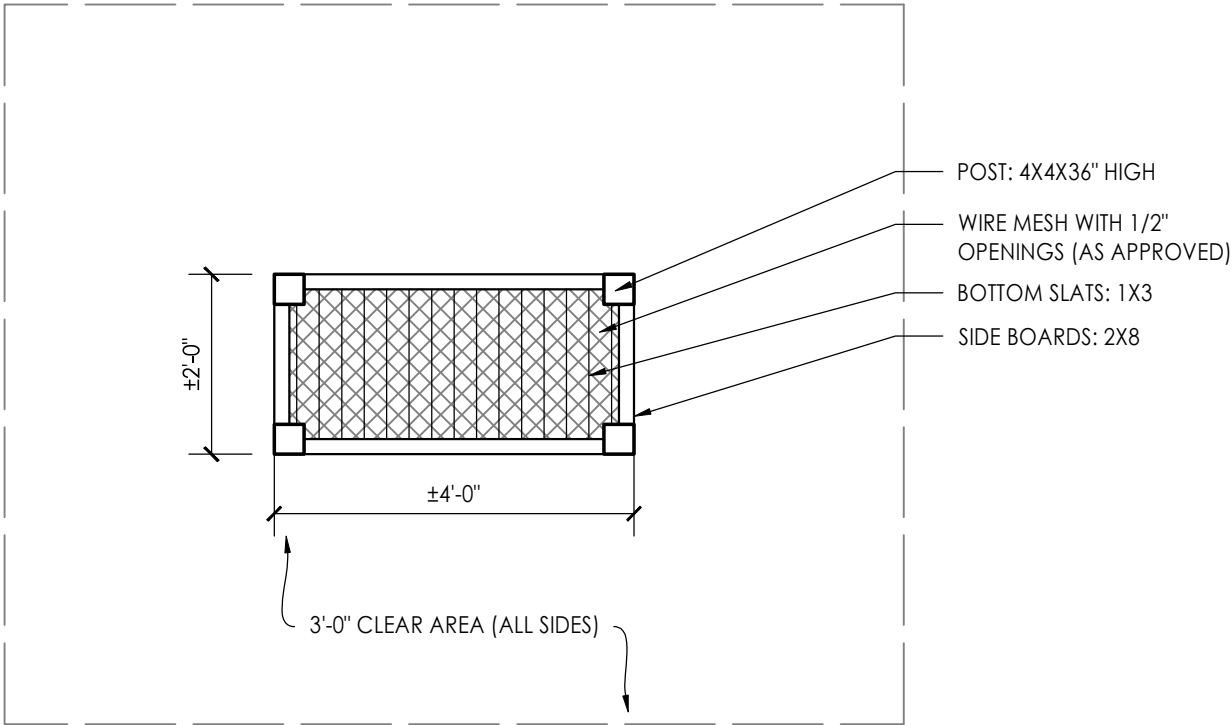
ACCESSIBLE RAISED PLANTER BEDS-OPTION 1: DETAIL

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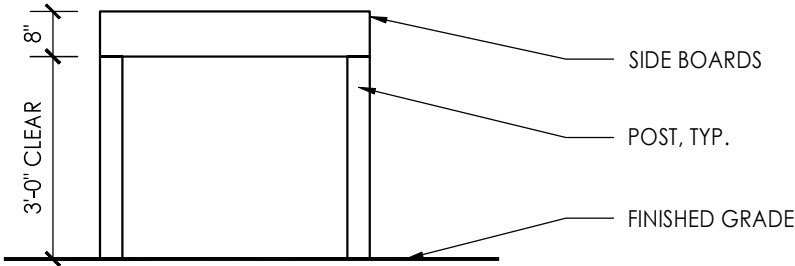
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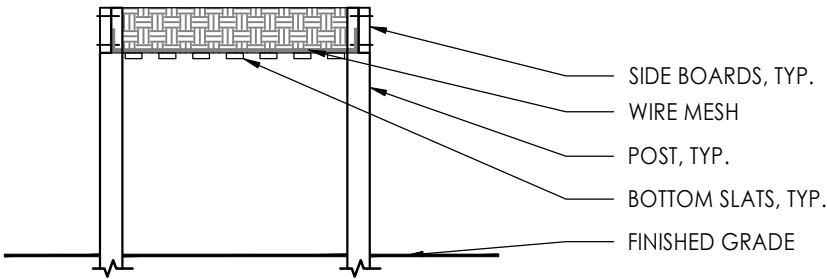
JANUARY 2023



TYPICAL CONCEPT PLAN LAYOUT
N.T.S.



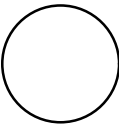
TYPICAL ELEVATION
N.T.S.



TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. WOOD TO BE CEDAR OR COMPOSITE LUMBER FOR EDIBLE GARDENS. DO NOT USE TREATED LUMBER.



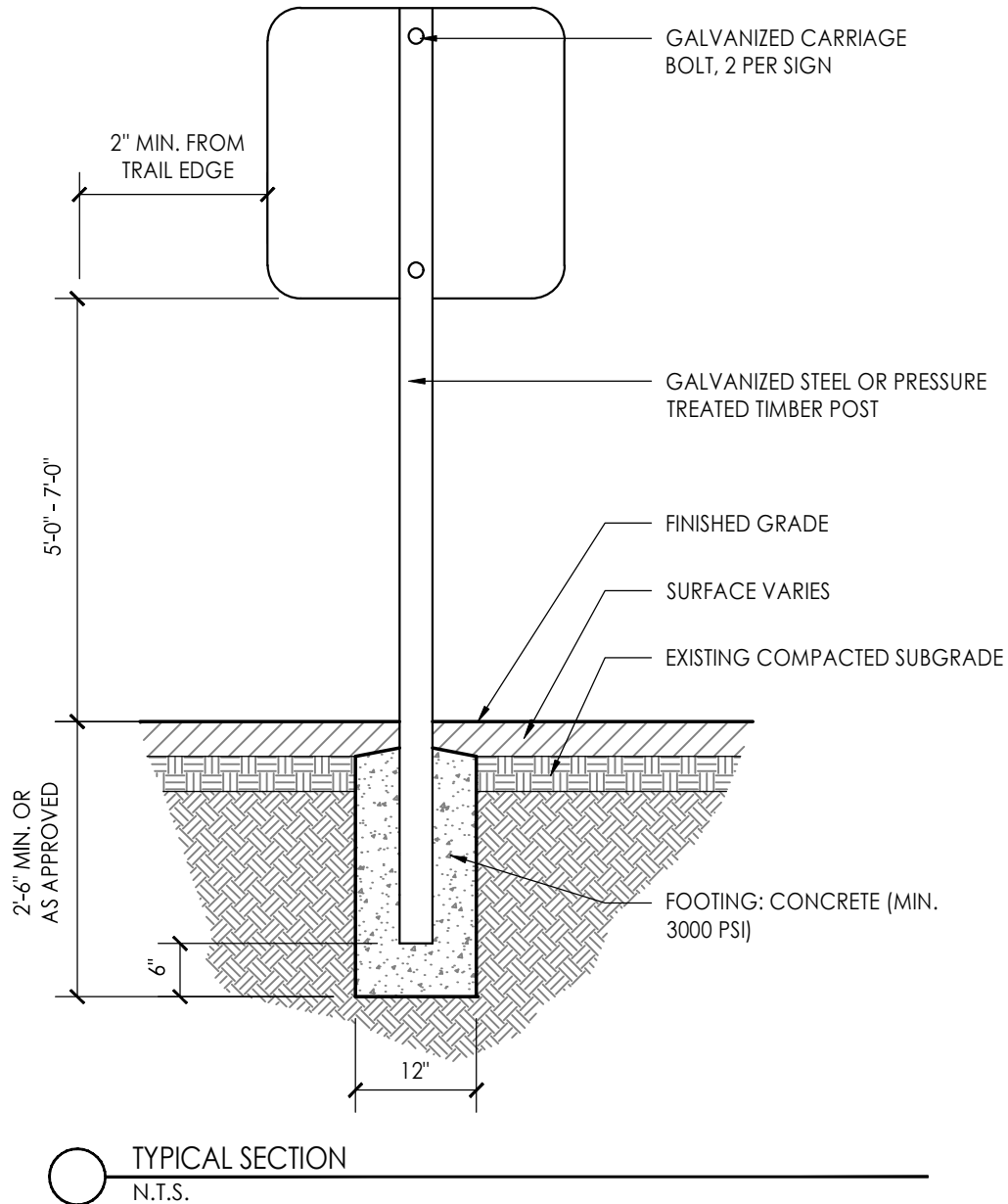
ACCESSIBLE RAISED PLANTER BEDS-OPTION 2: DETAIL

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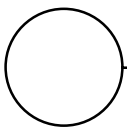
NUMBER

G-4.2

JANUARY 2023

**NOTES:**

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. ALL WARNING SIGNS SHALL ABIDE BY STANDARDS ESTABLISHED BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA). SIGN LETTERING AND TEXT MARGINS IN COMPLIANCE WITH STANDARDS DEVELOPED BY THE FHWA ON TRAFFIC CONTROL FOR BICYCLE FACILITIES. SIGN TYPES ARE FROM THE MUTCD.
4. ALL SIGN CORNERS AND BORDERS WILL BE ROUNDED. THE SIGN IS TO BE MADE OF .080 GAUGE ALUMINUM ON $\frac{3}{4}$ " MDO EXTERIOR PLYWOOD.
5. ALL EXPOSED WOOD SHALL BE PAINTED AS PER MANUFACTURE'S INSTRUCTIONS. (COLOR: SPANISH MOSS)
6. ALL INFORMATIONAL SIGNS SHALL HAVE BRONZE COLOR BACKGROUND WITH WHITE HELVETICA TYPE AND GRAPHICS UNLESS OTHERWISE SPECIFIED BY THE MUTCD OR M-NCPPC.
7. COORDINATE WITH M-NCPPC FOR TEXT, FONT AND COLOR.

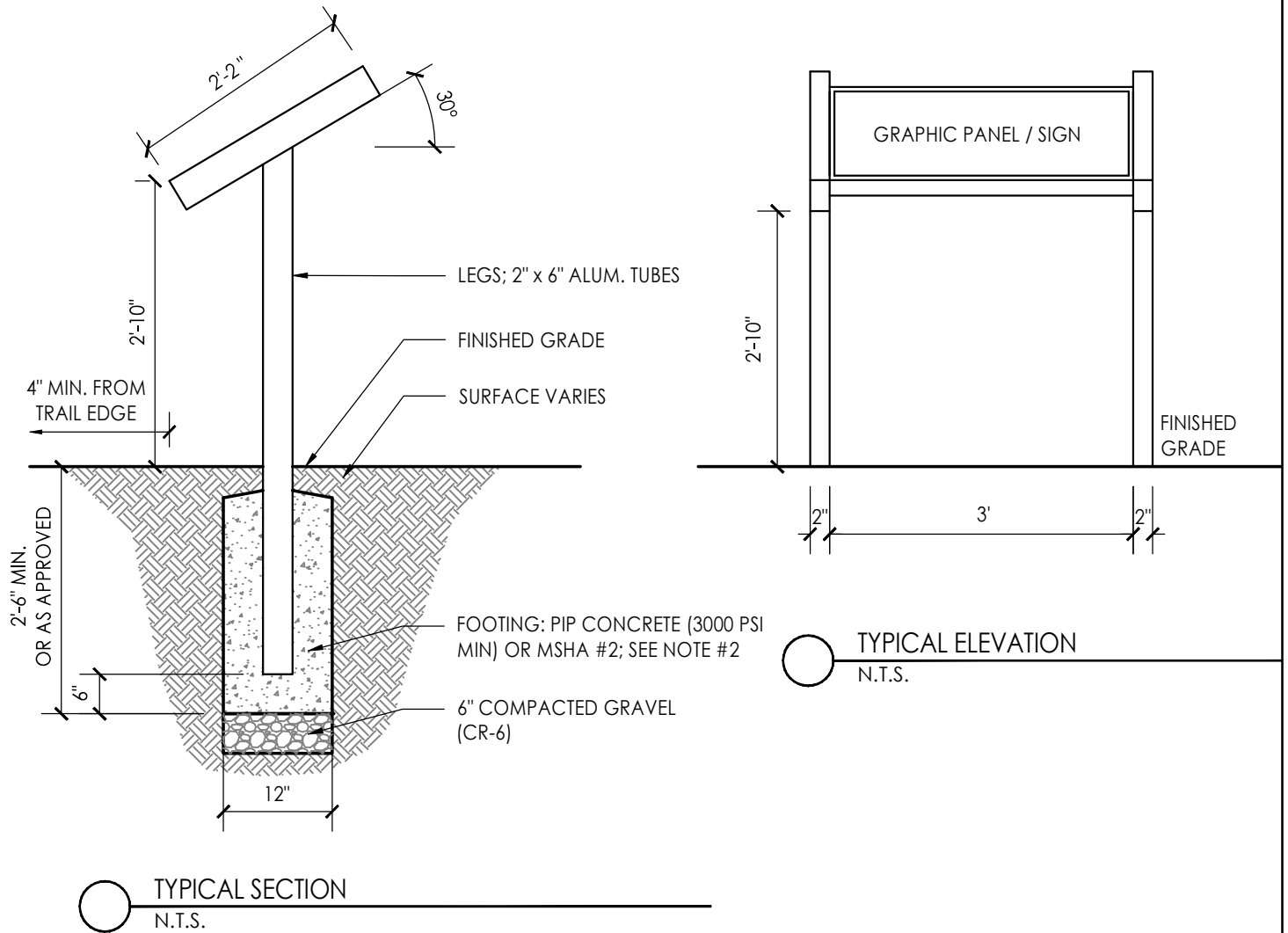
**GENERAL INFORMATION SIGNAGE: DETAIL**

The Maryland-National Capital Park and Planning Commission
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NUMBER

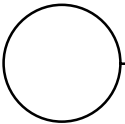
G-5.1

JANUARY 2023



NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. ALL MATERIAL FOR THE SIGN WILL BE ALUMINUM, EXCEPT FOR THE PANEL.
4. STANDARD PANEL SIZES ARE: 42" X 24", 36" X 24", 42" X 20", 36" X 20", 30" X 20", 24" X 18", 20" X 14", 16" X 12".
5. SIGN HEIGHT BASED ON ADA STANDARDS FROM FIG. 306.3 AND 307.3.
6. GROUND ADJACENT TO THE TRAIL SIGN SHALL BE AN ACCESSIBLE SURFACE.

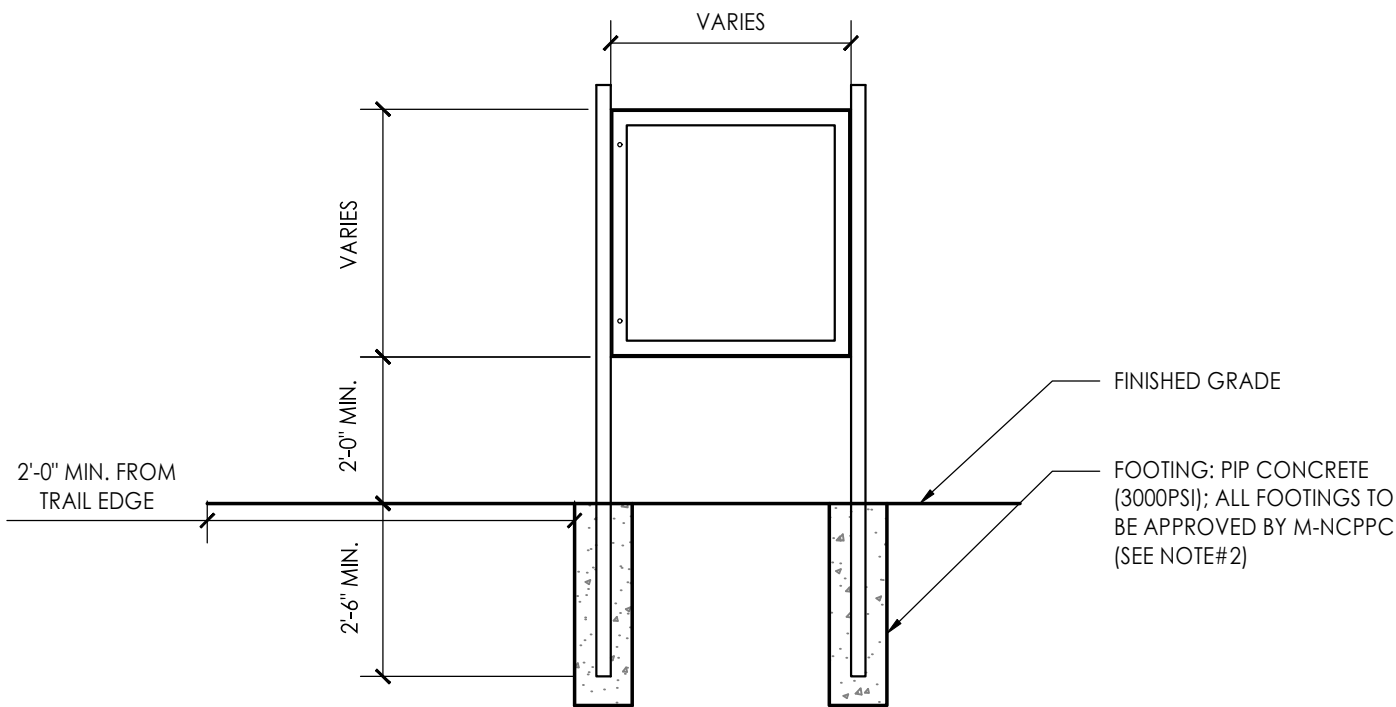
**INTERPRETIVE SIGNAGE: CONCEPT**

The Maryland-National Capital Park and Planning Commission
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NUMBER

G-5.2

JANUARY 2023



TYPICAL SECTION
N.T.S.



EXAMPLE PHOTOS FROM U.S. NPS
N.T.S.

NOTES:

- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
- 2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
- 3. DISPLAY AREA MUST BE WATERTIGHT AND BE ABLE TO BE OPENED FOR POSTING OF NOTICE AND LOCKABLE.
- 4. ALL MATERIAL FOR THE SIGN WILL BE TK. ALUMINUM, EXCEPT FOR THE PANEL.
- 5. PANEL SIZES TO BE COMPLY WITH NATIONAL PARK SERVICE STANDARDS AND TO BE APPROVED BY M-NCPPC.

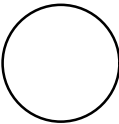


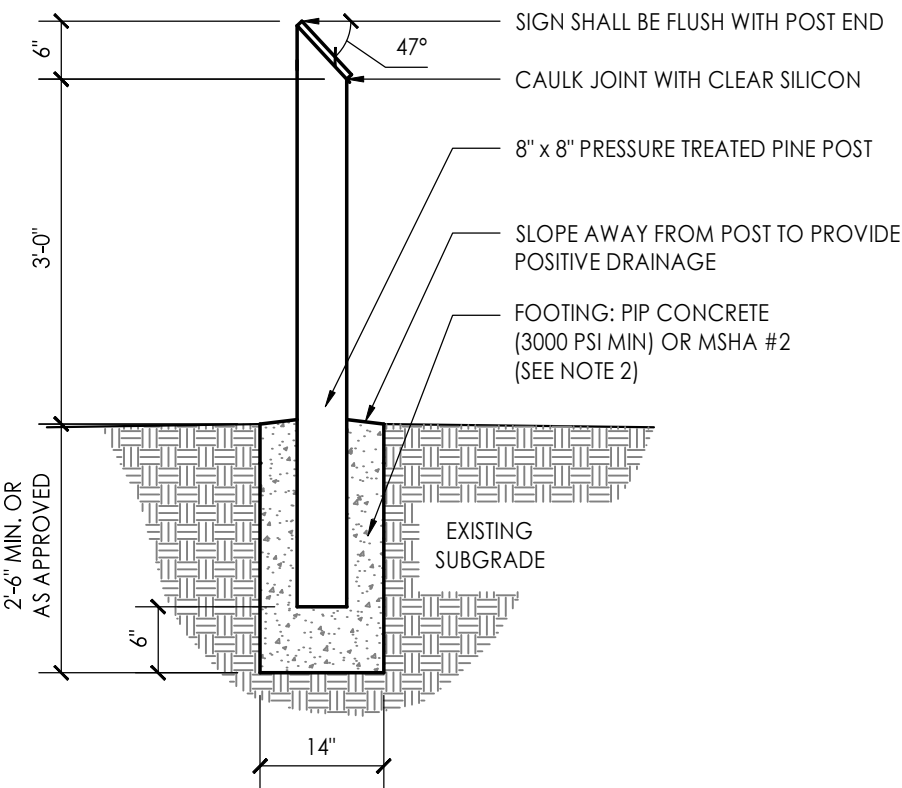
EXHIBIT STRUCTURE: CONCEPT

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NUMBER

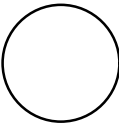
G-5.3

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TYPICAL SECTION
N.T.S.

- NOTES:
- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
 - 2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
 - 3. ALL SIGN CORNERS AND BORDERS WILL BE ROUNDED.
 - 4. ALL EXPOSED WOOD SHALL BE PAINTED WITH CABOT'S OVT ACRYLIC SOLID STAINS OIL STAIN OR APPROVED EQUAL, AS PER MANUFACTURE'S INSTRUCTIONS. COLOR: SPANISH MOSS.
 - 5. ALL INFORMATIONAL SIGNS SHALL HAVE BRONZE COLORS BACKGROUND WITH WHITE HELVETICA TYPE AND GRAPHICS UNLESS OTHERWISE SPECIFIED BY THE MUTCD OR M-NCPPC.



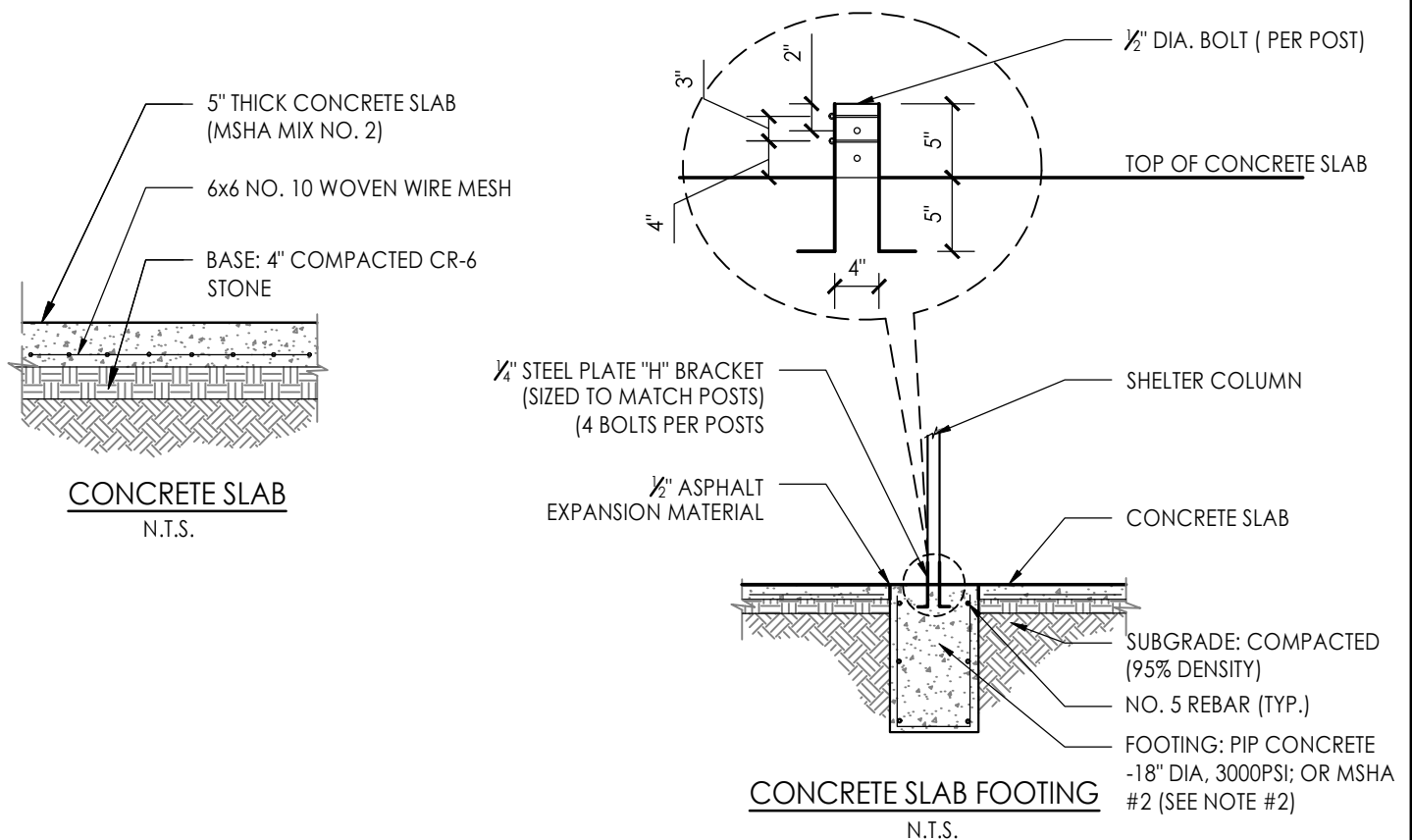
TRAIL MARKER: CONCEPT

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

G-5.4

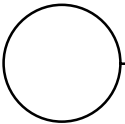
JANUARY 2023



○ TYPICAL CONCEPT PLAN LAYOUT
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. CONCRETE FINISHED SURFACE TO BE BROOM FINISHED, SLAB SLOPED FOR POSITIVE DRAINAGE.



PICNIC SHELTER, SLAB, AND FOOTING: DETAIL

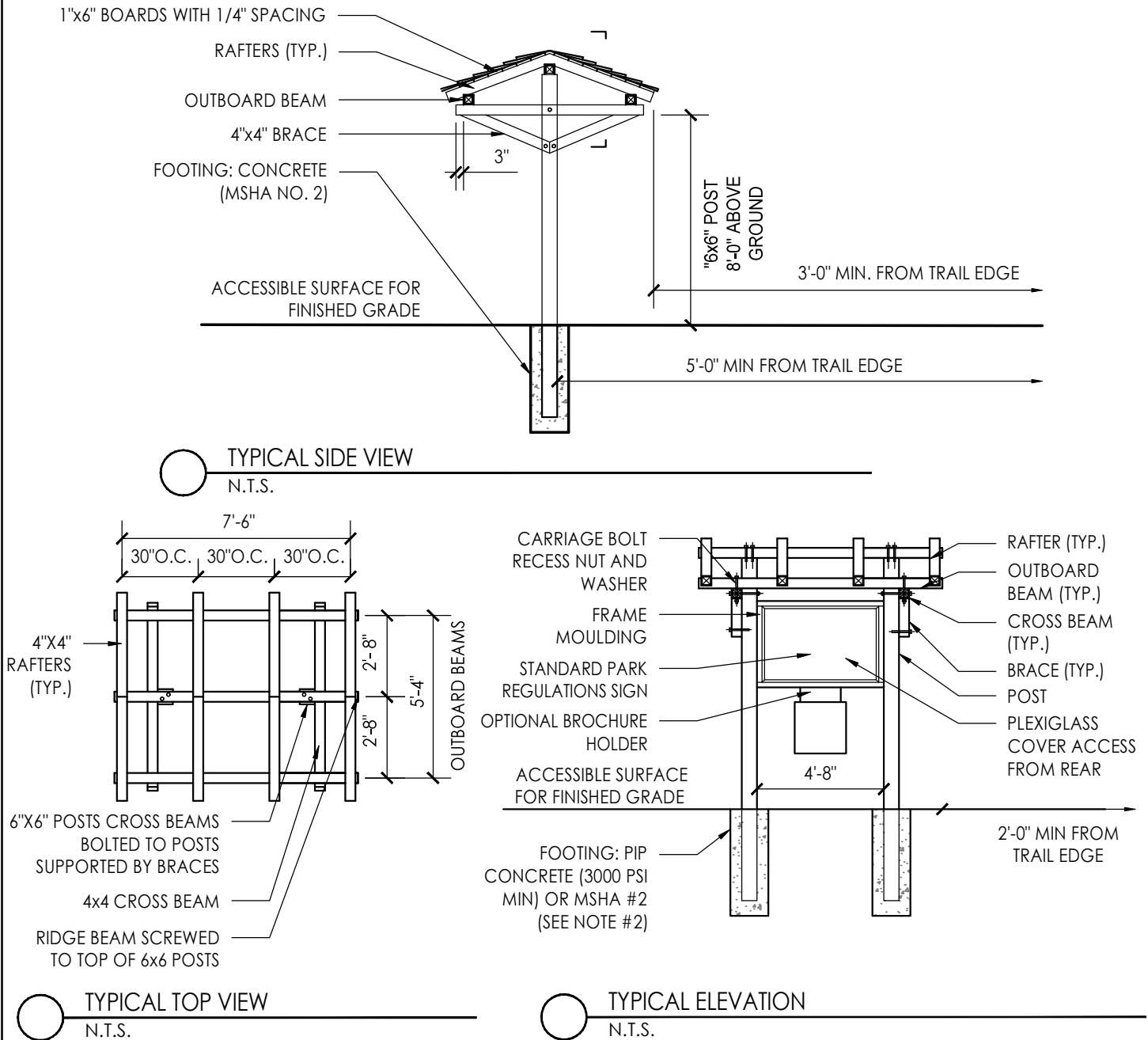


The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

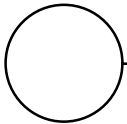
G-6.1

JANUARY 2023



NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
2. ALL FOOTINGS AND FOUNDATIONS TO BE REVIEWED AND APPROVED BY M-NCPPC.
3. DISPLAY AREA MUST BE WATERTIGHT AND BE ABLE TO BE OPENED FOR POSTING OF NOTICE AND LOCKABLE.
4. ROOF PLANKS ARE NOT SHOWN.
5. NOTCH RAFTERS AS SHOWN AT RIDGE AND OUTBOARD BEAMS.
6. ALL BEAMS AND RAFTERS ARE 4"x4" PRESSURE TREATED SOUTHERN YELLOW PINE, AS ARE THE 6"x6" POSTS.
7. COUNTERSINK AND PLUG ALL BOLTS EXPOSED TO VIEW WITH WOOD PLUGS.
8. SET PLUG WITH MARINE-GRADE GLUE.

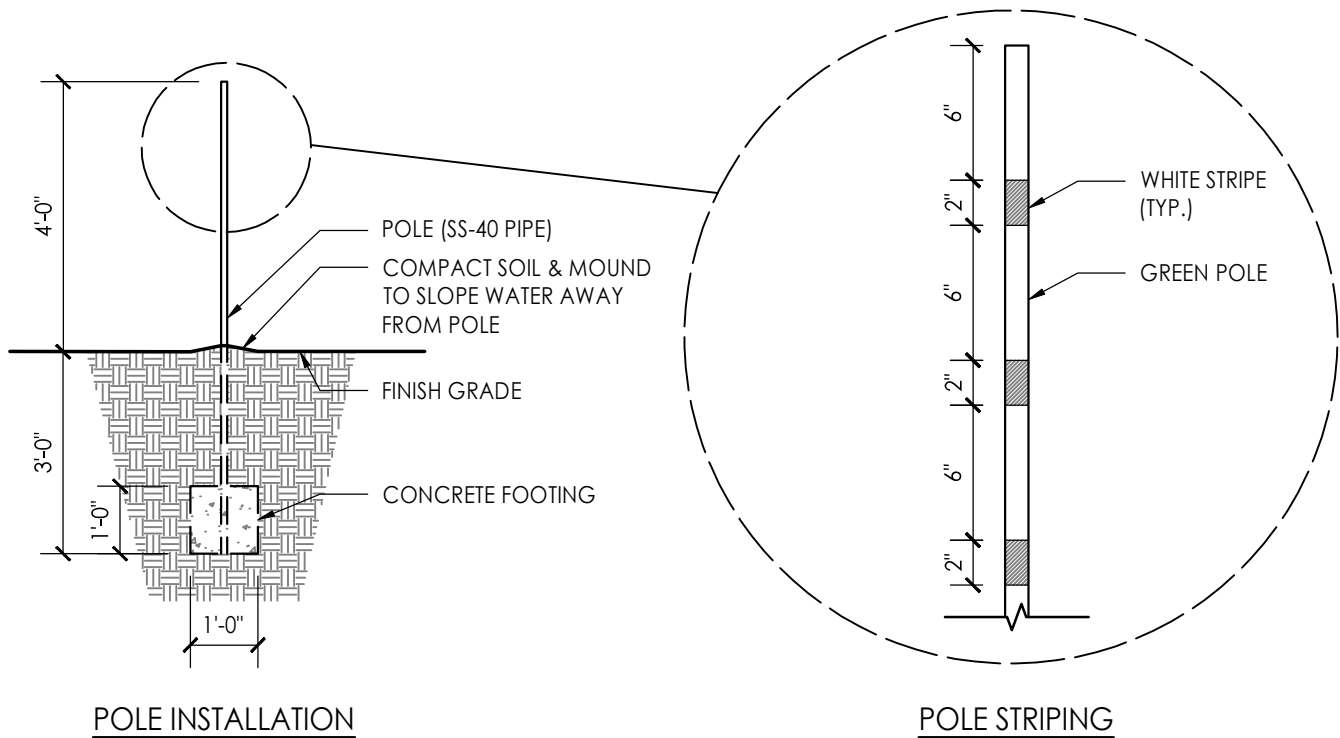
**METAL BULLETIN BOARD KIOSK - A AND B: CONCEPT**

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

G-7.1

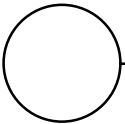
JANUARY 2023



○ TYPICAL SECTION
N.T.S.

NOTES:

1. POLES SHALL BE PLACED AT PROPERTY CORNERS AND PROPERTY LINE BREAKS WHERE APPLICABLE. IF THE DISTANCE BETWEEN CORNERS AND/OR ANGLE POINTS ARE GREATER THAN 300 FEET OR THERE IS NO CLEAR LINE OF SIGHT BETWEEN TWO POINTS DUE TO PHYSICAL BARRIERS OR GRADE CHANGES, ADDITIONAL POLES MUST BE INSTALLED.
2. THE POLES SHALL BE PLACED ONE FOOT INSIDE THE PARK PROPERTY AT ALL PROPERTY MARKERS (CORNERS, ANGLE BREAKS, MONUMENT AND POINTS ON LINE). WITNESSING THE ACTUAL PROPERTY MARKERS.
3. THE POLE SHALL BE SET IN CONCRETE 3 FEET BELOW GRADE AS SHOWN ON THE DRAWING.
4. THE POLE SHALL BE A 1-5/8" BY 7'-0" VINYL SS-40 PIPE WITH 3 WHITE STRIPES, 2 INCHES IN WIDTH AS SHOWN ON THE DRAWING.
5. THE COLOR OF THE POLE IS WOOLLYN GREEN.



PARK PROPERTY LINE POLE: DETAIL



The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

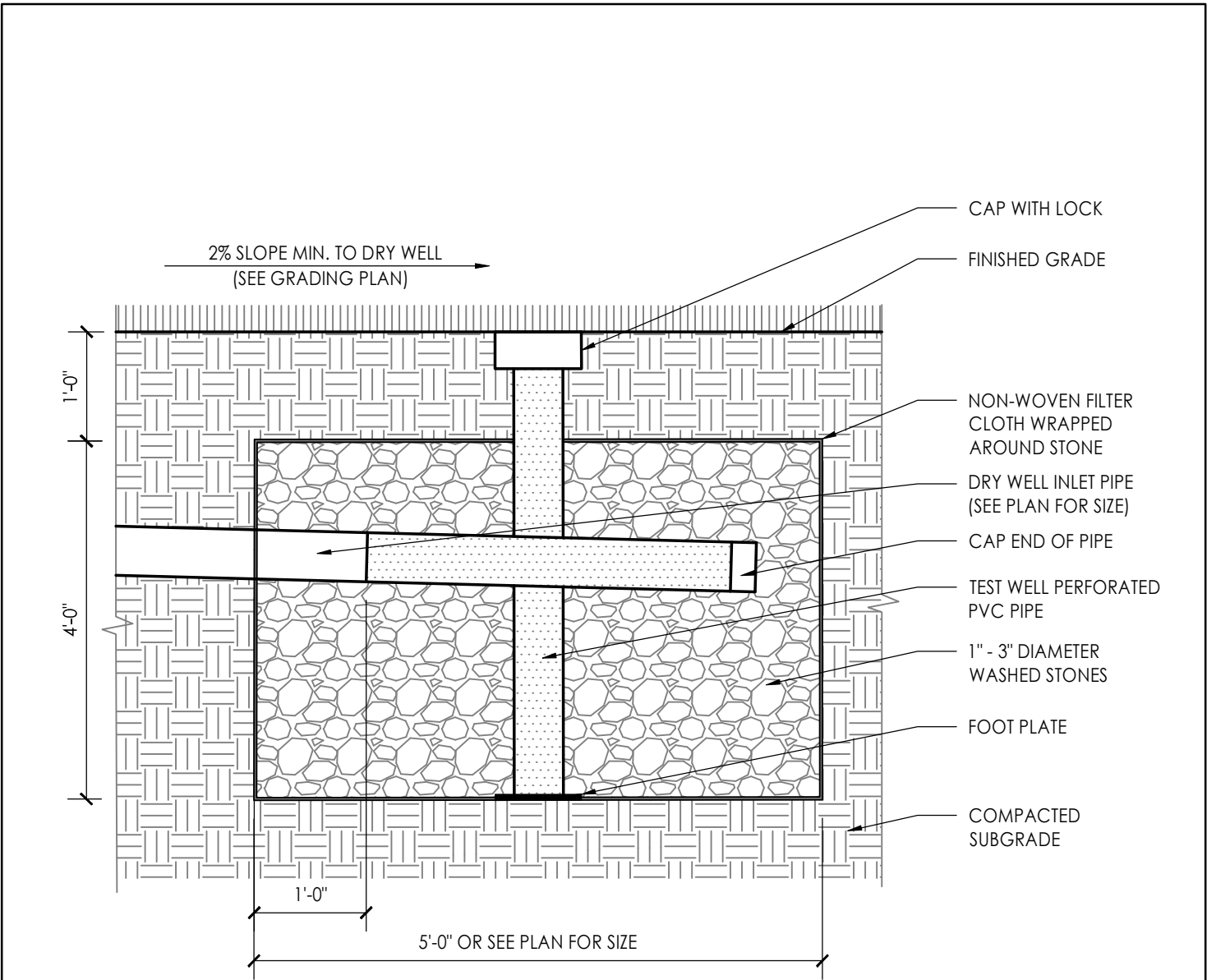
NUMBER

G-8.1

JANUARY 2023

INDEX OF DRAWINGS

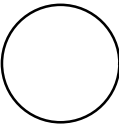
H-1.1 DRY WELL



○ TYPICAL SECTION
N.T.S.

NOTES:

1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.



DRY WELL: DETAIL

 The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation

NUMBER

H-1.1

JANUARY 2023

VII. APPENDIX



A. PROPERTY TO BE CONVEYED TO M-NCPPC

1. INTRODUCTION

Land to be conveyed to M-NCPPC for public parkland purposes shall be subject to the following:

1. An original, special warranty deed for the property to be conveyed (signed by the WSSC Assessment Supervisor) shall be submitted to the Department of Parks and Recreation ("DPR") of The Maryland-National Capital Park and Planning Commission ("M-NCPPC") along with the final plats.

2. The M-NCPPC shall be held harmless for the cost of public improvements associated with land to be conveyed, including, but not limited to, sewer extensions, adjacent road improvements, drains, sidewalks, curbs and gutters, and front-foot benefit charges prior to and subsequent to the final plat.

3. The boundaries and acreage of land to be conveyed to the M-NCPPC shall be indicated on all development plans and permits, which include such property.

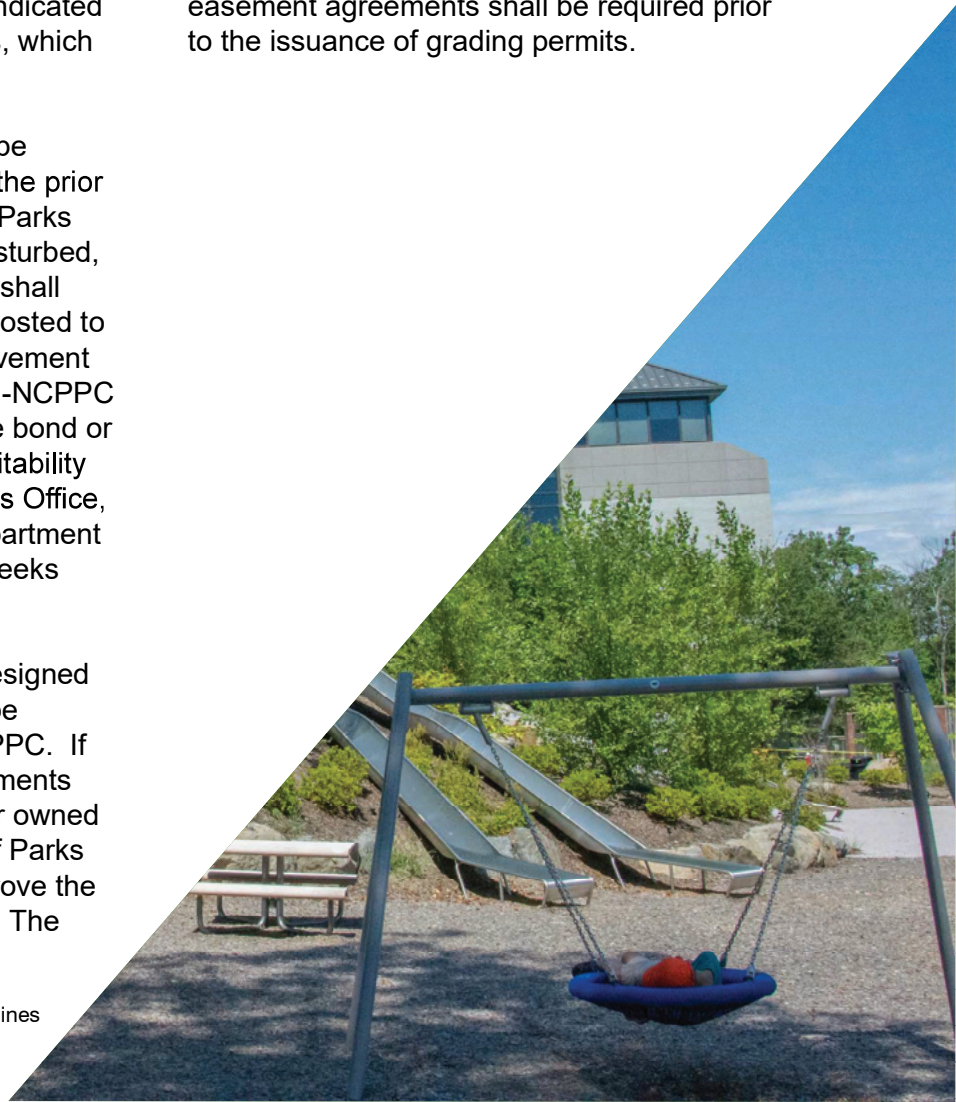
4. The land to be conveyed shall not be disturbed or filled in any way without the prior written consent of the Department of Parks and Recreation. If the land is to be disturbed, Department of Parks and Recreation shall require that a performance bond be posted to warrant restoration or repair or improvement made necessary or required by the M-NCPPC developmental approval process. The bond or other suitable financial guarantee (suitability to be judged by the General Counsel's Office, M-NCPPC) shall be submitted to Department of Parks and Recreation within two weeks prior to applying for grading permits.

5. Any storm drain outfalls shall be designed to avoid adverse impacts on land to be conveyed to or owned by The M-NCPPC. If the outfalls require drainage improvements on adjacent land to be conveyed to or owned by The M-NCPPC, the Department of Parks and Recreation shall review and approve the location and design of these facilities. The

Department of Parks and Recreation may require a performance bond and easement agreement prior to issuance of grading permits.

6. All waste matter and unnatural debris of any kind shall be removed from the property to be conveyed. The Department of Parks and Recreation shall inspect the site and verify that land is in acceptable condition for conveyance, prior to final plat approval.

7. No stormwater management facilities or tree conservation or utility easements shall be proposed on land owned by or to be conveyed to The M-NCPPC without the prior written consent of the Department of Parks and Recreation. The Department of Parks and Recreation shall review and approve the location and/or design of these features. If such proposals are approved by the Department of Parks and Recreation, a performance bond, maintenance and easement agreements shall be required prior to the issuance of grading permits.





B. RECREATION FACILITIES AGREEMENT

1. INTRODUCTION

Recreation Facilities Agreements (RFA) are further described in Section II, 2(a) of the Design Guidelines. Refer to Appendix D for sample forms.

1. Procedures for Processing an RFA for Public Recreation Facilities

a. The applicant must submit three signed, original RFAs to the Department of Parks and Recreation three weeks prior to the submission of Final Plats to the Development Review Division or prior to the application for grading permits, whichever occurs first.

b. Upon submission, the RFA will be reviewed for conformance with the guidelines in this manual and the plan(s) approved by the Prince George's County Planning Board. If it is complete, the RFA will be sent to the Commission's Office of the General Counsel for review and approval and then forwarded to the Commission's Executive Director for signature.

c. The signed RFA will be returned to the Department of Parks and Recreation, where the applicant will be notified to pick up the document and have it recorded in the Prince George's County Land Records Office, Clerk of the Circuit Court in Upper Marlboro, Maryland. The recorded RFA must be returned to the following address:

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation
6600 Kenilworth Avenue, 3rd Floor
Riverdale, MD 20737
ATTN: Park Planning and Development Division

d. The address provided in paragraph 1.c above should be written on the RFA in order for the Land Records Office to return the RFA to the Department of Parks and Recreation. After the RFA is received by the Department of Parks and Recreation, a copy will be sent to the Developer. The original will be maintained

by this Department.

e. The Liber and Folio of the RFA are to be placed on all Final Plats of Subdivision prior to submission of the Final Plats to the Development Review Division, as follows: "This plat is subject to a Recreation Facilities Agreement recorded in Liber _____, Folio _____."

f. The RFA will be terminated and the performance bond released after (1) all conditions and requirements in the RFA have been satisfactorily completed by the Developer, and (2) all facilities have been inspected by the Department of Parks and Recreation.

2. Procedures for Processing an Amended Recreation Facilities Agreement

An amendment to an RFA is sometimes necessary for reasons which include revisions to Site Plans, resubdivisions, other actions by the Prince George's County Planning Board or clerical errors on the original RFA. The process for amending an RFA is as follows:

a. A written request outlining the nature, reasons, and type of amendment to the original RFA shall be submitted to the Department of Parks and Recreation for review and consideration. Department of Parks and Recreation staff may request a meeting with the applicant to discuss the request or any outstanding issues. Upon the completion of Department of Parks and Recreation staff's review, a formal recommendation will be forwarded to the Prince George's County Planning Board or its designee.

b. All amendments shall be in accordance with the approved revision of the appropriate plan. This revision must be approved by the Prince George's County Planning Board or its designee.

c. The amended RFA will then be processed in accordance with the procedures for processing an RFA.

d The Liber and Folio of the amended RFA must be placed on all final plats of subdivision as follows, if said plats have not yet been recorded:

e. "This plat is subject to an amended Recreation Facilities Agreement recorded in Liber _____, Folio _____."

f. The amended RFA will be terminated and the performance bond will be released after (1) all conditions and requirements in the RFA have been satisfactorily completed by the Applicant/ Developer, and (2) all facilities have been inspected by the Department of Parks and Recreation.

3. Procedures for Processing a Rescinded Recreation Facilities Agreement

An agreement to rescind an RFA is required where (1) a Preliminary Plat of Subdivision that had been previously approved becomes substantially different from the recorded plat for that property, or (2) a Site Plan that had been previously approved for development is substantially different from a previously approved Site Plan. The agreement to rescind must be recorded prior to submission of new Final Plats or prior to the issuance of building permits if no new Final Plat is recorded. The following are the procedures to rescind an RFA:

a. Submit a Preliminary Plat of Subdivision and/or Site Plan to the Development Review Division and obtain approval from the Prince George's County Planning Board or its designee.

b. A written request outlining the reasons to rescind the original RFA shall be submitted to the Department of Parks and Recreation for review and consideration. Department of Parks and Recreation staff may request a meeting with the applicant to discuss the request or any outstanding issues. Upon the completion of Department of Parks and Recreation staff's review, a formal recommendation will be forwarded to the

Prince George's County Planning Board or its designee.

c. All amendments shall be in accordance with the approved revision of the appropriate plan. This revision must be approved by the Prince George's County Planning Board or its designee.

d. The rescinded RFA will then be processed in accordance with the procedures for processing an RFA.

e. The Liber and Folio of the amended RFA must be placed on all final plats of subdivision as follows, if said plats have not yet been recorded:

"This plat is subject to an amended Recreation Facilities Agreement recorded in Liber _____, Folio _____."

f. The rescinded RFA will be terminated and the performance bond will be released after (1) all conditions and requirements in the RFA have been satisfactorily completed by the Applicant/ Developer, and (2) all facilities have been inspected by the Department of Parks and Recreation

4. Right of Entry Agreement onto M-NCPPC Property

When a private entity or persons needs access to construct or modify facilities on M-NCPPC property, or for any temporary ingress/egress, a Right of Entry Agreement / Permit will need to be executed between M-NCPPC's Department of Parks and Recreation and the applicant/developer. The following are the procedures to obtaining a Right of Entry Agreement (REA).

a. A written request outlining the nature, reasons, and duration to the right of entry onto M-NCPPC property shall be submitted to the Department of Parks and Recreation for review and consideration. Department of Parks and Recreation staff may request a meeting with the applicant to discuss the request or any outstanding issues. Upon the completion of Department of Parks and Recreation staff's review, a formal

recommendation will be forwarded to the Director of Parks and Recreation.

b. Upon verbal confirmation from the Department of Parks and Recreation, Department of Parks and Recreation staff will contact applicant to provide:

i. A certificate of insurance for all contractors and maintenance assignees, naming the Maryland-National Capital Park and Planning Commission as additionally insured. This Certificate, in the amount of \$1,000,000.00, shall serve as additional insurance for this permit.

ii. A performance bond as collateral for the work to be performed under this permit. This bond must be delivered to M-NCPPC no later than five (5) weeks prior to the pre-construction meeting date and must be valid for a period of three (3) years or until the applicant receives a final approval and acceptance letter from the M-NCPPC.

c. Upon receipt and approval of all the required documents, the Director of Parks and Recreation, will issue the Right of Entry Agreement/Permit. The permit shall include the following standard conditions:

i. Applicant will contact Department of Parks and Recreation at (301) 699-2518 at least forty-eight (48) hours in advance of construction equipment entering the Property. The applicant will meet with Department of Parks and Recreation staff on-site to complete a pre-construction inspection of the property.

ii. Clearing of trees greater than 4 inches in caliper is prohibited.

iii. Applicant shall provide a copy of permit to all Contractors entering the Property and shall ensure a copy of this permit is on-site at all times during the construction process. Park Police may remove any party from the Property not in compliance with these terms.

iv. The Applicant shall take all reasonable measures and precautions to ensure Grantor's Property is free of hazards and remain in a safe condition. Any damages to the Property including all trails, roads and grass surfaces shall be restored to M-NCPPC's satisfaction within thirty (30)-days notice.

v. The Applicant agrees at the end of the project to set up a final inspection at the Property with Department of Parks and Recreation by calling (301) 699-2518. Upon completion and inspection and acceptance by the Department of Parks and Recreation, the performance bond will be returned to the applicant.

vi. The Agreement/Permit will expire within 2 years from issuance unless otherwise noted.



C. PERFORMANCE BONDS

1. INTRODUCTION

A Performance Bond is defined as a Letter of Credit, Surety Bond, Escrow Agreement or other suitable financial guarantee as determined by the Commission's Office of the General Counsel. A Performance Bond is a mandatory requirement when the construction of recreational facilities is required.

1. Types of Performance Bonds

The following types of Performance Bonds are acceptable to The Maryland-National Capital Park and Planning Commission:

Letter of Credit: The Developer obtains an irrevocable Letter of Credit from a bank or other financial institution to secure the cost of improvements or recreation facilities required pursuant to an RFA.

When the requirements of the RFA have been completed, the Letter of Credit or any remaining amount will be released.

Surety Bonds: The Developer obtains an irrevocable surety bond to ensure that the improvements or recreation facilities are constructed as required pursuant to an RFA.

If the Developer fails to construct the improvements as required, the bank or bonding company will be required to either complete the construction or pay the amount of the surety bond to the Commission. When the improvements or recreation facilities are satisfactorily completed, as determined by the Commission, the surety bond or any remaining amount will be released.

Escrow Agreement: The Developer enters into an Escrow Agreement with the Commission, then deposits either cash or certified check or other financial instrument that is readily convertible into cash as deemed acceptable by the Commission's Finance Department. If the Developer fails to complete the improvements within the specified time period, the Commission is entitled to utilize the funds in the account to ensure that the

improvements are completed. When the improvements are satisfactorily completed, as determined by the Commission, any remaining funds will be returned to the Developer. The Commission shall charge a fee of \$350.00 for the administration of each escrow account. This fee shall be paid at the time the funds are provided to the Commission.

2. Procedures for Processing Letters of Credit and Surety Bonds

a. The Developer shall make a written request to the Department of Parks and Recreation (5) five weeks prior to applying for grading permits, for a determination of the required bond amount for the recreation facilities specified in the recorded RFA.

b. The appropriate Department will conduct a cost analysis and set a bond amount. A letter stating the bond amount will then be sent to the Developer.

c. The Letter of Credit or Surety Bond is to be delivered to the appropriate Department as follows:

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation
6600 Kenilworth Avenue
Riverdale, MD 20737
ATTN: Park Planning and Development Division

d. The Commission's Office of the General Counsel will review the Letter of Credit or Surety Bond for legal sufficiency.

e. The following information must be specified on a Surety bond:
Bond number in the upper right-hand corner

The bond must be on the surety company's letterhead

Name and address of surety company,
business telephone number and the bonding company's state of incorporation

Attested signature of a principal or officer of the bonding company and corporate seal

Name, business address, business telephone number, corporate seal, and notarized signature of an attorney-in-fact on behalf of bonding company

Name, business address, business telephone number, Maryland license number and countersignature of a Maryland Resident Agent

Bond amount

Site Plan number and subdivision name

Liber and folio of recorded Recreation Facilities Agreement (RFA)

Statement of unconditional payment in favor of the Commission in the event that the required improvements are not constructed

3. Procedures for Processing Escrow Agreements

a. The Developer shall make a written request to the Department of Parks and Recreation [for public RFAs] five weeks prior to applying for grading permits, for a determination of the required amount for the recreation facilities specified in the recorded RFA.

b. The appropriate Department will conduct a cost analysis to set a bond amount. A letter stating the bond amount will then be sent to the Developer.

c. A signed and notarized Escrow Agreement for the appropriate bond amount will be delivered to either the Planning Department or the Department of Parks and Recreation at the address listed below (see form D-6 for an example Escrow Agreement):

Public Recreation Facilities
The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation
6600 Kenilworth Avenue

Riverdale, MD 20737

ATTN: Park Planning and Development Division

d. Upon submission, the Escrow Agreement will be reviewed by the Commission's Office of the General Counsel and sent to the Commission's Executive Director for signature. If the Agreement is approved, the Developer must submit the fund, in a financial instrument acceptable to the Finance Department, to be placed in an escrow account and pay a \$350 administration fee.

e. The signed and notarized Escrow Agreement will then be returned to the appropriate Department and the applicant will be notified to pick up a copy of the Agreement.

4. Release of Performance Bonds

The Performance Bond will be released upon the satisfactory completion of the requirements of the RFA. The Developer will also be required to sign a Recreation Facilities Certification form (see Appendix A, Form D-8) certifying that the recreation facilities have been constructed or installed in accordance with the approved plans, the Park and Recreation Facilities Guidelines, standards of the latest edition of the Handbook for Public Playground Safety published by the U.S. Consumer Products Safety Commission, the Americans With Disabilities Act, the standards of the American Society of Testing Materials and any equipment manufacturers' specifications. After the certification form is signed, the Performance Bond will be released and/or returned to the Developer.





D. PROJECT FORMS

1. INTRODUCTION

Sample formats for RFAs, performance bonds and other required forms are provided as a general model and may be modified as necessary to fit a particular subdivision or development project. The bracketed [] areas of the sample formats should be filled in with the information relevant to the particular development plan or RFA.





Private Recreation Facilities Agreement

[Subdivision Name]

THIS AGREEMENT made this [Leave Blank] day of [Leave Blank], 20 [Leave Blank] by and between The Maryland-National Capital Park and Planning Commission ("**Commission**"), a public body corporate, and _____, ("**Developer**"), with its principal office located at _____. The Commission and the Developer are collectively referred to in this Agreement as the "**parties.**"

WHEREAS, the Commission is a public body corporate, created by the State of Maryland and authorized by Division II of the Land Use Article of the Annotated Code of Maryland, to maintain and operate a park system within the Metropolitan District; and

WHEREAS, the Commission has delegated authority over the operation of parks and recreation in Prince George's County to the Prince George's County Planning Board ("**Planning Board**"); and

WHEREAS, the Planning Board is charged by Division II of the Land Use Article, of the Annotated Code of Maryland with the authority to approve subdivision plats for recordation in the designated sections of the Maryland-Washington Regional District located in Prince George's County; and

WHEREAS, Section 24-135 of the Subdivision Regulations of the Prince George's County Code provides that, in conjunction with certain types of development, private recreation facilities which equal or exceed the requirements for mandatory dedication may be provided by a subdivision applicant to satisfy the mandatory dedication requirement of the Subdivision Regulations; and

WHEREAS, the Developer is the current owner of certain property that is the subject of [specify the application name and number of preliminary plat, SDP or SP], as shown on a subdivision plat entitled _____. The property being the same land conveyed by deed to, which is recorded in the Land Records of Prince George's County, Maryland, in Liber _____, folio _____, comprising approximately _____ acres of land, being in the _____ Election District, Prince George's County, Maryland; and

WHEREAS, the Developer has proposed to provide private recreation facilities to satisfy the requirements of mandatory dedication; and

WHEREAS, the Commission has accepted the Developer's proposal.

NOW, THEREFORE, in consideration of the acceptance by the Commission of the Developer's offer to provide private recreation facilities in lieu of mandatory dedication, the mutual promises and obligations contained in this Agreement, and for other good and valuable consideration which is acknowledged by the parties, the parties agree to the following provisions:

1. **Recreation Facilities.** The Developer will construct private recreation facilities on that portion of the property being subdivided in compliance with approved plan [specify applicable plan name and number] and this Agreement.

(Optional – list type of facilities and construction schedule if not specifically set forth by the approved plan using the following language)

- (a) The recreation facilities to be constructed by the Developer and the location of same are as follows: (specify facilities by type and amount)**

2. Performance Bonds for Private Recreation Facilities.

- (a) To guarantee the prompt and satisfactory construction of the private recreation facilities referred to in paragraph 1, the Developer, its heirs, successors and assigns, will deliver to the Planning Department, prior to the application for any building permits, a suitable financial guarantee as defined in 2(f) of this Agreement). The amount of the performance bond will be determined by the Planning Department. The Developer will request in writing from the Planning Department a determination as to the amount of the required performance bond not less than two weeks prior to filing an application for building permits.
- (b) The performance bond will run to the benefit of the Commission and not be conditional. It is agreed by the parties that if the Commission finds that the Developer has failed to satisfactorily construct the recreation facilities as required by this Agreement, the Commission may choose, in its sole discretion, to construct the recreation facilities in accordance with the plans filed by the Developer by drawing on the performance bond. The Commission's decision as to the satisfaction of the construction or completion of the facilities will be binding on all parties. All recreation facilities will be constructed in accordance with the standards in the Parks and Recreation Facilities Guidelines, the manufacturer's specifications and the guidelines in the latest edition of the Handbook for Public Playground Safety published by the Consumer Products Safety Commission, American Society of Testing and Materials (ASTM) standards, and the Americans with Disabilities Act (ADA).
- (c) In the event that the performance bond is used by the Commission for the failure to satisfactorily complete construction of any recreation facilities, the Commission will not incur any liability for the construction or completion of the recreation facilities.
- (d) At such time that the Commission determines the recreation facilities have been completed, and the Developer has executed a Recreation Facility Certification, the performance bond or any remainder will be returned to the Developer.
- (e) If the construction of the recreation facilities referred to in paragraph 1, above, is not completed within five (5) years from the date the performance bond was issued, the Commission reserves the right to re-evaluate the amount of the performance bond and to require that the Developer post an additional bond amount.
- (f) Definition: For purposes of this Agreement, adequate financial security means a surety bond, letter of credit, escrow agreement, or other suitable financial guarantee as determined by the Commission's Office of the General Counsel.

- 3. Non-discrimination.** The Developer will not discriminate against any employee or applicant for employment due to age, sex, race, creed, color, national origin, or disability.

- 4. Indemnification.** The Developer will indemnify, save harmless, and defend the Commission from and against all actions, liability, claims, suits, damages, cost or expense of any



The Maryland-National Capital Park and Planning Commission
Prince George's County Planning Department

14741 Governor Oden Bowie Drive
 Upper Marlboro, MD 20772

kind that may arise, or be alleged to have arisen, out of or in connection with the Developer's performance of, or failure to perform, any of the obligations under the terms of this Agreement.

5. **Binding Covenant.** The provisions of this Agreement will be a covenant which runs with the land and is binding on the Developer, its heirs, successors and assigns. In the event that the Developer assigns this RFA to more than one successor, the Commission reserves the right to require a new or amended RFA for each successor.
6. **Recordation.** This Agreement will be recorded in the Land Records of Prince George's County prior to the acceptance of the above-referenced plat by the Development Review Division. All recording fees will be paid by the Developer. The original recorded RFA will be returned to the Development Review Division. The failure of the Developer to record this Agreement will preclude the issuance of any building permits applied for in the above-named subdivision.
7. **Modification.** Any substantial modification to this Agreement, as determined by the Commission, will be permitted only upon the filing of a new preliminary plat or site plan by the Developer, approval by the Planning Board or its designee, and the recording of an Amended Recreation Facilities Agreement.
8. **Entire Agreement.** This instrument contains the entire Agreement between the parties and will not be modified except by written agreement signed by the parties.
9. **Severability.** The invalidity or illegality of any provision of this Agreement will not affect the remainder of this Agreement or any other provision.
10. **Applicable Law and Forum.** This Agreement will be interpreted and enforced in accordance with the laws of the State of Maryland.
11. **Waiver.** The failure of the Commission to enforce any part of this Agreement will not be deemed as a waiver thereof.
12. **Termination.** This Agreement will extend for twenty-five (25) years from the date of execution. All obligations of the Developer under this Agreement will become due one (1) year prior to the expiration of this Agreement.
13. **Recitals.** The Recitals are hereby incorporated in this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be properly executed on the day and year first written above.

SEAL/WITNESS:

[Developer Name]

[Signature] _____

Name: [Print]

Title: [Print]



The Maryland-National Capital Park and Planning Commission
Prince George's County Planning Department

14741 Governor Oden Bowie Drive
 Upper Marlboro, MD 20772

ATTEST:

THE MARYLAND-NATIONAL CAPITALPARK
 AND PLANNING COMMISSION

Joseph Zimmerman
 Secretary-Treasurer

 Asuntha Chiang-Smith
 Executive Director

STATE OF MARYLAND :
 COUNTY OF PRINCE GEORGE'S :

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Developer representative], [title] who acknowledged that [Developer representative] is authorized to execute the above Agreement.

Witness my hand and official seal this _____ day of _____, 20____.

[signature] _____
 Notary Public

My commission expires: _____

STATE OF MARYLAND :
 COUNTY OF PRINCE GEORGE'S: ss

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared Asuntha Chiang-Smith, Executive Director, who acknowledged that she is authorized to execute the above Agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20____.

[signature] _____
 Notary Public

My commission expires: _____

Sample Form D-1: Public Recreation Facilities Agreement

[Subdivision Name]

THIS PUBLIC RECREATION FACILITIES AGREEMENT (hereinafter "Agreement" or "RFA") is made this _____ day of _____, 20____, by and between THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION (hereinafter the "Commission"), a public body corporate, and _____, (hereinafter the "Developer"), with its principal office located at _____.

WHEREAS, the Commission is a public body corporate, created by the State of Maryland and authorized by Article 28 of the Annotated Code of Maryland, to maintain and operate a park and recreation system within the Metropolitan District; and

WHEREAS, the Commission has delegated authority over the operation of parks and recreation in Prince George's County to the Prince George's County Planning Board (hereinafter the "Planning Board"); and

WHEREAS, the Planning Board is charged by Article 28 of the Annotated Code of Maryland, with the authority to approve subdivision plats for recordation in the designated sections of the Maryland-Washington Regional District located in Prince George's County; and

WHEREAS, Section 24-135 of the Subdivision Regulations of the Prince George's County Code provides that, in conjunction with certain types of development, recreation facilities which equal or exceed the requirements for mandatory dedication may be provided by a subdivision applicant to satisfy the mandatory dedication requirement of the Subdivision Regulations; and

WHEREAS, the Developer is the current owner/applicant of certain property which is the subject of [specify the application name and number of Preliminary Plan, SDP, or SP], as shown on a Final Plat of Subdivision entitled [specify subdivision plat name], said property being the same land conveyed by deed to _____ which is recorded in the Land Records Office of Prince George's County, MD, in Liber _____, Folio _____, comprising approximately _____ acres of land, being in the _____ Election District, Prince George's County, MD; and

WHEREAS, the Developer has proposed to provide public recreation facilities to satisfy the requirements and provisions of the Prince George's County Subdivision Regulations or other requirements; and

WHEREAS, the Commission has accepted the Developer's proposal.

NOW, THEREFORE, in consideration of the acceptance by the Commission of the Developer's offer to provide public recreation facilities, the mutual promises and obligations contained herein and for other good and valuable consideration which is hereby acknowledged, the parties hereby have agreed to the following provisions:

1. Recreation Facilities

- a) The Developer or its/his/her successors and assigns (collectively hereinafter the "Developer") shall construct and/or install on [specify the portion of the property being subdivided], in accordance with approved plan [specify applicable plan name and

number], the recreation facilities approved by the Prince George's County Planning Board as specified below. All recreation facilities shall be constructed and/or installed in accordance with the current editions of the Park and Recreation Facilities Guidelines, the Handbook for Public Playground Safety, published by the U.S. Consumer Products Safety Commission, the manufacturers' specifications, American Society of Testing and Materials (ASTM) F1487 98 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, ASTM F1292 99 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment, ASTM F1951 99 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment, and the Americans with Disabilities Act (ADA).

- b) The recreation facilities to be constructed by the Developer and the time period in which said recreation facilities are to be constructed, are as follows:

[Specify facilities by type, amount and the time period in which facilities are to be completed.]

2. Performance Bond - Public Recreation Facilities

- a) To guarantee the prompt and satisfactory construction of the recreation facilities set forth in paragraph one above, and the complete performance under this RFA, the Developer shall deliver to the Department of Parks and Recreation, at least five weeks prior to any application for grading permits, an irrevocable surety bond, Letter of Credit or other suitable financial guarantee (collectively, Performance Bond) as determined by the Commission's Office of the General Counsel. The amount shall be determined by the Department of Parks and Recreation. The Performance Bond must be submitted and approved prior to the issuance of any grading permits for land owned by the Commission or land to be conveyed to the Commission. The Developer shall request in writing from the Department of Parks and Recreation a determination as to the amount of the required Performance Bond at least five weeks prior to the application for any grading permits in order to allow for timely processing.
- b) The Performance Bond shall run to the sole benefit of the Commission and not be conditional. It is agreed by the parties hereto that the Commission shall utilize the Performance Bond if it finds that the Developer has failed to satisfactorily construct or install the recreation facilities or perform as required by this RFA and the plans filed with the Commission for the recreation facilities. The Commission's decision as to the satisfaction of the construction of the facilities shall be binding on all parties.
- c) In the event that the Performance Bond is used by the Commission due to the failure of the Developer to satisfactorily complete construction of any recreation facilities or to satisfy the requirements of the RFA, the Commission shall not incur any responsibility or liability for the construction, installation or completion of said recreation facilities, and the Developer shall remain financially liable for such recreational facilities.
- d) The Developer shall notify the Commission in writing to request an inspection upon the completion of the construction and/or installation of all required recreation facilities. Upon a satisfactory inspection of the recreation facilities, the Developer or a qualified representative of the Developer will be required to complete a Recreation Facilities Certification form (see Appendix A- Form IV-H of the Park and Recreation Guidelines) certifying that the recreation facilities have been constructed in accordance with the

1 approved plans, the current editions of the Park and Recreation Facilities Guidelines,
2 Handbook for Public Playground Safety published by the U.S. Consumer Products
3 Safety Commission, ASTM F 1487, ASTM F 1292 99, ASTM F 1951 99, the
4 manufacturers' specifications and the Americans with Disabilities Act (ADA). After
5 certification by the Commission, the Performance Bond or any remainder thereof will
6 be released to the Developer.

- 7
8 e) If the construction of the recreation facilities specified in paragraph one, above, is not
9 completed within five years from the date the Performance Bond was issued, the
10 Commission reserves the right to reevaluate the amount of the Performance Bond and
11 to increase or decrease same for any recreation facilities that have not been constructed.

12
13 3. Nondiscrimination. The Developer shall not discriminate against any individual due to age,
14 gender, race, creed, color, national origin or physical disability.

15
16 4. Indemnification. The Developer shall indemnify and save harmless the Commission from
17 and against all actions, liability, claims, suits, damages, costs or expenses of any kind arising
18 from the Developer's negligence or failure to perform any of the obligations under the
19 terms of this Agreement.

20
21 5. Binding Covenant. The provisions of this Agreement shall constitute a covenant which
22 runs with the land and are binding on the Developer and his/her successors and/or assigns.
23 In the event that the Developer assigns this RFA to more than one successor, the
24 Commission reserves the right to require a new or amended RFA for each successor.

25
26 6. Recordation. This Agreement shall be recorded in the Land Records Office of Prince
27 George's County prior to acceptance of the above-referenced Final Plat of Subdivision by
28 the Development Review Division. All recording fees shall be paid by the Developer. The
29 original recorded RFA shall be returned to the Department of Parks and Recreation.
30 Failure of the Developer to record this Agreement shall preclude the issuance of any
31 grading permits for the above-named subdivision.

32
33 7. Modification. Any substantial modification to this Agreement, as determined by the
34 Commission, shall be permitted only upon the filing of a new Preliminary Plat or Site Plan
35 by the Developer, approval by the Planning Board or its designee and the recording of an
36 amended RFA.

37
38 8. Entire Agreement. This instrument contains the entire agreement between the parties and
39 shall not be modified except by written Agreement signed by the parties and attached
40 hereto.

41
42 9. Severability. The invalidity or illegality of any provision of this Agreement shall be severed
43 from this Agreement, and shall not affect the remainder of this Agreement or any other
44 provision contained herein.

45
46 10. Applicable Law and Forum. This Agreement shall be enforced in any court of competent
47 jurisdiction in Prince George's County, Maryland, and interpreted in accordance with the
48 laws of the State of Maryland.

49
50 11. Waiver. The failure of the Commission to enforce any part of this Agreement shall not be
51 deemed as a waiver thereof.

12. Termination. This Agreement shall extend for the duration of the applicable Site Plan, or 25 years from the date of execution. All obligations of the Developer under this Agreement shall become due one (1) year prior to the expiration of this Agreement.

13. Recitals. The Recitals are hereby incorporated in this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be properly executed on the day and year first written above.

SEAL/WITNESS: [DEVELOPER'S NAME]

By: [Signature]
Name: [Print]
Title: [Print]

ATTEST: THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

By: _____
(INSERT NAME)
Secretary-Treasurer

By: _____
(INSERT NAME)
Executive Director

STATE OF MARYLAND
COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Developer representative's name], [title], who acknowledged that he/she is authorized to execute the above Agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20____.

[Signature] _____
Notary Public

My commission expires: _____

STATE OF MARYLAND
COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Executive Director's name], Executive Director for The Maryland-National Capital Park and Planning Commission, who acknowledged that he/she is authorized to execute the above Agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____
Notary Public

My commission expires: _____

After recordation, return to:

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation
6600 Kenilworth Avenue
Riverdale, MD 20737
ATTN: Park Planning and Development Division

Sample Form D-2: Amended Recreation Facilities Agreement

THIS AMENDED AGREEMENT ("Agreement") is made this ____ day of _____, 20__, to amend the Recreation Facilities Agreement, dated _____, by and between THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, a public body corporate, (hereinafter the "Commission") and _____ (hereinafter the "Developer"), with offices located at _____.

WHEREAS, the Developer (or previous Developer) and the Commission entered into a Recreation Facilities Agreement (RFA), dated _____, and recorded at Liber _____, Folio _____, for the [Subdivision name], [Plat book, Plat], in the Land Records Office of Prince George's County, Maryland, whereby the Developer agreed to construct certain recreation facilities; and

WHEREAS, the Developer and the Commission agree that said Recreation Facilities Agreement (RFA) requires an amendment, and [Specify reason for amendment and applicable approval authority, e.g., clerical error in the original RFA, or in accordance with revisions to approved plans by the Prince George's County Planning Board or its designee. [The date of approval and the Site Plan name and number should also be specified.]

NOW, THEREFORE, WITNESSETH, in consideration of the promises contained herein and for other good and valuable consideration, the Developer and the Commission hereby agree as follows:

1. [List specific amendments]
2. This Agreement to amend shall be recorded in the Land Records Office of Prince George's County. All recording fees shall be paid by the Developer.
3. All remaining terms, obligations and conditions of the RFA dated _____, except as specified herein, shall remain in full force and effect.

This Agreement shall be attached to the original RFA.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to amend to be executed on the date first written above.

SEAL/WITNESS: [DEVELOPER'S NAME]

By: [Signature] _____

Name: [Print] _____

Title: [Print] _____

ATTEST: THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

By: _____
 (INSERT NAME)
 Secretary-Treasurer

By: _____
 (INSERT NAME)
 Executive Director

STATE OF MARYLAND
 COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Developer's representative], [title], who acknowledged that he/she is authorized to execute the above Agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____
 Notary Public
 My commission expires: _____

STATE OF MARYLAND
 COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Executive Director's name], Executive Director for The Maryland-National Capital Park and Planning Commission, who acknowledged that he/she is authorized to execute the above Agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____
 Notary Public
 My commission expires: _____

After recordation, return to:

The Maryland-National Capital Park and Planning Commission
 Department of Parks and Recreation
 6600 Kenilworth Avenue
 Riverdale, MD 20737
 ATTN: Park Planning and Development Division

Sample Form D-3 :Rescinded Recreation Facilities Agreement

THIS AGREEMENT TO RESCIND ("Agreement") is made this _____ day of _____, 20__, and hereby rescinds the Recreation Facilities Agreement dated _____ day of _____, 20__, between THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, a public body corporate (hereinafter the "Commission"), and _____ (hereinafter the "Developer"), with its principal offices located at _____.

WHEREAS, the Commission and the Developer (or previous Developer) entered into a Recreation Facilities Agreement ("RFA") dated _____, recorded in Liber _____, Folio _____, for the property _____, shown on a plat of subdivision entitled _____, recorded in Plat Book _____ at Plat _____; and

WHEREAS, the Developer and the Commission have agreed to rescind said RFA.

NOW, THEREFORE, WITNESSETH, in consideration of the promises contained herein and for other good and valuable consideration, the parties hereby agree as follows:

1. [Specify reasons/justification for rescinding]
2. The RFA dated _____, and recorded in Liber _____ Folio _____, in the Prince George's County Land Records Office, is hereby rescinded and declared null and void.
3. This Agreement to rescind shall be recorded in the Land Records Office of Prince George's County. All recording fees are to be paid by the Developer.
4. The above Recitals are incorporated herein.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to rescind to be executed on the date first written above.

SEAL/WITNESS: [DEVELOPER'S NAME]

By: [Signature] _____

Name: [Print] _____

Title: [Print] _____

ATTEST: THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

By: _____
(INSERT NAME)
Secretary-Treasurer

By: _____
(INSERT NAME)
Executive Director

STATE OF MARYLAND
COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Developer representative name], [title], who acknowledged that he/she is authorized to execute the above Agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____
Notary Public
My commission expires: _____

STATE OF MARYLAND
COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Executive Director's name], Executive Director for The Maryland-National Capital Park and Planning Commission, who acknowledged that he/she is authorized to execute the above Agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____
Notary Public
My commission expires: _____

After recordation, return to:

The Maryland-National Capital Park and Planning Commission
Department of Parks and Recreation
6600 Kenilworth Avenue
Riverdale, MD 20737
ATTN: Park Planning and Development Division

Sample Form D-4: Irrevocable Letter of Credit

The Maryland-National Capital Park and Planning Commission

Date:

The Maryland-National Capital Park and Planning Commission
 Department of Parks and Recreation
 6600 Kenilworth Avenue
 Riverdale, MD 20737
 ATTN: Park Planning and Development Division

Re: Irrevocable Letter of Credit No.:

Subdivision Name:

Phase/Section:

Approved Plan No.:

Dear Sir/Madam:

We hereby authorize The Maryland-National Capital Park and Planning Commission (hereinafter the "Commission") to draw on the _____ (also referred to as the "Bank"), for the account of _____ in the amount of _____ (\$_____). In the event that the terms of the Recreation Facilities Agreement ("RFA") dated _____, 20__, and recorded in Liber _____, folio _____, have not been performed as required, the Commission shall draw on the account by its Sight Draft which must be accompanied by written certification that the terms of the RFA have not been completed.

This irrevocable Letter of Credit shall expire one year from the above-referenced date. It is a condition of this Letter of Credit, however, that it shall automatically renew on an annual basis unless the Bank shall notify the Department of Parks and Recreation by registered letter, 60 days prior to the expiration date that it elects not to renew this Letter of Credit. Upon receipt of such notice, the Commission may issue its Sight Draft on the Bank, accompanied by the above-stated documentation for the full amount of the Letter of Credit.

Upon issuance of its Sight Draft, the Commission shall not incur any liability for the construction or completion of the recreation facilities specified in the aforementioned RFA.

Payment of the Sight Draft shall be made within 15 days of receipt by the Bank of the Sight Draft. This Letter of Credit is subject to the Uniform Commercial Code and all applicable provisions as stated in the Commercial Law Article, Maryland Code Annotated, and shall be construed and enforced in accordance with the laws of the State of Maryland.

SEAL/WITNESS:

[NAME OF BANK]

By: [Signature] _____

Name: [Print] _____

Title: [Print] _____

1
2 ACKNOWLEDGMENT3
4 STATE OF MARYLAND

5 COUNTY OF PRINCE GEORGE'S

6
7 On this _____ day of _____, 20__, before me personally appeared [Bank
8 representative's name] _____, known to me to be the [Title] _____ of
9 [Bank name] _____, who executed the foregoing instrument, and acknowledged
10 to me that he/she/they executed same as and for the act and deed of the Bank.

11
12 [Signature] _____

13 Notary Public

14 My commission expires: _____
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Sample Form D-5: Surety Bond

Bond No.:

(Must be submitted on Surety's letterhead)

KNOW ALL PERSONS BY THESE PRESENTS that on this _____ day of _____, 20____
[name and business address of Developer], as Principal hereinafter called the Developer, and
[name, business address of bonding company], as Surety, hereinafter the Surety, are held and
firmly bound under this obligation unto The Maryland-National Capital Park and Planning
Commission, Department of Parks and Recreation, Attention: Park Planning & Development
Division, 6600 Kenilworth Avenue, Riverdale, Maryland 20737 as Obligee, (hereinafter the
"Commission"), in the amount of _____ Dollars (\$_____). The
Developer and Surety hereby bind and obligate themselves, their heirs, executors,
administrators, successors and assigns, jointly and severally, for payment of said sum as set
forth below:

1. **RFA.** The Developer has entered into a Recreation Facilities Agreement, (hereinafter
"RFA"), with the Commission per the Approved Plan No. _____, dated _____
20____, and recorded in Liber _____, Folio _____, for, among other things, the
construction of certain recreation facilities in the _____ Subdivision, recorded in
Plat Book _____ Plat _____. The RFA is incorporated herein by reference and
made a part hereof.
2. **Term.** The condition of this obligation is such that, if the Developer shall promptly
perform in all respects the terms and conditions of the RFA, which shall be approved and
accepted by the Commission, this obligation shall become null and void; otherwise it shall
remain in full force and effect.
3. **Waiver.** The Surety hereby waives notice of any modification of the RFA, or extension of
time for same, granted by the Commission to the Developer.
4. **Default.** Upon default under the RFA by the Developer and notice to the Surety, the
Surety shall promptly remedy the default within 30 days or pay to the Commission the
amount bound under this obligation.
5. **Default Remedy.** To remedy any default of the Developer, the Surety shall either pay the
Commission the amount bound under this obligation, or fulfill the terms and conditions of
the RFA.
6. **Indemnification.** The Commission shall not incur any liability or responsibility for the
construction or completion of the recreation facilities specified in said RFA, and the Surety
and Developer shall save and hold harmless the Commission from and against all actions,
liability, claims, suits, damages, costs or expenses of any kind incurred due to the failure of
the Developer, his/her successors or assigns to comply with the requirements of the RFA
or any authorized modifications thereto, or due to the negligence of the Developer, his/her
employees or agents.
7. **Forum.** This obligation shall be enforced in a court of competent jurisdiction in Prince
George's County, Maryland, in accordance with the laws of Maryland.

IN WITNESS WHEREOF, the Developer and Surety have executed this obligation under seal
this _____ day of _____, 20____.

SEAL [DEVELOPER REPRESENTATIVES NAME]

[Signature] _____

By: Name: [Print] _____

Title: [Print] _____

SEAL/WITNESS: [SURETY NAME]

[Signature] _____

By: Name: [Print] _____

Title: [Print] _____

[Note: All signatures must be notarized.]

Countersignature of Maryland Resident Agent:

[Name] _____

[Address and Zip Code] _____

[Registration No.] _____

[Telephone No.] _____

Note: This information must be provided completely in order for bond to be approved.

Note: A certified copy of Power of Attorney of the person signing for the Surety Company must be filed with the bond. A corporate acknowledgment is required when a principal is a corporation.

STATE OF MARYLAND

COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Developer representative's name], [title], who acknowledged that he/she is authorized to execute the above agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____

Notary Public

My commission expires: _____

STATE OF MARYLAND

COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Surety representative's name], [title], who acknowledged that

he/she is authorized to execute the above agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____

Notary Public

My commission expires: _____

Sample Form D-6: Escrow Agreement

THIS ESCROW AGREEMENT is made this _____ day of _____, 20____, by and between The Maryland-National Capital Park and Planning Commission, a public body corporate, (hereinafter alternatively referred to as the “Commission” and the “Obligee”), and [Developer name], (hereinafter alternatively referred to as the “Developer” and the “Obligor”), with offices located at _____.

WHEREAS, the Developer is the current owner of a certain parcel known as [specify name of parcel], as shown on a subdivision plat entitled [specify name of subdivision], recorded in the Land Records Office of Prince George's County, Maryland, in Plat Book _____, Plat _____ being in the _____ Election District, Prince George's County, Maryland; and

WHEREAS, the Developer has offered to provide private recreation facilities on the property known as [specify application name and number], in lieu of mandatory dedication, as provided for in Section 24-135 of the Subdivision Regulations for Prince George's County, Maryland; and

WHEREAS, the Commission has accepted the Developer's offer to provide private recreation facilities in lieu of mandatory dedication; and

WHEREAS, the Developer desires to deposit funds which are to be held by the Commission in escrow to secure performance of a recreation facilities agreement entered into by the Developer; and

WHEREAS, the Commission agrees to hold said escrow until the completion of the terms of said Recreation Facilities Agreement.

NOW, THEREFORE, in consideration of the monies to be paid by the Obligor, the promises contained herein, and for other good and valuable consideration, the Parties hereby agree as follows:

1. Escrow. The Developer shall deposit _____ (\$_____) with the Commission to be held in escrow as a performance bond to secure the satisfactory completion of the terms and conditions of the Recreation Facilities Agreement (“RFA”) dated _____, for the [subdivision name], and recorded in Liber _____, Folio _____, in the Land Records Office of Prince George's County, Maryland. Said RFA is incorporated herein by reference and made a part hereof.
2. Escrow Agent. The Obligor and Obligee hereby appoint and designate the Secretary-Treasurer of the Commission (or its designee), as the Escrow Agent (hereinafter referred to as the “Escrow Agent”) to keep and preserve the escrow amount in its possession. The Escrow Agent shall serve without bond and shall not be liable to the Obligor for release of escrow to the Commission.
3. Use of Escrow. The Commission shall use the funds held in escrow if it finds that the Developer has failed to satisfy the terms and conditions of the RFA, or if the construction of the recreation facilities is not in accordance with the plans filed with the Planning Department. The Commission's decision as to the satisfaction of the construction of the facilities shall be binding on all parties. All recreation facilities shall be constructed and/or installed in accordance with the designated standards of the Department of Parks and Recreation.

In the event that the amount held in escrow is utilized by the Commission due to the Developer's failure to satisfy the terms and conditions of the RFA, or failure to complete the construction of any required recreation facilities, the Developer shall save and hold harmless the Commission for the construction or completion of said recreation facilities, and the Developer shall still remain financially liable for same. Upon completion of the construction and/or installation of the recreation facilities, the Commission shall return the amount held in escrow, or any remainder thereof, to the Developer. This paragraph shall survive the termination of this Escrow Agreement.

4. Termination. This Agreement will terminate upon either the satisfactory compliance with the terms and conditions of the RFA and the construction of the required recreation facilities, or the replacement by the Developer and acceptance by the Commission of a Performance Bond or other suitable financial instrument in a sum equivalent to the amount required for escrow. Only upon compliance with these conditions will this Escrow Agreement terminate and any remaining amounts held in escrow shall, at that time, be returned to the Developer.
5. Interest. The Commission shall maintain the funds held in escrow in a noninterest bearing account.
6. Modification. Any substantial modification to this Escrow Agreement, as determined by the Commission, shall be permitted only upon the filing of a new Preliminary Plat or Site Plan by the Developer, approval by the Planning Board or its designee, and the recording of an amended RFA.
7. Entire Agreement. This instrument contains the entire agreement between the parties and shall not be modified except by written agreement signed by the parties and attached hereto.
8. Severability. The invalidity or illegality of any provision of this Escrow Agreement shall be severed from this Agreement and shall not affect the remainder of this Escrow Agreement or any other provision contained herein.
9. Applicable Law and Forum. This Escrow Agreement shall be enforced in any court of competent jurisdiction in Prince George's County, Maryland, and interpreted in accordance with the laws of the State of Maryland.
10. Waiver. The failure of the Commission to enforce any part of this Agreement shall not be deemed as a waiver thereof.
11. The above recitals shall be incorporated herein.

IN WITNESS WHEREOF, the parties hereto have caused this Escrow Agreement to be executed on the day and year first written above.

SEAL: [Developer Representative's Name]

[Signature] _____

Name: [Print] _____

Title: [Print] _____

ATTEST: THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

By: _____
(INSERT NAME)
Secretary-Treasurer

By: _____
(INSERT NAME)
Executive Director

STATE OF MARYLAND
COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Developer representative's name], [title], who acknowledged that he/she is authorized to execute the above Agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20____.

[Signature]
Notary Public

My commission expires: _____

Sample Form D-7: Surety Bond (For Right of Entry Agreement With DPR)

Bond No.:

(Must be submitted on Surety's letterhead)

KNOW ALL PERSONS BY THESE PRESENTS that on this _____ day of _____, 20____ [name and business address of Developer], as Principal (hereinafter called the "Developer"), and [name, business address of bonding company], as Surety, (hereinafter the "Surety"), are held and firmly bound under this obligation unto The Maryland-National Capital Park and Planning Commission, Department of Parks and Recreation, Attention: Park Planning & Development Division, 6600 Kenilworth Avenue, Riverdale, Maryland 20737 as Obligee, (hereinafter the "Commission"), in the amount of _____ Dollars (\$_____). The Developer and Surety hereby obligate and bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, for payment of said sum as set forth below:

1. Right of Entry Agreement. The Developer has entered into a Right of Entry Agreement, (hereinafter "REA"), with the Commission dated _____, which allows the Developer the right to enter Commission-owned property specifically identified therein for the sole purpose(s) outlined therein. Said REA allows work to be performed by the Developer in conjunction with the _____ subdivision and is incorporated herein by reference and made a part hereof.
2. Term. The condition of this obligation is such that, if the Developer shall promptly perform in all respects the terms and conditions of the REA, which shall be approved and accepted by the Commission, this obligation shall become null and void; otherwise it shall remain in full force and effect.
3. Waiver. The Surety hereby waives notice of any modification of the REA, or extension of time for same, granted by the Commission to the Developer.
4. Default. Upon default under the REA by the Developer and notice to the Surety, the Surety shall promptly remedy the default within 30 days or pay to the Commission the amount bound under this obligation.
5. Default Remedy. To remedy any default of the Developer, the Surety shall either pay the Commission the amount bound under this obligation, or fulfill the terms and conditions of the REA.
6. Indemnification. The Commission shall not incur any liability or responsibility for the construction or completion of any work specified in said REA, and the Surety and Developer shall save and hold harmless the Commission from and against all actions, liability, claims, suits, damages, costs or expenses of any kind incurred due to the failure of the Developer, his/her successors or assigns to comply with the requirements of the REA or any authorized modifications thereto, or due to the negligence of the Developer, his/her employees or agents.
7. Forum. This obligation shall be enforced in a court of competent jurisdiction in Prince George's County, Maryland, in accordance with the laws of Maryland.

IN WITNESS WHEREOF, the Developer and Surety have executed this obligation under seal
this _____ day of _____, 20__.

SEAL [DEVELOPER REPRESENTATIVE' NAME]

[Signature] _____

By: Name: [Print] _____

Title: [Print] _____

SEAL/WITNESS: [SURETY NAME]

[Signature] _____

By: Name: [Print] _____

Title: [Print] _____

[Note: All signatures must be notarized.]

Countersignature of Maryland Resident Agent:

[Name] _____

[Address and Zip Code] _____

[Registration No.] _____

[Telephone No.] _____

Note: This information must be provided completely in order for bond to be approved.

Note: A certified copy of Power of Attorney of the person signing for the Surety Company must be filed with the bond. A corporate acknowledgment is required when a principal is a corporation.

STATE OF MARYLAND

COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Developer representative's name], [title], who acknowledged that he/she is authorized to execute the above agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____

Notary Public

My commission expires: _____

STATE OF MARYLAND

COUNTY OF PRINCE GEORGE'S

I hereby certify that before me, the subscriber, a Notary Public in and for the State and County aforesaid, personally appeared [Surety representative's name], [title], who acknowledged that he/she is authorized to execute the above agreement for the reasons and purposes stated therein.

Witness my hand and official seal this _____ day of _____, 20__.

[Signature] _____

Notary Public

My commission expires: _____

Sample Form D-8: Recreation Facilities Certification (Public)

TO: Department of Parks and recreation, Park Planning and Development Division,
The Maryland-National Capital Park and Planning Commission

SUBJECT: _____ Project Name _____

DSP/SDP Number (s): _____

Recreational Facilities Agreement (RFA): Recorded in Liber _____ @ Folio _____

Permit Number(s): _____

Recreation Facilities covered by this Certification:

This is to certify that based upon inspection of the above-named facilities by myself, or under my supervision, these facilities have been properly installed in accordance with all of the following:

1. The above-referenced Detailed Site Plan (DSP)/Specific Design Plan (SDP) and permit(s).
2. The Park and Recreation Facilities Guidelines (latest edition published by the M-NCPPC).
3. All applicable standards of the Handbook for Public Playground Safety (latest edition) published by the U. S. Consumer Product Safety Commission.
4. The American with Disabilities Act.
5. American Society for Testing and Materials

Registered Architect Number: _____

Registered Civil Engineer Number: _____

Registered Landscape Architect Number _____

PROFESSIONAL SEAL

SIGNATURE: _____

DATE: _____

Sample Form D-9: Recreation Equipment Substitution Request

Project Name: _____

Section or Phase of Development: _____

Name and Address of Applicant:

Authorization:

I _____, Developer/Owner of the above-referenced subdivision, am requesting substitution of the equipment specified below. Originally indicated on the equipment schedule of the site plan/landscape plan #_____.

Signature

Previously Approved Items		Proposed Substitutions	
Name of Item		Name of Item	
Manufacturer		Manufacturer	
Catalog Number		Catalog Number	
Cost		Cost	
Quantity		Quantity	

In the space below, justify the substitution by comparing pertinent factors affecting product durability to prove equality or superiority, i.e., wood treatment, finishing, connecting system, detailing, etc. Attach complete specifications and cut sheets or other graphic representations for both the originally specified item and the proposed substitution.

FOR OFFICE USE ONLY:

Disapproved – substitution not equal or better

Approved

Name: _____ Date: _____



E. LEVEL OF SERVICE (LOS) STANDARD FOR LAND DEDICATION BY SERVICE AREA



TABLE 1: MEDIAN PER ACRE RESIDENTIAL LAND VALUE (2014-2018)

SERVICE AREA	LAND VALUE	LAND VALUE PER ACRE
	TOTAL	MEDIAN
1	\$ 2,272,532,691	\$ 469,626
2	\$ 2,715,407,272	\$ 600,957
3	\$ 3,757,702,122	\$ 405,362
4	\$ 1,269,135,671	\$ 436,646
5	\$ 1,378,199,415	\$ 392,174
6	\$ 3,446,057,152	\$ 435,498
7	\$ 1,300,930,858	\$ 437,791
8	\$ 3,079,027,672	\$ 310,573
9	\$ 1,864,720,295	\$ 366,182

TABLE 2: LOS STANDARD FOR LAND DEDICATION, BY SERVICE AREA, IN ACRES PER DWELLING UNIT

SERVICE AREA	SINGLE-FAMILY DWELLING UNIT	MULTI-FAMILY HOUSING UNIT
1	0.01272	0.00977
2	0.01590	0.01221
3	0.01503	0.01154
4	0.00809	0.00622
5	0.01676	0.01288
6	0.02283	0.01687
7	0.02196	0.01687
8	0.01358	0.01043
9	0.01647	0.01265



F. PLANT LIST

1. Introduction

In this section are representative plant list recommendations when designing parks and parks facilities. Included are sample plant lists to assist the landscape designer when implementing their final designs. The plant lists are a sampling of suggestions, and past experiences and not intended to be all inclusive. For example, if a plant is not on the Poisonous/Toxic plant list, do not assume that the plant is safe and non toxic.

2. List of Resources

- Woodland Conservation Manual (M-NCPPC)
- Prince George's County Landscape Manual (M-NCPPC)
- ANSI Z133.1-2000 for Arboricultural Operations, American National Standards Institute(ANSI)
- Standard Procedures and Specifications-Planting Operations, American Association of Nurserymen.
- Invasive Species, Maryland Department of Agriculture, Maryland Invasive Species Council, Plant Protection and Weed Management Section
- Maryland Cooperative Extension Service
- Cornell University, Manes and Tails Organization (from Merck Veterinary Manual)
- Equus Magazine
- Howard County Animal Control
- Maryland Department of Natural Resources: The Maryland Roadside Tree Law, Title 08, Law and Regulations- Permits and Certified Tree Care Experts

Table A: MNCPPC Preferred Plants

Scientific Name	Common Name	Site Hydrology	Light Reqs	Drought Tolerance	Salt Tolerance	Deer Tolerance
<i>Tree</i>						
Magnolia virginiana 'Green Mile'	Sweetbay Magnolia	Wet to medium wet	Full sun to part sun		Yes	High
Magnolia virginiana 'Jim Wilson'	Sweetbay Magnolia	Wet to medium wet	Full sun to part sun		Yes	High
Platanus occidentalis	American Sycamore	Wet to medium wet	Full sun to part sun			
Quercus bicolor	Swamp White Oak	Wet to medium wet	Full sun to part sun			
Quercus phellos	Willow Oak	medium wet				
Acer rubrum	Red maple	Wet to medium wet	Full sun to part sun	Yes	No	Suseptible as a sapling, resistant once established
Acer rubrum 'October Glory'	October Glory maple	Wet to medium wet	Full sun	Yes	No	sapling, resistant once established
Quercus phellos	Willow Oak	Average				
Quercus alba	White Oak, Stave Oak	Average				
Quercus coccinea	Scarlet oak	Average				
Quercus falcata	Southern Red Oak	Average				
Quercus michauxii	Swamp chestnut oak, cow oak	Average				
Quercus nigra	Water oak	Average				
Quercus palustris	Pin oak	Average				
Quercus prinus	Chestnut Oak, Rock Oak	Average				
Quercus velutina	Black oak, quercitron oak	Average				
Carya alba	Mockernut Hickory	Average	Part sun to shade			
Carya glabra	Pignut Hickory	Average	Full sun to part sun			
Quercus velutina	Black oak	to dry	Full sun	Yes		
Quercus alba	White Oak, Stave Oak	Medium dry to dry				

Scientific Name	Common Name	Site Hydrology	Light Reqs	Drought Tolerance	Salt Tolerance	Deer Tolerance
Quercus coccinea	Scarlet oak	Medium dry to dry				
Quercus falcata	Southern Red Oak	Medium dry to dry				
Carya alba	Mockernut Hickory	Medium dry to dry	Part sun to shade	Yes	Unknown, related species have poor tolerance	Once established
Carya glabra	Pignut Hickory	Medium dry to dry	Full sun to part sun			
<i>Shrub</i>						
Cephalanthus occidentalis 'Sugar Shack'	Sugar Shack Buttonbush	Wet to medium wet	Sun to part sun	No	Yes	
Ceanothus americanus	New Jersey Tea	Average				
Comptonia peregrina	Sweet Fern	Average				
<i>Grass</i>						
Deschampsia cespitosa 'Goldtau'	Golden Dew Tufted Hair Grass	Wet to medium wet	Sun to Part Shade	No		
Eriophorum virginicum	Tawny Cottongrass	Wet to medium wet	Sun	No	Low	Moderate
Juncus effusus	Soft Rush	Wet to medium wet	Sun	No		Moderate
Juncus effusus 'Big Twister'	Giant Corkscrew Rush	Wet to medium wet	Sun	No		
Rhynchospora colorata	White-topped Star Sedge	Wet to medium wet	Sun	No		High
Dicanthelium clandestinum	Deer-Tongue Grass	Wet to medium wet	Part sun to shade	Yes		High
Muhlenbergia lindheimeri	Blue Muhly	Average	Sun	Yes	High	High
Panicum virgatum 'Cheyenne Sky'	Red Switchgrass	Average	Sun	Yes	Moderate	High
Panicum virgatum 'Cloud Nine'	Tall Switchgrass	Average	Sun	Yes	Low	High
Panicum virgatum 'North Wind'	Northwind Switchgrass	Average	Sun	Yes (VERY)	Moderate	High

Scientific Name	Common Name	Site Hydrology	Light Reqs	Drought Tolerance	Salt Tolerance	Deer Tolerance
<i>Panicum virgatum</i> 'Purple Tears'	Purple Tears Switchgrass	Average	Sun to part sun	Yes	Moderate	High
<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Switchgrass	Average	Sun to part sun	Yes	Moderate	High
<i>Schizachyrium scoparium</i> 'Blaze'	Blaze Little Blue Stem	Average	Sun	Yes	High	High
<i>Schizachyrium scoparium</i> 'Chameleon'	Chameleon Little Bluestem	Average	Sun	Yes	High	High
<i>Schizachyrium scoparium</i> 'Standing Ovation'	Standing Ovation Little Bluestem	Average	Sun	Yes	High	High
<i>Sorghastrum nutans</i>	Indian Grass	Average	Sun	Yes	Moderate	High
<i>Sorghastrum nutans</i> 'Golden Sunset'	Yellow Prairie Grass	Average	Sun to part sun	Yes	Moderate	High
<i>Sporobolus heterolepis</i>	Prairie Dropseed	Average				
<i>Sporobolus heterolepis</i> 'Tara'	Dwarf Prairie Dropseed	Average				
<i>Andropogon gerardii</i>	Big Bluestem	Medium dry to dry	Sun	Yes	Moderate	High
<i>Andropogon gerardii</i> 'Blackhawks'	Blackhawks Big Bluestem	Medium dry to dry	Sun	Yes	Moderate	High
<i>Andropogon gerardii</i> 'Karls Cousin'	Karl's Cousin Big Bluestem	Medium dry to dry	Sun	Yes	Moderate	High
<i>Andropogon gerardii</i> 'Red October'	Red Big Bluestem	Medium dry to dry	Sun	Yes	Moderate	High
<i>Andropogon ternarius</i> 'Black Mountain'	Black Mountain Beard Grass	Medium dry to dry	Sun	Yes	Low	High
<i>Andropogon virginicus</i>	Broomsedge	Medium dry to dry	Sun	Yes	Low	High
<i>Danthonia spicata</i>	Poverty Oat Grass	Medium dry to dry	Sun to shade	Yes		
<i>Eragrostis spectabilis</i>	Purple Love Grass	Medium dry to dry	Sun	Yes	Moderate	High

Scientific Name	Common Name	Site Hydrology	Light Reqs	Drought Tolerance	Salt Tolerance	Deer Tolerance
Panicum amarum 'Dewey Blue'	Bitter Switchgrass	Medium dry to dry	Sun to part sun	Yes	High	
Panicum virgatum 'Dallas Blues'	Blue Switchgrass	Medium dry to dry	Sun	Yes	High	High
Schizachyrium scoparium	Little Bluestem	Medium dry to dry				
Schizachyrium scoparium 'Ha Ha Tonka'	Ha Ha Tonka Little Bluestem	Medium dry to dry	Sun	Yes	High	High
Sporobolus wrightii	Giant Sacaton	Medium dry to dry	Sun	Yes (VERY)	High	Moderate to high
Sporobolus wrightii 'Wind Breaker'	Windbreaker Giant Sacaton	Medium dry to dry	Sun	Yes (VERY)	High	Moderate to high
Perennial						
Aruncus dioicus	Goatsbeard	Wet to medium wet				
Aruncus 'Horatio'	Horatio Goatsbeard	Wet to medium wet				
Asclepias incarnata	Swamp Milkweed	Wet to medium wet	Sun	No	Low	High
Asclepias incarnata 'Cinderella'	Cinderella Swamp Milkweed	Wet to medium wet	Sun	No	Low	High
Asclepias incarnata 'Ice Ballet'	White Swamp Milkweed	Wet to medium wet	Sun	No	Low	High
Chelone glabra	Turtlehead	Wet to medium wet	Sun to shade	No	Low	Moderate
Chelone obliqua 'Tiny Tortuga'	Tiny Turtlehead	Wet to medium wet	Sun to part sun	Yes	Low	Moderate
Chelone lyonii 'Hot Lips'	Hot Lips Turtlehead	Wet to medium wet	Sun to part sun	Yes	Low	Moderate
Coreopsis pallustris 'Summer Sunshine'	Swamp Tickseed	Wet to medium wet	Sun	No		
Allium cernuum	Nodding Onion	Average				
Amorpha canescens	Lead Plant	Average				
Amsonia 'Blue Ice'	Blue Star	Average				
Amsonia hubrichtii	Hubricht's Blue Star	Average				

Scientific Name	Common Name	Site Hydrology	Light Reqs	Drought Tolerance	Salt Tolerance	Deer Tolerance
Aquilegia canadensis 'Corbett'	Corbett Columbine	Average	Sun to part sun	No		High
Aquilegia canadensis 'Little Lanterns'	Little Lanterns Columbine	Average	Sun to part sun	No		High
Aquilegia canadensis 'Pink Lanterns'	Pink Lanterns Columbine	Average				
Armeria maritima	Sea Pink	Average				
Armeria maritima 'Morning Star White'	White Sea Pink	Average				
Baptisia australis	Wild Blue Indigo	Average	Sun	No	Low	High
Baptisia 'Crème de Menthe'		Average				
Baptisia 'Dutch Chocolate'		Average				
Baptisia 'Ivory Towers'		Average				
Baptisia 'Purple Smoke'		Average				
Baptisia sphaerocarpa 'Screamin' Yellow'		Average				
Baptisia × variicolor 'Twilite'	Twilight Prairie Blues False Indigo	Average				
Monarda bradburiana		Average				
Monarda didyma 'Jacob Cline'		Average				
Monarda didyma 'Purple Rooster'		Average				
Monarda fistulosa 'Marshall's Delight'		Average				
Monarda 'Dark Ponticum'		Average				
Monarda 'Fireball'	Dwarf Bee Balm	Average	Sun to Part Shade	No		High

Scientific Name	Common Name	Site Hydrology	Light Reqs	Drought Tolerance	Salt Tolerance	Deer Tolerance
Monarda 'Grand Marshall'		Average				
Monarda 'On Parade'		Average				
Rudbeckia 'American Gold Rush'	Black Eyed Susan	Average				
Symphotrichum cordifolium	Blue Wood Aster	Average	shade to shade			
Symphotrichum cordifolium 'Avondale'	Avondale Wood Aster	Average	Dappled shade to shade			
Veronicastrum virginicum		Average				
virginicum 'Album'		Average				
Veronicastrum virginicum 'Challenger'		Average				
millefolium	Yarrow	to dry				
Achillea pt. 'Walther Funcke'	Salmon Yarrow	Medium dry to dry				
Achillea x 'Moonshine'	Moonshine Yellow Yarrow	Medium dry to dry				
Agastache 'Black Adder'	Black Adder Hyssop	Medium dry to dry				
Agastache 'Blue Boa'	Blue Boa Hyssop	Medium dry to dry				
Agastache 'Blue Fortune'	Blue Fortune Hyssop	Medium dry to dry				
Agastache 'Crazy Fortune'	Crazy Fortune Hyssop	Medium dry to dry				
Allium stellatum	Prairie Onion	to dry				
Artemisia ludoviciana	Prairie Sagebrush	Medium dry to dry				
Asclepias tuberosa	Butterfly Weed	to dry				
Asclepias verticillata	Whorled Milkweed	Medium dry to dry				
Coreopsis lanceolata	Lance-leaf Tickseed	Medium dry to dry				

Scientific Name	Common Name	Site Hydrology	Light Reqs	Drought Tolerance	Salt Tolerance	Deer Tolerance
Coreopsis verticillata 'Zagreb'	Whorled Leaf Tickseed	Medium dry to dry	Sun to part sun			High
Coreopsis 'Crème Brûlée'	Crème Brûlée Tickseed	Medium dry to dry	Sun	Yes		High
Coreopsis 'Gilded Lace'	Gilded Lace Tickseed	Medium dry to dry	Sun	Yes		High
Dalea purpurea	Purple Prairie Clover	Medium dry to dry	Sun	Yes	Moderate	Moderate
Ground Cover						
Packera aurea	Golden Ragwort	Wet to medium wet	Full sun to shade	Yes	Yes	High
Anemone canadensis	Crowfoot Anemone	Average				
Asarum canadense	Canadian Wild Ginger	Average	Part shade to shade	No	Low	High
Chrysogonum virginianum	Green and Gold	Average				
Sedum ternatum	Woodland Stone Crop	Average	Part shade	Yes		High
Tradescantia x 'Blushing Bride'	Blushing Bride Spiderwort	Average	Part sun to part shade			
Tradescantia x 'Maiden's Blush'	Maiden's Blush Spiderwort	Average	Part sun to part shade			
Annual						
Chamaecrista fasciculata	Partridge Pea	Average				
Coreopsis 'Cherry Lemonade'	Cherry Lemonade Coreopsis	Average	Sun			High
Coreopsis 'Jive'	Jive Coreopsis	Average	Sun			High
Coreopsis 'RP1'	Little Penny Coreopsis	Average	Sun			High
Coreopsis 'Strawberry Lemonade'	Strawberry Lemonade Coreopsis	Average	Sun			High

TABLE B: TREES RECOMMENDED FOR “AROUND” HORSES

Scientific Name	Common Name
<i>Shade Trees</i>	
Betula nigra ‘Heritage’	River Birch
Carya ovata	Shagbark Hickory
Celtis occidentalis	Hackberry
Fagus grandifolia	American Beech
Fraxinus americana	White Ash
Gleditsia triacanthos	Honey Locust
Liriodendron tulipifera	Tulip Poplar
<i>Evergreen Trees</i>	
Juniperus virginiana	Eastern Redcedar

TABLE C: DEER RESISTANT PLANTS

Scientific Name	Common Name	Comments
<i>Shade Trees</i>		
Acer sachharinum	Silver Maple	
Diospyros virginiana	Persimmon	
Fagus sylvatica	European Beech	
Fraxinus pennsylvanica	Green Ash	
Gleditsia triacanthos	Honey Locust	Thornless varieties
Liquidambar styraciflua	Sweetgum	
Sassafras albidum	Sassafras	
<i>Evergreen Trees</i>		
Chamaecyparis pisifera	Japanese Falsecypress	
Cryptomeria japonica	Japanese Cryptomeria	
Ilex aquifolium cultivars	English Holly	
Ilex aquipernyi 'Dragon Lady'	Holly	
Ilex aquipernyi 'San Jose'	Holly	
Ilex opaca	American Holly	
Juniperus virginiana	Eastern Redcedar	
Osmanthus heterophyllus	False Holly	
Picea abies	Norway Spruce	
Picea glauca	White Spruce	
Picea pungens	Colorado Spruce	
Pinus spp.	Pine	
Pinus mugo	Mugo Pine	
Pinus sylvestris	Scotch Pine	
Pseudotsuga menziesii	Douglas Fir	
Thuja occidentalis 'Green Giant'	American Arborvitae	
<i>Ornamental Trees</i>		
Acer palmatum	Japanese Maple	
Amelanchier spp.	Serviceberry	
Cornus florida	Flowering Dogwood	
Cornus kousa	Kousa Dogwood	
Cotinus coggygria	Smoketree	
Crataegus spp.	Hawthorn	
Hibiscus syriacus	Rose of Sharon	
Lagerstroemia indica	Crape Myrtle	
Prunus serrulata	Japanese Flowering Cherry	
Pyrus communis	Common Pear	

Scientific Name	Common Name	Comments
<i>Shrubs, Vines, and Ground Covers</i>		
Ajuga reptans	Carpet Bugle	Ground cover
Arctostaphylos uva-ursi	Bearberry	Ground cover
Aronia arbutifolia	Red Chokeberry	
Baccharis halimifolia	Groundselbush	
Buxus spp.	Boxwood	
Calluna spp.	Heather	Ground cover
Caryopteris x clandonensis	Caryopteris	
Cephalotaxus harringtonia	Japanese Plum-yew	Good substitute for Taxus
Clethra alnifolia	Sweet Pepperbush	
Cornus sericea	Red Twig Dogwood	
Cytisus spp.	Broom	
Enkianthus campanulatus	Redvein Enkianthus	
Forsythia spp.	Forsythia	
Galium odoratum	Sweet Woodruff	Ground cover
Gaultheria procumbens	Wintergreen	Ground cover
Helleborus spp.	Hellebore	Ground cover
Hypericum spp.	St. Johnswort	
Ilex glabra	Inkberry	
Ilex verticillata	Winterberry	
Jasminum nudiflorum	Winter Jasmine	
Juniperus spp.	Juniper	Green varieties
Kalmia latifolia	Mountain Laurel	
Kerria japonica	Japanese Kerria	
Kolkwitzia amabilis	Beautybush	
Leucothoe spp.	Leucothoe	
Lindera benzoin	Spicebush	
Liriope spp.	Lilyturf	Ground cover
Lonicera sempervirens	Trumpet Honeysuckle	Vine (Hummingbirds)
Myrica pensylvanica	Northern Bayberry	
Nandina domestica	Heavenly Bamboo	
Pachysandra orientalis	Japanese Spurge	Ground cover
Parthenocissus quinquefolia	Virginia Creeper	Vine
Pieris japonica	Japanese Pieris	
Polystichum acrostichoides	Christmas Fern	Ground cover
Potentilla spp.	Cinquefoil	

Scientific Name	Common Name	Comments
<i>Shrubs, Vines, and Ground Covers</i>		
Rhamnus cathartica	Common Buckthorn	
Rhus spp.	Sumac	
Rhus glabra	Smooth Sumac	
Santolina chamaecyparissus	Santolina	
Sambucus canadensis	Elderberry	
Skimmia japonica	Japanese Skimmia	
Symphoricarpos albus	Snowberry	
Symphoricarpos orbiculatus	Coralberry	
Syringa spp.	Lilac	
Vinca minor	Periwinkle	Ground cover
Yucca spp.	Yucca	

TABLE D: POTENTIALLY POISONOUS OUTDOOR PLANTS

Not recommended for planting in parks applications as listed

Scientific Name	Common Name	Toxic to:			Poisonous Part	Recommendations
		Humans	Horses	Dogs		
<i>Acer rubrum</i>	Red Maple		X		Leaves (wilted)	Do not plant; remove if present. One of most poisonous trees to horses
<i>Acer saccharum</i>	Sugar Maple, Rock Maple, Hard Maple		X		Leaves	
<i>Acer saccharinum</i>	Silver Maple, Soft Maple, White Maple		X		Leaves	
<i>Aconitum</i> spp.	Monkshood, Aconite, or Wolfsbane	X		X	Leaves, roots, all	
<i>Actaea spicata</i>	Baneberry			X	Berries, root, foliage	
<i>Aesculus hippocastanum</i>	Horse Chestnut, Buckeye	X	X		All parts, esp. young shoots, seeds, and leaves	Do not plant; well fed horses will usually leave these alone; reduce access to existing trees
<i>Agrostemma githago</i>	Corn Cockle	X	X		Seeds	
<i>Allium</i> spp.	Commercial Onions, Wild Onions, Swamp Onions, and Chives		X	X	Bulbs, leaves	
<i>Amianthium muscaetoxicum</i>	Fly poison, Staggergrass, Crow poison		X		All parts	
<i>Amsinckia intermedia</i>	Fiddleneck		X		Seeds	
<i>Apocynum</i> spp.	Dogbane	X	X		Rhizomes, leaves, stems	
<i>Arisaema</i> spp.	Jack-in-the-Pulpit	X		X	All parts	

Scientific Name	Common Name	Toxic to:			Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Asclepias spp.	Milkweeds		X		Leaves, fruit, stems	
Asclepias spp.	Milkweeds		X		Leaves, fruits, stems	
Astragalus and Oxytropis spp.	Locoweed, Milk Vetch		X		Flowers, leaves, stems	Do not plant; remove if present. One of most poisonous plants to horses.
Atropa belladonna	Nightshade	X		X	All parts	
Brassica spp., Raphanus spp., Descurainia spp.	Mustards, Crucifers, Cress, Tansymustards	X	X		Roots, seeds	
Cassia obtusifolia and Cassia occidentalis	Coffeepod, Sicklepod, Coffee senna, Coffee weed		X		Pods, seeds, wilted foliage. Seeds are most toxic.	
Centaurea repens and Centaurea solstitialis	Yellow Star Thistle, Russian Knapweed, Barnaby's Thistle		X		All parts	Do not plant; remove if present. One of most poisonous plants to horses.
Cestrum diurnum, C. nocturnum	Day-blooming Jessamine, Night-blooming Jessamine		X	X		
Chenopodium album	Lambs Quarters	X	X		All parts	
Cicuta spp.	Water Hemlock		X	X	Roots, stem base, young leaves	

Scientific Name	Common Name	Toxic to:			Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Conium maculatum	Hemlock		X	X	All parts, root and root stem	Do not plant; remove if present. One of most poisonous plants to horses.
Convallaria majalis	Lily-of-the-Valley	X		X	All parts	
Coronilla varia	Crown Vetch		X			
Crotalaria spp.	Rattlebox		X	X	All parts, esp. seeds	
Cynoglossum officinale	Hound's Tongue		X			
Daphne spp.	Daphne	X		X	Berries, bark, leaves	
Datura spp.	Jimsonweed, Downy Thornapple, Devils Trumpet, Angels Trumpet	X	X	X	Flowers, leaves, seeds	
Delphinium spp.	Larkspurs	X	X	X	Young plants and seeds	
Digitalis purpurea	Foxglove	X	X	X	Leaves, seeds, flowers	
Elaeagnus angustifolia	Russian Olive, Oleaster		X			Do not plant; remove if present.
Equisetum spp.	Horsetail		X			
Eupatorium rugosum	White Snakeroot	X	X	X		Do not plant; remove if present. One of most poisonous plants to horses.
Euphorbia spp.	Poinsettia, Spurge, Snow on the Mountain		X	X	Leaves, stems, sap	
Fagopyrum esculentum	Buckwheat		X			
Festuca arundinacea	Tall Fescue		X		All parts	Do not plant near equestrian uses. Acceptable in other use..

Scientific Name	Common Name	Toxic to:			Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Gelsemium sempervirens	Jessamine		X		All parts	
Glechoma spp.	Ground Ivy, Creeping Charlie, Gill over the Ground		X		Leaves, stems	
Haplopappus heterophyllus	Rayless Goldenrod, Burroweed		X			
Helenium (Dugaldia) hoopesii	Orange Sneezeweed		X			Limit access
Hypericum perforatum	St. Johns Wort, Klamath Weed				All parts	
Iris spp.	Iris	X		X	Rhizomes, rootstocks	
Juglans nigra	Black Walnut		X		Sawdust	Do not plant; avoid contact with sawdust from this tree; reduce access to existing trees
Kalmia spp.	Laurel, Ivybush, Lambkill		X		All vegetative parts	
Laburnum anagyroides	Golden Chain, Laburnum	X	X	X	Pods, seeds, all parts	
Lathyrus spp.	Sweet Pea, Tangier Pea, Everlasting Pea, ...	X	X	X	Seeds, Pods	
Ligustrum spp.	Privet, Ligustrum, Hedge plant		X		Leaves, fruit	
Lupinus spp.	Lupines, Bluebonnet		X		Seeds	
Melilotus alba and Melilotus officinalis	White and Yellow Sweetclover		X		Stem	
Menispermum canadense	Moonseed	X		X	All parts	

Scientific Name	Common Name	Toxic to:			Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Nandina domestica	Nandina, Heavenly Bamboo, Chinese Sacred Bamboo		X		Foliage, fruits	Do not plant near equestrian uses. Acceptable in other use..
Nerium oleander	Oleander, Rose Laurel	X	X	X	All, leaves, stems	Do not plant; remove if present. One of most poisonous plants to horses.
Onoclea sensibilis	Sensitive Fern		X		Leaves	
Ornithogalum umbellatum	Star of Bethlehem	X		X	Bulbs, flowers, all	
Peganum harmala	African Rue		X		Seeds, leaves, stems	Unpalatable; eaten only under drought conditions.
Perilla frutescens	Perilla mint, Beefsteak plant		X			
Photinia spp.	Faser's Photinia, Red Tip Photinia		X		Foliage, fruits	
Phytolacca americana	Pokeweed	X	X	X	All parts, roots most toxic	
Podophyllum peltatum	Mayapple, Mandrake	X		X	Roots, foliage, unripe fruit	
Prunus spp.	Wild Cherries, Black Cherry, Bitter Cherry, Choke Cherry, Pin Cherry...		X	X	Seeds, leaves	Do not plant; remove if present.
Pteridium aquilinum	Bracken Fern		X		All parts	Do not plant; remove if present. One of most poisonous plants to horses.
Quercus spp.	Oak species		X		Acorns, young leaves	Well fed horses will usually leave these alone; reduce access
Ranunculus spp.	Buttercups, Crowfoot		X	X	All parts	

Scientific Name	Common Name	Toxic to:			Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Rheum rhaponticum	Rhubarb		X	X	Leaves	
Ricinus comunis	Castor Bean	X	X		Seeds, if chewed, All parts	
Robinia pseudoacacia	Black locust	X	X	X	Bark, leaves, seeds, flowers	Seasonal (summer – fall) concern
Sambucus canadensis	Elderberry	X		X	Leaves, twigs, roots, unripe fruits	
Senecio spp.	Senecio, Groundsels, Ragworts		X		Leaves	Do not plant; remove if present. One of most poisonous plants to horses.
Sesbania (Daubentonia) punicea and Sesbania (Glottidium) vesicaria	Rattlebox, Purple Sesbane, Bladderpod		X		Seeds	
Solanum spp.	Common Nightshade, Black Nightshade, Horse Nettle, Buffalo Bur, Jerusalem Cherry	X	X	X	Leaves, shoots, immature fruit	
Sorghum spp.	Sorghum, Milo, Sudan Grass, Johnson Grass		X		Leaves, stems	Do not plant; remove if present. One of most poisonous plants to horses.
Taxus spp.	Yew		X			Do not plant; remove if present. One of most poisonous plants to horses.
Trifolium spp.	Alsike Clover, Red Clover, White Clover		X		All, leaves (nitrate)	

Scientific Name	Common Name	Toxic to:			Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Vicia spp.	Common Vetch, Hairy Vetch, Narrow-leaved Vetch, Purple Vetch, Broad Beans	X	X		Seeds	
Xanthium spp.	Cocklebur	X	X		Seeds and young seedlings	
Wisteria spp.	Wisteria	X		X	Seeds, pods	
Zygadenus spp.	Death Camas		X		All parts, seeds most toxic	

Table E: Mid Atlantic Invaders and Potential Invaders

Scientific Name	Common Name
<i>Tree</i>	
<i>Pyrus calleryana</i>	Callery Pear
<i>Acer platanoides</i>	Norway Maple
<i>Broussonetia papyrifera</i>	Paper Mulberry
<i>Paulownia tomentosa</i>	Princess Tree
<i>Albizia julibrissin</i>	Silk Tree
<i>Ailanthus altissima</i>	Tree of Heaven
<i>Morus alba</i>	White Mulberry
<i>Shrub and Subshrub</i>	
<i>Lonicera maackii</i>	Amur Honeysuckle
<i>Elaeagnus umbellata</i>	Autumn Olive
<i>Berberis thunbergii</i>	Japanese Barberry
<i>Spiraea japonica</i>	Japanese Meadowsweet
<i>Viburnum dilatatum</i>	Linden Viburnum
<i>Lonicera morrowii</i>	Morrow's Honeysuckle
<i>Rosa multiflora</i>	Multiflora Rose
<i>Ligustrum obtusifolium</i> , <i>L. ovalifolium</i> , <i>L. sinense</i> and <i>L. vulgare</i>	Privets
<i>Rubus phoenicolasius</i>	Wineberry
<i>Euonymus alatus</i>	Winged Burning Bush
<i>Grass or Sedge</i>	
<i>Bambusa vulgaris</i> , <i>Phyllostachys aurea</i> and <i>Pseudosasa japonica</i>	Bamboos
<i>Schoenoplectus mucronatus</i>	Bog Bulrush
<i>Phragmites australis</i>	Common Reed
<i>Microstegium vimineum</i>	Japanese Stiltgrass
<i>Oplismenus hirtellus</i> ssp. <i>undulatifolius</i>	Wavyleaf Basketgrass
<i>Herbaceous Forb</i>	
<i>Perilla frutescens</i>	Beefsteak Plant
<i>Cirsium arvense</i>	Canada Thistle
<i>Lespedeza cuneata</i>	Chinese Lespedeza
<i>Hemerocallis fulva</i>	Common Daylily
<i>Hesperis matronalis</i>	Dame's Rocket
<i>Urtica dioica</i>	European Stinging Nettle
<i>Ficaria verna</i>	Fig Buttercup
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Glechoma hederacea</i>	Ground Ivy
<i>Fallopia japonica</i>	Japanese Knotweed
<i>Ornithogalum nutans</i> and <i>Ornithogalum umbellatum</i>	Nodding Star of Bethlehem and Sleepydick
<i>Lythrum salicaria</i>	Purple Loosestrife

Scientific Name	Common Name
<i>Centaurea stoebe</i> ssp. <i>micranthos</i>	Spotted Knapweed
<i>Vine</i>	
<i>Cynanchum louiseae</i>	Black Swallow-Wort
<i>Wisteria sinensis</i>	Chinese Wisteria
<i>Akebia quinata</i>	Chocolate Vine
<i>Vinca minor</i>	Common Periwinkle
<i>Hedera helix</i>	English Ivy
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Humulus japonicus</i>	Japanese Hop
<i>Wisteria floribunda</i>	Japanese Wisteria
<i>Pueraria montana</i> var. <i>lobata</i>	Kudzu
<i>Persicaria perfoliata</i>	Mile-a-Minute
<i>Celastrus orbiculatus</i>	Oriental Bittersweet
<i>Cynanchum rossicum</i>	Pale Swallow-Wort
<i>Ampelopsis brevipedunculata</i>	Porcelainberry
<i>Clematis terniflora</i>	Sweet Autumn Virginsbower
<i>Euonymus fortunei</i>	Winter Creeper
<i>Aquatic</i>	
<i>Myriophyllum spicatum</i>	Eurasian Water-Milfoil
<i>Salvinia molesta</i>	Giant Salvinia
<i>Hydrilla verticillata</i>	Hydrilla
<i>Myriophyllum aquaticum</i>	Parrot-Feather
<i>Trapa natans</i>	Water Chestnut
PLANTS TO WATCH	
Latin Name	Common Name
<i>Tree</i>	
<i>Phellodendron amurense</i>	Amur Corktree
<i>Aralia elata</i>	Japanese Angelica Tree
<i>Quercus acutissima</i>	Sawthooth Oak
<i>Shrub and Subshrub</i>	
<i>Kalopanax septemlobus</i>	Castor Aralia
<i>Rhodotypos scandens</i>	Jetbead
<i>Mahonia bealei</i>	Leatherleaf Mahonia
<i>Buddleja davidii</i>	Orange-Eye Butterfly Bush
<i>Grass</i>	
<i>Miscanthus sinensis</i>	Japanese Silvergrass
<i>Ripidium ravennae</i>	Ravenna-Grass
<i>Arthraxon hispidus</i>	Small Carpetgrass
<i>Herbaceous Forb</i>	
<i>Epipactis helleborinus</i>	Broadleaf Helleborine
<i>Heracleum mantegazzianum</i>	Giant Hogweed
<i>Aegopodium podagraria</i>	Goutweed

Scientific Name	Common Name
Arum italicum	Italian Arum
Murdannia keisak	Marsh Dewflower
Hyacinthoides hispanica	Spanish Bluebells
Leucojum aestivum	Summer Snowflake
Lamium galeobdolon	Yellow Archangel
<i>Vine</i>	
Dioscorea polystachya	Chinese Yam



G. RECREATIONAL FACILITY COSTS

**THE MARYLAND-NATIONAL CAPITAL PARK
AND PLANNING COMMISSION (M-NCPPC)
RECREATIONAL FACILITY COSTS**



NOTES

The unit pricing provided in this section has been developed from the parks and recreation facilities design guidelines prepared by The Maryland-National Capital Park and Planning Commission dated January 2023.

This estimate consists of estimated construction costs and recommended bonding amounts for a variety of recreational facilities. These costs include various elements, structures, fields, etc. as described in the design guideline.

The bonding amounts include the construction costs as well as: general conditions, general contractor's overhead & profit and bonds / insurances. (approx. 30% of the construction cost) No allowances have been made for design contingency or escalation.

The level of pricing of this cost estimate is representative of current day costs of construction in the Prince George's County, MD area. It assumes a fair and reasonable rate of return for overhead and profit for the general contractor and subcontractors.

This cost estimate is an opinion of probable costs based on fair market value and is not a prediction of the anticipated low bid. RLB has no control over the costs of labor, material, the general contractor's, or any subcontractor's method of determining price or competitive bidding and market conditions.

Assumptions: It is assumed work will be performed during normal working hours.

Cost includes all required general contractor markups.

Cost reflects 2022 inflation, however if there were extreme outliers when it comes to cost, these were ignored, and "average cost" were used. With inflation the highest it has been in over 40 years, it is recommended to revisit the facility cost at the end of 2023.

Escalation: Escalation has been excluded from the cost.

Design Contingency: No contingency has been included.

**THE MARYLAND-NATIONAL CAPITAL PARK
AND PLANNING COMMISSION (M-NCPPC)
RECREATIONAL FACILITY COSTS**



NOTES

Exclusions: We do not include the following items in this estimate:

- Design Fees or other consultant fees.
- Impact or other Government costs.
- Costs resulting from owner requested changes or design changes.
- Any special testing requirements or inspection costs.
- Utility company charges
- Swing space.
- Office furniture or equipment.
- Telecommunications devices, wiring, equipment.
- Security system devices, wiring, equipment.
- Audio/visual devices, wiring, equipment.
- Public Address & Paging systems devices, wiring, equipment.
- Digital signage and public displays equipment/wiring.
- Design contingency
- Escalation (We recommend an escalation rate of 3.8% per annum be carried for future projects).

The Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation

2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
<u>1. STORM WATER MANAGEMENT</u>		
NATURALIZED BIORETENTION (500 SF)	\$7,000.00	\$9,100.00
STRUCTURED / URBAN BIORETENTION (500 SF)	\$17,500.00	\$22,750.00
SUBMERGED GRAVEL WETLAND	\$10.00/SF	\$13.00/SF
LANDSCAPE INFILTRATION	\$15.00/SF	\$19.50/SF
MICRO-BIORETENTION	\$16.00/SF	\$20.80/SF
BIORETENTION	\$18.00/SF	\$23.40/SF
RAIN GARDEN	\$16.00/SF	\$20.80/SF
SWALES	\$5.00/SF	\$6.50/SF
INFILTRATION TRENCH	\$22.00/SF	\$28.60/SF
INFILTRATION BERM	\$5.00/SF	\$6.50/SF
PERMEABLE PAVING	\$24.00/SF	\$31.20/SF
DRYWELL	\$10.00/SF	\$13.00/SF
REINFORCED TURF	\$10.00/SF	\$13.00/SF
LEVEL SPREADER	\$4.50/SF	\$5.85/SF
18" NON-GROUTED BASIN/FILTERS, EA	\$125.0	\$162.5
RIP-RAP (for outfall, 12"thk)	\$66.88/SY	\$86.95/SY
CONCRETE CULVERT (20'long, 24" pipe)	\$5,016.2	\$6,521.1

2. BUILDINGS

PREFABRICATED COMPOSTING TOILET (Romtec model 10120)	\$190,000.00	\$247,000.00
KIOSK (wooden structure, 6' x 6')	\$13,237.30	\$17,208.49
COMMUNITY CENTER, 20,000 SF OR LARGER (finished)	\$416.00/SF	\$540.80/SF

The Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation

2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
RECREATION BUILDING, 5,000 SF OR LESS (finished)	\$450.00/SF	\$585.00/SF
INDOOR TENNIS COMPLEX (10 courts, fabric only, 300' x 240')	\$34.84/SF	\$45.29/SF
INDOOR TENNIS COMPLEX-PNEUMATIC (10 courts, fabric only, 300' x 240')	\$29.50/SF	\$38.35/SF
OUTDOOR AMPHITHEATER, APPROX. 3000 SF (concrete wall seating for 300 people, each seat 18" w, stage, no canopy)	\$78.03/SF	\$101.44/SF
STORAGE SHED, (10' x 10' pre-fabricated)	\$139.34/SF	\$181.14/SF
STONE VENEER TO STORAGE SHED, 3'h	\$57.60/SF	\$74.88/SF

3. COURTS

BASKETBALL (MULTI-PURPOSE) FULL COURT (60' X 90') (cleared, graded, paved, lined, poles, backboards and (1) 6' bench)	\$79,200.00	\$102,960.00
BASKETBALL (MULTI-PURPOSE) HALF COURT (60' X 50') (cleared, graded, paved, lined, poles, backboards and (1) 6' bench)	\$44,220.00	\$57,486.00
TENNIS COURT, SINGLES (60'X120')	\$79,360.00	\$103,168.00
TENNIS COURT, DOUBLES (110'X122')	\$145,920.00	\$189,696.00
TENNIS COURT/FUTSAL LIGHT POLE & FIXTURE, 20h-30'h	\$10,240.00	\$13,312.00
FUTSAL COURT (60' x 90') (cleared, graded, paved, lined, futsal goals and (1) 6' bench)	\$59,400.00	\$77,220.00
PICKLE BALL COURTS (20' x 44') (cleared, graded, paved, lined, fencing and (1) 6' bench)	\$15,840.00	\$20,592.00

4. FIELDS

OPEN PLAY AREA (100' x 200', cleared, graded, seeded)	\$53,120.00	\$69,056.00
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The Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation

2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
SOFTBALL FIELDS (310' foul line w/ fencing, cleared, graded, seeded, backstop, benches, 8'long)	\$305,280.00	\$396,864.00
BASEBALL FIELDS (310' foul line w/ fencing, cleared, graded, seeded, backstop, benches, 8'long)	\$350,720.00	\$455,936.00
FOOTBALL/SOCCER FIELDS (360' x 225', cleared, graded, seeded, standard goal posts)	\$274,560.00	\$356,928.00
FOOTBALL FIELD LIGHTING 4-6 poles, 1500w metal halide, 50'-70'h	\$305,280.00	\$396,864.00
CRICKET FIELDS (400' dia, turf grass, cleared, graded, (2ea) 12' team bench	\$424,744.32	\$552,167.62
ARTIFICIAL TURF	\$21.12/SF	\$27.46/SF
IRRIGATION	\$1.92/SF	\$2.50/SF

5. FISHING

FISHING PIERS AND DOCKS 200' long, 10'w (timber)	\$160.00/SF	\$208.00/SF
BOAT AND KAYAK LAUNCH (level 2 service, concrete 30' W x 30' L)	\$51,200.00	\$66,560.00

6. GOLF

18 HOLE GOLF COURSE, (100 acres, inc driving range, parking, chipping green)	\$32,000.00/ACRE	\$41,600.00/ACRE
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7. LANDSCAPE

SHADE TREE (Min 2.5" Caliper)	\$800.00	\$1,040.00
ORNAMENTAL TREE 8' TALL	\$550.00	\$715.00
EVERGREEN TREE 6'- 8' TALL	\$500.00	\$650.00

The Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation

2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
MEDIUM SHRUB 36" DIA / 1 GAL	\$60.00	\$78.00
NATIVE GRASSES AND PERENNIAL BED	\$0.20/SF	\$0.26/SF
SEEDING	\$0.35/SF	\$0.46/SF
SODDING	\$6.97/SY	\$9.06/SY
<u>8. MISCELLANEOUS</u>		
CAMPGROUND SITE 90 sites (inc associated trails & bathrooms)	\$2,376,000.00	\$3,088,800.00
BOARDWALK, 200' LONG 8' WIDE (wood deck, wood railing 4'h)	\$1,216.00/LF	\$1,580.80/LF
PREFABRICATED STEEL BRIDGE, 50'long, 10'w, (wood deck, wood railing 4'h)	\$256.00/SF	\$332.80/SF
<u>9. PARKING</u>		
PARKING LOT LIGHTING (100 SPACE PARKING LOT WITH 18 QTY 30' POLES, LED FIXTURES, 111 WATTS EA)	\$185,000.00	\$240,500.00
PARKING LOT (PER SPACE)	\$3,762.00	\$4,890.60
22' WIDE ASPHALT ROAD & CONCRETE CURBING	\$224.00/LF	\$291.20/LF
PARKING GARAGE (w/ lighting)	\$101.64/SF	\$132.13/SF
<u>10. PAVILIONS / SHELTERS</u>		
SMALL METAL PAVILION (28' dia w/ 4-5 picnic tables, 8'long)	\$63,360.00	\$82,368.00
MEDIUM METAL PAVILION (44' dia w/ 8-9 picnic tables, 8'long)	\$141,900.00	\$184,470.00
LARGE METAL PAVILION (60' dia w/ 16-18 picnic tables, 8'long)	\$236,280.00	\$307,164.00

The Maryland-National Capital Park and Planning Commission

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2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
<u>11. PICNIC / SITTING AREAS</u>		
SITTING AREAS (inc clearing, grading, mulching, landscaping)		
LARGE (400 SF, 4 benches, 8'long)	\$10,032.48	\$13,042.22
SMALL (200 SF, 2 benches, 8'long)	\$5,573.60	\$7,245.68
PICNIC AREA (5000 SQ.FT.)		
GROUP PICNIC AREA (Includes select clearing and grading, wood fiber surfacing, 2 picnic tables, 8'long Including one ADA accessible, 2 grills, 3'x2' and 1 trash receptacle, 2'dia)	\$36,367.74	\$47,278.06
PARK BENCH, 8'long	\$1,672.08	\$2,173.70
(ADA) PARK BENCH W/BACK AND ARMS, 8'long	\$2,229.44	\$2,898.27
(ADA) PICNIC TABLE W/2 LONG BENCHES, 8'long	\$2,229.44	\$2,898.27
PICNIC GRILL, 3'x2'	\$1,184.39	\$1,539.71
COMMUNITY GARDENS (Plot size 10' x 15', raised planters with topsoil, 6' wide paths, deer fence, drainage)	\$4,500.00	\$5,850.00
<u>12. PLAYGROUNDS</u>		
Pre-School Age (2-5yrs) 2500 SF, APPROX.	\$187,440.00	\$243,672.00
CAPACITY 100-150 (Including site preparation, ADA accessible play equipment, 5' wide ADA access trail, timber edging and wood fiber surfacing installed & compacted to 12" depth w/ underdrainage)	(inc \$113,000 playground equip)	(inc \$147,000 playground equip)
SCHOOL AGES (5-12yrs) 5000 SF, APPROX.	\$281,820.00	\$366,366.00
CAPACITY 150-200 (Including site preparation, ADA accessible play equipment, 5' wide ADA access trail, timber edging and wood fiber surfacing installed & compacted to 12" depth w/ underdrainage)	(inc \$169,500 playground equip)	(inc \$220,000 playground equip)
MULTI AGE (2-5 & 5-12 yrs.) 10,000 SF,	\$632,280.00	\$821,964.00

The Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation

2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
APPROX. CAPACITY 250-300 (Including site preparation, ADA accessible play equipment, 5' wide ADA access trail, timber edging and wood fiber surfacing installed & compacted to 12" depth w/ underdrainage)	(inc \$414,000 playground equip)	(inc \$538,000 playground equip)
ENGINEERED WOOD FIBER (12" depth, installed)	\$5.28/SF	\$6.86/SF
RUBBER MATS/TILES (4" thick inc. underlay)	\$19.80/SF	\$25.74/SF
POURED IN PLACE RUBBER (4" thick, inc underlay)	\$29.04/SF	\$37.75/SF
TIMBER EDGING 8" x 8" nominal	\$19.80/LF	\$25.74/LF
TIMBER EDGING 8" x 6" nominal	\$18.48/LF	\$24.02/LF

13. RECREATION GAMES

SWIMMING POOL, 25METER (82' x 42', w/ equipment)	\$858,000.00	\$1,115,400.00
WADING POOL, (21' x 19', w/ equipment)	\$145,200.00	\$188,760.00
BATHHOUSE, (20' x 30', 4 rooms, men changing, men bath, female changing, female bath)	\$237,600.00	\$308,880.00
DECK (2,500 sf)	\$66,000.00	\$85,800.00
FITNESS STATIONS, CLUSTER OF 6	\$23,760.00	\$30,888.00
FITNESS STATIONS, CLUSTER OF 12	\$46,860.00	\$60,918.00
LAWN GAMES, HORSESHOES, WOOD, SAND/GRAVEL AND LANDSCAPING (50'x 10')	\$5,280.00	\$6,864.00
SAND VOLLEYBALL COURTS (CUT TURF, POLES, EDGING, SAND, TREES AND TRASH RECEPTACLE) (60'x30')	\$23,760.00	\$30,888.00
GRASS VOLLEYBALL/BADMINTON COURTS (60'x30')	\$18,480.00	\$24,024.00
SHUFFLEBOARD (64'x10')	\$13,200.00	\$17,160.00

The Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation

2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
BALL WALLS (single sided wall, 10' ht x 64' L wall, 24' deep hard surface court) one 6' bench	\$48,000.00	\$62,400.00
BOCCE BALL (standard court, 60' x 12' bench seating, clay & sand court surface)	\$18,000.00	\$23,400.00
4-SQUARE (single court, asphalt 16' X 16')	\$3,072.00	\$3,993.60
GAGA PITS (20' diameter, 24" HT, grass and dirt)	\$1,570.00	\$2,041.00
DISC GOLF (assume natural terrain, includes 1 disk golf basket with footer)	\$850.00	\$1,105.00
ULTIMATE FRISBEE (assume no cost. can be played on any non-standard rectangular multipurpose field)	\$0.00	\$0.00
DOG PARKS (1 acre, includes fencing, shaded seating, water stations, cleaning stations, natural turf)	\$261,360.00	\$339,768.00
<u>14. SIGNS</u>		
MILE MARKER POST 4" x 4", 8'h	\$1,188.00	\$1,544.40
<u>15. SITE PREPARATION</u>		
TOPSOIL	\$54.34/CY	\$70.65/CY
SITE CLEARING	\$0.60/SF	\$0.78/SF
ROUGH GRADING (assumes site over 30,000 SF)	\$15.00/CY	\$19.50/CY
<u>16. SKATE PARKS</u>		
SKATE PARK, 3000SF	\$66.00/SF	\$85.80/SF
<u>17. STORAGE</u>		
BICYCLE RACK (3 hoops for bicycles, Inverted U Stainless Steel)	\$1,122.00	\$1,458.60

The Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation

2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
<u>18. TRAILS</u>		
ASPHALT PATHS (3" thk on 4" gravel base)	\$5.44/SF	\$7.07/SF
BLUESTONE DUST PATH (3" Depth)	\$3.81/SF	\$4.95/SF
10' WIDE EQUESTRIAN TRAIL (Grass)	\$26.40/LF	\$34.32/LF
<u>19. FENCING</u>		
BOARD FENCE	\$31.24/LF	\$40.61/LF
FARM FENCE	\$25.56/LF	\$33.23/LF
ORNAMENTAL FENCE	\$125.00/LF	\$162.50/LF
CHAIN-LINK FENCE (10'h galvanized)	\$58.22/LF	\$75.69/LF
CHAIN-LINK FENCE (8'h galvanized)	\$48.28/LF	\$62.76/LF
CHAIN-LINK FENCE (4'h galvanized)	\$31.95/LF	\$41.54/LF
CHAIN-LINK FENCE (10'h vinyl coated)	\$59.64/LF	\$77.53/LF
CHAIN-LINK FENCE (8'h vinyl coated)	\$49.70/LF	\$64.61/LF
CHAIN-LINK FENCE (4'h vinyl coated)	\$32.66/LF	\$42.46/LF
CHAIN-LINK GATE, (4'w, 4'h)	\$710.00	\$923.00
CHAIN-LINK GATE, (4'w, 7'h)	\$1,065.00	\$1,384.50
CHAIN-LINK GATE, (5'w, 7'h)	\$1,278.00	\$1,661.40
CHAIN-LINK GATE, (6'w, 7'h)	\$1,491.00	\$1,938.30
CHAIN-LINK GATE, (12'w) maintenance gate	\$2,272.00	\$2,953.60

The Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation

2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
<u>20. MISC. SITE ELEMENTS</u>		
GUARD RAIL (powder coated)	\$290.00/LF	\$377.00/LF
GUARD RAIL (painted)	\$230.00/LF	\$299.00/LF
METAL HANDRAIL (powder coated)	\$130.00/LF	\$169.00/LF
METAL HANDRAIL (painted)	\$95.00/LF	\$123.50/LF
CONCRETE STAIRS (3 risers)	\$285.00/LF	\$370.50/LF
CONCRETE STAIRS (5 risers)	\$475.00/LF	\$617.50/LF
CONCRETE STAIRS (7 risers)	\$665.00/LF	\$864.50/LF
BOLLARDS (concrete, fixed)	\$1,000.00	\$1,300.00
PREFABRICATED PEDESTRIAN BRIDGE (8' wide)	\$1,600.00/LF	\$2,080.00/LF

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