# Parks and Recreation Facilities DESIGN GUIDELINES



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

# ACKNOWLEDGEMENTS

The Maryland-National Capital Park and Planning Commission

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I. INTRODUCTION



# A. VISION

The Maryland-National Capital Park and Planning Commission (M-NCPPC) serves the bi-county area of Montgomery County and Prince George's County, Maryland. The purpose, powers, and duties of M-NCPPC are found in 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.



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 longlasting 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. A detailed description of the updated processes for identifying options to meet the mandatory parkland dedication requirement, and the methods for submission and approval, 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.



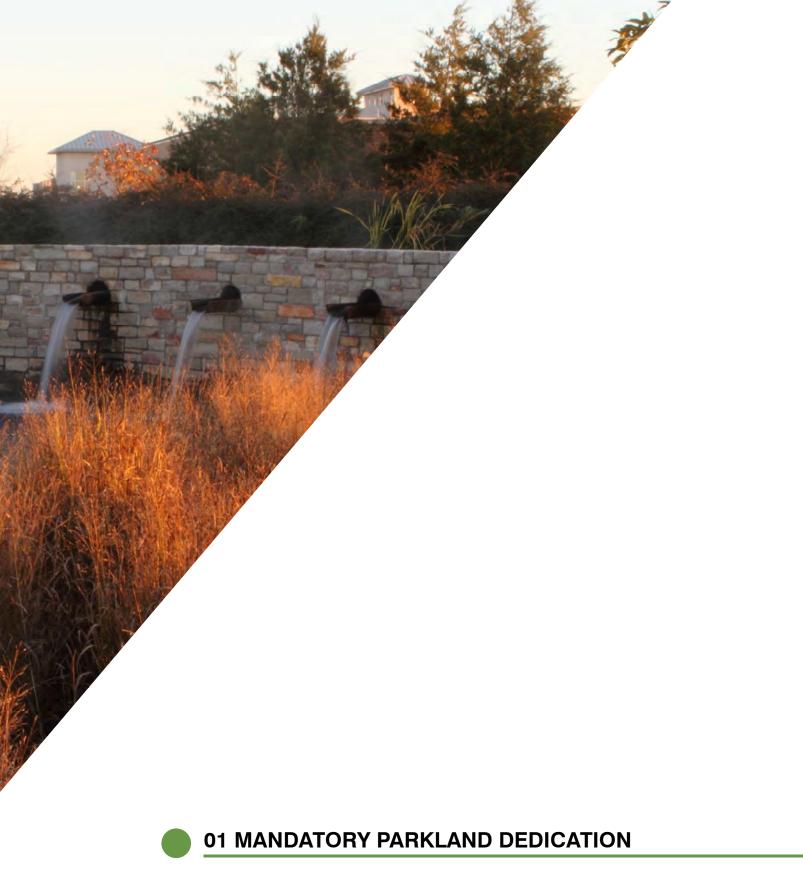


M-NCPPC has developed guidelines and strategies for land acquisition, land preservation and recreation, environmental management and historic preservation within the park system. Park development is guided by planning documents, starting with Prince George's Plan 2035 (approved 2014) and M-NCPPC's Physical 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 and Subdivision Ordinance
- 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



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 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-footwide 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(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 Recreational 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.

The location and type of off-site recreational facilities will be negotiated with Department staff and must also 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.

When construction of private and/or public recreation facilities is required, a Recreation Facilities Agreement (RFA) is mandatory pursuant to Section 24-3402(c)(2)(B)(i)(cc) of the Subdivision Regulations. 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 Plat 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 RFAs are included in Appendix A. Also included in Appendix A are sample forms and procedures for an Amended RFA and a Rescinded RFA.

# **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 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 A.

# 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 A.

# 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 will initiate legal action to ensure the completion of the recreational facility. Enforcement of the violation may include using the financial

# **DEVELOPMENT REVIEW PROCESS**

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 manufacturers' specifications. After the certification form is signed, the Performance Bond will be released and returned to the Developer.





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 twelvemonth 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.





# **STEP 1 -** REQUIREMENTS

# DETERMINE THE DEVELEOPMENT'S PARKLAND DEDICATION REQUIREMENTS

The staff will calculate the parkland dedication requirements in acres during the pre-application review.

# DID YOU KNOW:

Formula 2040 Functional Master Plan for Parks, Recreation, and Open Space in Prince George's County set the objective of matching the provision of parkland, trails, indoor recreational facilities, and outdoor amenities to the needs of the residents within the nine Park Service Areas, using Level of Service (LOS) standards.



# DETERMINE THE COMBINATION OF OPTIONS ONE, TWO AND/OR THREE TO SATISFY THE PARKLAND DEDICATION REQUIREMENT

AVENUE DEDICATE PARKLAND

DEDICATION TYPES

AND/OR

LARGER

Community Neighborhood

SMALLER Urban

The proposed park site area and characteristics must

adequately meet the needs of the proposed recreation activities, support facilities, and infrastructure.

In general, parks under two acres should be privately owned but publicly accessible through a public use agreement.

DID YOU KNOW: The Mandatory Parkland Dedication Program is enacted through the Subdivision Ordinance, Section 24-4600. AVENUE PROVISION OF PUBLIC OUTDOOR RECREATIONAL FACILITIES

Provide amenities listed in the guidelines, or propose new types that have an associated value. All recreational facilities must comply with the requirements in this document.

Recreational facilities should equate to the value of the acreage that would have been identified as dedication. AVENUE PAYMENT OF A FEE-IN-LIEU OF PARKLAND AND/OR FACILITIES

Value of the land to be dedicated, or Fee-In-Lieu, shall be calculated by determining the actual per acre land value at the time of preliminary plan, or by using the median per acre land value for the service area provided in Appendix E.

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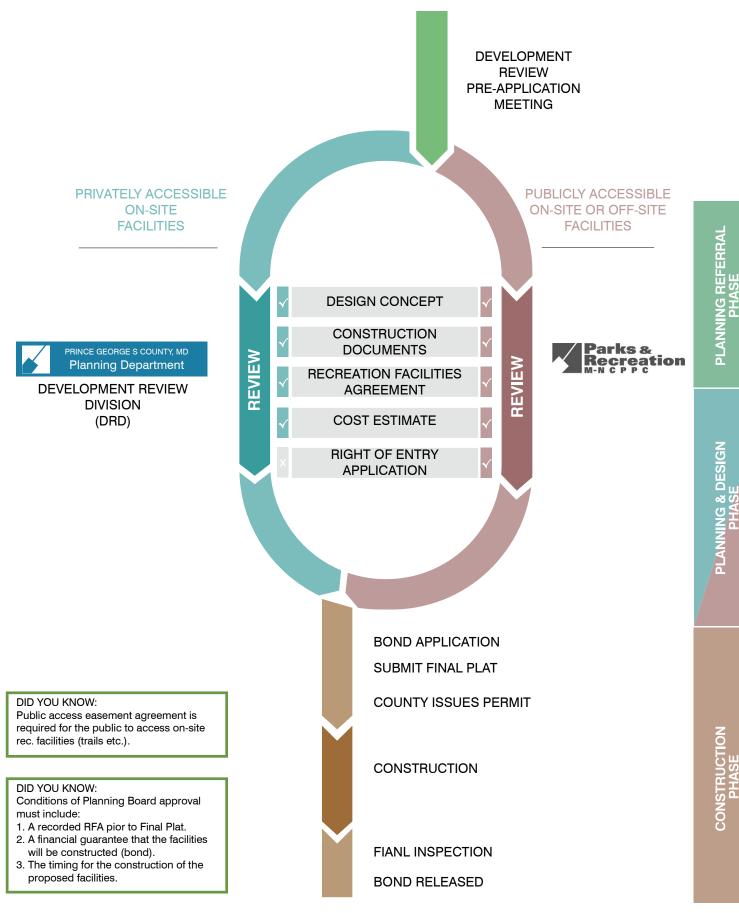
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DID YOU KNOW: Facility types not listed in these guidelines may be proposed by the applicant. DID YOU KNOW:

The median land values and Level of Service calculations, found in Appendix E, are updated every three years.

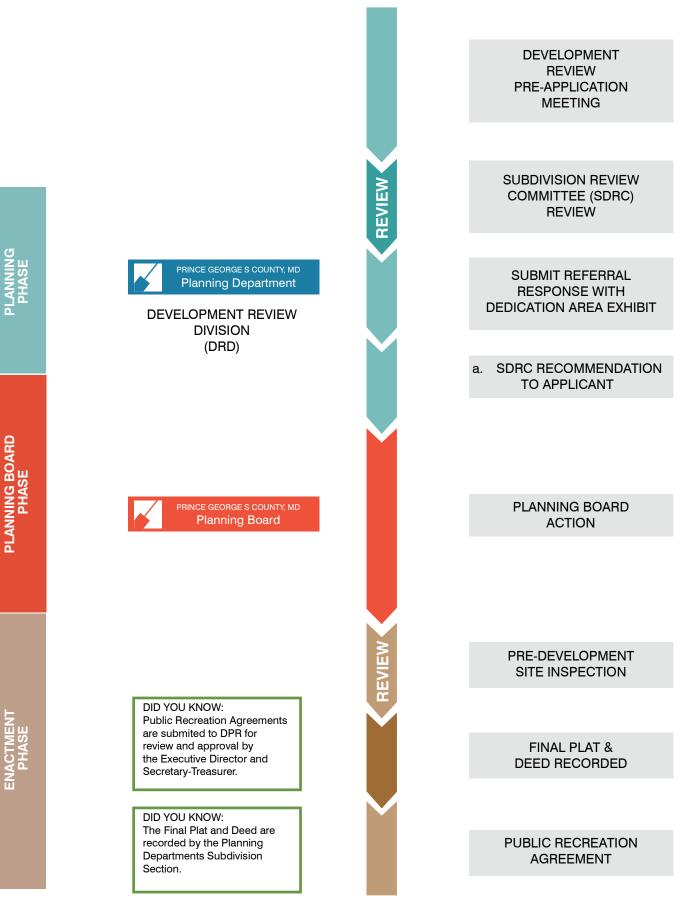
# **DEVELOPMENT REVIEW PROCESS**

# PROVISION OF PUBLIC OUTDOOR RECREATIONAL FACILITIES



# **DEVELOPMENT REVIEW PROCESS**

# LAND DEDICATION REVIEW PROCESS



# **III. DEVELOPMENT OF OUTDOOR PARKS AND RECREATION FACILITIES**





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 onequarter 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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# 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 Title II regulations at 28 CFR 35.151 and the 2004 Americans With Disability Act Accessibility Guidelines at 36 CFR part 1191?
- 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?



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 ofr 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

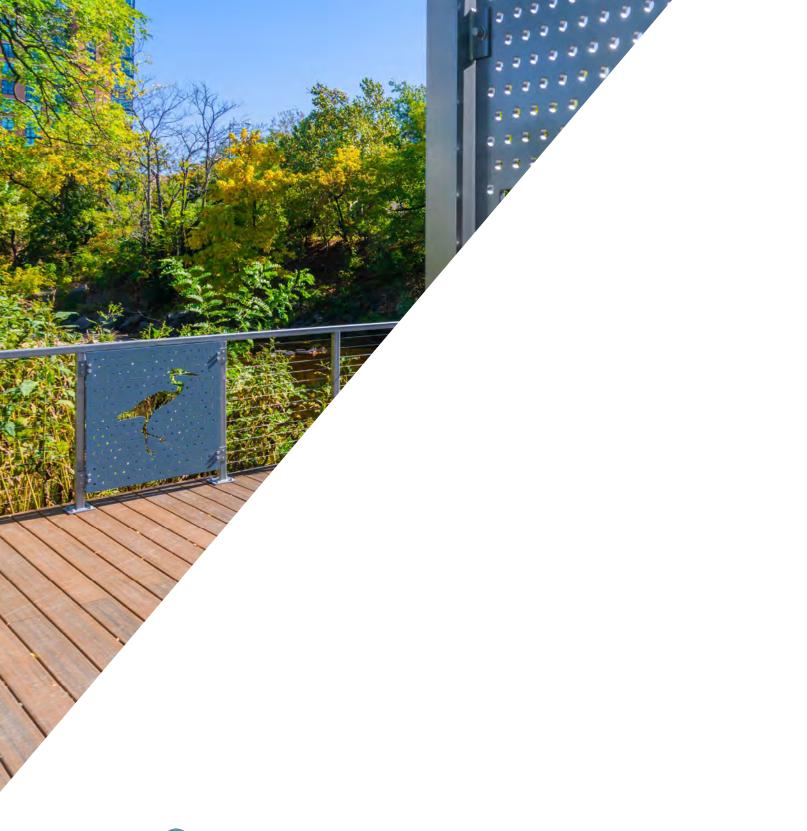
This is a difficult quality for a place to achieve, but once attained it becomes an unmistakable feature. When people see friends, meet and greet their neighbors, and feel comfortable interacting with strangers, they tend to feel a stronger sense of place or attachment to their community and to the place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



# A. WHAT IS MULTI-MODAL DESIGN?

For the purposes of these guidelines a Multimodal 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 onesize-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 onstreet 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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#### 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 produceminimal 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 accomodated on site	none
Secondary Trails	as can be reasonably accomodated on site	none
Recreation Trails: Fitness Loops	1 per 1/4 mile of loop	LOS 2: No parking required, ADA spaces strongly encouraged. LOS 1: As indicated, include paved ADA
Recreation Trails: Hiking & Mountain Biking	as can be reasonably accomodated on site	
Recreation Trails: Equestrian	2-10 cars & stock trailers as site allows, with sufficient staging area per guidelines	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
thletic 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	1
Tennis Courts	4 per court	
Pickle Ball Courts	4 per court	
Volleyball Courts	20	
Boat and Kayak Launch	15 each ramp <sup>1</sup> 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 <sup>1</sup>	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 <sup>3</sup>	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**

Gan	nes and Play Areas		
	Playground Facilities	1 per 4 occupants <sup>1</sup>	LOS 3: Limited parking acceptable. Provide ADA spaces per use.
	Unstructured Play Areas	1 per 4 occupants <sup>1</sup>	LOS 2: As indicated, include paved ADA spaces. May include allowed reductions to 50% of required amount.
	Ball Walls	2, or none if ancillary to other court use	
	Bocce Ball	2	
	Shuffle Board	2	LOS 1: As indicated, paved, include ADA spaces. May
	4- Square	2	include allowed reductions to 30% of required amount at reviewer's discretion.
	Gaga pits	6	
Pas	sive 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
	Picnic Areas	1 per picnic table	amount.
			LOS 1: As indicated, paved, include ADA spaces.
	Community Gardens	1 per 5 plots	LOS 1, 2, 3: As indicated
	Interpretive Elements	none, ancillary use	N/A
	Urban Spaces		
		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	<ul> <li>w</li> <li>LOS 2: As indicated, include paved ADA spaces. May include allowed reduction to 50% of required amount.</li> <li>LOS 1: As indicated, paved, include ADA spaces. May include allowed reductions to 30% of required amount at reviewer's discretion.</li> </ul>
	Cleaning Stations	none, ancillary use	N/A
Site	Elements		
	Shelters	Refer to picnic area table requirement	N/A
	Restroom Buildings	none, ancillary use	7
	Pedestrian Trail Bridges	none, ancillary use	7

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

1

### 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 Facilties 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
  - A 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
  - OPW&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

# 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.

#### 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 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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# 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, nonmotorized 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 formlined 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.



# 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.



#### 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).



#### 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.



# 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 developmewnt 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

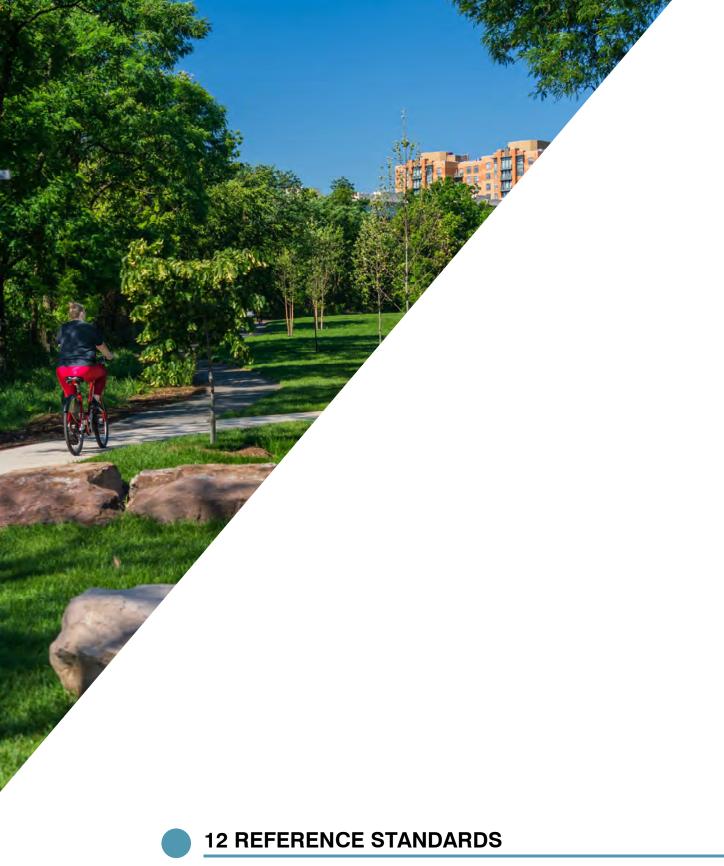
- Divert reusable vegetation, rocks, and soil from disposal
- Protect air quality during construction and landscape maintenance

### **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.



### 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



# 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.



#### 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.



Image source: https://www.pgparks.com/4724/Walk-with-Ease



Image source: https://www.pgparks.com/4604/Henson-Creek-Trail



Credit is owned by M-NCPPC



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.

Accessibility

- 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.

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 TrailsNatural 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 TrailsPaved Loop Recreation TrailsNatural 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.

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

\* 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

	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.

#### TABLE IV-1.2 BASIC DESIGN REQUIREMENTS: PATHS AND TRAILS

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.

#### **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

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.

#### 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, nonslip 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
- 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.	<ul> <li>Alignments are selected in four ways:</li> <li>1. To improve connectivity to the Primary Network.</li> <li>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.</li> <li>3. To reduce demand for school bussing by enlarging the safe walk zones of schools.</li> <li>4. To enhance quality of life and property values at the neighborhood level.</li> </ul>	
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.	

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	<ul> <li>Standard: 10 feet; 11 feet in high use areas.</li> <li>Use the FHWA Shared Use Path Level of Service Calculator to justify minimum 8-foot widths, or wider 12-14-foot pavements.</li> <li>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.</li> </ul>	<ul> <li>Sidepaths: Standard is 10 feet; 11 feet in high use areas, 8 feet if justified by desired LOS.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	

	Primary	Secondary
Corridor Width	If along a road, 28 feet or greater. Away from roads 25 feet or greater	<ul> <li>If along a road, 18 feet minimum (19-20 feet preferred) Section: 5 feet buffer to roadway, 10 feet paved treadway, 3 feet shoulder.</li> <li>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.</li> </ul>
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 their 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 their 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.

	Primary	Secondary
Plantings	<ul> <li>Turf, trees, raingarden vegetation and other plantings can be considered based on the trailside context and level of effort available for maintenance.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Turf, trees, raingarden vegetation and other plantings can be considered based on the trailside context and level of effort available for maintenance.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
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 200' 12.5% 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	<ul> <li>Standards for Federal Outdoor Developed Areas, 2014.</li> <li>Design Speed: 12 to 20 mph</li> <li>Minimum curve radius: 27 feet to 74 feet depending on design speed.</li> <li>Stopping Sight Distance: See AASHTO.</li> <li>The AASHTO Guide for the Development of Bicycle Facilities provides standards, guidelines and methods of calculation for each of these important geometric considerations.</li> </ul>	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 Table continued on next page

	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	<ul> <li>Use of wood or metal bollards is discouraged.</li> <li>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.</li> <li>Pipe railings are recommended to block larger lawn areas.</li> <li>Flexible bollards with flags are preferred in some locations, or P-Gates.</li> <li>Yellow color with generous portions of retro-reflective material should be used to maximize visibility in low light.</li> <li>Standard hazard striping should be included (See AASHTO).</li> <li>In most cases, the standard sign NO UNAUTHORIZED VEHICLES ALLOWED should be used.</li> <li>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.</li> </ul>	<ul> <li>Use of wood or metal bollards is discouraged.</li> <li>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.</li> <li>Pipe railings, plantings or boulders can be used to block larger lawn areas.</li> <li>Flexible bollards with flags are preferred in some locations, or P-Gates. Refer to Section VI for design features.</li> <li>Yellow color with generous portions of retro-reflective material should be used to maximize visibility in low light.</li> <li>Standard hazard striping should be included (See AASHTO).</li> <li>In most cases, the standard sign NO UNAUTHORIZED VEHICLES ALLOWED should be used.</li> <li>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.</li> </ul>

	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.		

	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 Shard 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 Shard 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 CLASSIFICATONS			
	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.	

	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.	

	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

	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 accomodation 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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# 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

# DESIGN GUIDANCE FOR COMMON PARK FEATURES

#### 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
PARKING <sup>1</sup>	Limited Parking Acceptable	Minimum 20	60
SEATING			
Number of users/ Seating area	750-1,200 square feet Seat- ing 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 <sup>2</sup> 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/Road <sup>3</sup>	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

LEVEL OF SERVICE 2



Image source: https://parkrxamerica.org/m/1177/foxhill-park https://barbadostoday.bb/2019/08/10/slb-



Image source: u19-wins-first-friendly-match-in-washingtondc/

LEVEL OF SERVICE 1



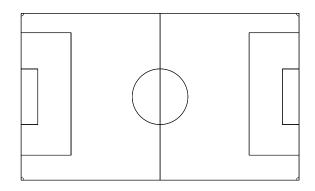
Credit is owned by M-NCPPC

# 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

## DESIGN GUIDANCE FOR COMMON PARK FEATURES

TABL	ΕI	V-2	.2
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	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
PARKING <sup>1</sup>	Limted Parking Acceptable	20/60	60
SEATING			
Player	N/A	28 feet Bench / Team	28 feet Bench / Team
Spectator	750-1,200 square feet Seat- ing 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/ Infill², or natural
SETBACKS	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/Road <sup>3</sup>	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** 



facility/details/2-sc-soccer-field

LEVEL OF SERVICE 1



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

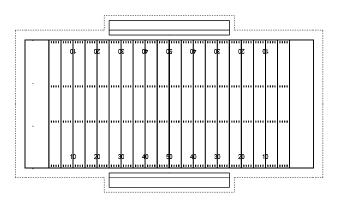
MNCPPC, MD - Parks and Recreation Facilities Design Guidelines

# 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

## DESIGN GUIDANCE FOR COMMON PARK FEATURES

TABLE	IV-2.3
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			IABLE 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
PARKING <sup>1</sup>	Limited Parking Acceptable	20/60	60
SEATING			
Player	N/A	50 feet Bench / Team	50 feet Bench / Team
Spectator	750-1,200 square feet Seat- ing 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/ Infill², or natural
SETBACKS			
Fields	75 feet	75 feet	75 feet
Parking/Road <sup>3</sup>	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://parkrxamerica. org/m/1185/collington-station-park

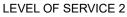




Image source: https://parkrxamerica. org/m/1343/k-della-underwood-park

LEVEL OF SERVICE 1



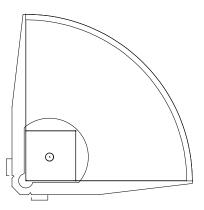
Credit is owned by M-NCPPC

# 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

## DESIGN GUIDANCE FOR COMMON PARK FEATURES

			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
	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 Seat- ing 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 <sup>2</sup> , or natural
SETBACKS			
Fields	50 feet	50 feet	50 feet
Parking/Road <sup>3</sup>	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



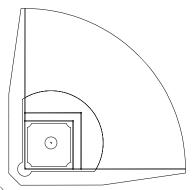
Credit is owned by M-NCPPC

# BASEBALL - DIAMOND FIELD

#### A. DESCRIPTION

Diamond shaped field predominantely 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
PARKING <sup>1</sup>	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 Seat- ing 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 <sup>2</sup>
SETBACKS			
Fields	50 feet	50 feet	50 feet
Parking/road <sup>3</sup>	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



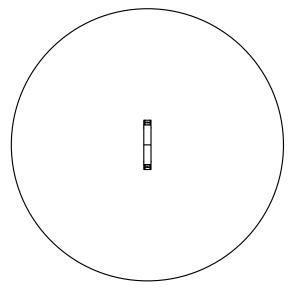
Credit is owned by M-NCPPC

# 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**



#### 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

#### 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

## DESIGN GUIDANCE FOR COMMON PARK FEATURES

#### 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
PARKING <sup>1</sup>	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 <sup>2</sup>	Compacted dirt with natural turf grass
SETBACKS			
Fields	50 feet	50 feet	50 feet
Parking/Road <sup>3</sup>	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



maryland/entertainment/laurel\_5\_cricket\_ ground/

#### LEVEL OF SERVICE 2



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

#### LEVEL OF SERVICE 1



Image source: https://siteresourcesinc.com/ portfolio/south-germantown-recreationalpark-cricket-field/

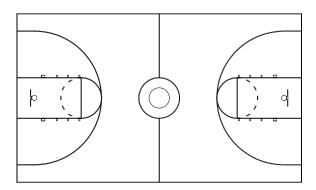
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# **BASKETBALL - HARD SURFACE COURT**

# 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**

- 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
PARKING <sup>1</sup>	Limited Parking Acceptable	20	20
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Team
Spectator	750-1,200 square feet Seat- ing 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 specta- tors 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/Road <sup>2</sup>	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-courtrenovation-program/



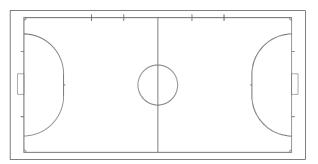
Image source: https://www.pgparks.com/ gallery.aspx?PID=182

# 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**

- 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	
PARKING <sup>1</sup>	Limited Parking Acceptable	20/60	60	
SEATING				
Player	1 Bench/Court	1 Bench/Court	1 Bench/Team	
Spectator	750-1,200 square feet Seat- ing 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 specta- tors 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/Road <sup>2</sup>	30 feet	30 feet	30 feet	
Property Line	25 feet	25 feet	25 feet	
EQUIPMENT	Court Pavement Futsal Goals Permimeter 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/



Image source: https://www.muscatineiowa. 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

- 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

	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
PARKING <sup>1</sup>	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/Road <sup>2</sup>	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 Equiment 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

#### TABLE IV-2.9

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.pgparks. com/4512/Columbia-Park-Community-Center

LEVEL OF SERVICE 2



Image source: https://www.morganproperties.com/apartments/md/largo/ northampton/photos-virtual-tours



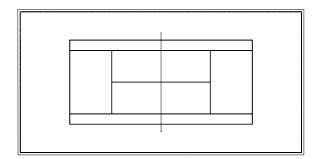
Image source: https://www.tvs-sportssurfaces. com/what-is-the-best-surface-for-an-outdoorbasketball-court/

# 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

- 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
	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/Road <sup>2</sup>	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.pgparks. com/4551/Upper-Marlboro-Community-Center

LEVEL OF SERVICE 2



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



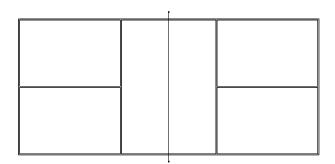
Image source: http://thetennisdesignstudio. com/prince-georges-community-college

# 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

- 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

TAB	LE	IV-2.11	

			IABLE 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
PARKING <sup>1</sup>	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 Seat- ing 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/Road <sup>2</sup>	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-outdoorpickleball-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-inarizona/

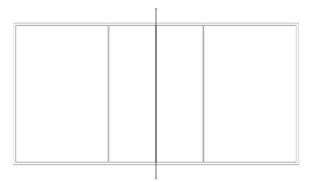
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# **VOLLEYBALL - SAND OR GRASS COURT**

# 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**

- 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
PARKING <sup>1</sup>	Limited Parking Acceptable	20	20
SEATING			
Player	1 Bench/Court	1 Bench/Court	1 Bench/Court
Spectator	750-1,200 square feet Seat- ing 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 specta- tors 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/Road <sup>2</sup>	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



Image source: https://www.recreater.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 <sup>1</sup>	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/

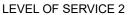




Image source: https://www.businessyab. com/explore/united\_states/maryland/anne\_ arundel\_county/3/pasadena/john\_downs\_ loop/8311/downs\_park.html



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**

- 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
PARKING <sup>1</sup>	Limited Parking Acceptable	20	20
SEATING			
Player	1 Bench/Field	1 Bench/Field	1 Bench/Field
Spectator	750-1,200 square feet Seat- ing 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 <sup>2</sup>
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/Road <sup>3</sup>	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



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





# 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, allweather 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
MINUMUM 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



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

LEVEL OF SERVICE 2

#### 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 orLocal Public Park orDense Urban AreaNear 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 northsouth 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-renovationprogram/

**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 northsouth 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 Tur		
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



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**

7 7 7 7 10 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	

# C. GENERAL GUIDELINES

• Any orientation is allowable, with northsouth 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 Suffe Board
- G-1.1 Bench
- G-2.1 Trash Receptacle
- D-8 Concrete Walk
- D-12 Concrete Ramp
- F-1 Underdrain

E 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/residentialshuffleboard-court-photos.html



Credit is owned by M-NCPPC

# FOUR SQUARE - HARD SURFACE COURT

# A. DESCRIPTION

Square paved court divided by lines into four quadrants.

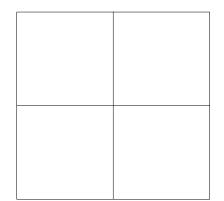
## **B. COURT DIAGRAM**

## **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

# **DESIGN GUIDANCE FOR COMMON PARK FEATURES**

			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.

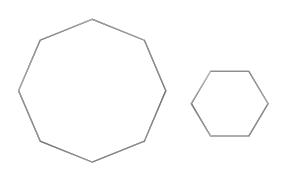
# **B. COURT DIAGRAM**

### **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



# **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 inchecs 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

### TABLE IV-3.7

	LEVEL OF SERVICE		
	3	2	1
COURT SIZE	Single Hexagon 15 feet diam- eter (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



Image source: https://www.walkersvillemd.gov/parksrecreation/slideshows/walkersvillecommunity-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**

- 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
PARKING <sup>1</sup>	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/Road <sup>2</sup>	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-skateparksin-maryland-melrose-skatepark-md-3/

#### LEVEL OF SERVICE 1



Image source: https://skatethestates.com/best-skateparksin-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**

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

			TABLE IV-2.16			
	LEVEL OF SERVICE					
	3	1				
COURSE SIZE	3-4 Acres (9 holes)	1-2 Acres Per Hole (12-18 holes)	1-2 Acres Per Hole (18 holes)			
PARKING <sup>1</sup>	1 per basket	1 per basket	2 per basket			
SURFACE Natural Terrain/ Trail Surface		Natural Terrain/ Trail Surface	Natural Terrain/ Trail Surface			
SETBACKS						
Parking/Road <sup>2</sup>	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.pgparks.com/4611/Disc-Golf

LEVEL OF SERVICE 2



Image source: https://www.hannibalparks.org/facilities/doncrane-disc-golf-course/

LEVEL OF SERVICE 1



Image source: https://udisc.com/blog/post/worlds-bestdisc-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 acessible 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			
PARKING <sup>1</sup>	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-riverpark-2/

LEVEL OF SERVICE 1



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





# PLAZAS & OPEN SPACES

# **1. DESCRIPTION**

#### **Closed Square**

- Space shared by buildings, typically multifamily 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 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 amphitheatertype 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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# 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 (<sup>3</sup>/<sub>4</sub>) of the site (minimum <sup>3</sup>/<sub>4</sub> of an acre).
- The separate small dog area should be one quarter (¼) of the site (minimum ¼ 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 acess 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, selflatching, 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 Wall, 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		LO	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 strucure/ trees, drinking fountain	Shade strucure/ trees, drinking fountain	Shade strucure/ trees, drinking fountain	Shade strucure/ trees, drinking fountain, Seating	Shade strucure/ trees, drinking fountain, Seating	Shade strucure/ trees, drinking fountain, Seating
PLAY AMENI- TIES	Not required	Hybrid seating/ agility Objects	Hybrid seating/ agility Objects	Agility Equipment	Agility Equipment	Agility Equipment, Specific defining feature
PARKING	No dedicated Limited Dedicated dedicated parking 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 communtiy 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

MNCPPC, MD - Parks and Recreation Facilities Design Guidelines

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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 weatherproof 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 concreate. 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 composing 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; <sup>3</sup>/<sub>4</sub> 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 lowmaintenance 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.

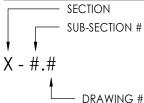
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# **INDEX OF SECTIONS**

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# NUMBERING SYSTEM



**ABBREVATION 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
EXP.	EXPANSION	NO.	NUMBER	W/	WITH

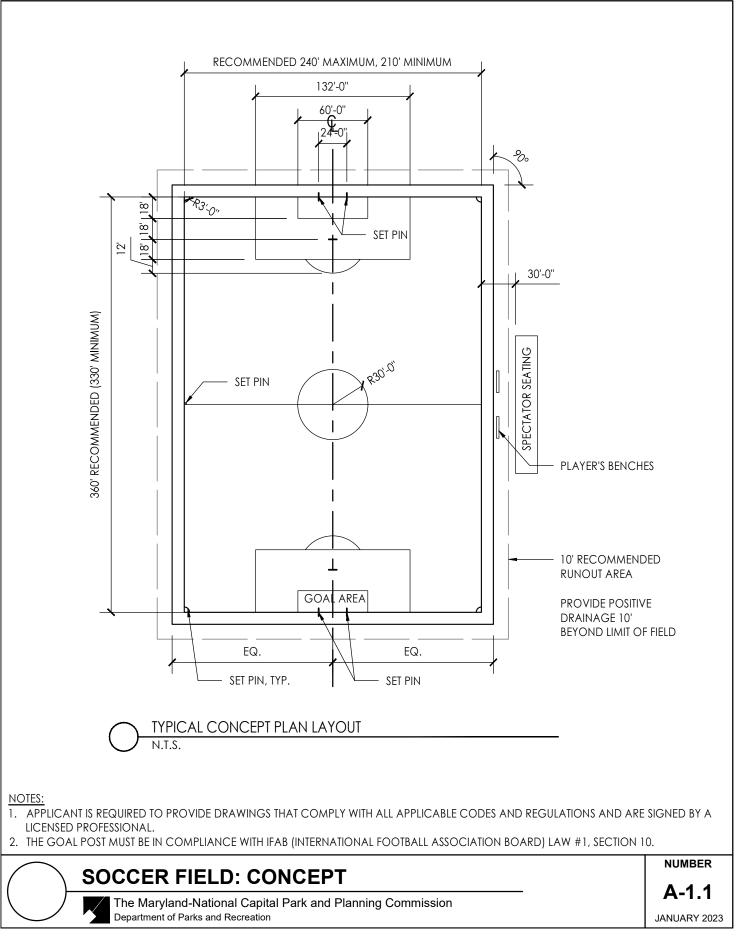
	COVER SHEET	NUMBER
Г	The Maryland-National Capital Park and Planning Commission Department of Parks and Recreation	JANUARY 2023

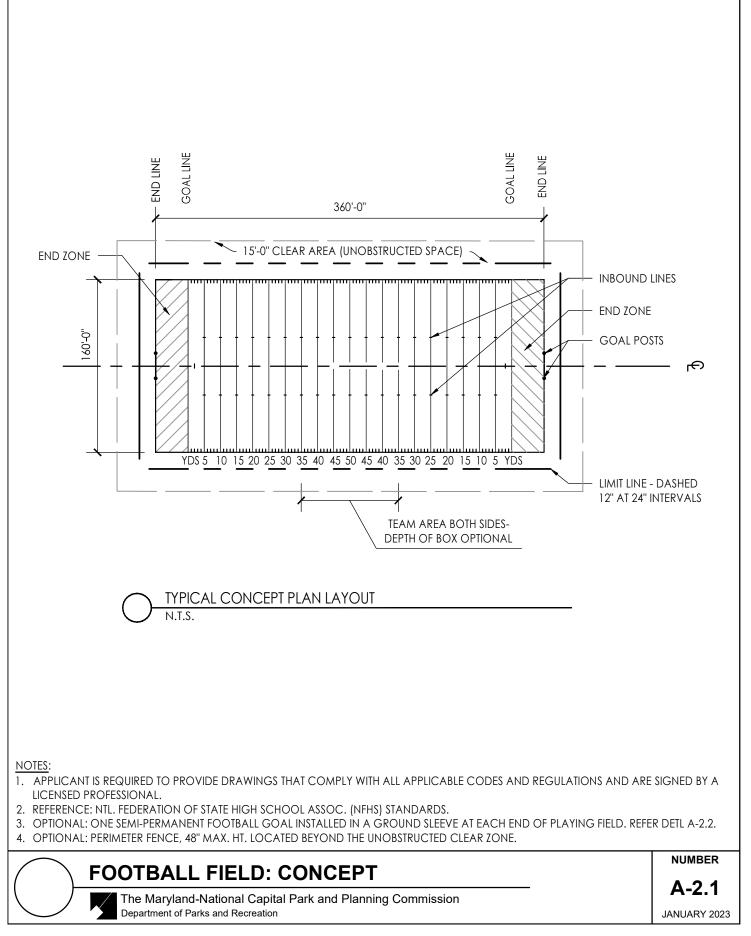
# INDEX OF DRAWINGS - SPORTS FIELDS

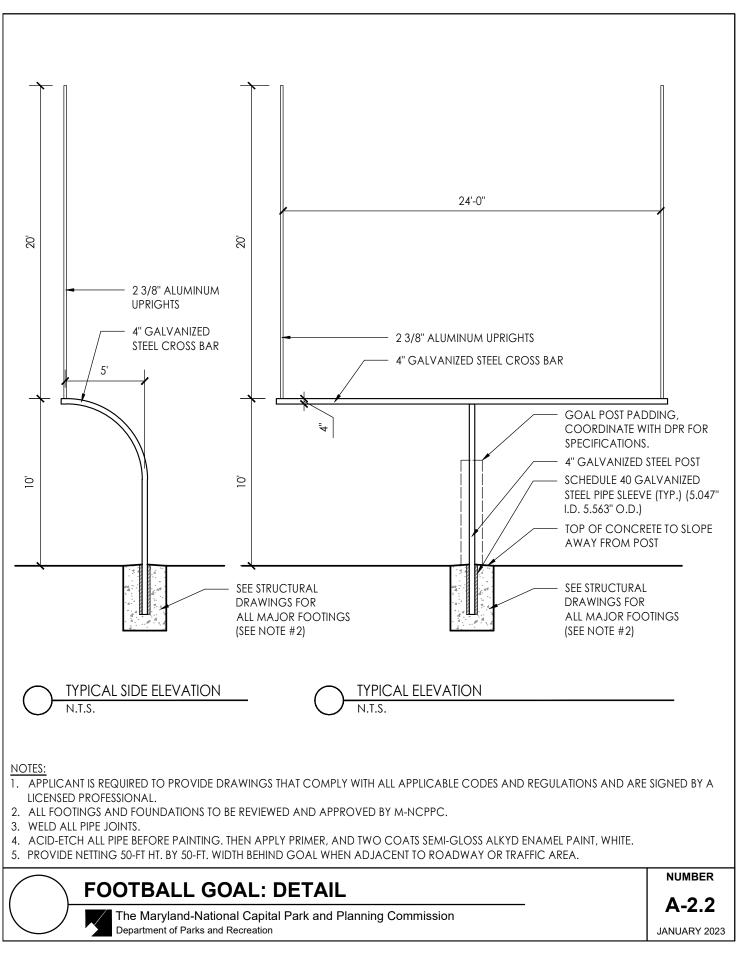
A-1.1 SOCCER FIELD

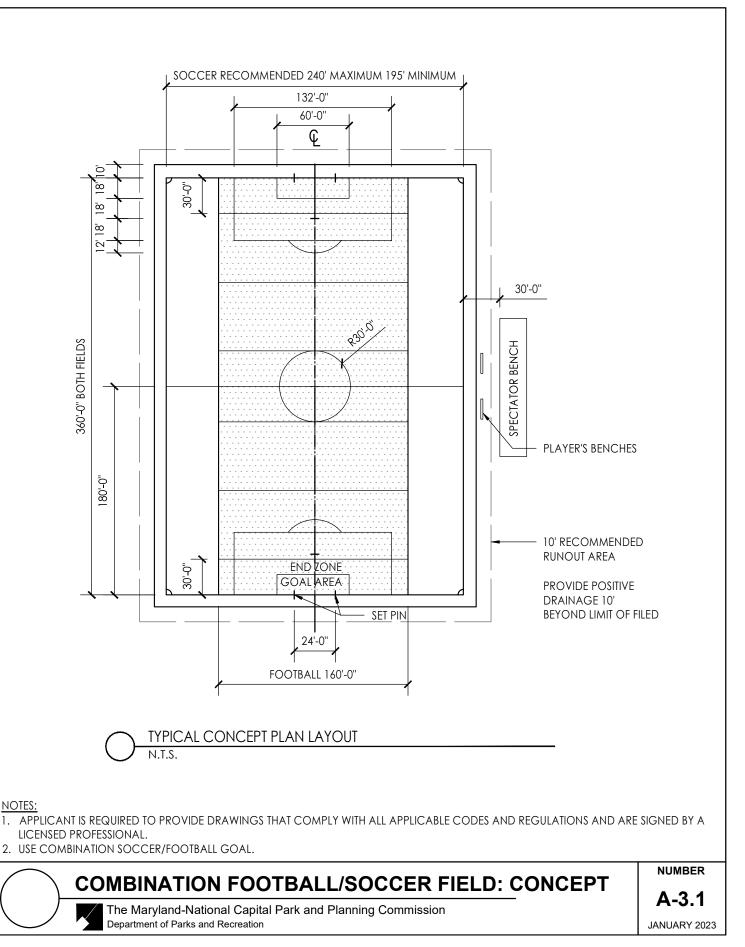
A-2.1 FOOTBALL FIELD

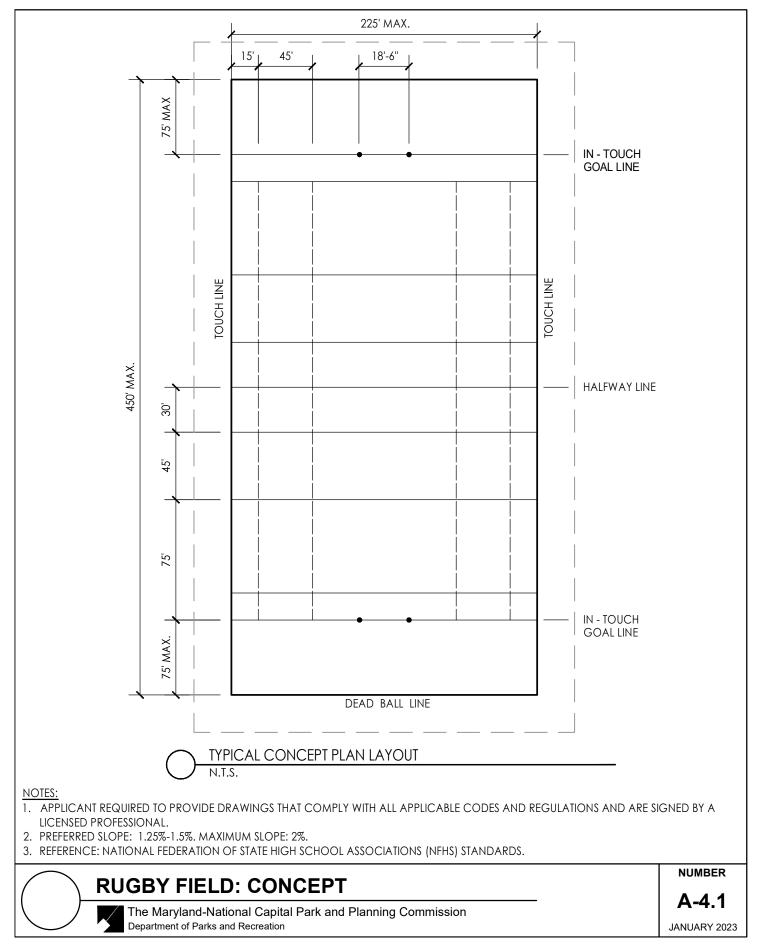
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- A-6.1 CRICKET FIELD
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- A-9.1 BALL WALL
- A-10.1 RECTANGULAR FIELD DRAINAGE PATTERN



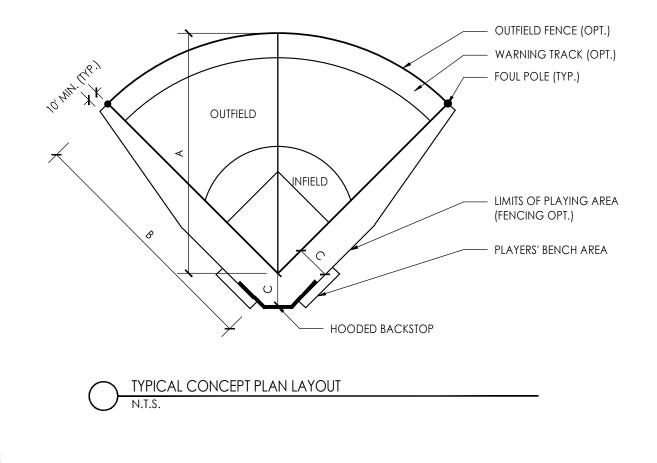








USE	AGE GROUP	А	В	С	TYP. APPROX. AREA
ADULT BABE RUTH HIGH SCHOOL	15 & UP	375' MIN. 400' PREF.	325' MIN. 350' PREF.	40' MIN. 60' PREF.	3 AC
PONY LEAGUE JUNIOR HIGH SCHOOL	13 - 14	300' MIN. 350' PREF.	275' MIN. 300' PREF.	25' MIN. 40' PREF.	2.5 AC
LITTLE LEAGUE	9 - 12	200' MIN. 225' PREF.	180' MIN. 200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



NOTES:

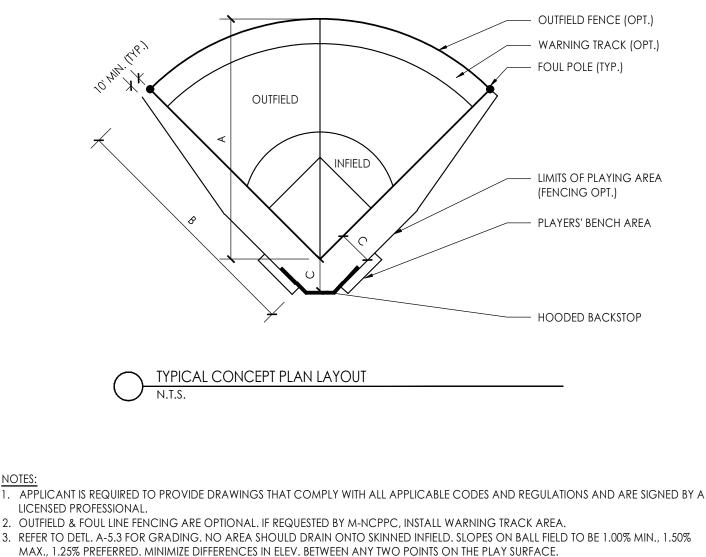
- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
- 2. OUTFIELD & FOUL LINE FENCING ARE OPTIONAL. IF REQUESTED BY M-NCPPC, INSTALL WARNING TRACK AREA.
- 3. RISE OF PITCHERS MOUND TO BE 10" ABOVE FIELD.
- 4. REFER TO DETL. A-5.3 FOR GRADING. NO AREA SHOULD DRAIN ONTO SKINNED 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.
- 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 Department of Parks and Recreation NUMBER

**A-5.1** JANUARY 2023

USE	A	В	С	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



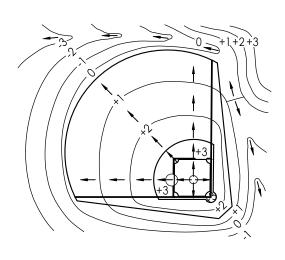
- 4. DIMENSIONS ARE FOR 12" (BALL CIRCUM.) SLOW PITCH SOFTBALL. FOR FAST PITCH OR OTHER, CONSULT THE NTL. SOFTBALL ASSOC. (NSA) **REGULATIONS.**
- 5. REFERENCE: NTL. FEDERATION OF STATE HIGH SCHOOL ASSOC. (NFHS) STANDARDS.
- 6. SOFTBALL INFIELD IS FULLY SKINNED W/ 3" SPECIAL INFIELD MIX (1/3 CLAY, 1/3 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

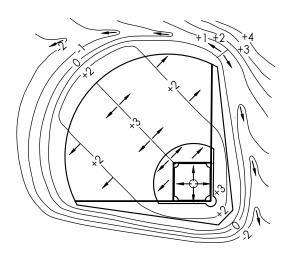
The Maryland-National Capital Park and Planning Commission Department of Parks and Recreation

NUMBER A-5.2

NOTES:



PLAN LAYOUT - RADIAL N.T.S.



#### PLAN LAYOUT - SYMMETRICAL CROSS SLOPE

N.T.S.



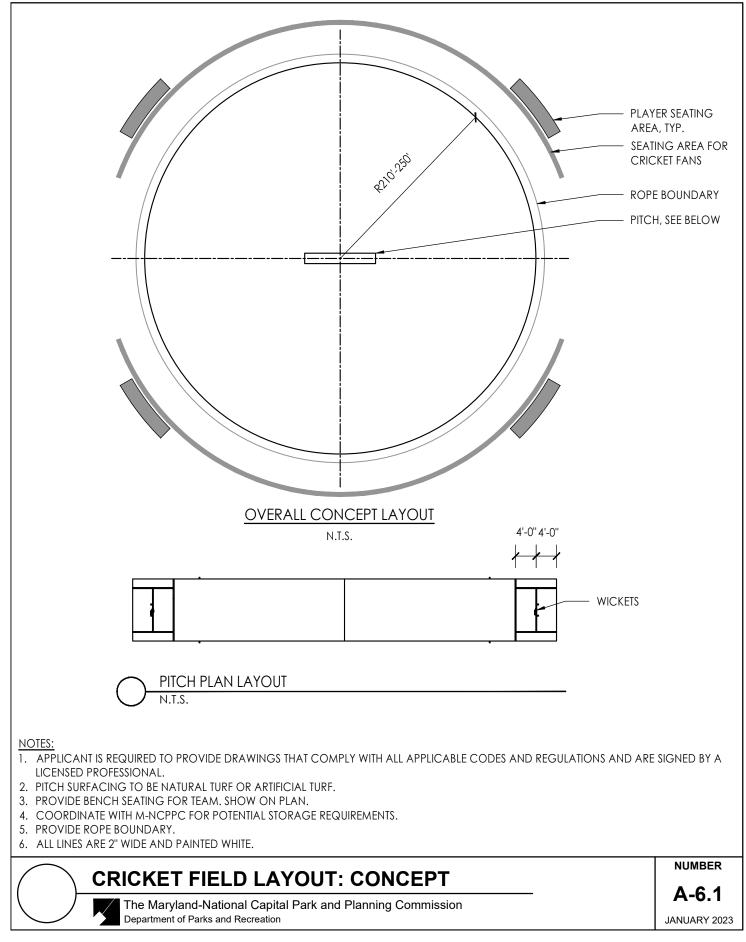
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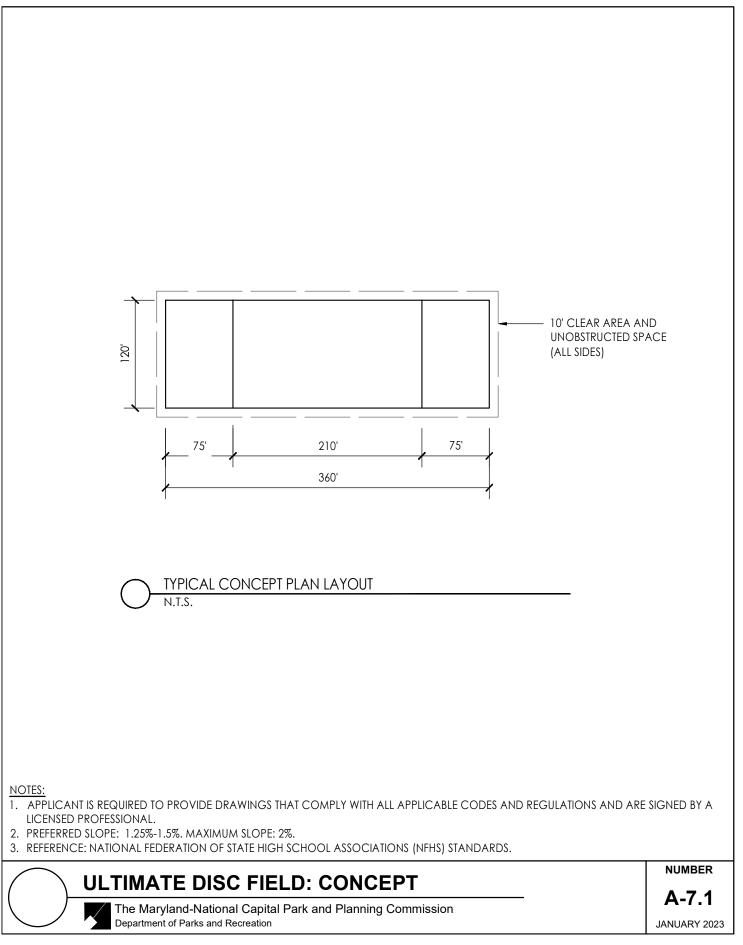
- 1. APPLICANT IS REQUIRED TO PROVIDE DRAWINGS THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND ARE SIGNED BY A LICENSED PROFESSIONAL.
- 2. PITCHERS MOUND TO BE HIGHEST WITHIN FIELD.
- 3. PREFERED: PITCHERS MOUND, BASES AND HOME PLATE ARE LEVEL.
- 4. IF NECESSARY, MAX. INFIELD SLOPE 2% FROM 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.

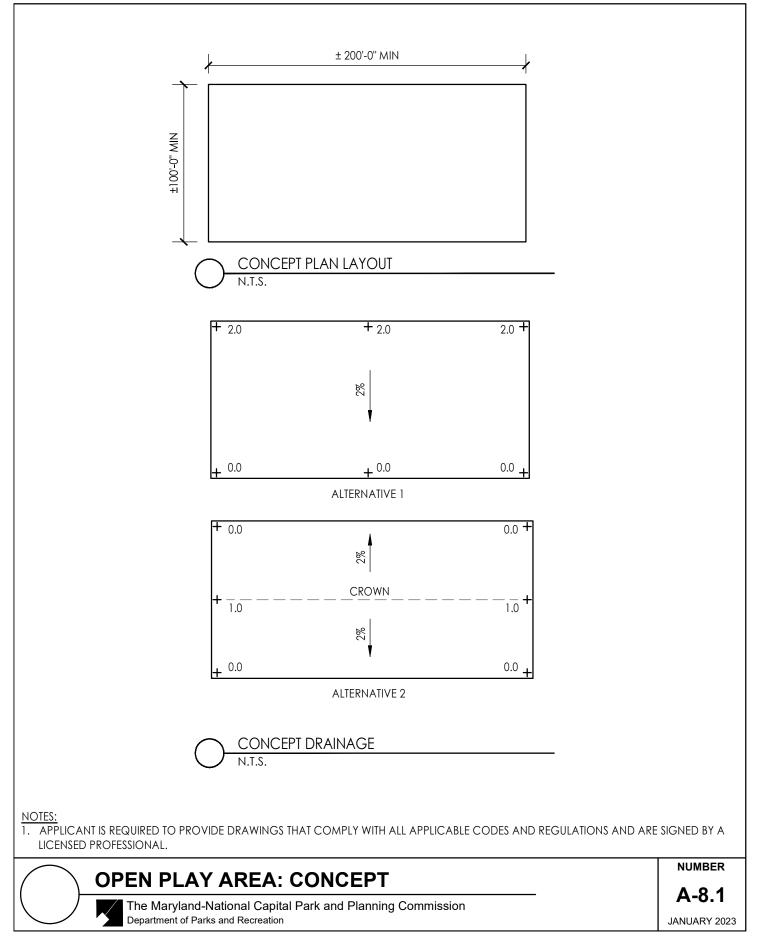
# BALLFIELD DRAINAGE: CONCEPT

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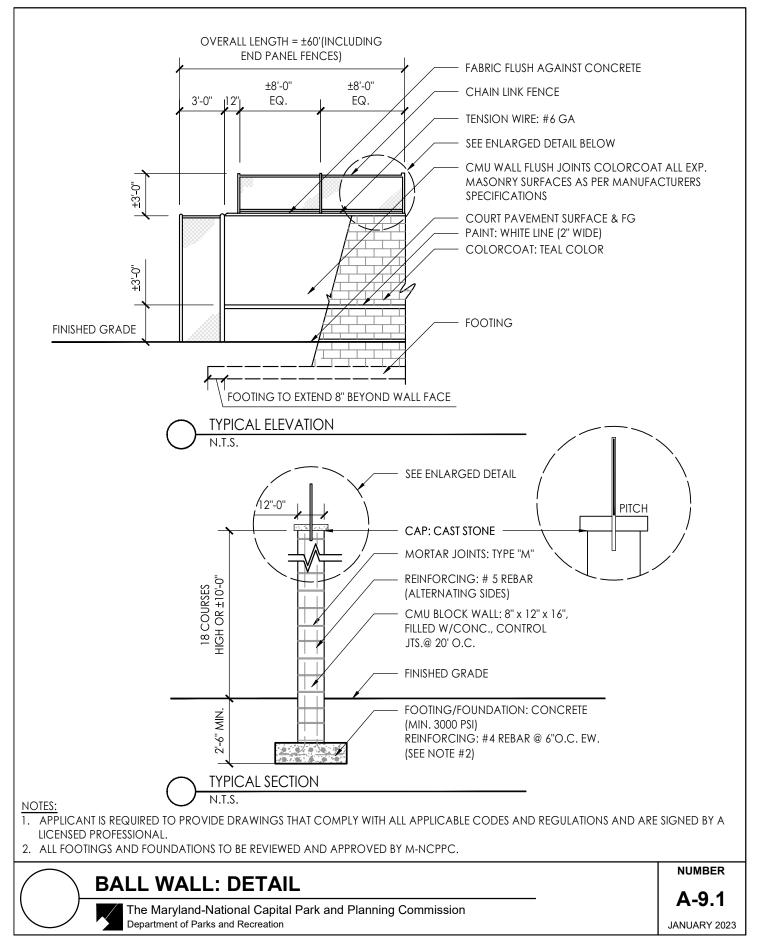
JANUARY 2023

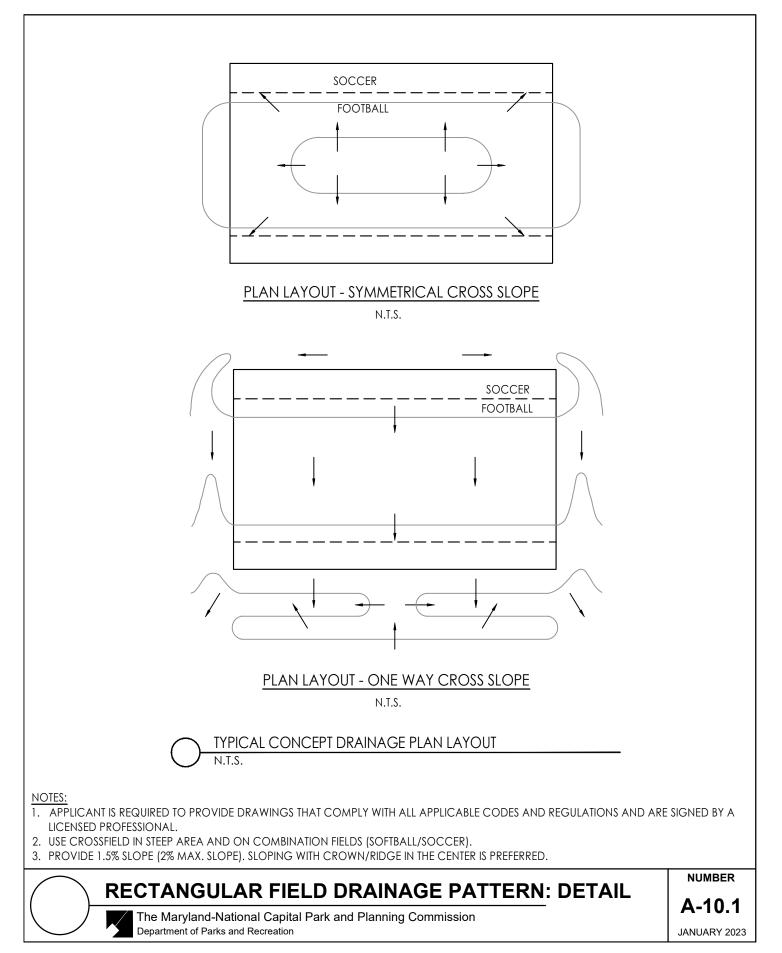






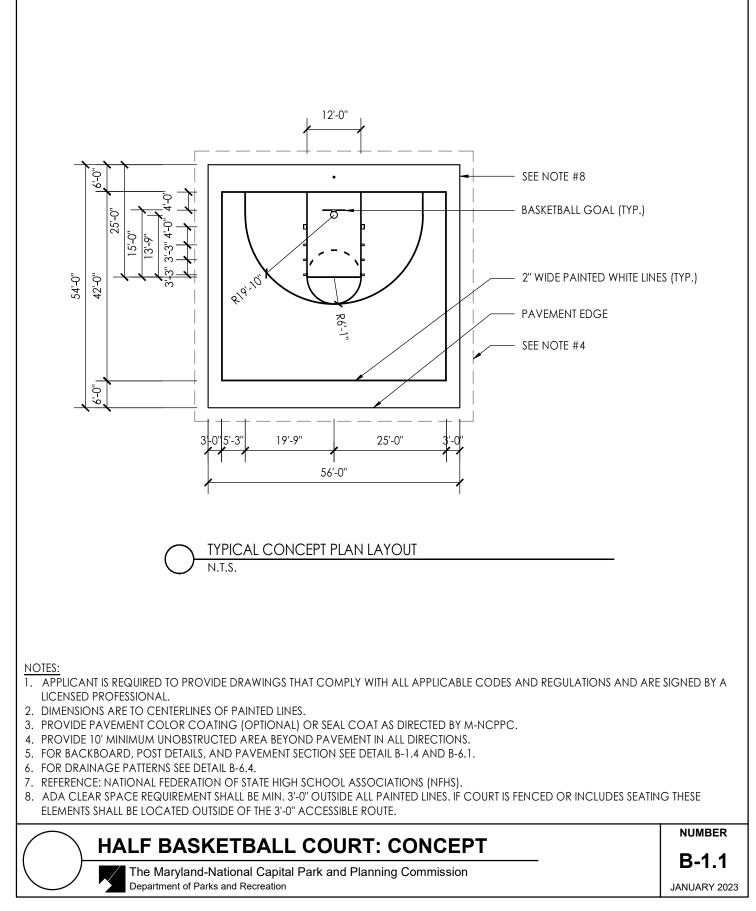
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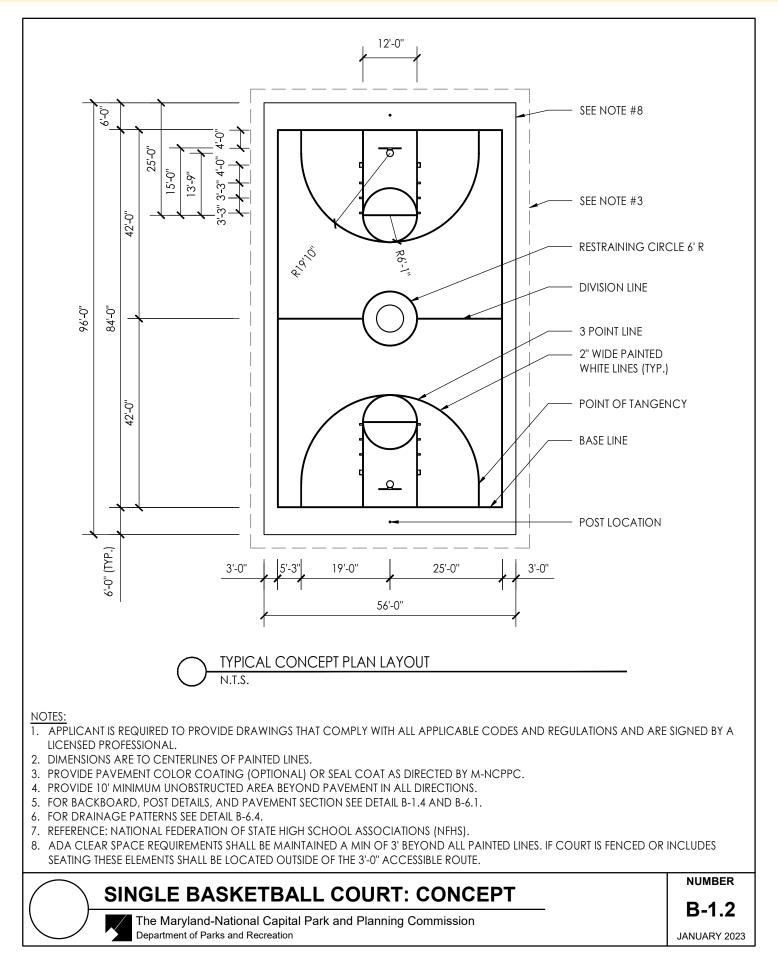


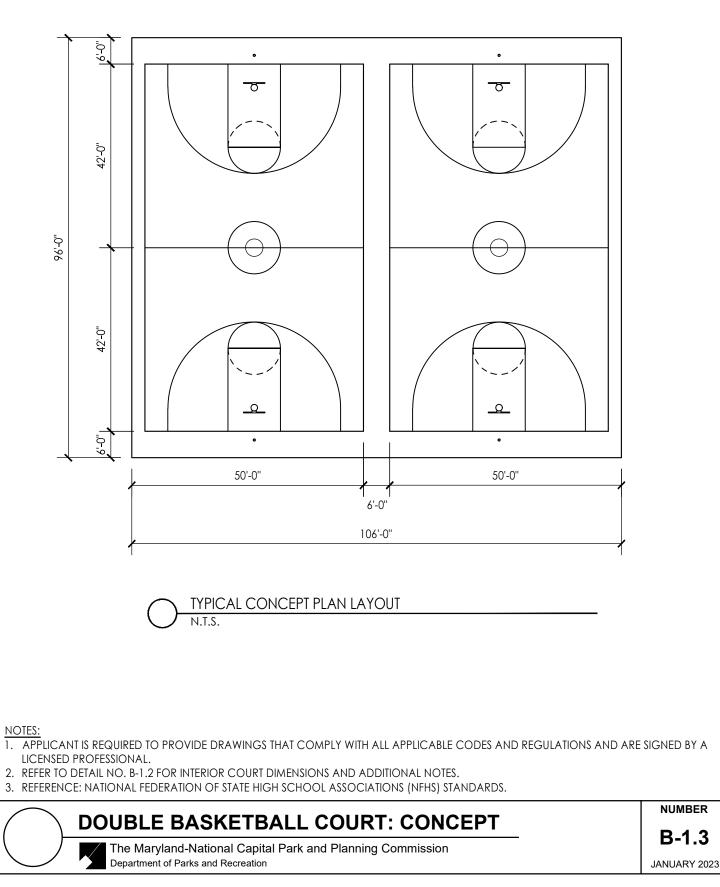


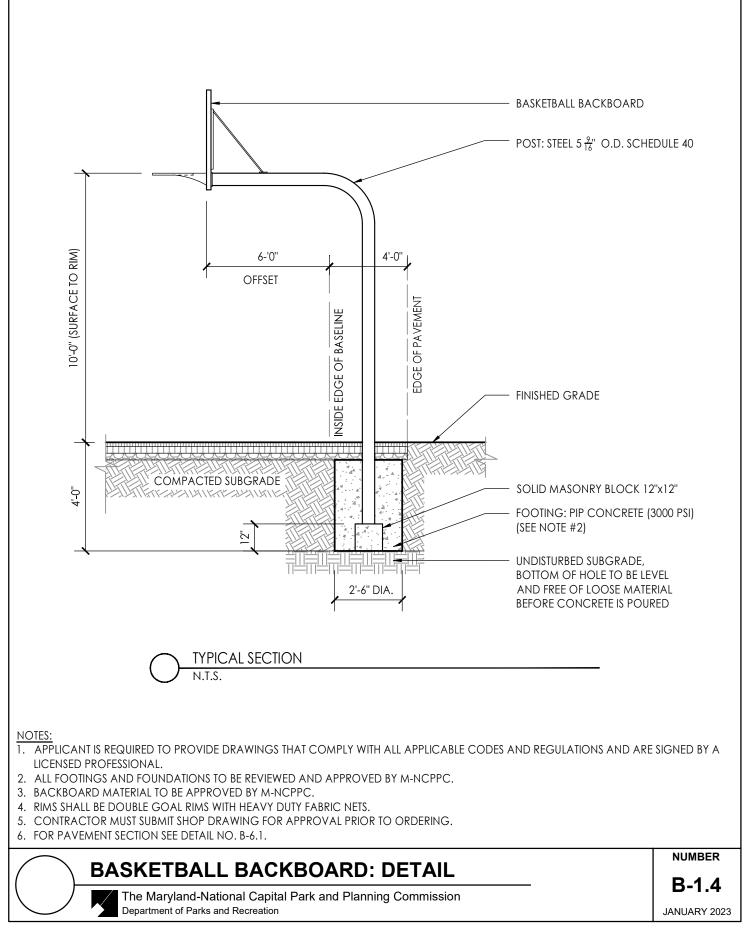
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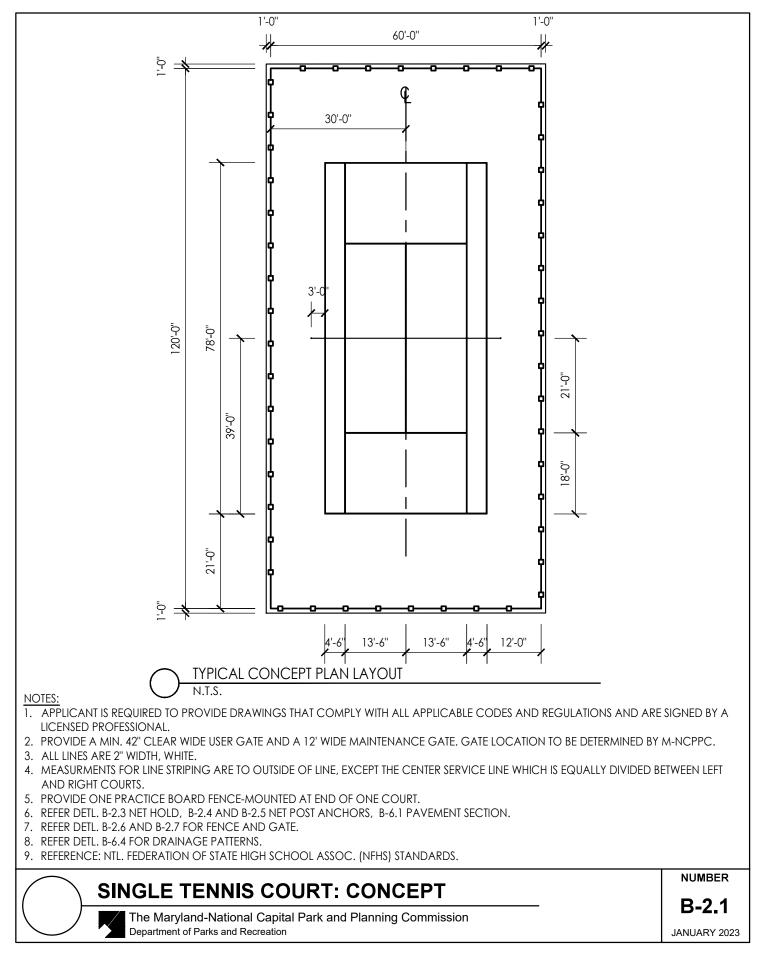
- B-1.1 HALF BASKETBALL COURT
- B-1.2 SINGLE BASKETBALL COURT
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- B-1.4 BASKETBALL BACKBOARD
- **B-2.1 SINGLE TENNIS COURT**
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- B-6.3 COURT RENOVATION MODIFIED "SLIP SHEET" METHOD
- B-6.4 COURT DRAINAGE PATTERNS

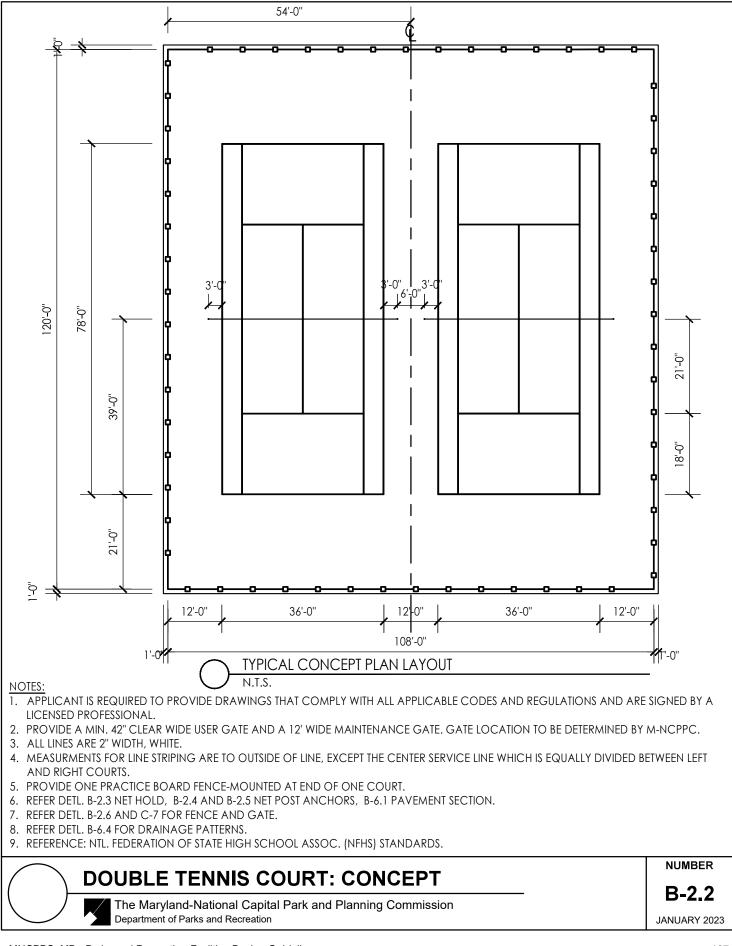


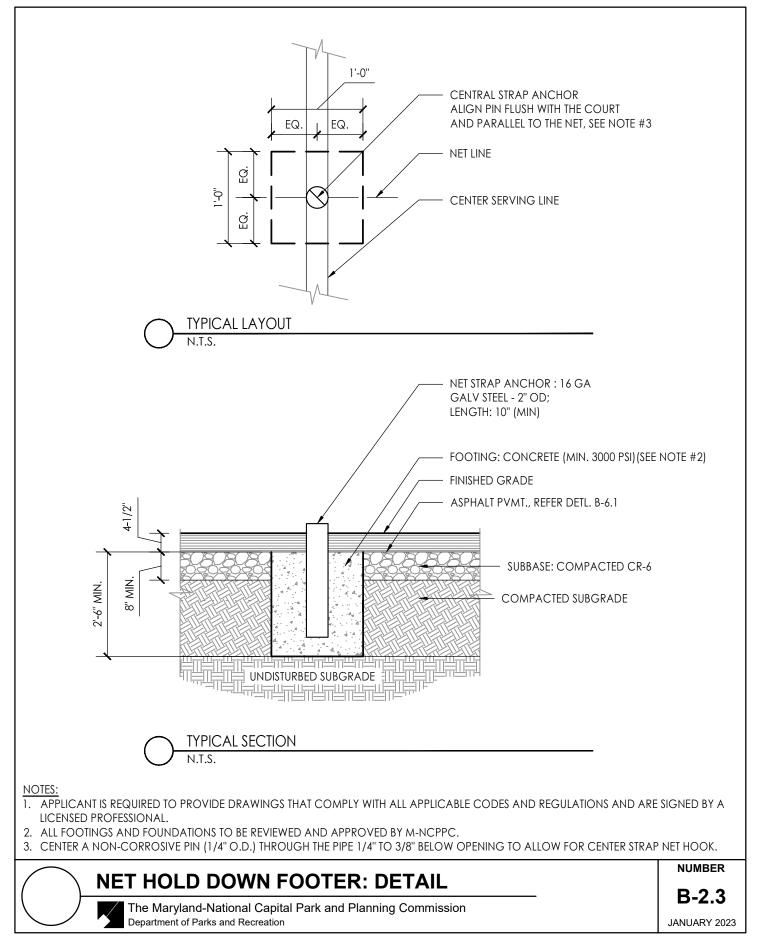


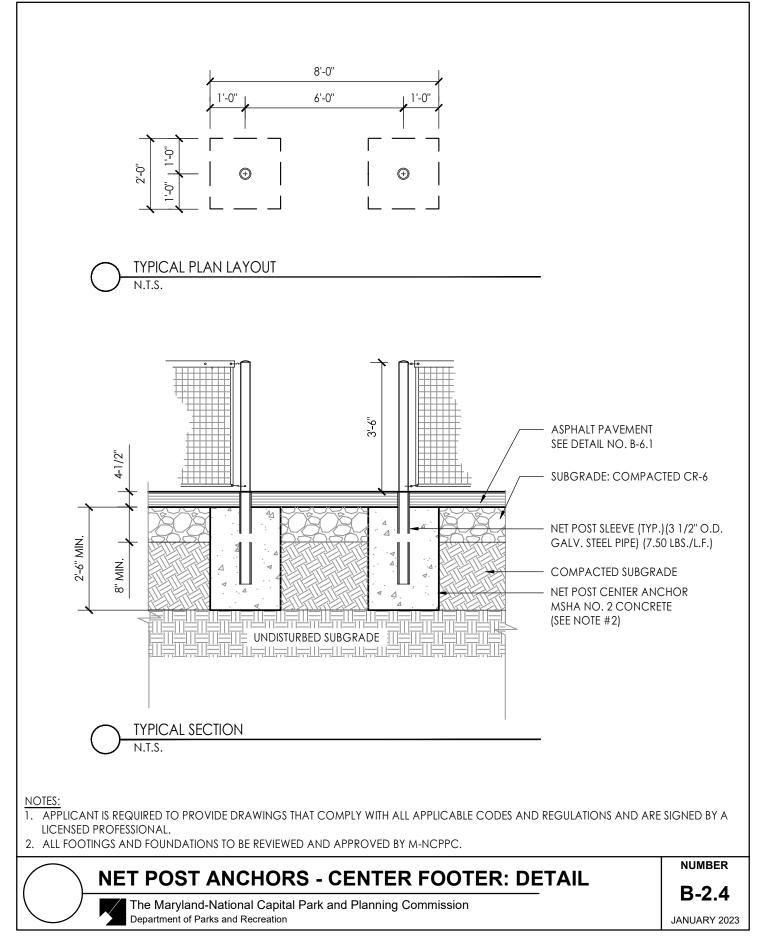


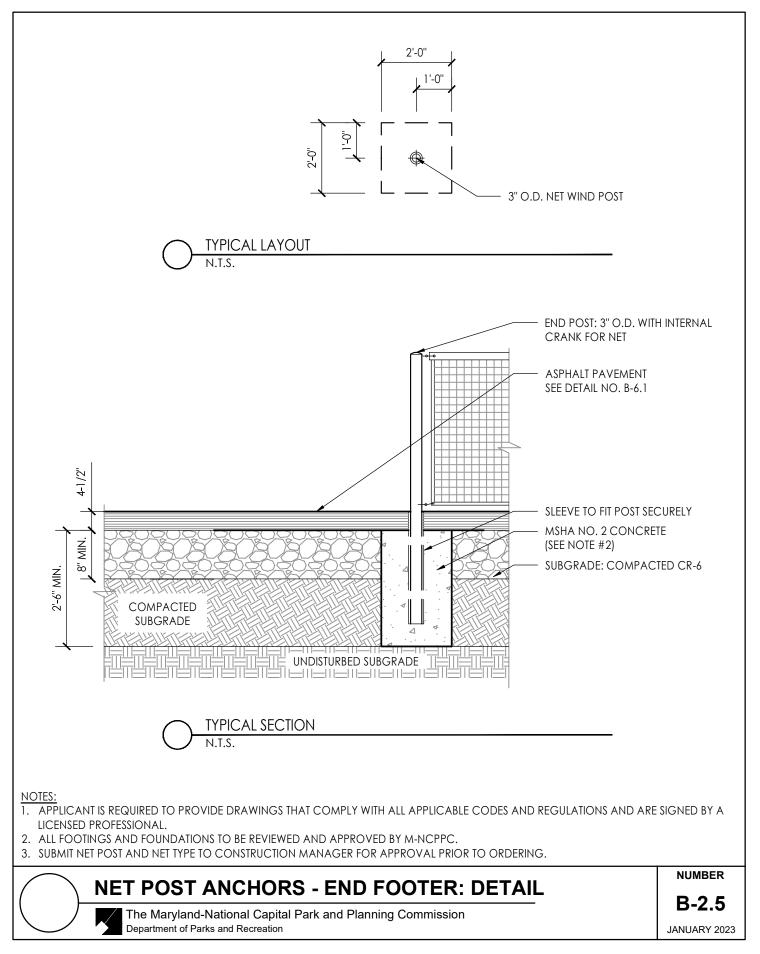


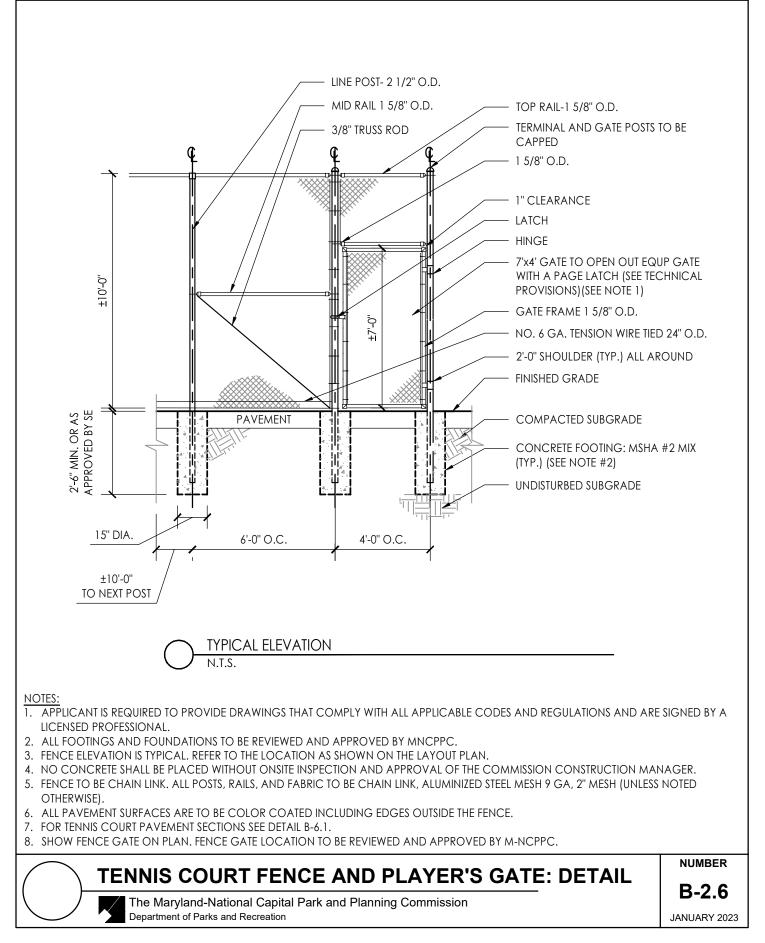


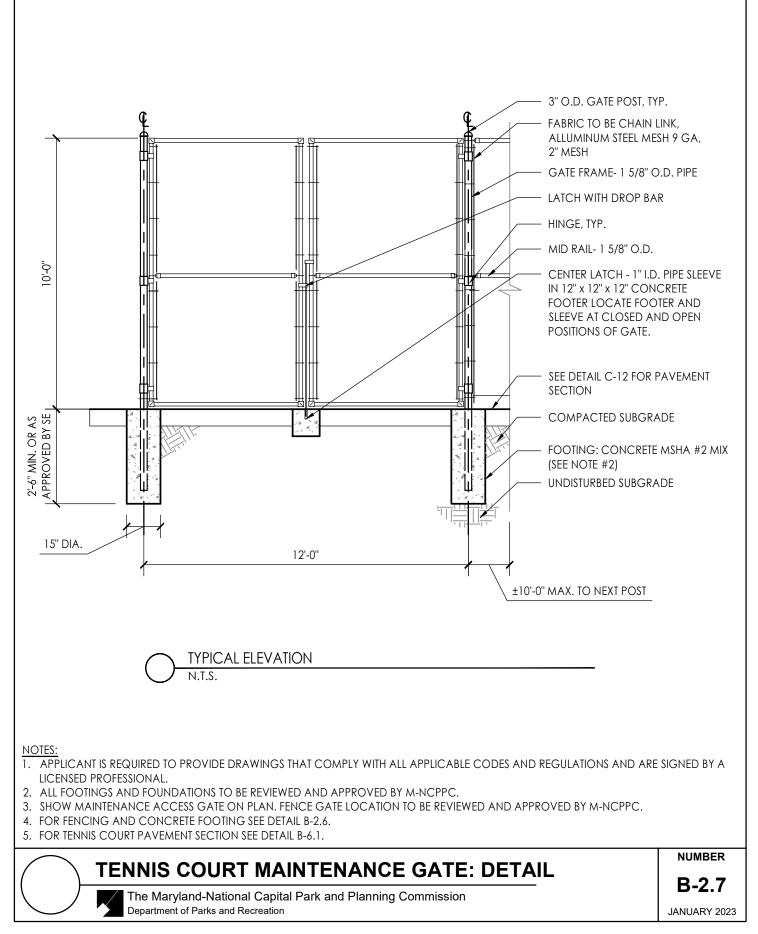


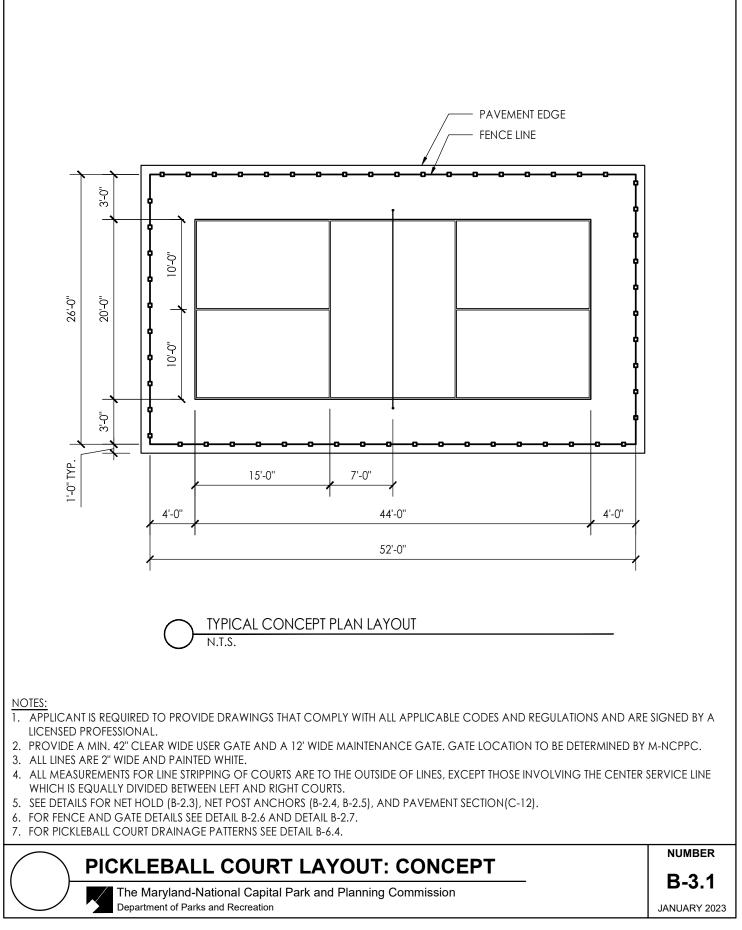


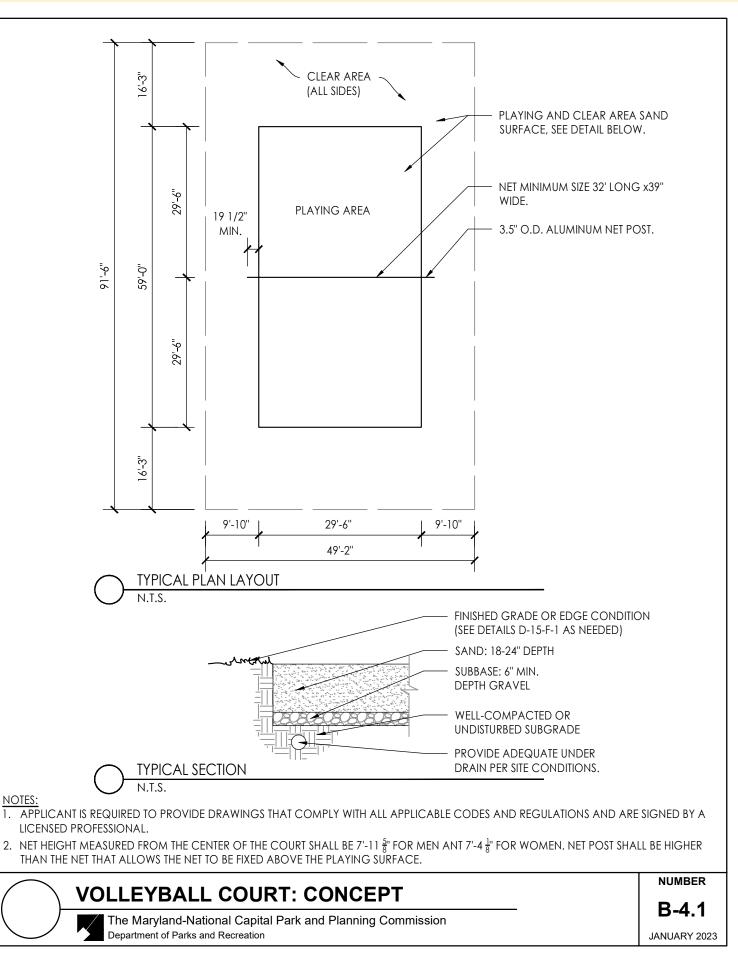


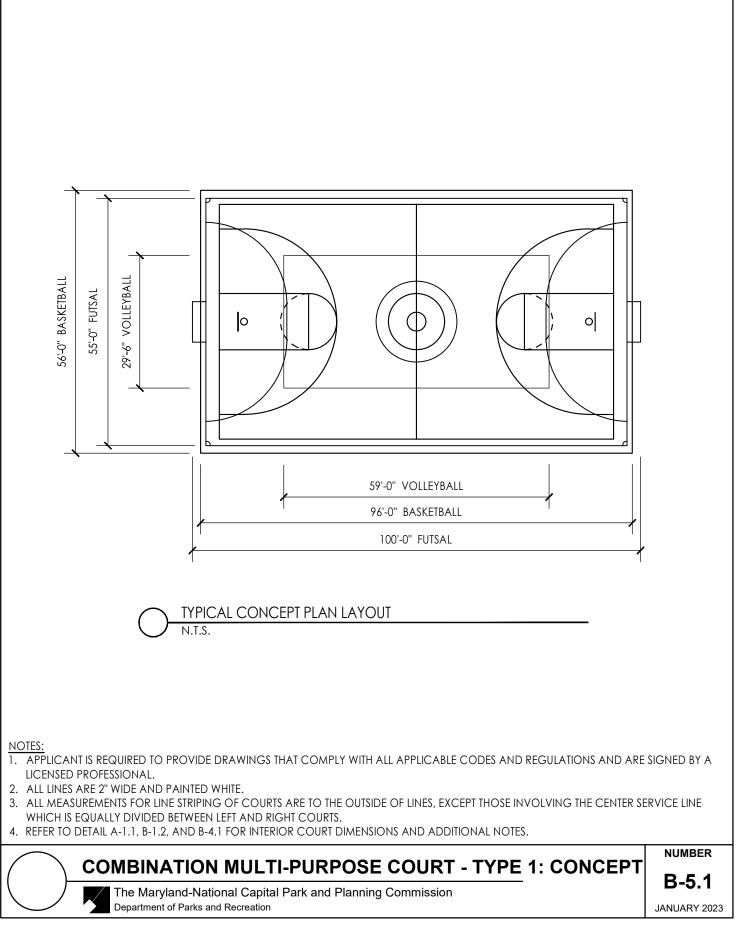


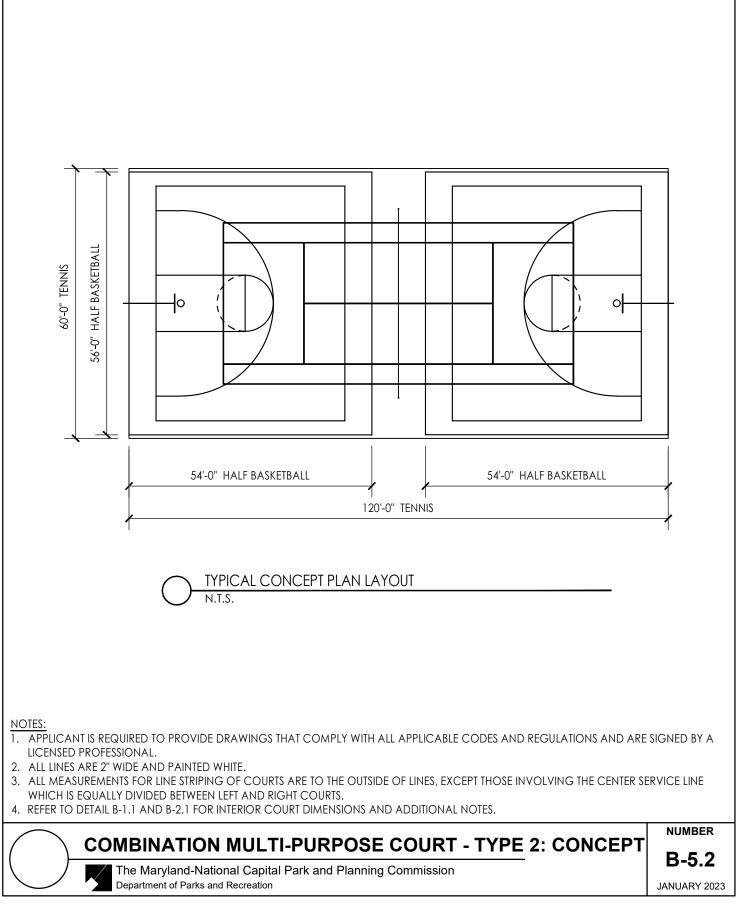


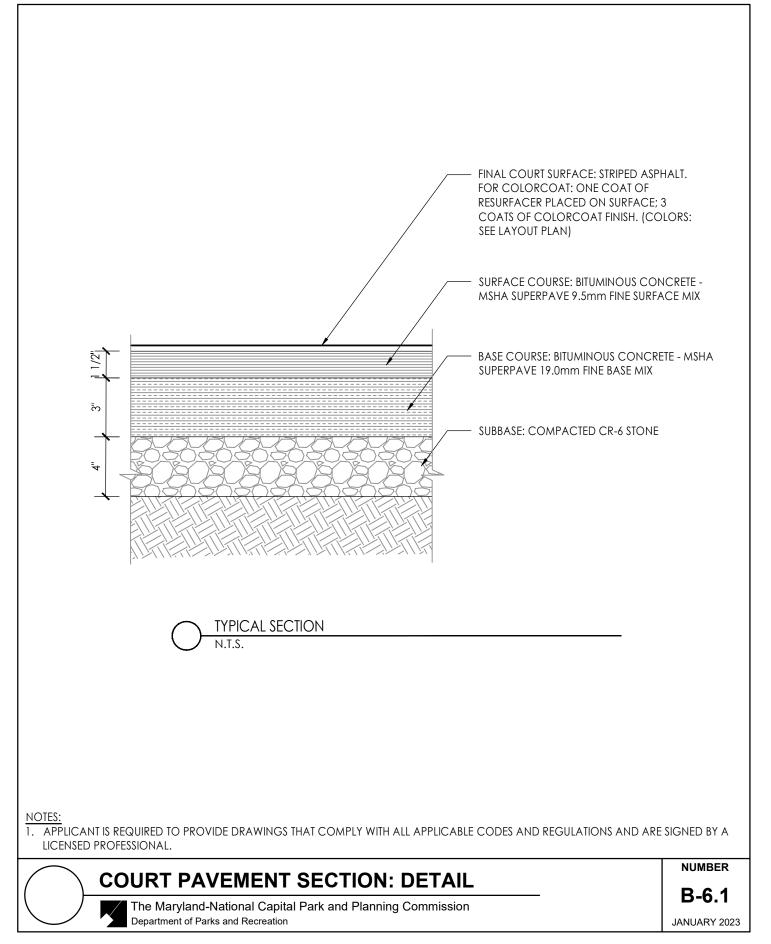


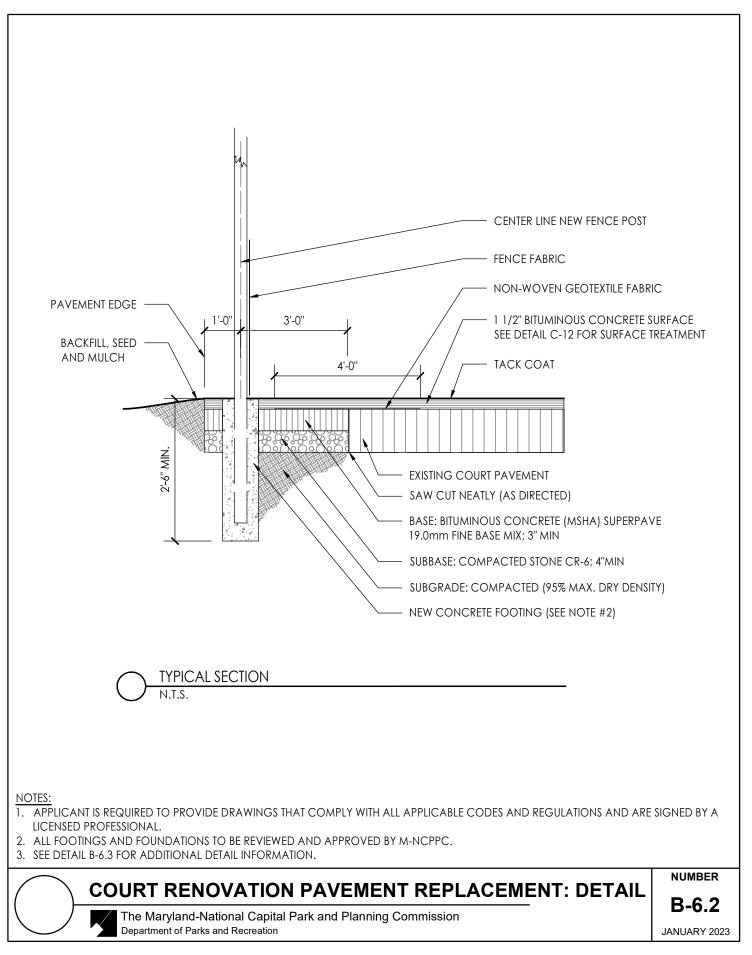


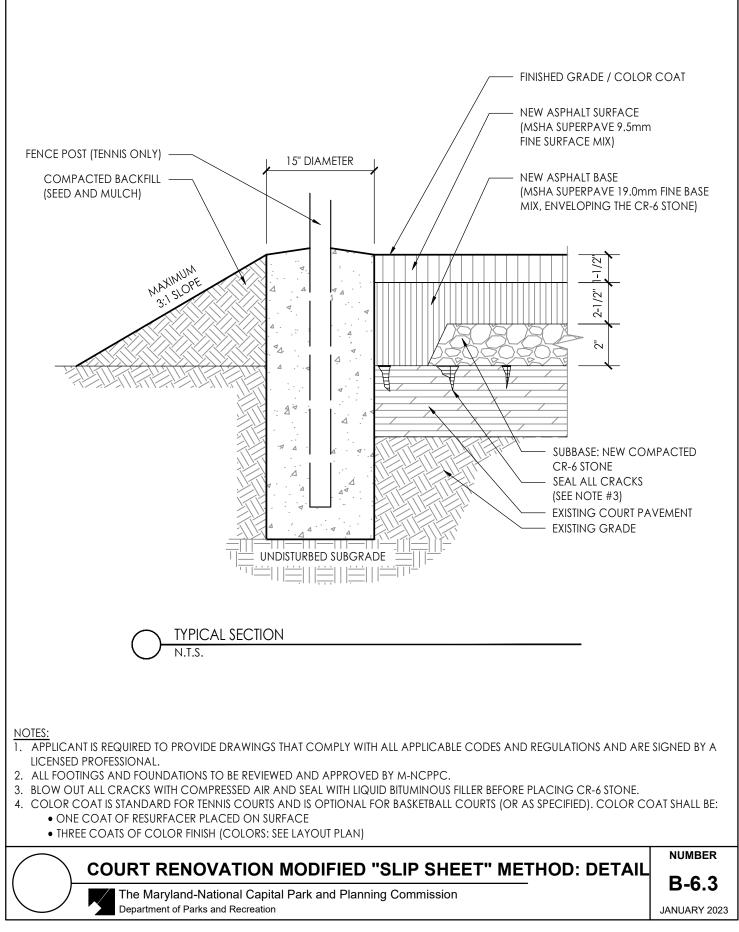


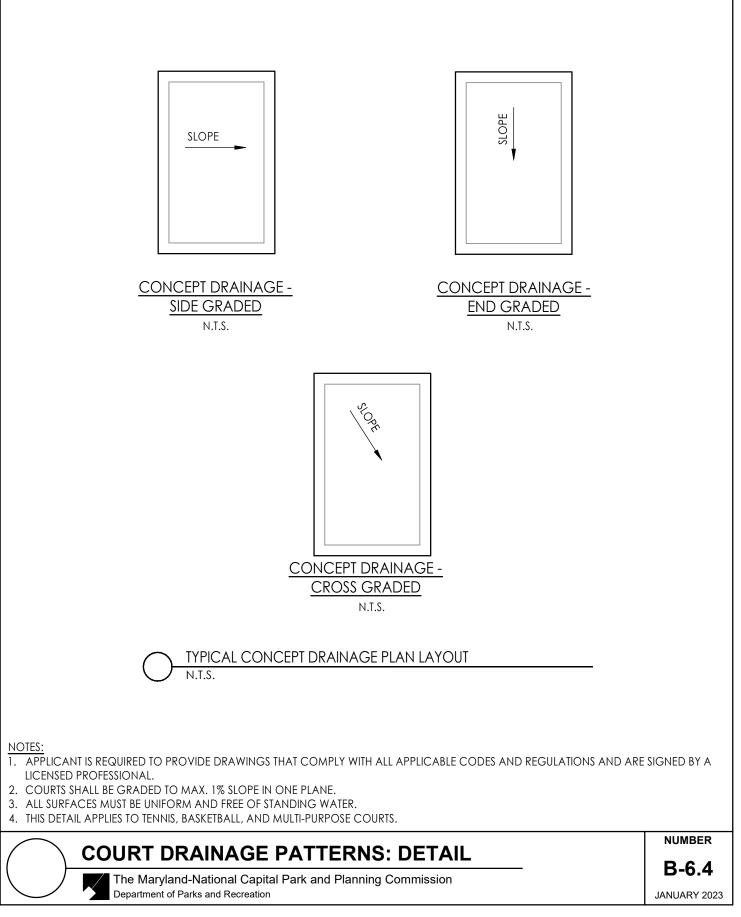












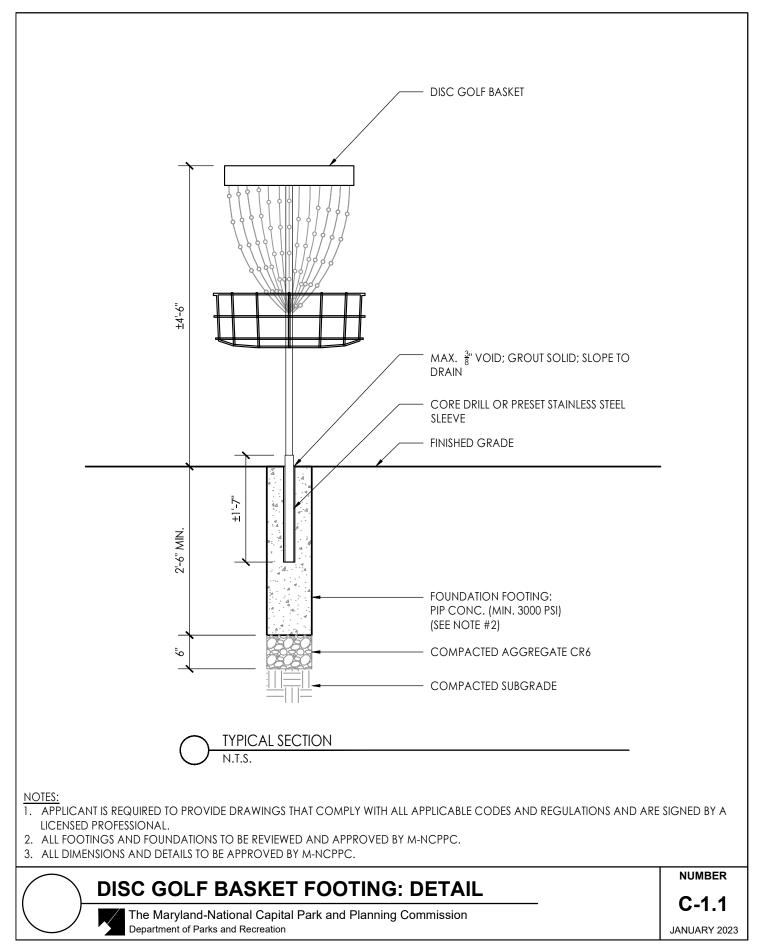
**INDEX OF DRAWINGS - PLAY SURFACES & EQUIPMENT** 

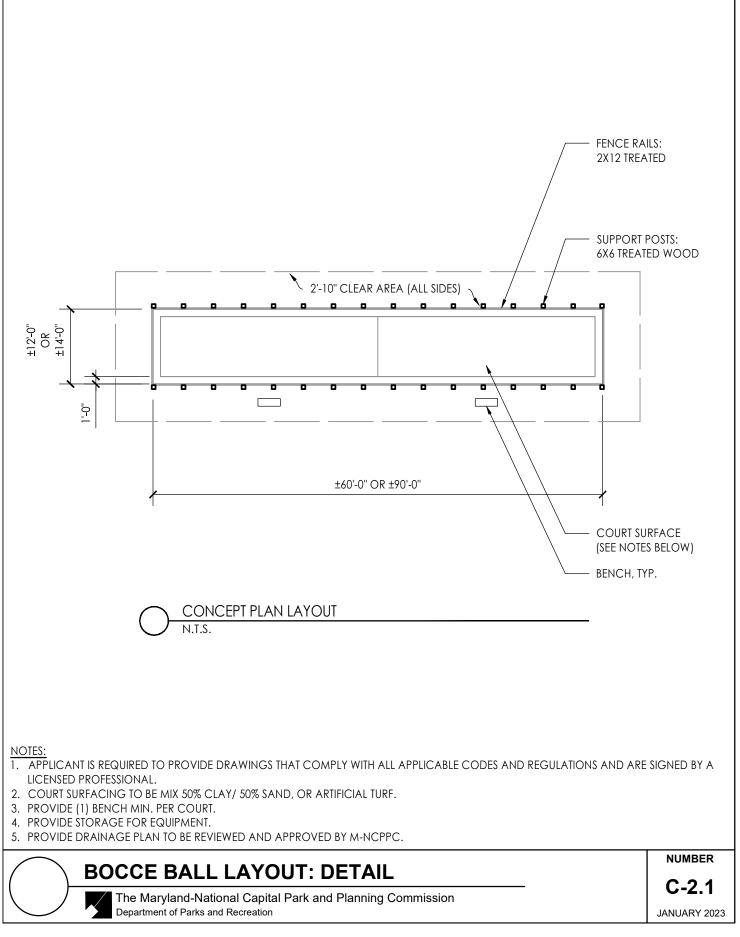
C-1.1 DISC GOLF BASKET FOOTING

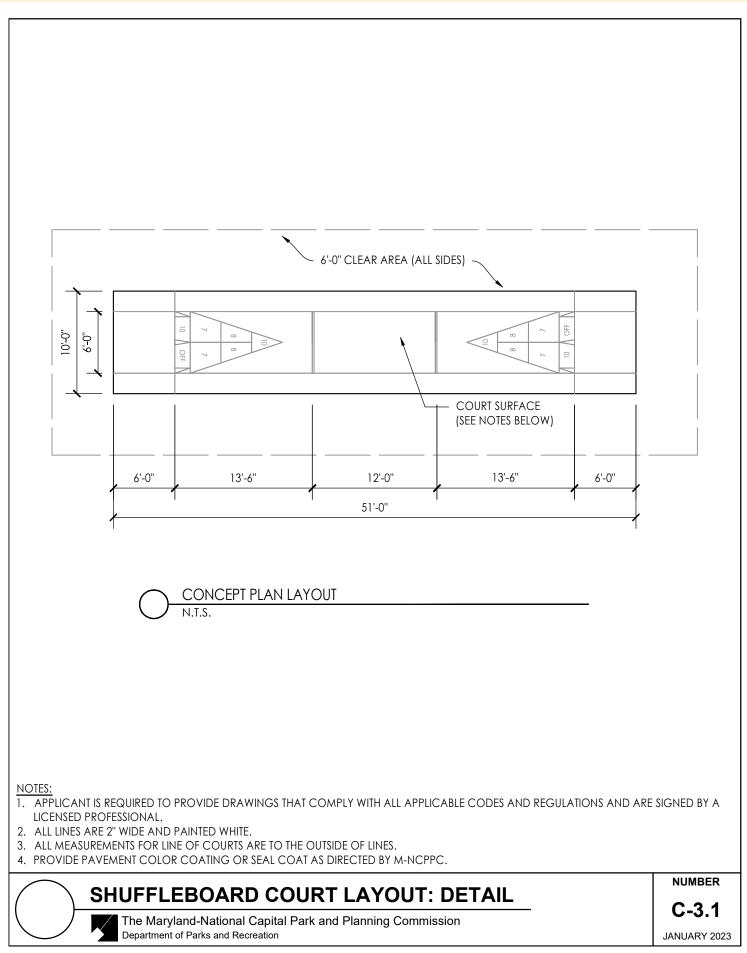
- C-2.1 BOCCE BALL
- C-3.1 SHUFFLEBOARD
- C-4.1 FOUR-SQUARE
- C-5.1 GAGA PIT LAYOUT AND WALL CONSTRUCTION

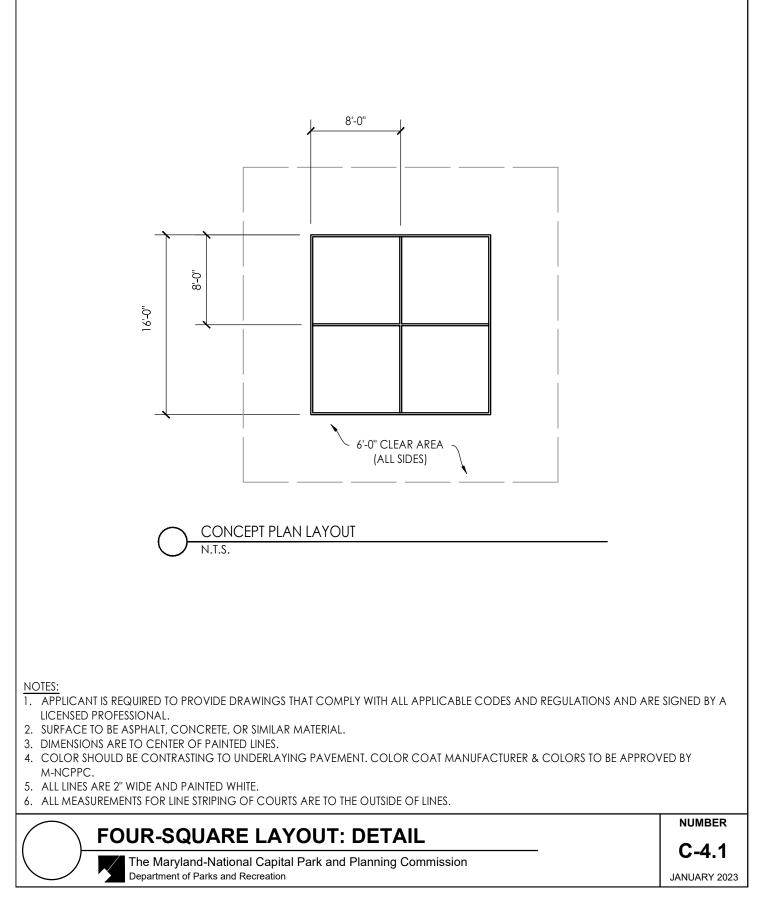
C-6.1 PLAY EQUIPMENT FOOTING - TYPICAL

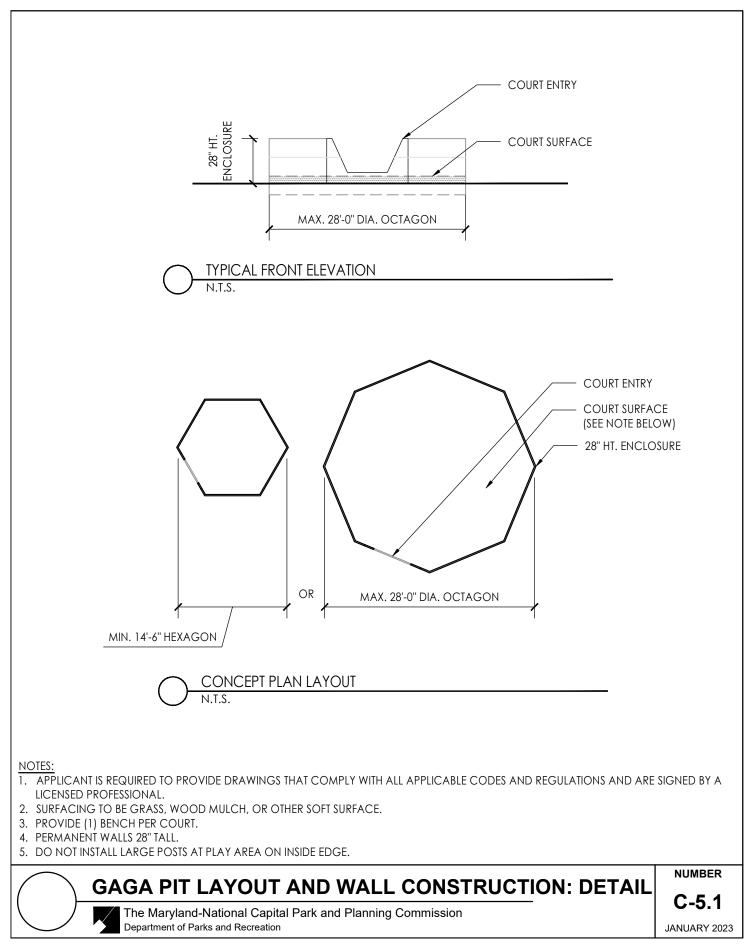
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- C-6.8 STONE BOULDER

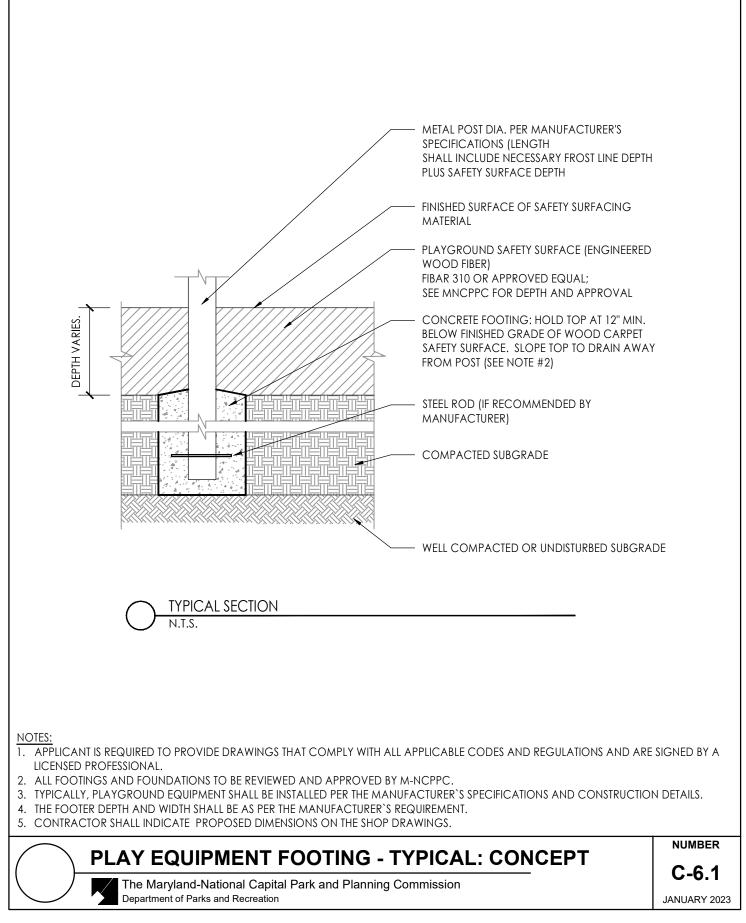


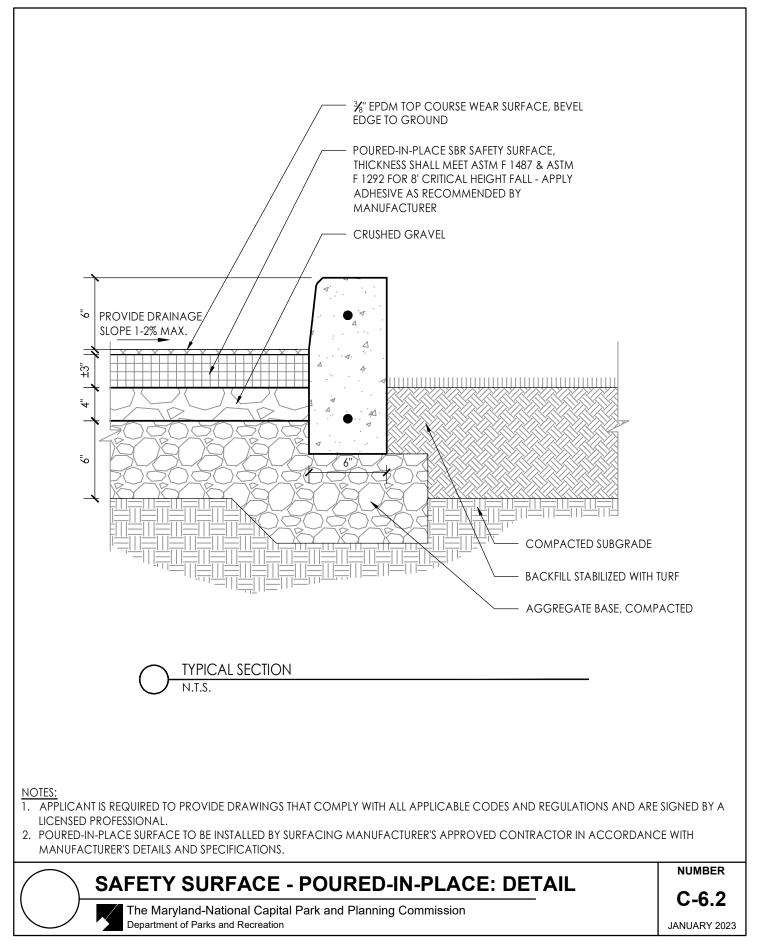


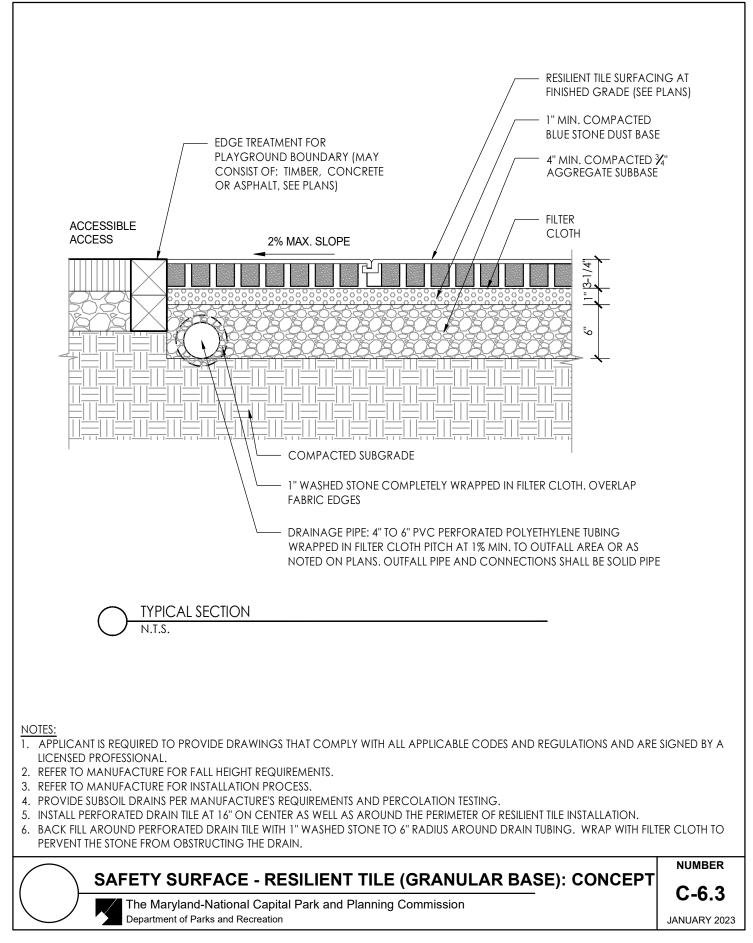


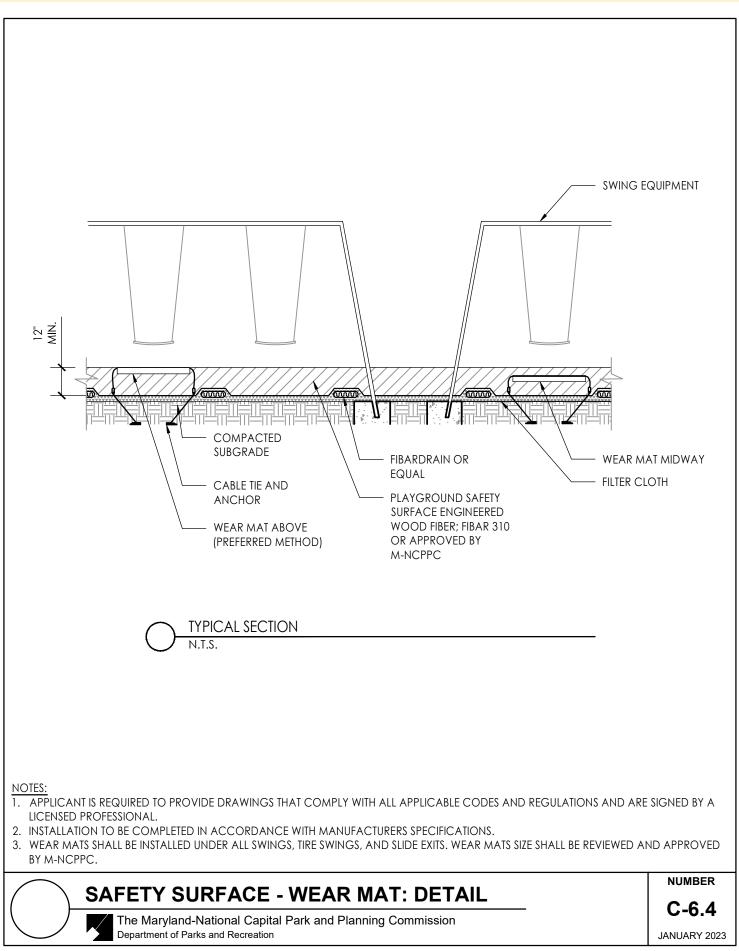


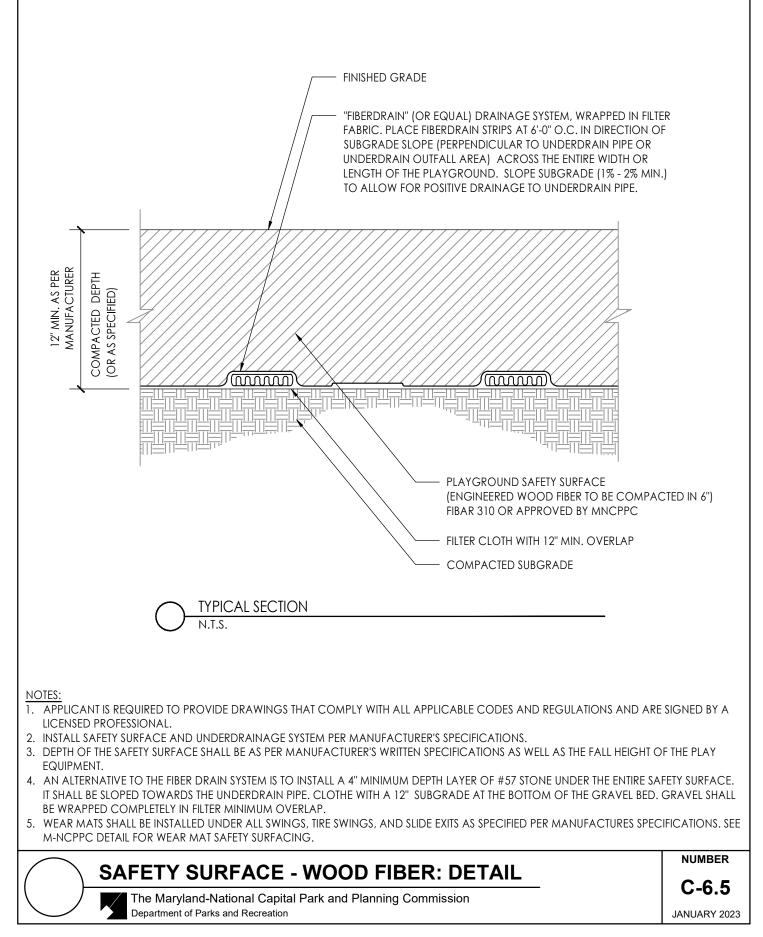


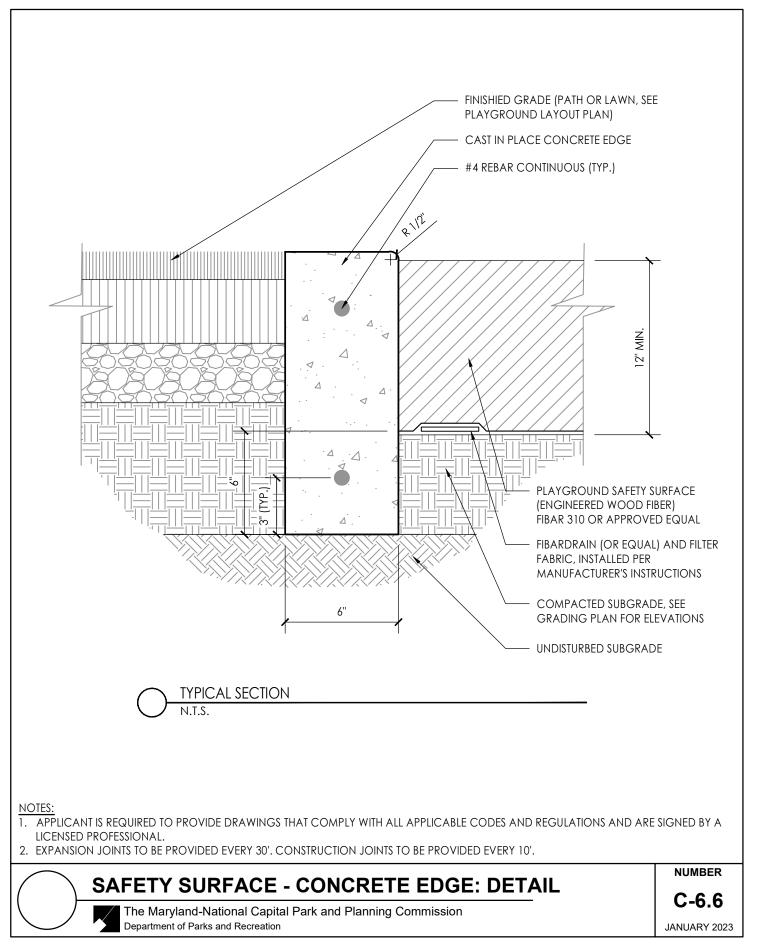


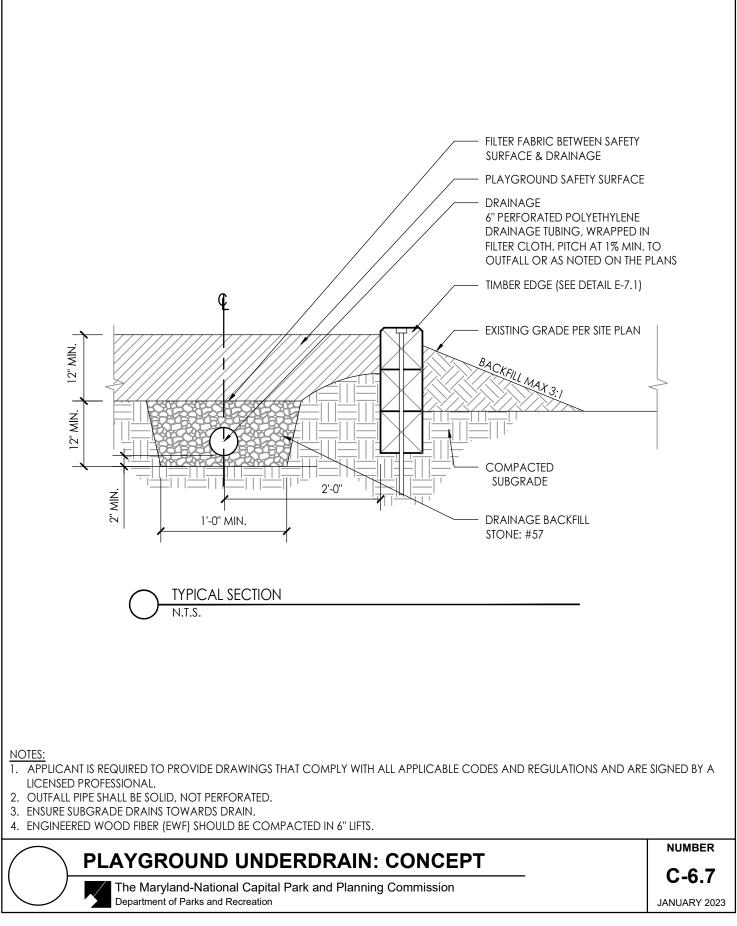


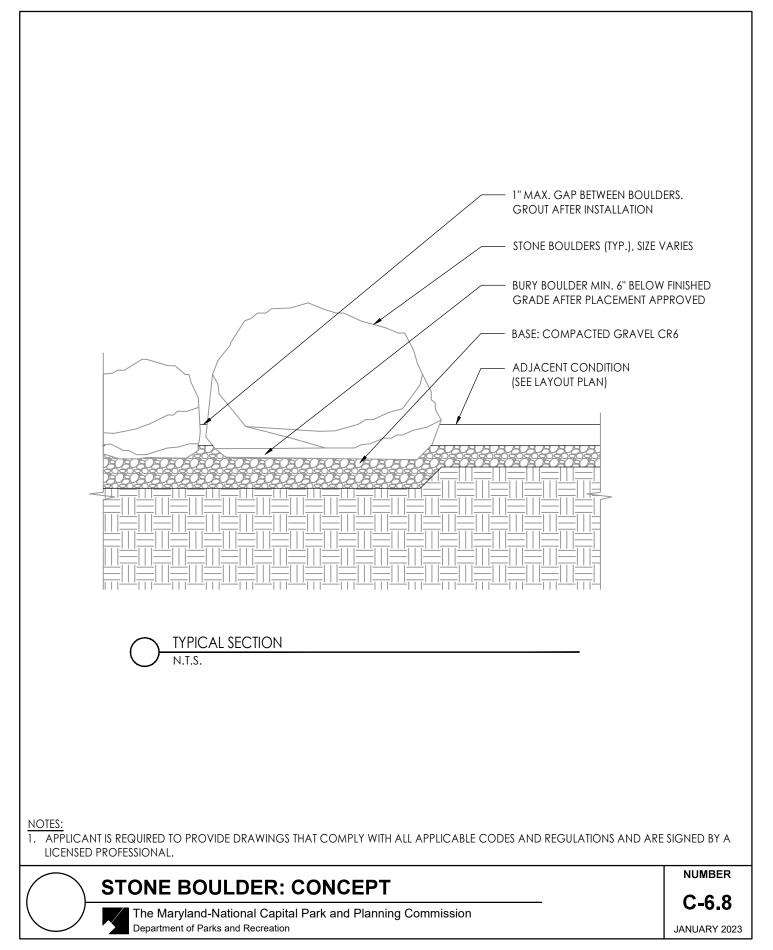












#### INDEX OF DRAWINGS - SHARED USE PATHS (TRAILS)

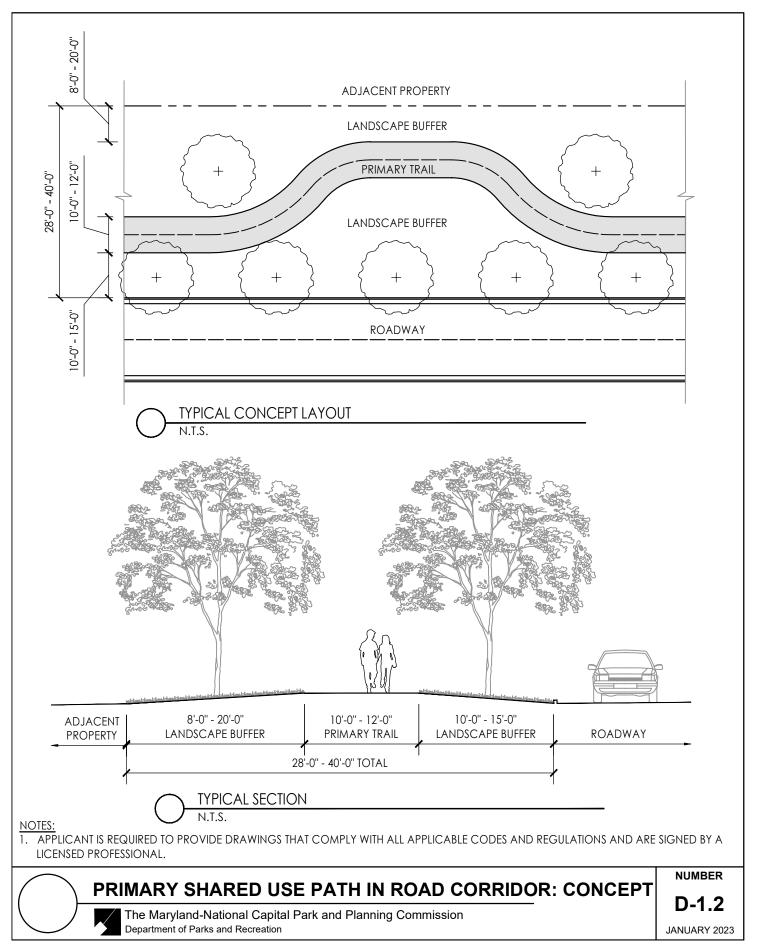
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- D-1.2 PRIMARY SHARED USE PATH IN ROAD CORRIDOR
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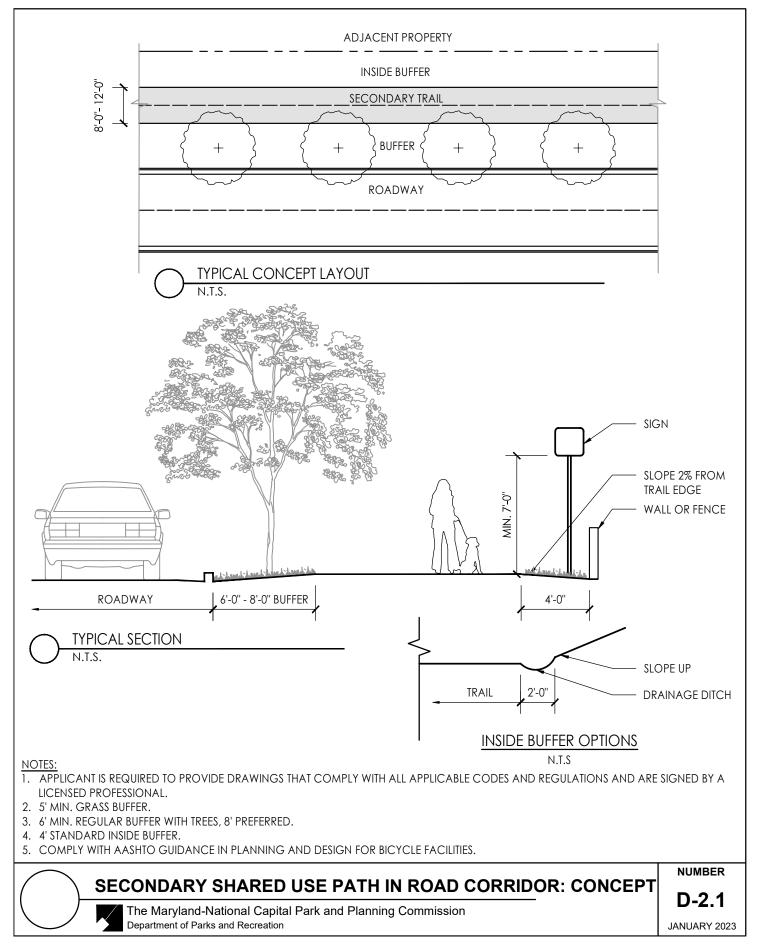
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D-7.1 BOARDWALK A D-7.2 BOARDWALK B

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- \* SEE SECTION F FOR MORE FENCING OPTIONS
- \* SEE SECTION G FOR SITE FURNITURE & SIGNAGE

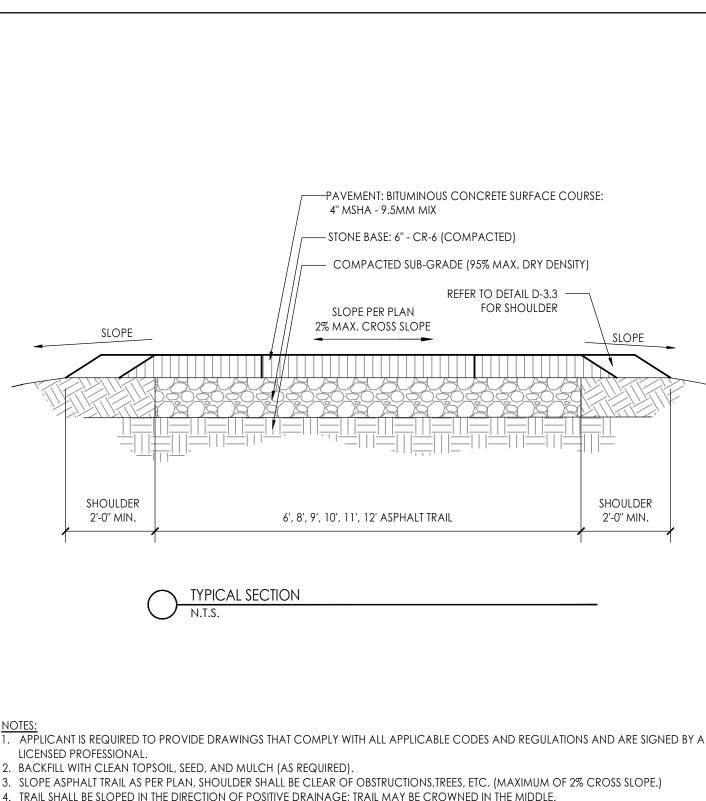




Department of Parks and Recreation

TYPE PROPERTIES AND AS REQUESTED BY M-NCPPC.

MAINTENANCE RESPONSIBILITY.



5. OPTIONAL FILTER CLOTH MAY BE PROVIDED BETWEEN THE GRAVEL SUBBASE AND THE COMPACTED SUBGRADE DEPENDING ON THE SOIL

6. IF TRAIL IS LOCATED WITHIN A ROAD RIGHT-OF-WAY, THE TRAIL SHALL BE DESIGNED TO MEET THE STANDARDS OF THE AGENCY ASSUMING

SHARED USE PATH PAVEMENT CROSS SECTION: DETAIL

The Maryland-National Capital Park and Planning Commission

### CONSTRUCTION DETAILS

D-3.1

NUMBER

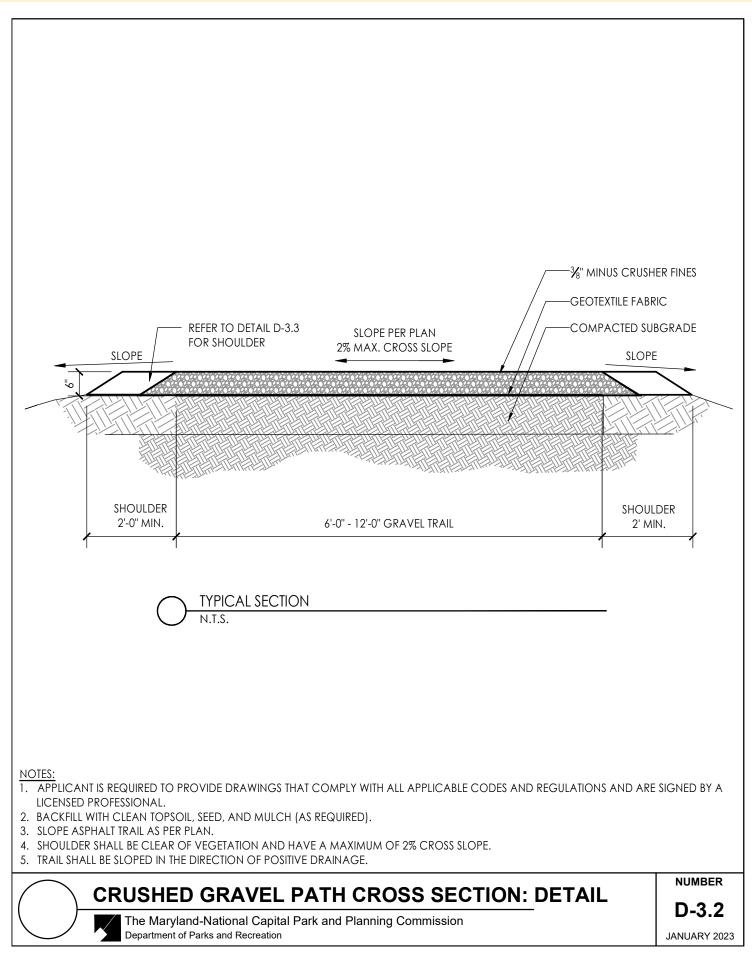
JANUARY 2023

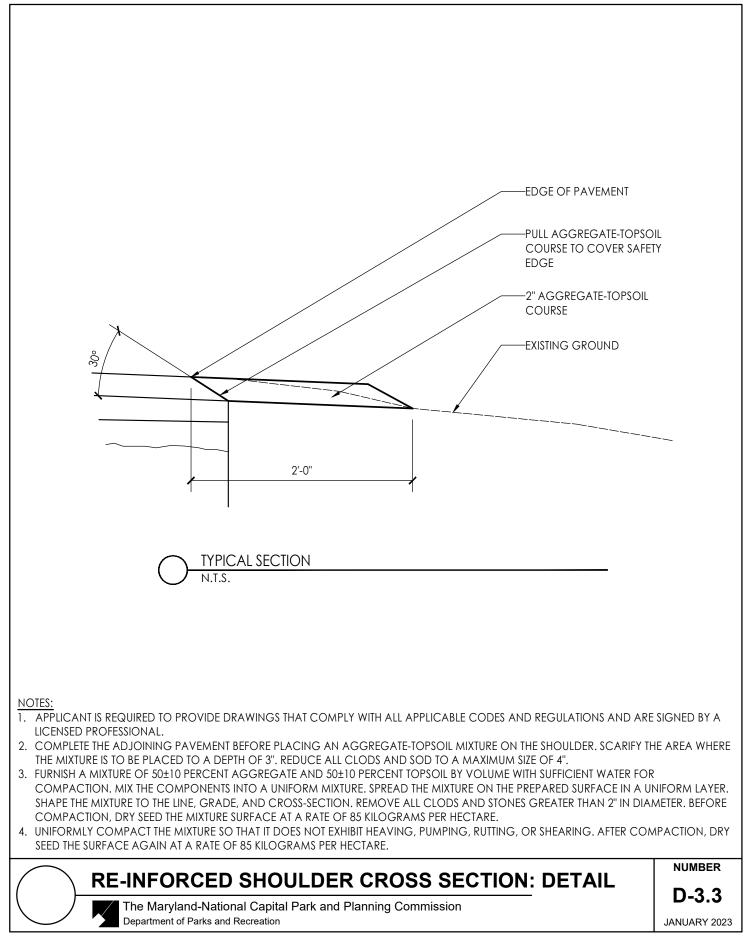
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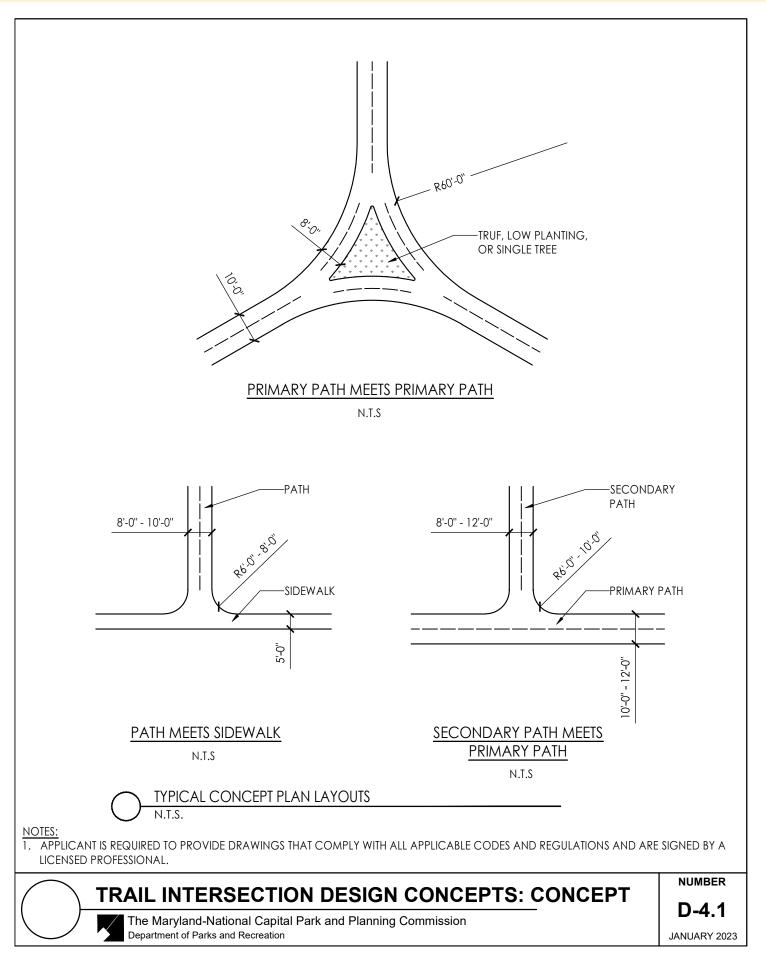
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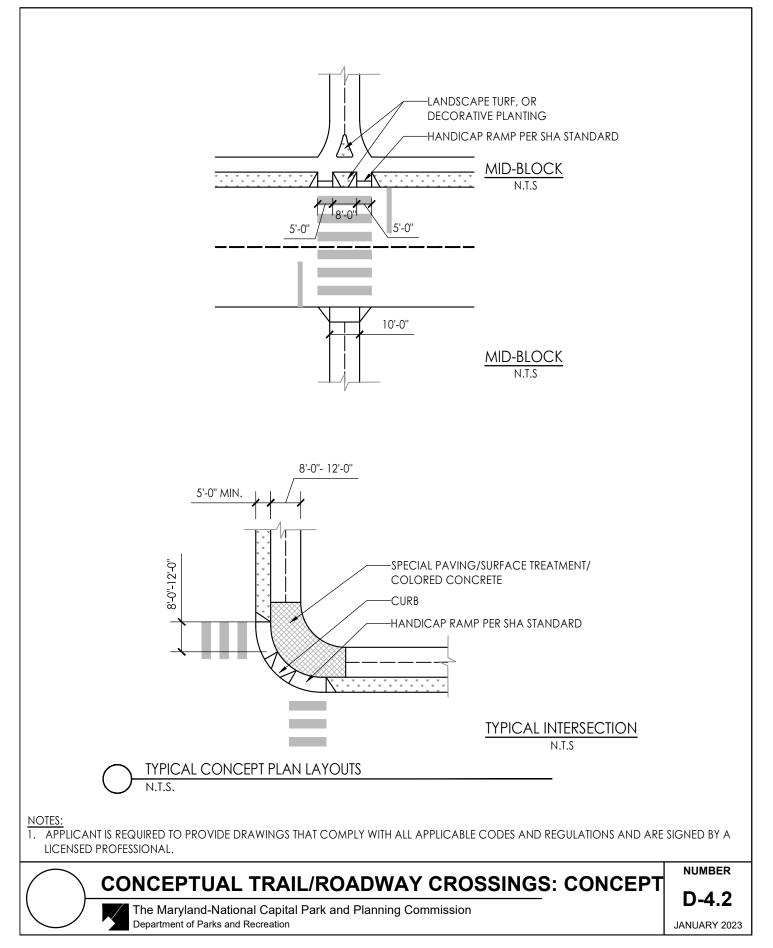
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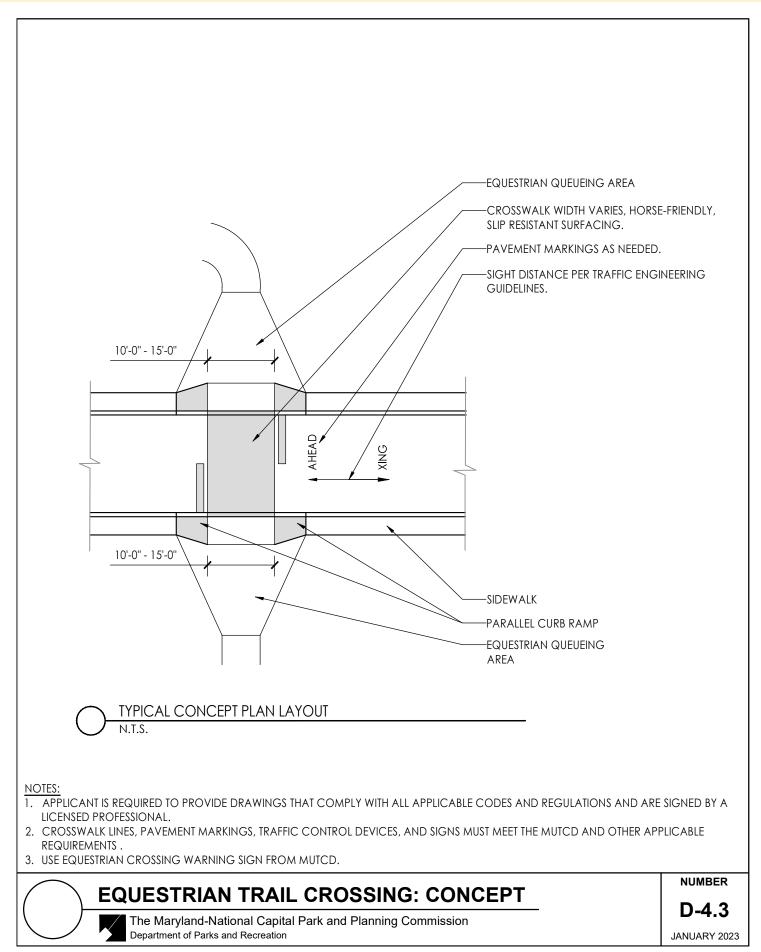
**SLOPE** 

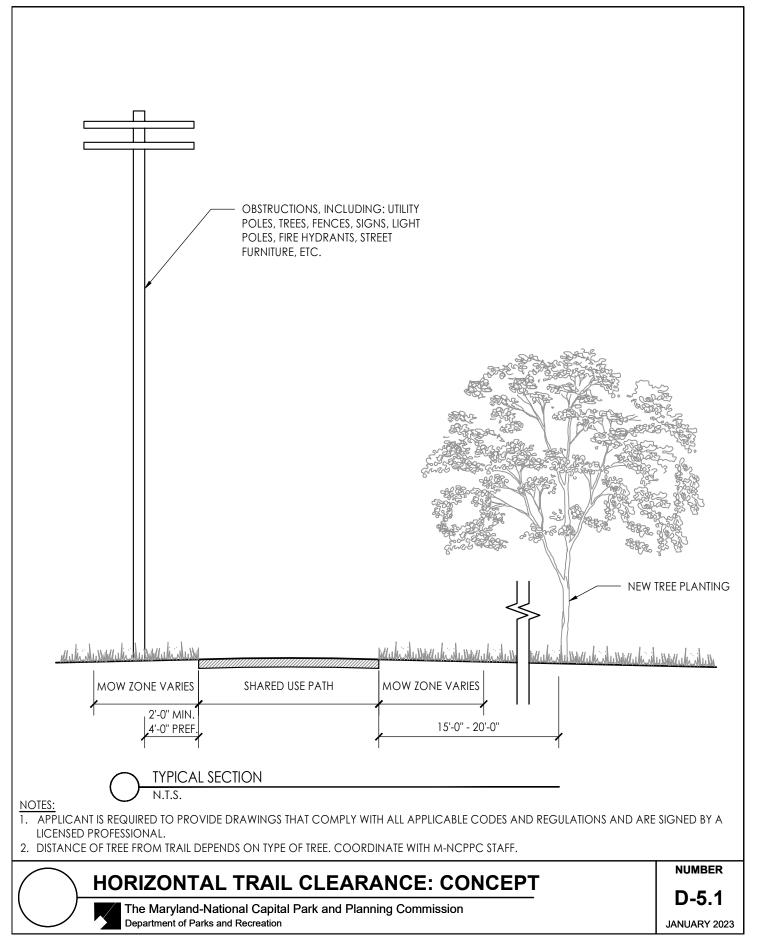


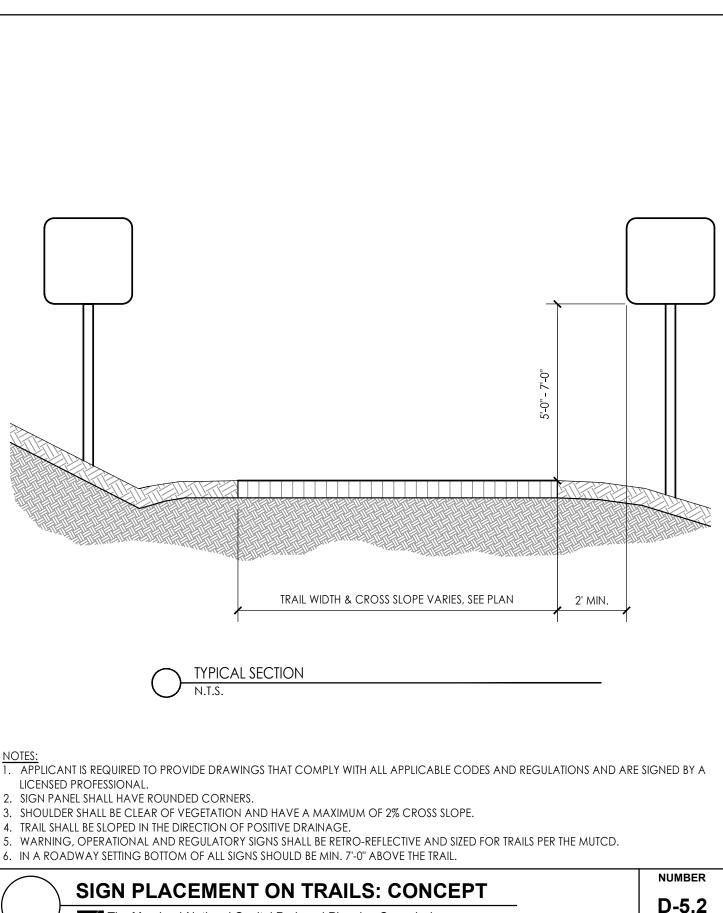




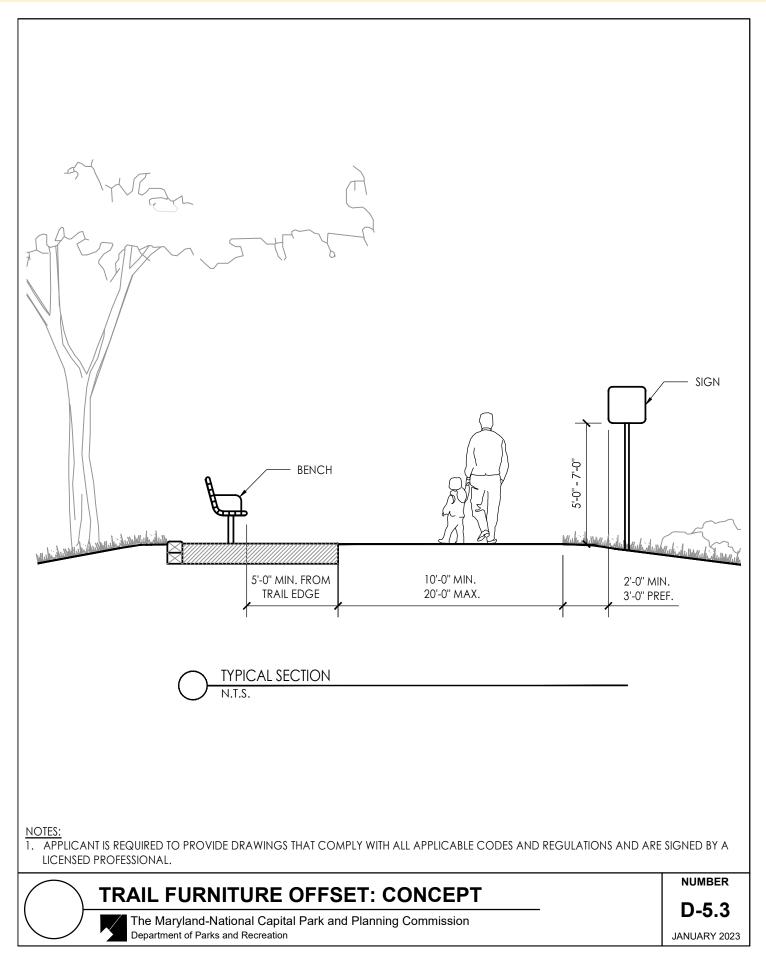


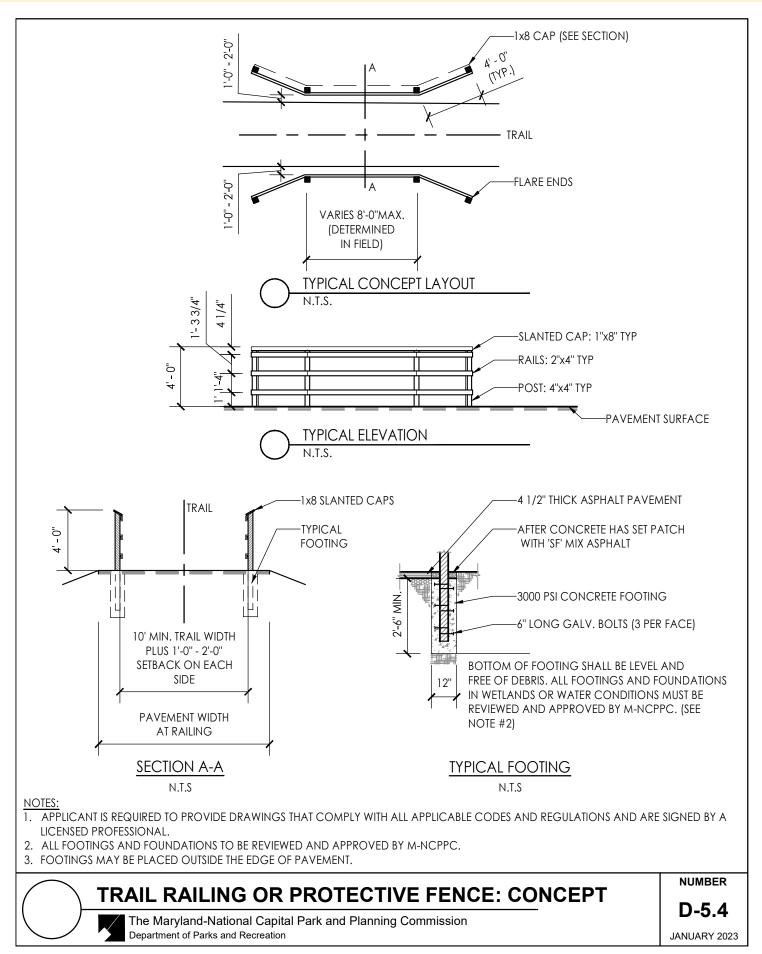


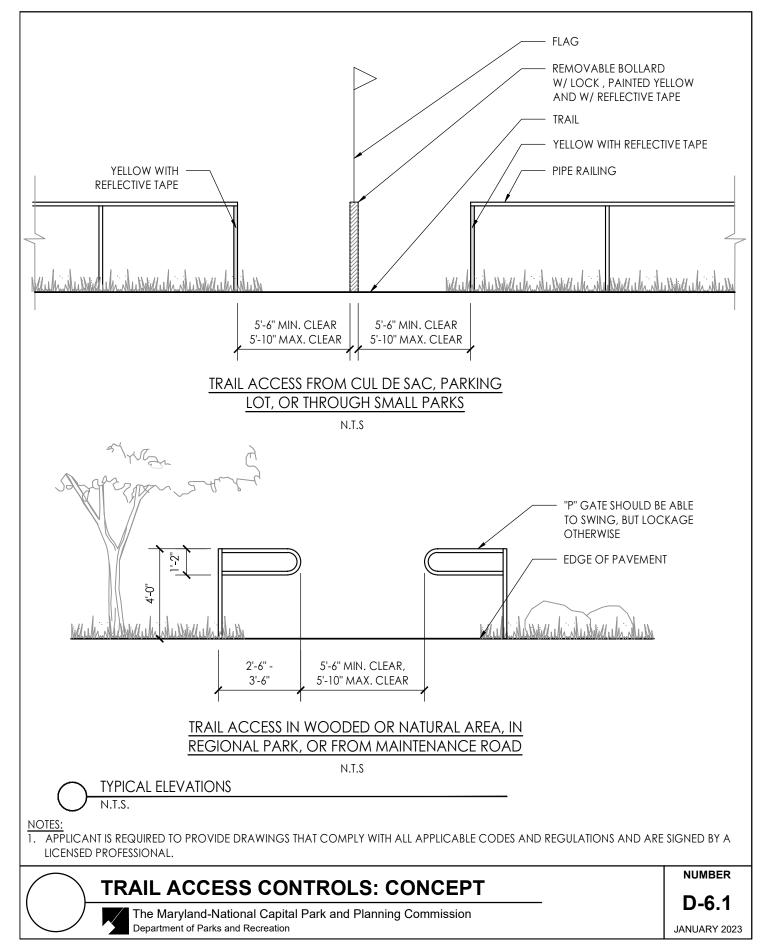


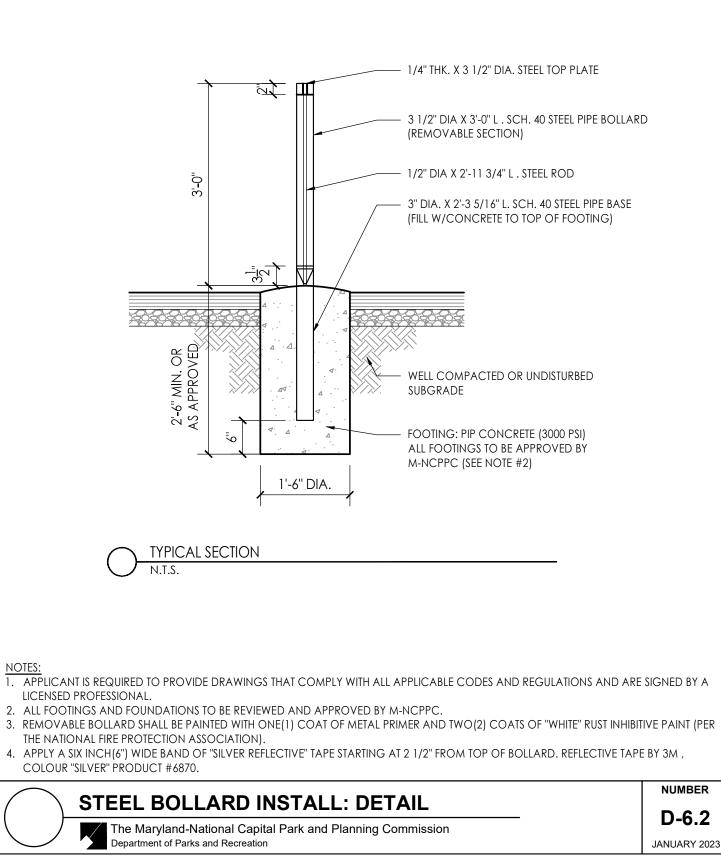


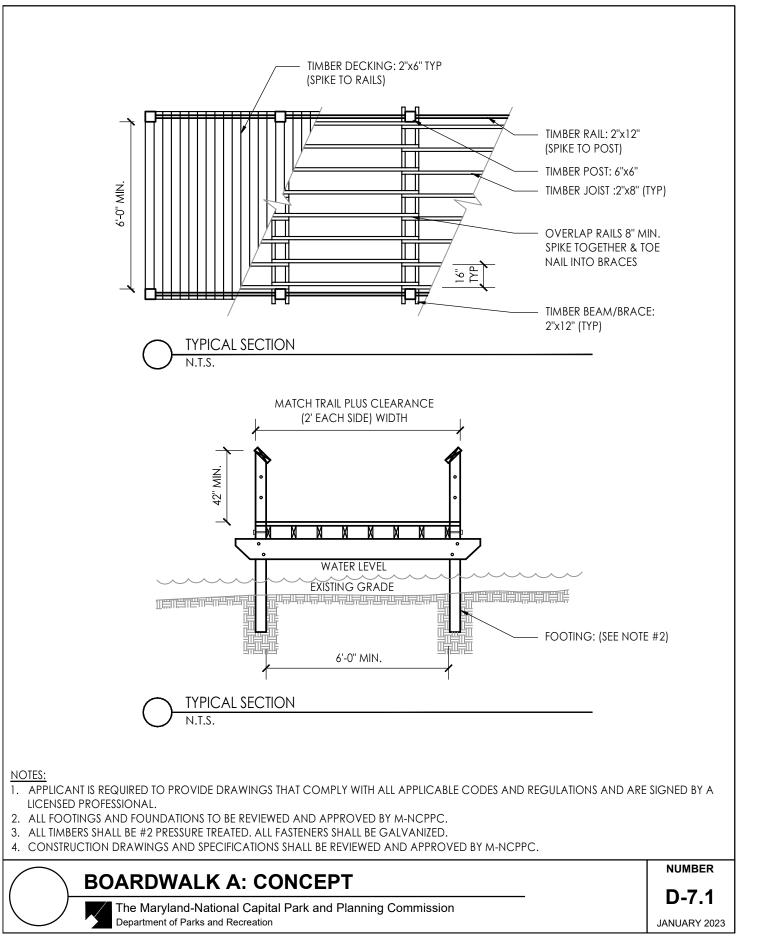
The Maryland-National Capital Park and Planning Commission Department of Parks and Recreation



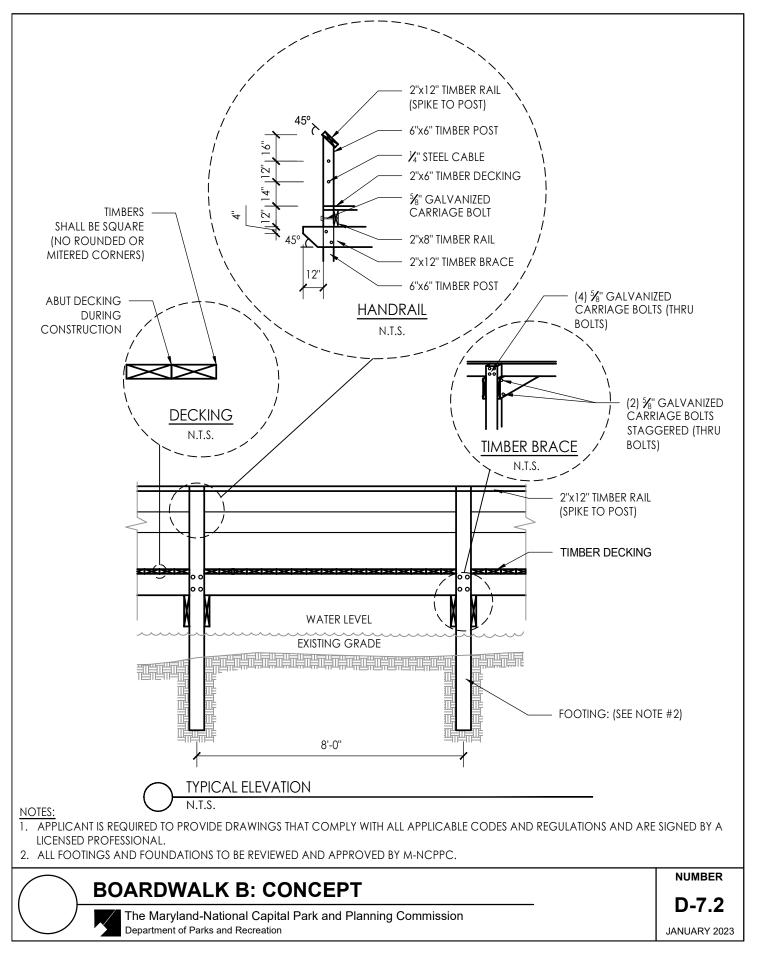








#### DETAILS



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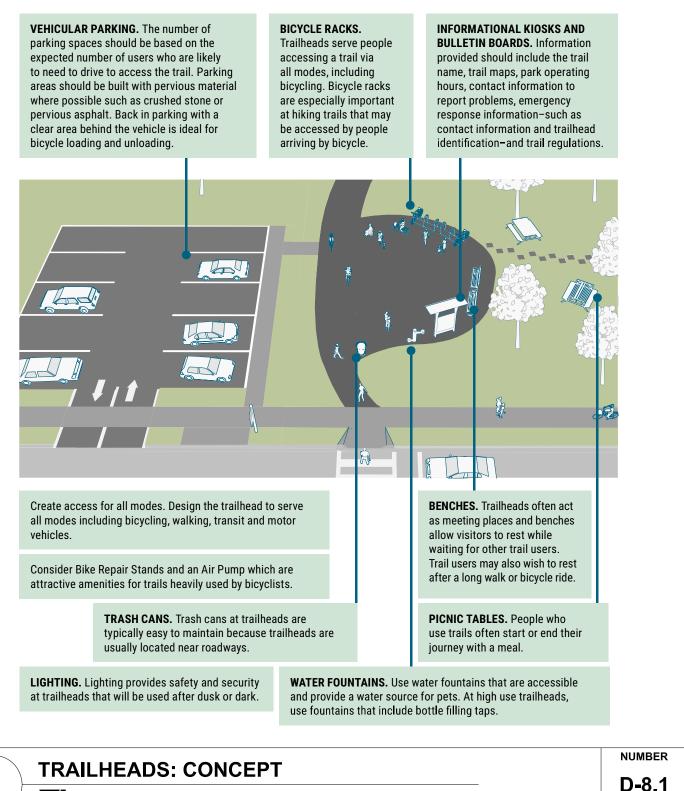
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### Trailheads

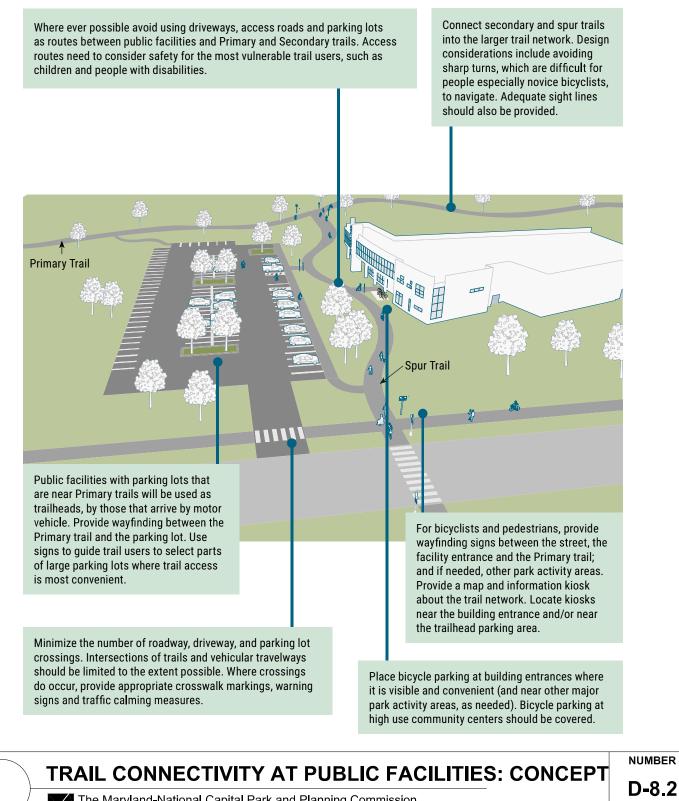
Trailheads serve as major gateways that provide access to the trail system. Most commonly a trailhead provides a motor vehicle parking area, bicycle parking, seating areas, bathroom facilities, water, and a kiosk map to provide guidance and other information about the trails system.



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

## **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.



### **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 site 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. Overuse 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.

Department of Parks and Recreation

- 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

NUMBER D-8.3 JANUARY 2023

# 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 peoplewatching 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

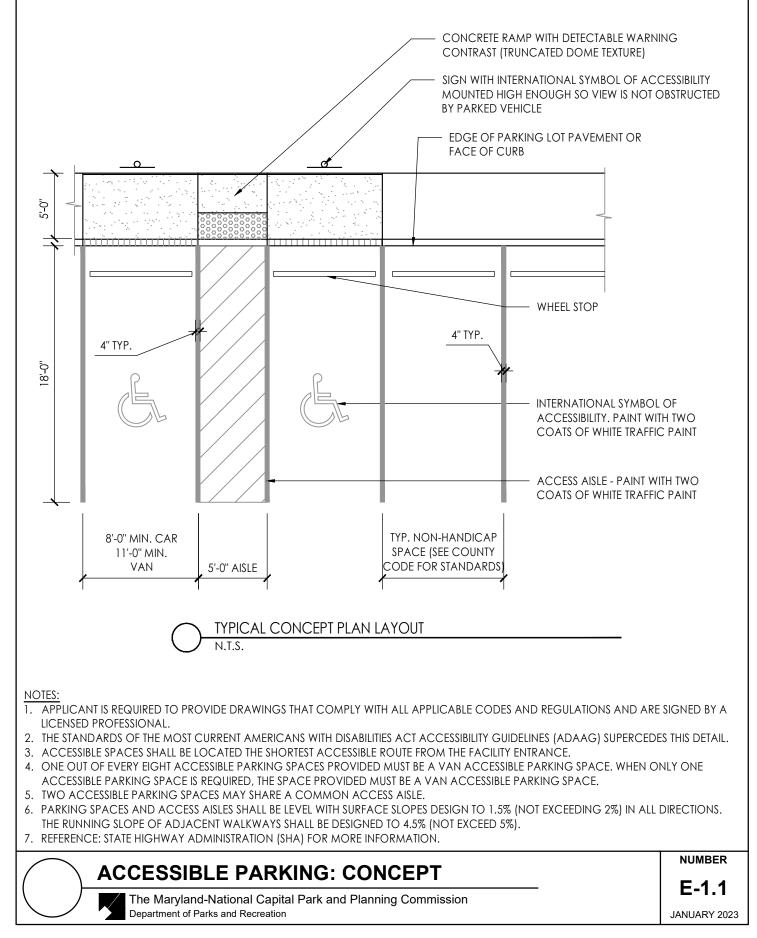
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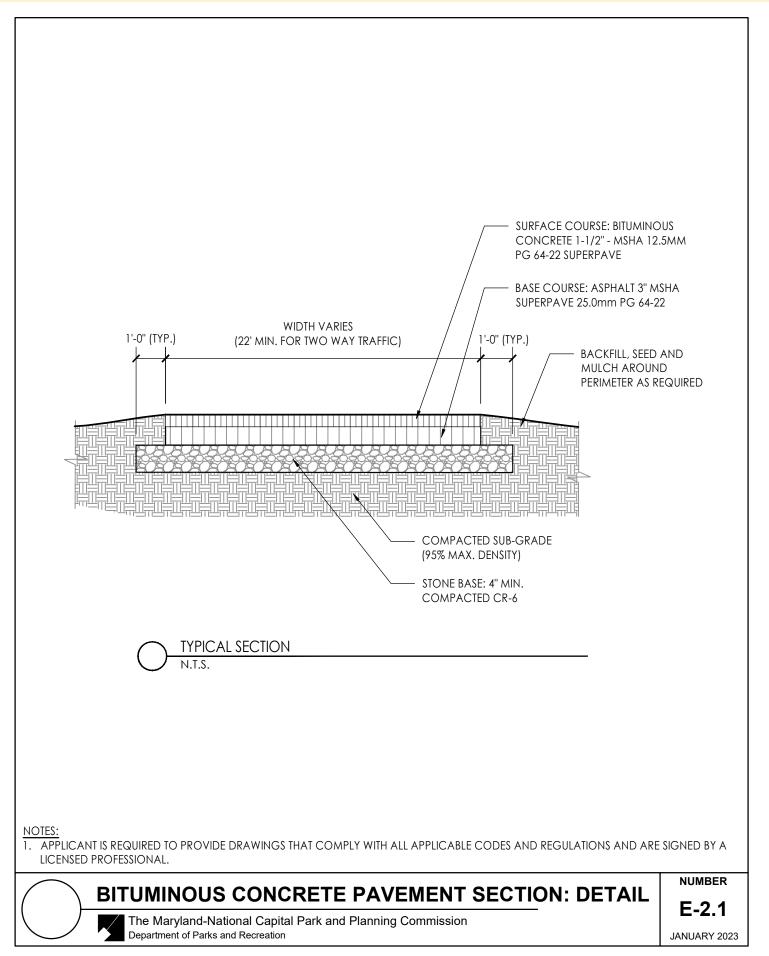
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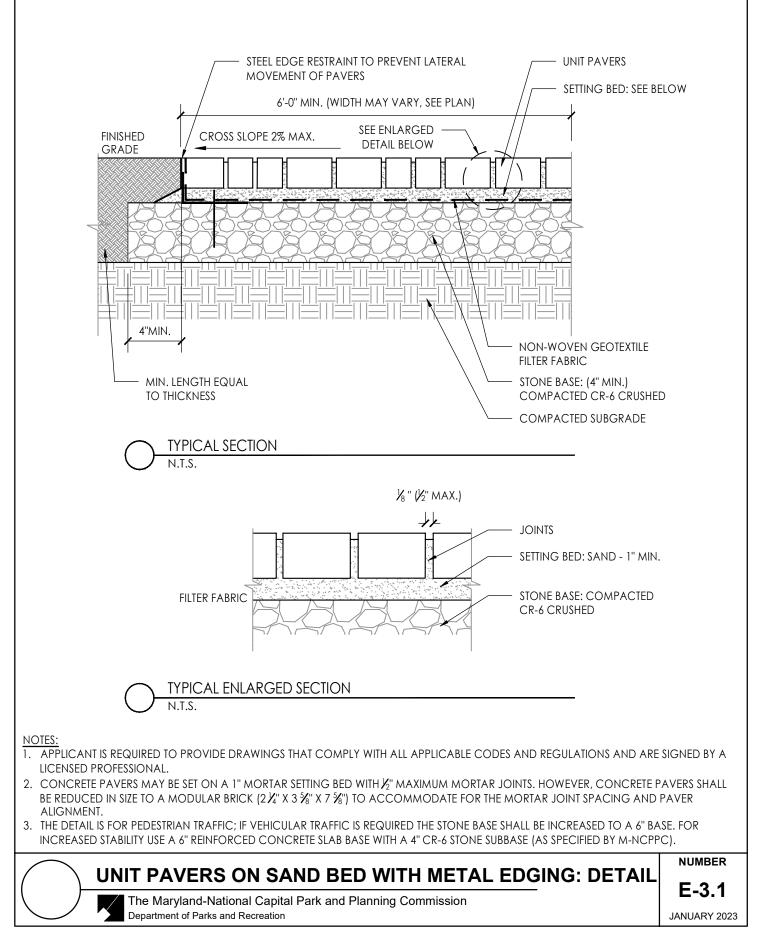
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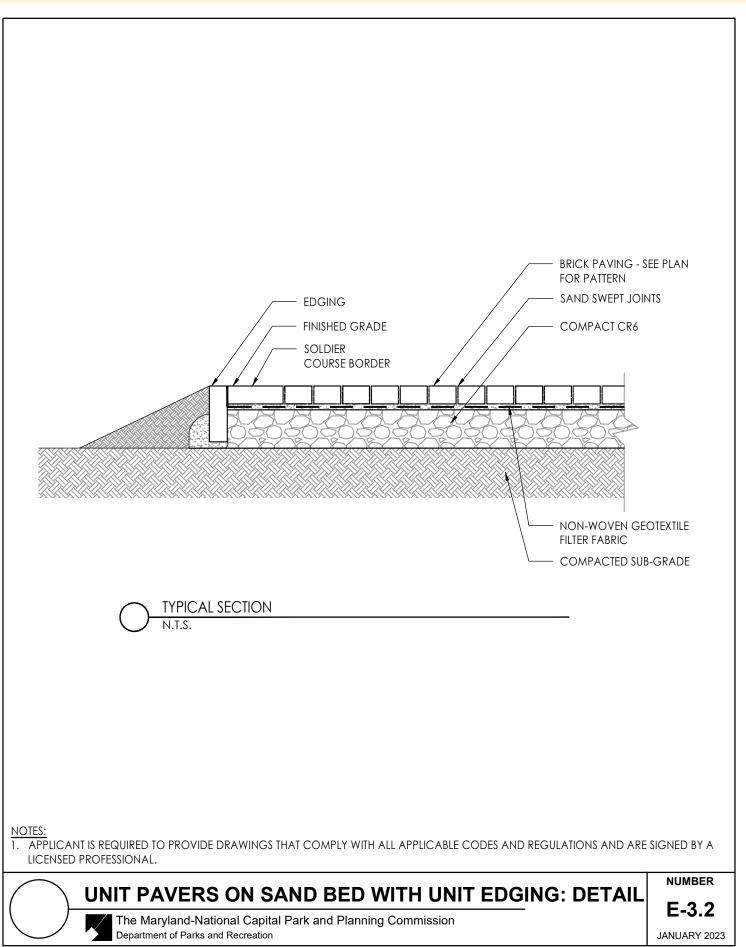
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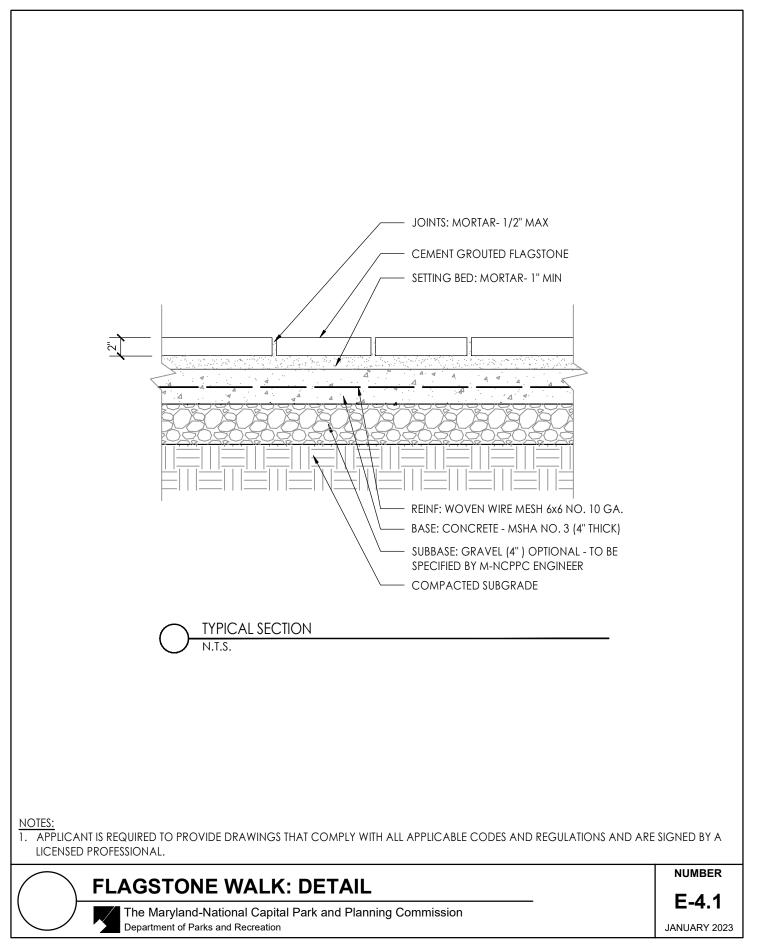
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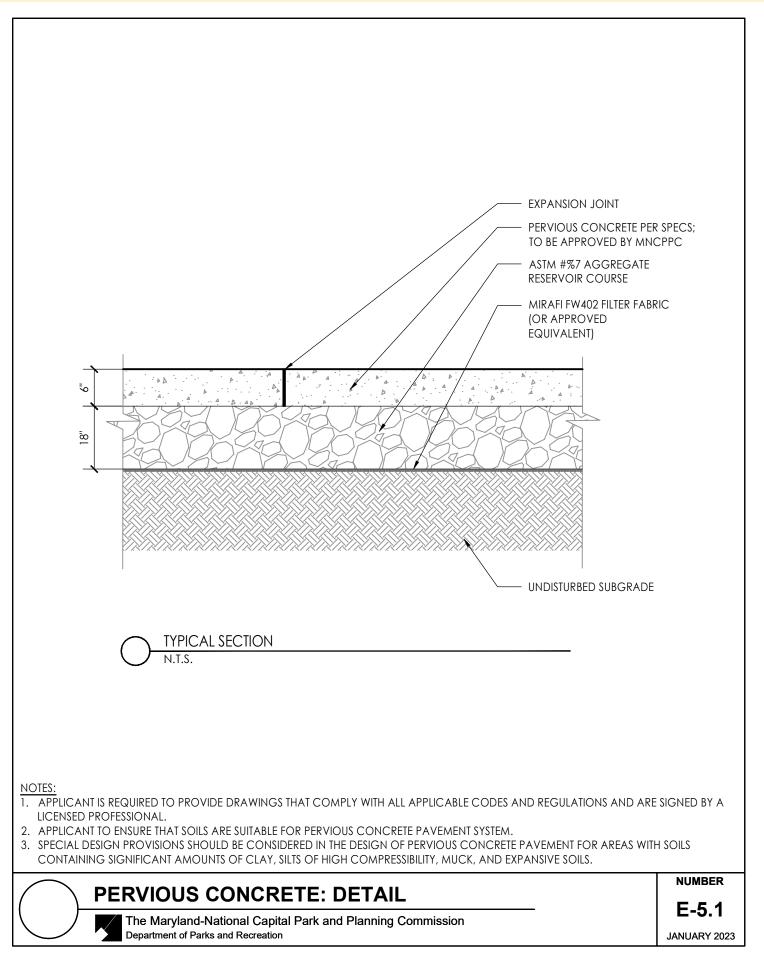


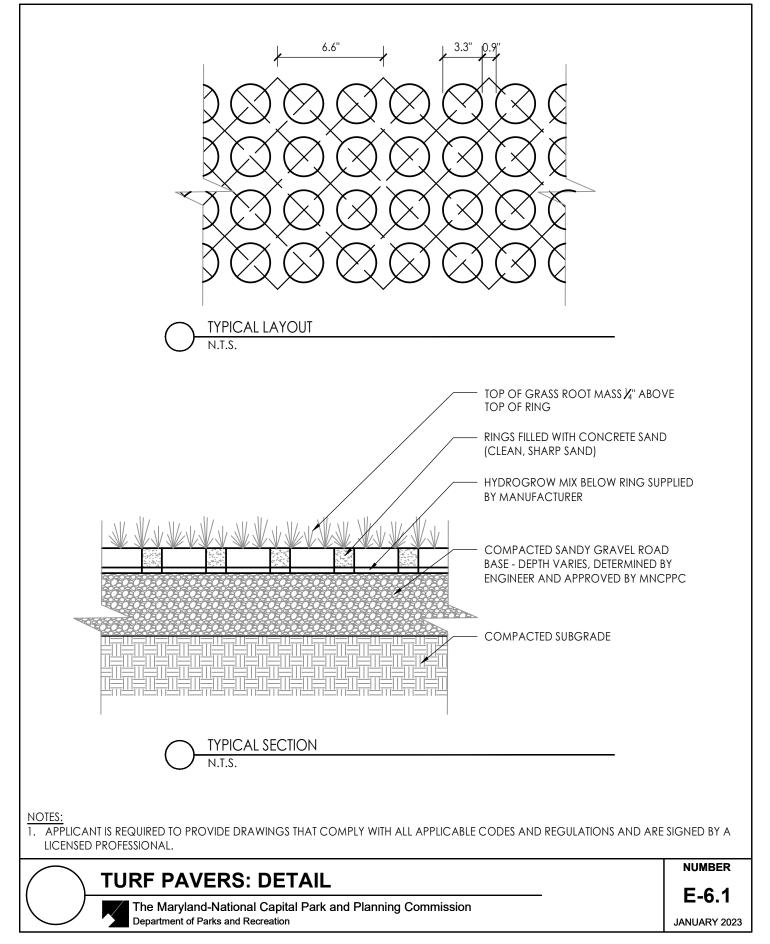


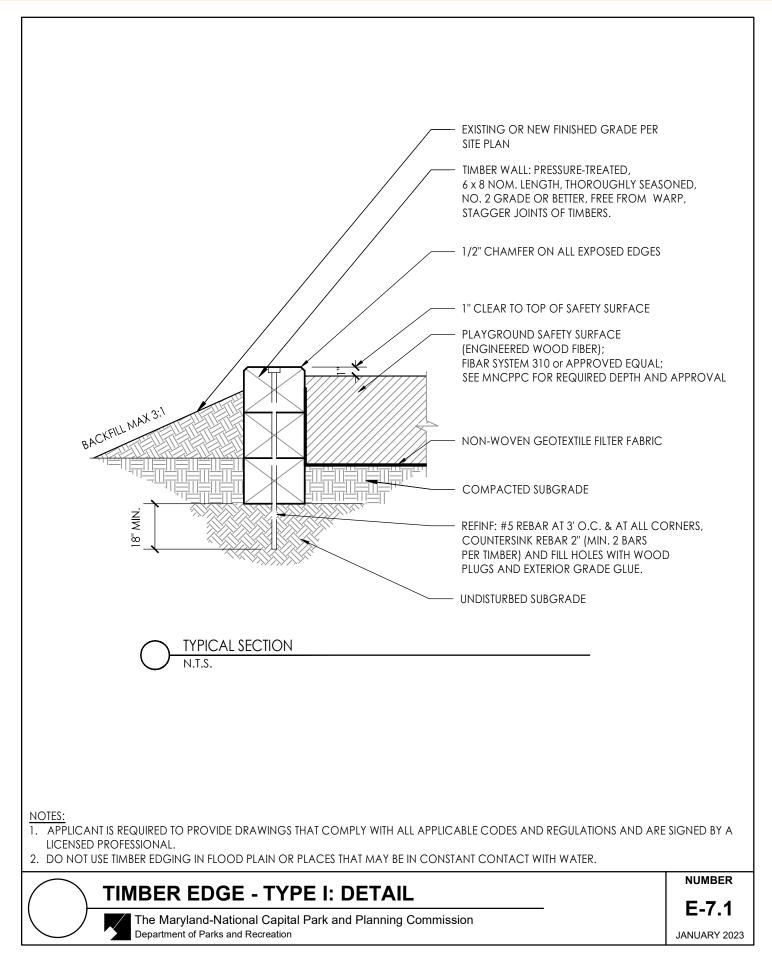


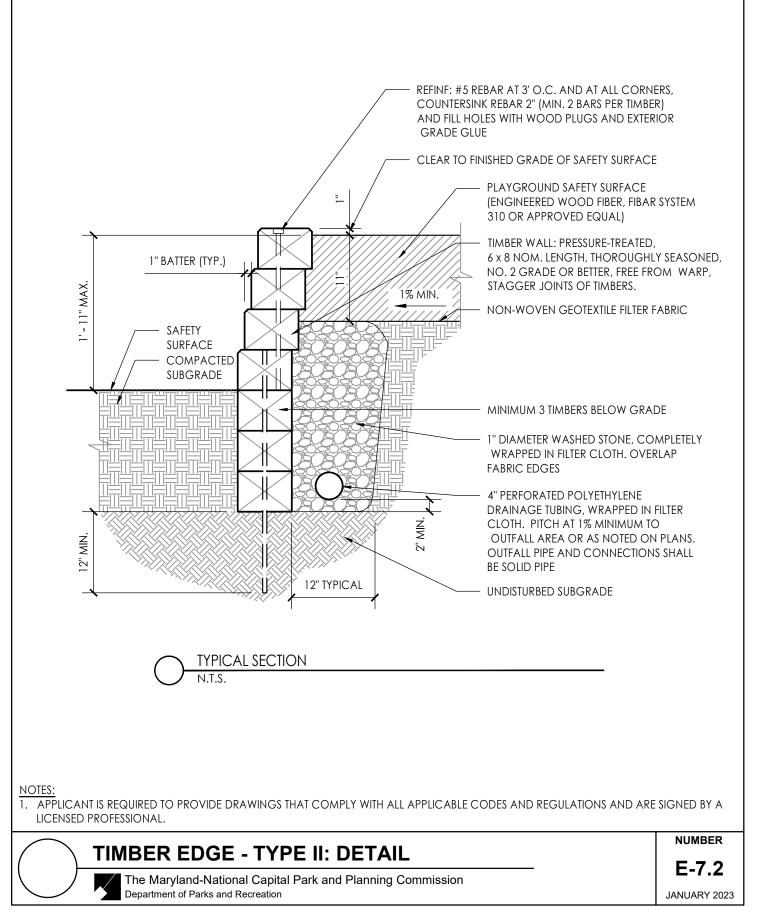


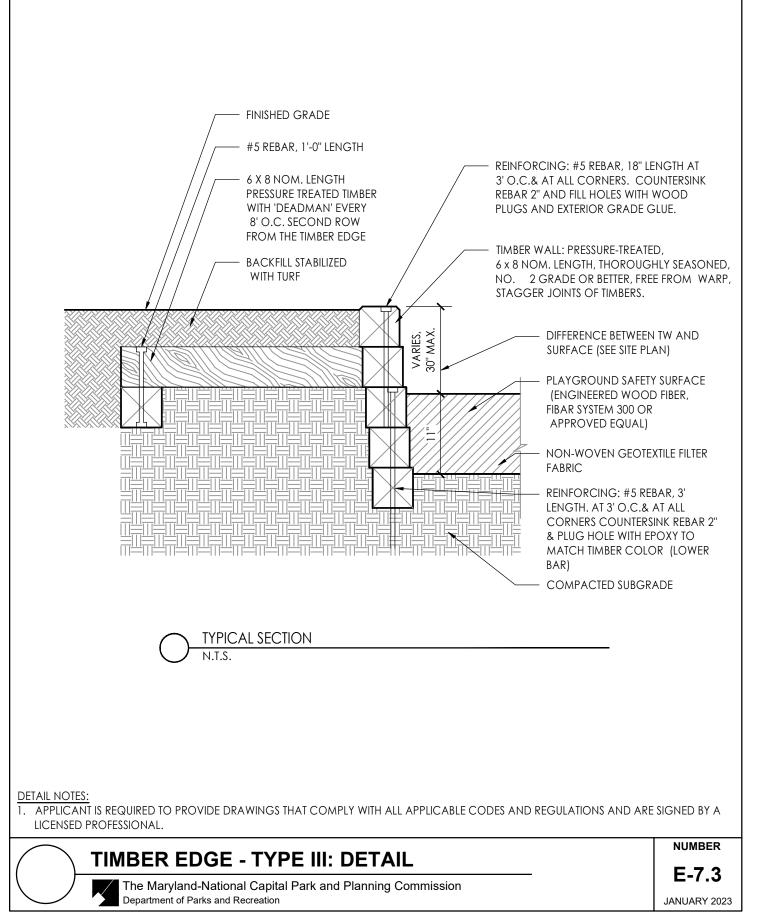






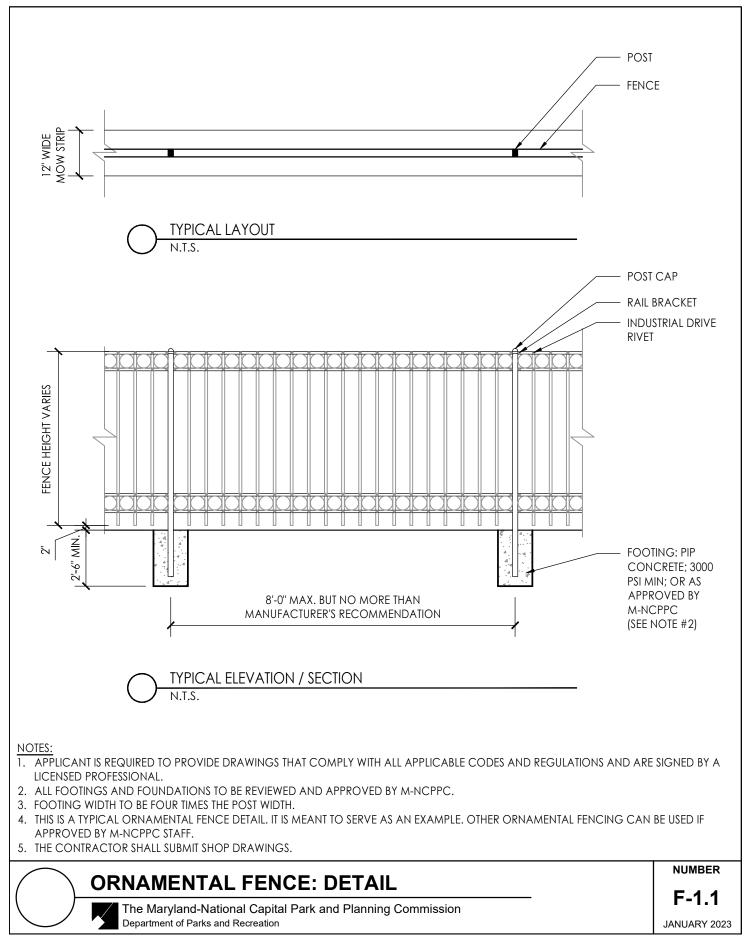


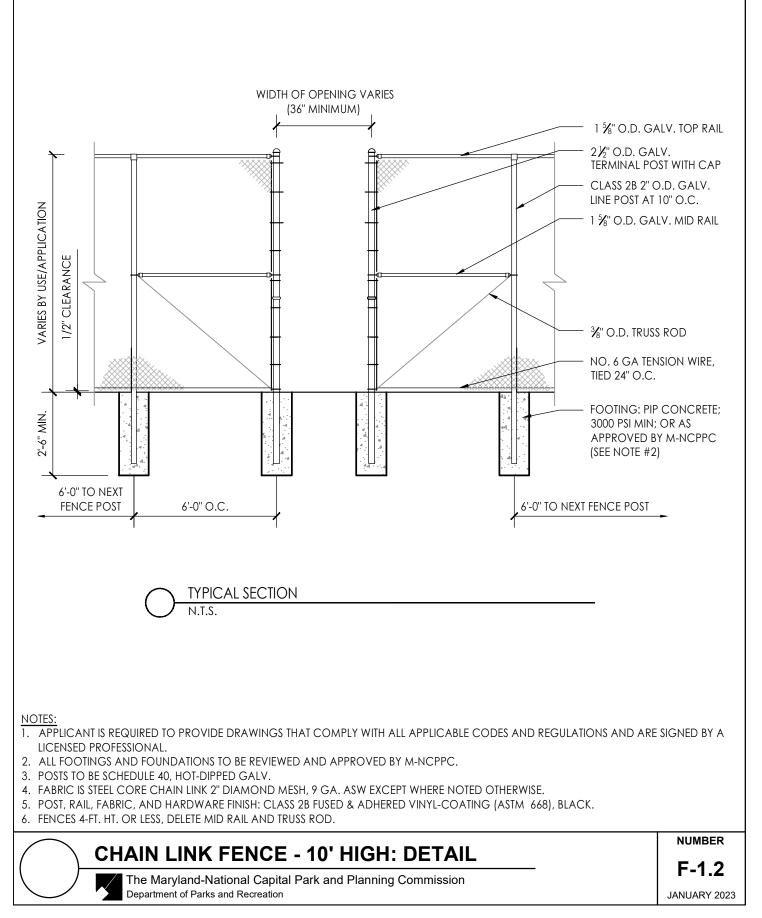


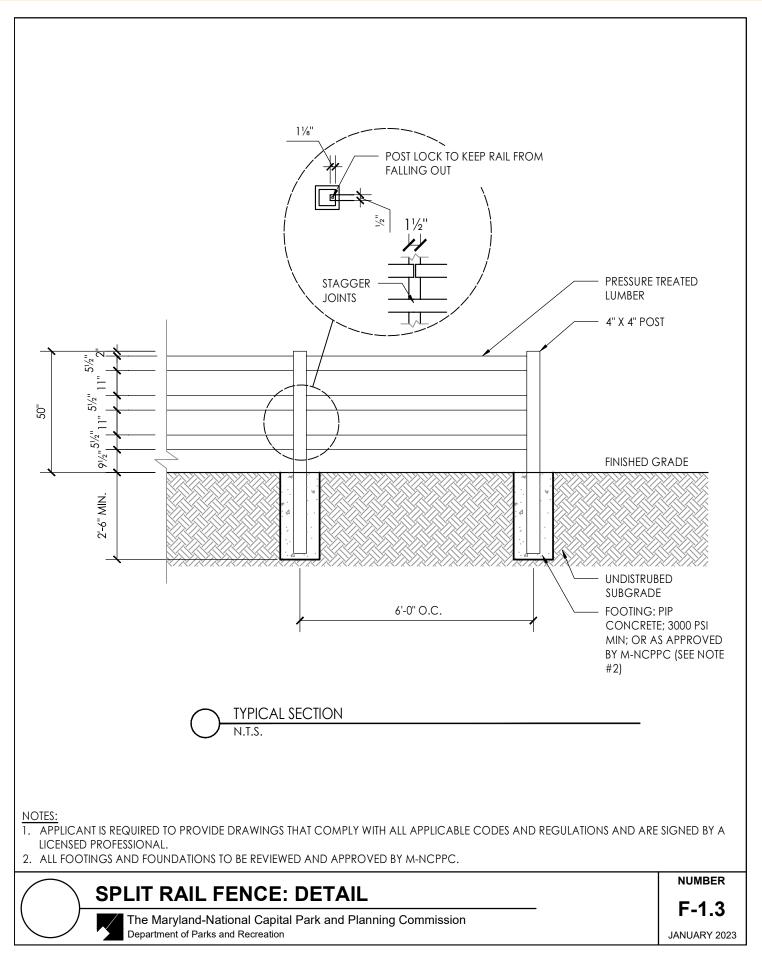


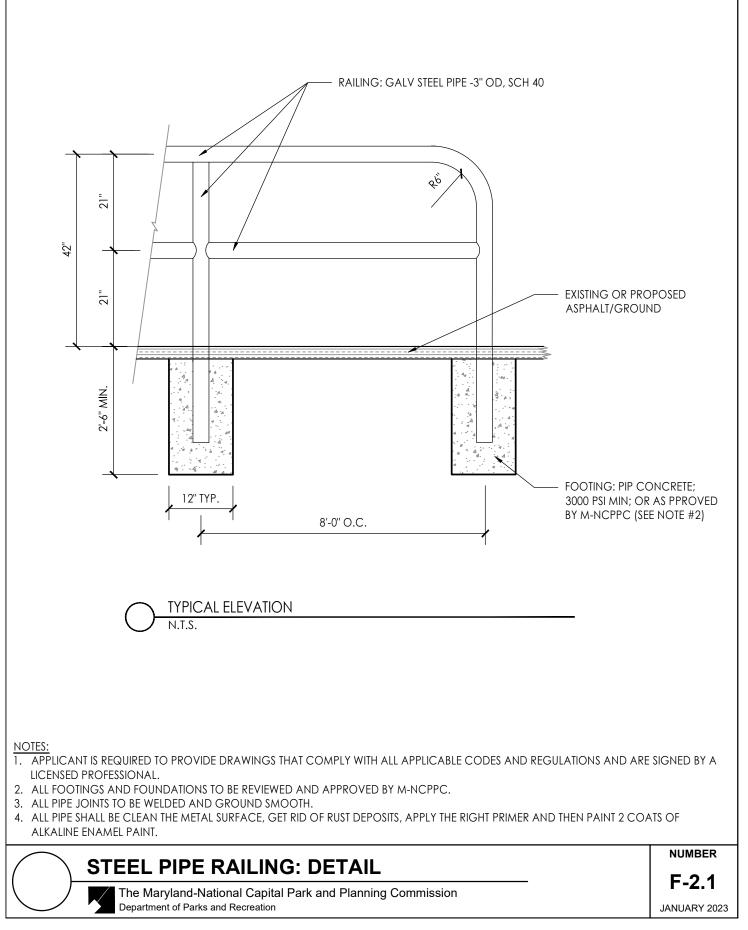
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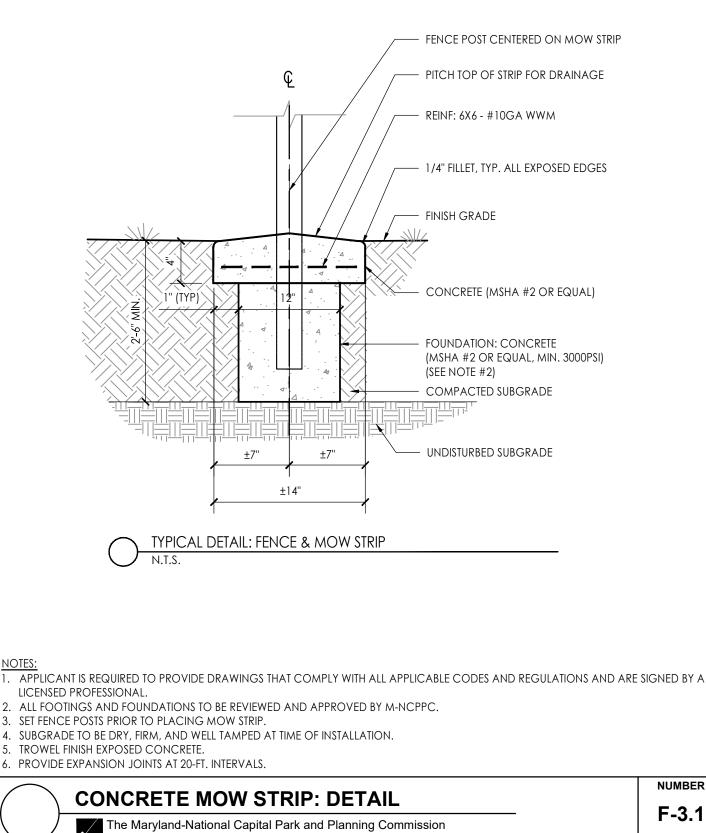
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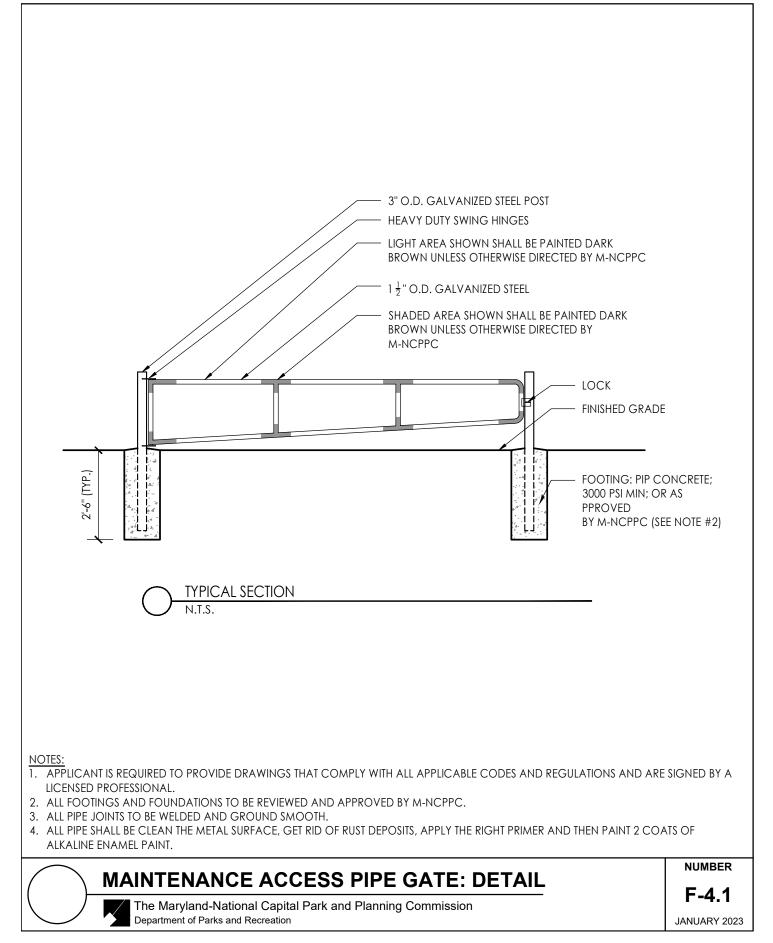








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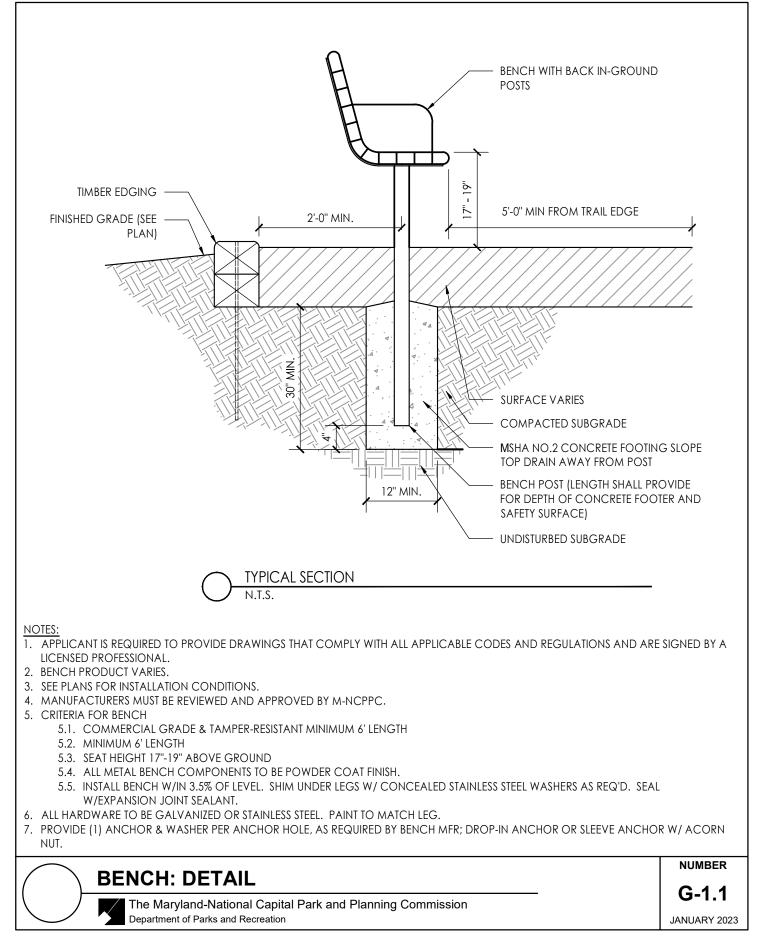
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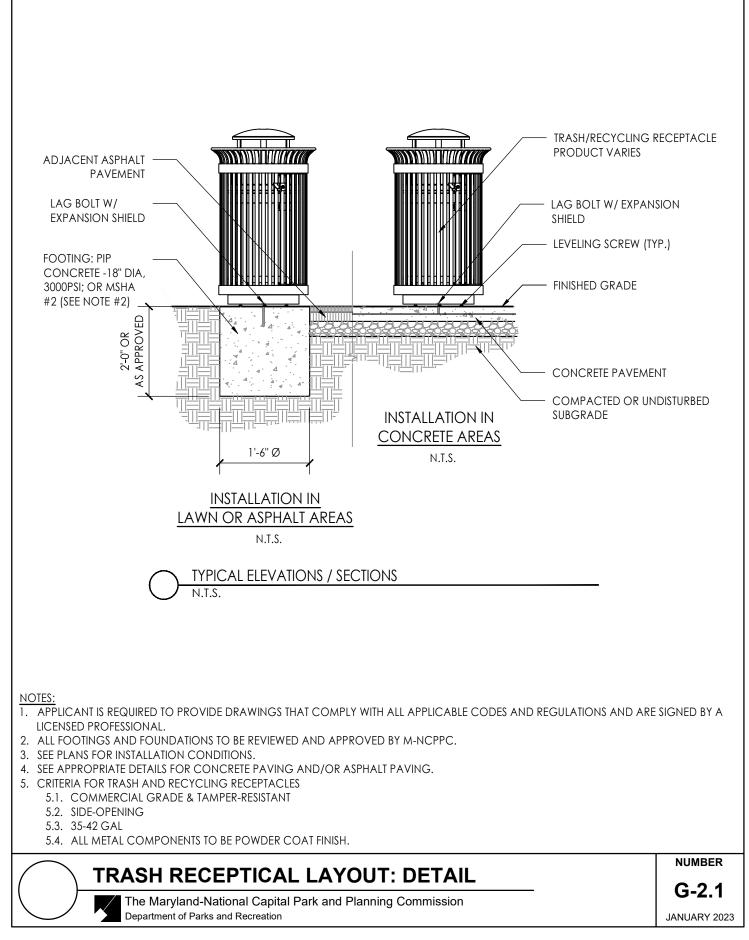
G-5.4 TRAIL MARKER

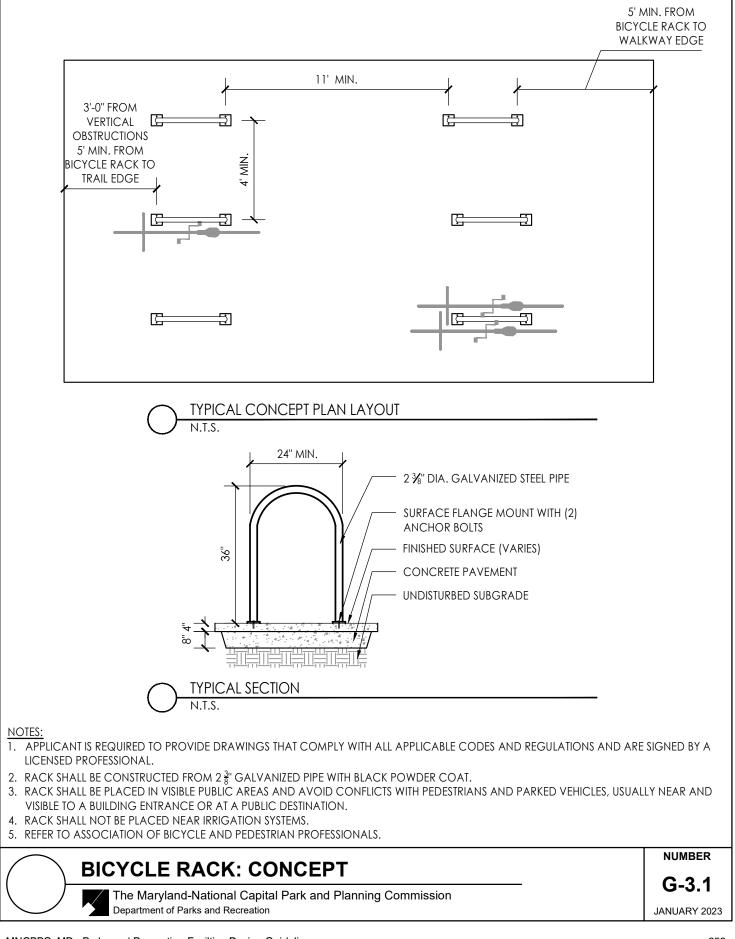
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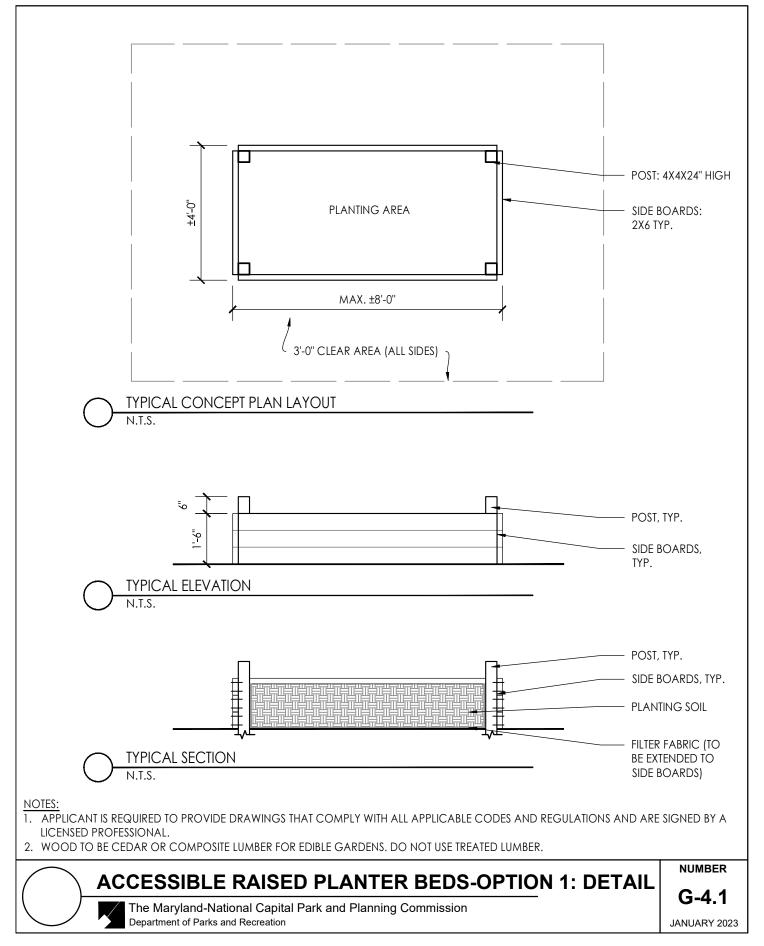
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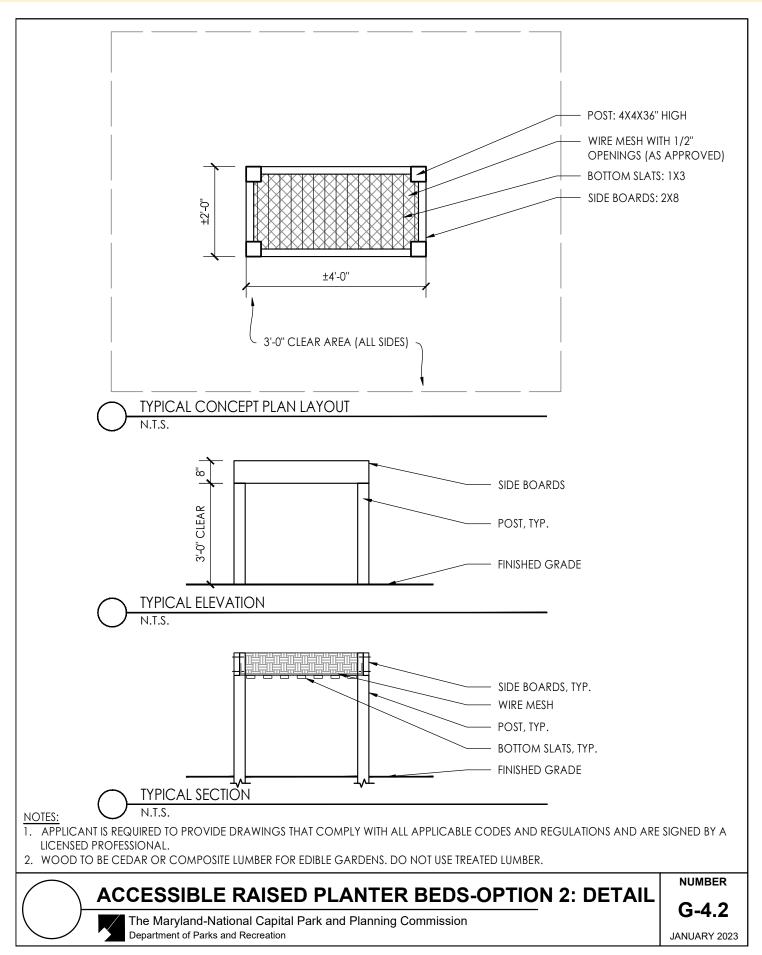
G-8.1 PARK PROPERTY LINE POLE

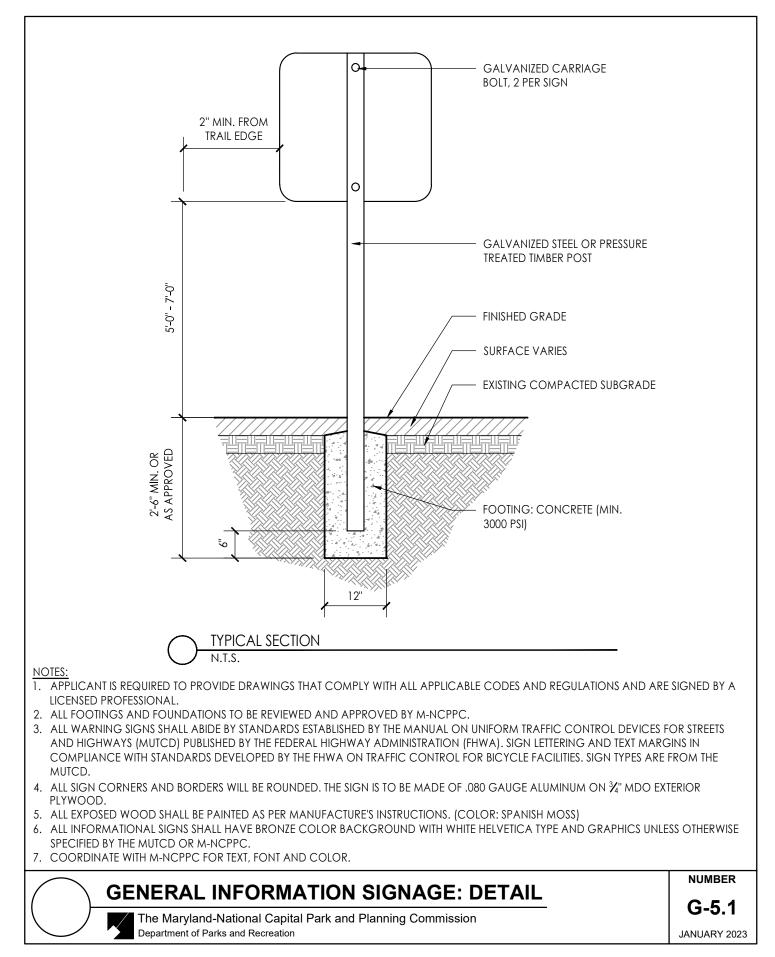


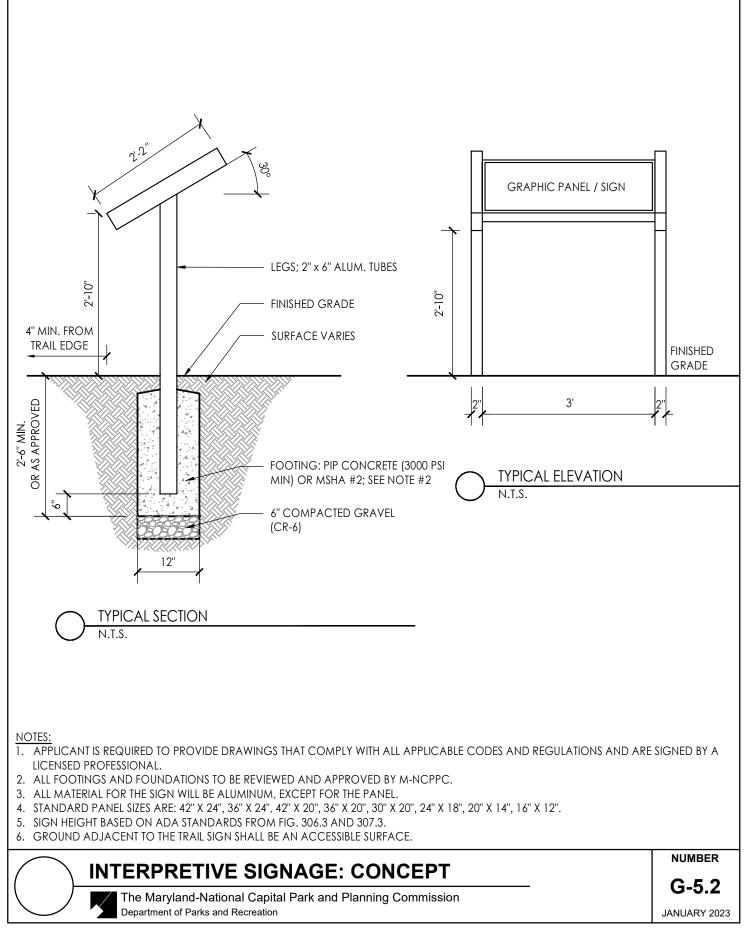


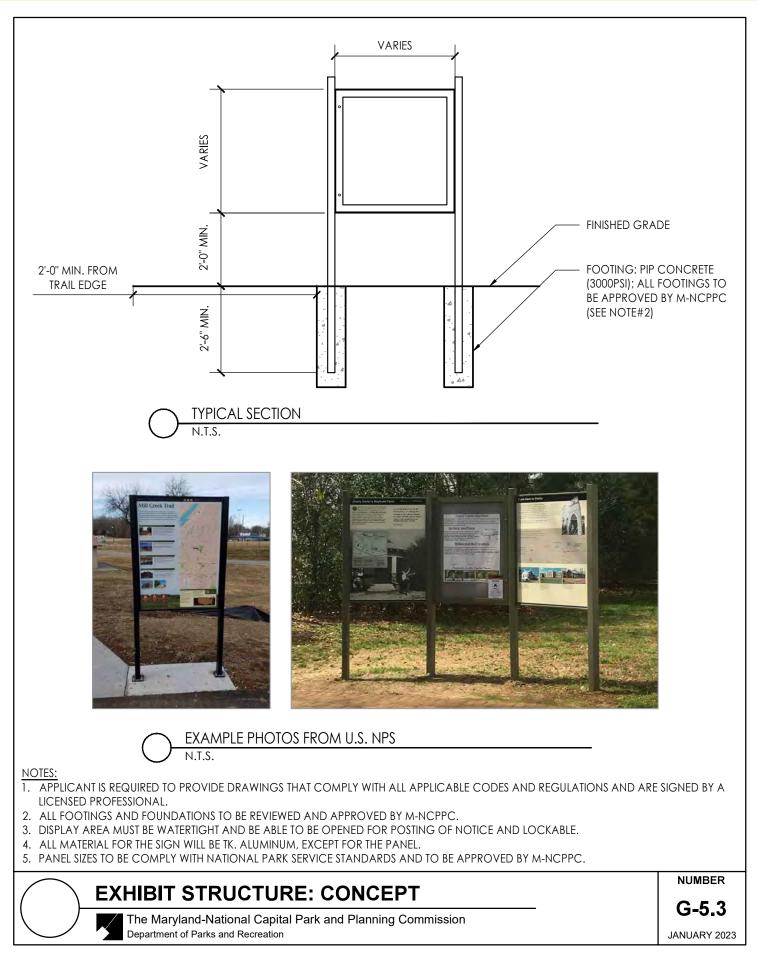


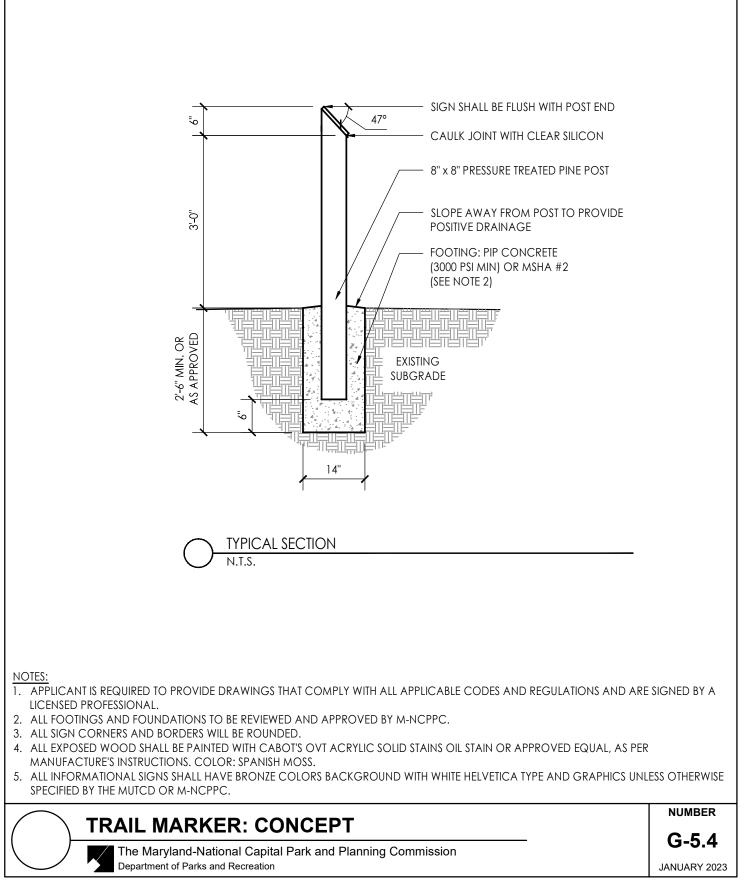


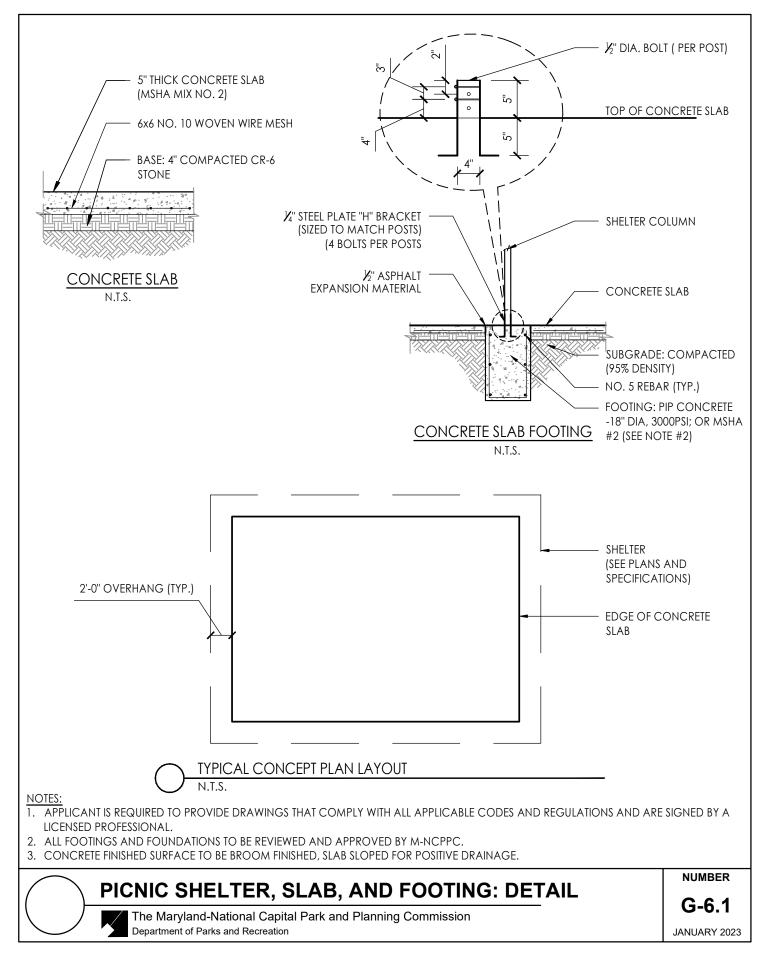


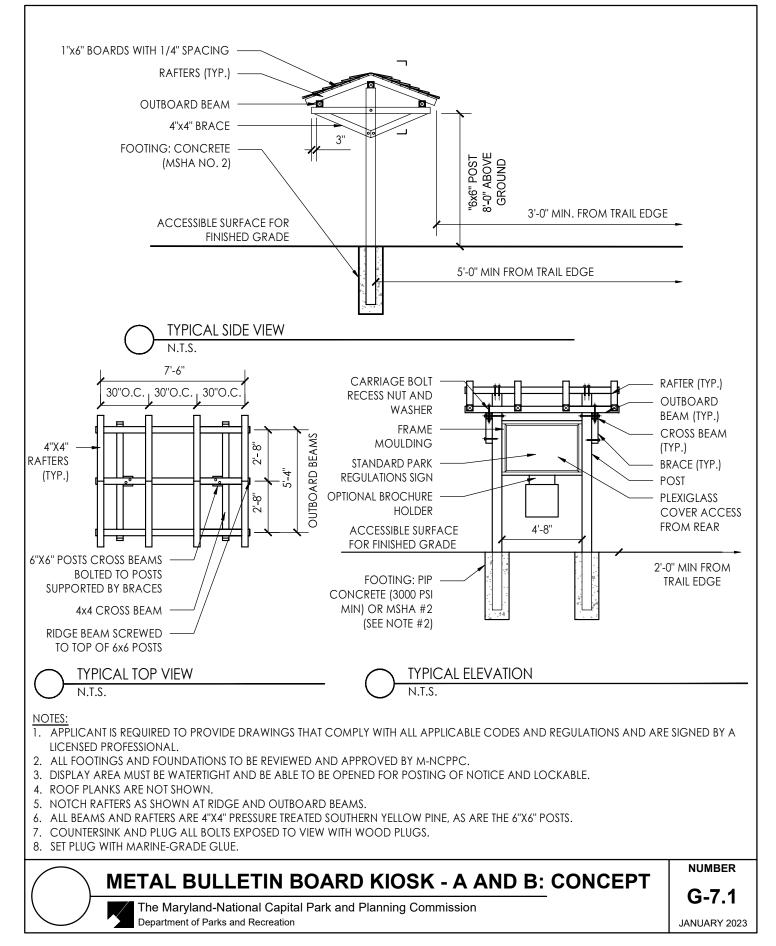


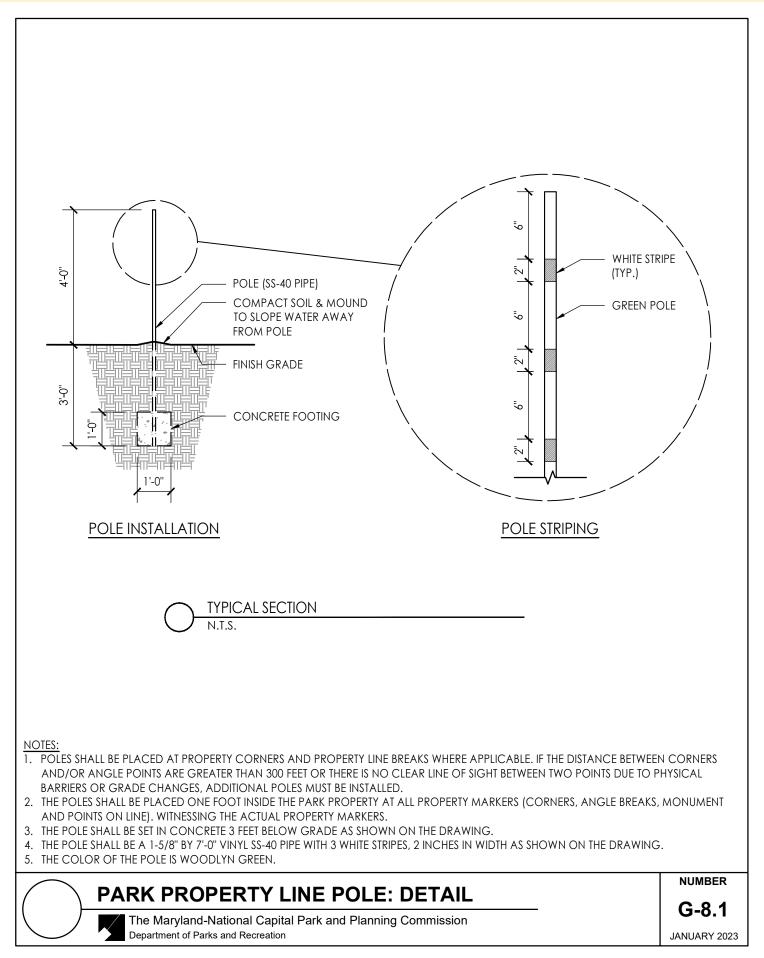






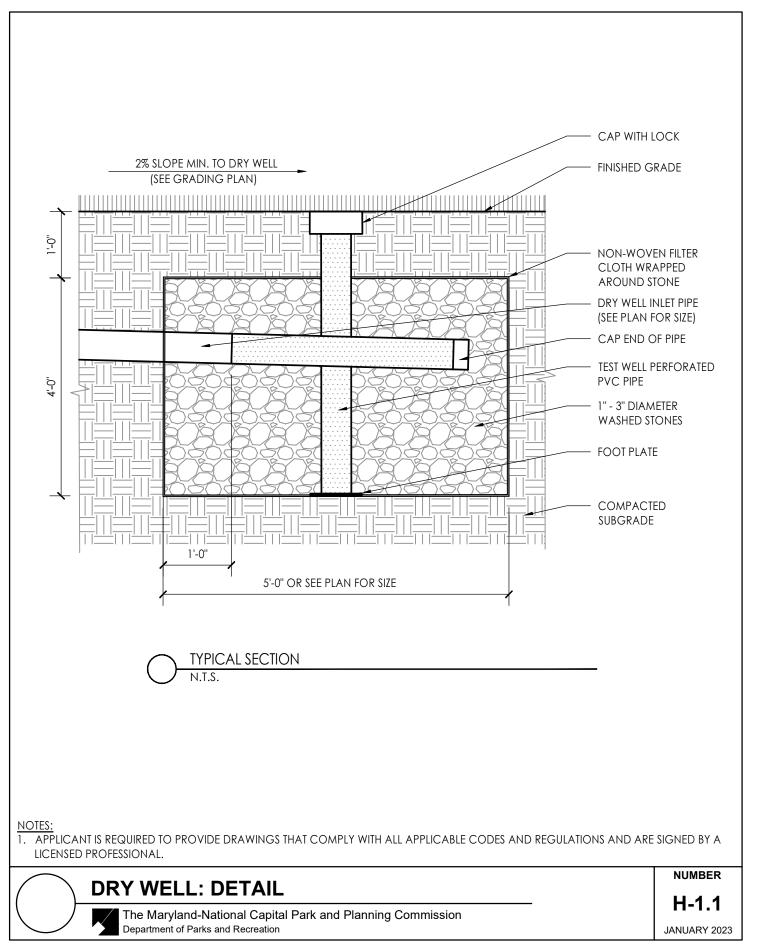






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H-1.1 DRY WELL



**VII. APPENDIX** 



### **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

MNCPPC, MD - Parks and Recreation Facilities Design Guidelin

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.





### **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

## APPENDIX

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.





## APPENDIX

### **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.





### **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.



The Maryland-National Capital Park and Planning Commission **Prince George's County Planning Department** 

## Private Recreation Facilities Agreement [Subdivision Name]

THIS AGREEMENT made this <u>[Leave Blank]</u> day of <u>[Leave Blank]</u>, 20 <u>[Leave Blank]</u> 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.



The Maryland-National Capital Park and Planning Commission
Prince George's County Planning Department

(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 <u>Parks and Recreation Facilities Guidelines</u>, the manufacturer's specifications and the guidelines in the latest edition of the <u>Handbook for Public Playground Safety</u> 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 <u>Recreation Facility Certification</u>, 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



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 <u>building permits</u> 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 <u>Amended Recreation Facilities Agreement</u>.
- 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 he day and year first written above.

SEAL/WITNESS:

[Developer Name]

[<u>Signature</u>] 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:

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**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 "Developer"), with principal the its 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 \_\_\_\_\_ acres of land, being in the \_\_\_\_\_\_ Election District, Prince George's approximately 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 The Developer or its/his/her successors and assigns (collectively hereinafter the a) "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

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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.]
- 19 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

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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. 52

approved plans, the current editions of the Park and Recreation Facilities Guidelines,

1 2 3 4	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.		
5 6	13. Recitals. The Recitals are	hereby incorporated in this Agreement.	
7 8 9	IN WITNESS WHEREOF, executed on the day and year	, the parties hereto have caused this Agreement to be properly first written above.	
10 11 12	SEAL/WITNESS:	[DEVELOPER'S NAME]	
13 14 15 16 17		By:[Signature]Name:[Print]Title:[Print]	
18 19 20	ATTEST:	THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION	
21 22	By:	By:	
23 24 25 26 27 28 29 30 31 32 33 34 35	By: (INSERT NAME) Secretary-Treasurer	(INSERT NAME) Executive Director	
36 37			
38 39 40 41 42 43	aforesaid, personally appeared	ORGE'S ne, the subscriber, a Notary Public in and for the State and County d [Developer representative's name], [title], who acknowledged that cute the above Agreement for the reasons and purposes stated	
44 45	therein.		
46	Witness my hand and official	seal this day of, 20	

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2 3	[C'au stand]
3 4	[Signature] Notary Public
5	i votary i ubile
6	My commission expires:
7 8	STATE OF MARYLAND
9	COUNTY OF PRINCE GEORGE'S
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11	I hereby certify that before me, the subscriber, a Notary Public in and for the State and County
12	aforesaid, personally appeared [Executive Director's name], Executive Director for The
13 14	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.
15	autionized to excedite the above regreement for the reasons and purposes stated increm.
16	Witness my hand and official seal thisday of, 20
17	
18	
19 20	
20	[Signature]
22	Notary Public
23	
24	My commission expires:
25 26	After recordation, return to:
20 27	
28	The Maryland-National Capital Park and Planning Commission
29	Department of Parks and Recreation
30	6600 Kenilworth Avenue
31 32	Riverdale, MD 20737
32 33	ATTN: Park Planning and Development Division
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1	Sample Form	<b>D-2: Amended Recreation Facilities Agreement</b>
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3 4 5 6 7 8	20, to amend the Recreation THE MARYLAND-NATION public body corporate, (here	EMENT ("Agreement") is made this day of, on Facilities Agreement, dated, by and between ONAL CAPITAL PARK AND PLANNING COMMISSION, a inafter the "Commission") and (hereinafter the cated at
9 10 11 12 13	Recreation Facilities Agreen	r (or previous Developer) and the Commission entered into a nent (RFA), dated, and recorded at Liber the [Subdivision name], [Plat book, Plat], in the Land Records County, Maryland, whereby the Developer agreed to construct id
14 15 16 17 18 19 20	Agreement (RFA) requires as approval authority, e.g., cleri approved plans by the Princ	er and the Commission agree that said Recreation Facilities in amendment, and [Specify reason for amendment and applicable cal error in the original RFA, or in accordance with revisions to e George's County Planning Board or its designee. [The date of me and number should also be specified.]
20 21 22 23 24		NESSETH, in consideration of the promises contained herein and consideration, the Developer and the Commission hereby agree as
24 25 26	1. [List specific amendment	3]
20 27 28 29 30	ē	d shall be recorded in the Land Records Office of Prince George's es shall be paid by the Developer.
31 32 33	0 1	gations and conditions of the RFA dated, except emain in full force and effect.
34 35	This Agreement shall be attac	thed to the original RFA.
36 37 38	IN WITNESS WHEREOF, executed on the date first wri	the parties hereto have caused this Agreement to amend to be tten above.
39 40	SEAL/WITNESS:	[DEVELOPER'S NAME]
41 42		By: [Signature]
43 44		Name: [Print]
45 46		Title: [Print]
47 48 49 50	ATTEST:	THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

By:		By:
	INSERT NAME)	By: (INSERT NAME)
5	Secretary-Treasurer	Executive Director
STATE	OF MARYLAND	
COUNT	'Y OF PRINCE GEORGE'S	
I hereby	certify that before me, the sub	oscriber, a Notary Public in and for the State and C
		loper's representative], [title], who acknowledged
	is authorized to execute the a	above Agreement for the reasons and purposes s
therein.		
Witness	my hand and official seal this	day of, 20
withess	ing nand and official scal tins _	day 01, 20
	[Sigr	nature] Notary Public
		Notary Public
	My c	commission expires:
STATE	OF MARYLAND	
	Y OF PRINCE GEORGE'S	
		oscriber, a Notary Public in and for the State and C
		cutive Director's name], Executive Director for
		lanning Commission, who acknowledged that he/s
authoriz	ed to execute the above Agreen	ment for the reasons and purposes stated therein.
Witness	my hand and official seal this	day of, 20
		, 20
	[Sign	nature]
		Notary Public
	My c	commission expires:
After red	cordation, return to:	
111101 100		
	The Maryland-National Car	oital Park and Planning Commission
	Department of Parks and R	
	6600 Kenilworth Avenue	
	Riverdale, MD 20737	
	ATTN: Park Planning and	Development Division

Sample	Form D-3 :Rescinded Recreation Facilities Agreement		
, 20, day of, 20, PLANNING COMM	I TO RESCIND ("Agreement") is made this day and hereby rescinds the Recreation Facilities Agreement dated between THE MARYLAND-NATIONAL CAPITAL PARK AN ISSION, a public body corporate (hereinafter the "Commission"), a reinafter the "Developer"), with its principal offices located 		
Recreation Facilities A Folio, fe	mmission and the Developer (or previous Developer) entered into greement ("RFA") dated, recorded in Liber or the property, shown on a plat of subdivision entitl corded in Plat Book at Plat; and		
WHEREAS, the Deve	eloper and the Commission have agreed to rescind said RFA.		
	, WITNESSETH, in consideration of the promises contained herein as uable consideration, the parties hereby agree as follows:		
1. [Specify reasons/ju	stification for rescinding]		
	, and recorded in Liber Folio, s County Land Records Office, is hereby rescinded and declared null a		
U	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 WHEF executed on the date fi	REOF, the parties hereto have caused this Agreement to rescind to rst written above.		
SEAL/WITNESS:	[DEVELOPER'S NAME]		
	By: [Signature] Name: [Print] Title: [Print]		
ATTEST:	THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION		
By:	By:		
(INSERT NAM Secretary-Treas	ME) (INSERT NAME)		

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2 3	STATE OF MARYLAND
3 4	COUNTY OF PRINCE GEORGE'S
5	COUNT FOR FRINCE GEORGES
6 7	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
8	he/she is authorized to execute the above Agreement for the reasons and purposes stated
9	therein.
10	$\mathbf{W}'_{1} = 1 + $
11 12	Witness my hand and official seal this day of, 20
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13 14	[Construe]
14	[Signature] Notary Public
16	My commission expires:
10	My commission expires
17	STATE OF MARYLAND
18 19	COUNTY OF PRINCE GEORGE'S
20	COUNT FOR TRINCE OFOROES
21 22 23 24 25	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.
23 26	Witness my hand and official seal this day of, 20
27	
28	
29	[Signature]
30	Notary Public
31	My commission expires:
32	
33	After recordation, return to:
34	
35	The Maryland-National Capital Park and Planning Commission
36	Department of Parks and Recreation
37	6600 Kenilworth Avenue
38	Riverdale, MD 20737
39	ATTN: Park Planning and Development Division
40	~ *
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1	Sample Form D-4: Irrevocable Letter of Credit			
2				
3	The Maryland-National Capital Park and Planning Commission			
4				
5	Date:			
6				
7	The Maryland-National Capital Park and Planning Commission			
8	Department of Parks and Recreation			
9	6600 Kenilworth Avenue			
10 11	Riverdale, MD 20737 ATTN: Park Planning and Development Division			
12	ATTIN. Tark Hamming and Development Division			
13	Re:Irrevocable Letter of Credit No.:			
14	Subdivision Name:			
15	Phase/Section:			
16	Approved Plan No.:			
17 18	Dear Sir/Madam:			
19	Dear On/ matani.			
20	We hereby authorize The Maryland-National Capital Park and Planning Commission			
21	(hereinafter the "Commission") to draw on the (also referred to as the			
22	"Bank"), for the account of in the amount of			
23	(\$). In the event that the terms of the Recreation Facilities Agreement ("RFA")			
24	dated, 20, and recorded in Liber, folio, have not been			
25	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 REA have not been			
26	must be accompanied by written certification that the terms of the RFA have not been			
27 28	completed.			
20 29	This irrevocable Letter of Credit shall expire one year from the above-referenced date. It is a			
30	condition of this Letter of Credit, however, that it shall automatically renew on an annual basis			
31	unless the Bank shall notify the Department of Parks and Recreation by registered letter, 60			
32	days prior to the expiration date that it elects not to renew this Letter of Credit. Upon receipt			
33	of such notice, the Commission may issue its Sight Draft on the Bank, accompanied by the			
34	above-stated documentation for the full amount of the Letter of Credit.			
35				
36 37	Upon issuance of its Sight Draft, the Commission shall not incur any liability for the			
37 38	construction or completion of the recreation facilities specified in the aforementioned RFA.			
39	Payment of the Sight Draft shall be made within 15 days of receipt by the Bank of the Sight			
40	Draft. This Letter of Credit is subject to the Uniform Commercial Code and all applicable			
41	provisions as stated in the Commercial Law Article, Maryland Code Annotated, and shall be			
42	construed and enforced in accordance with the laws of the State of Maryland.			
43				
44				
45	SEAL/WITNESS: [NAME OF BANK]			
46				
47 48	<u>By: [Signature]</u> Name: [Print]			
48 49	Title: [Print]			

1 2	ACKNOWLEDGMENT
3 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 namel , known to me to be the [Title] of
9	[Bank name], who executed the foregoing instrument, and acknowledged to me that he/she/they executed same as and for the act and deed of the Bank.
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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1		Sample Form D-5: Surety Bond
2 3	Вс	nd No.:
4	(N	fust be submitted on Surety's letterhead)
5 6 7 8 9 10 11 12 13 14 15	[na [na fira Co Di "C Di ad	NOW ALL PERSONS BY THESE PRESENTS that on this day of, 20 me and business address of Developer], as Principal hereinafter called the Developer, and me, business address of bonding company], as Surety, hereinafter the Surety, are held and mly bound under this obligation unto The Maryland-National Capital Park and Planning mmission, Department of Parks and Recreation, Attention: Park Planning & Development vision, 6600 Kenilworth Avenue, Riverdale, Maryland 20737 as Obligee, (hereinafter the ommission"), in the amount of Dollars (\$). The eveloper and Surety hereby bind and obligate themselves, their heirs, executors, ministrators, successors and assigns, jointly and severally, for payment of said sum as set rth below:
16 17 18 19 20 21 22 23	1.	<b>RFA.</b> 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.
23 24 25 26 27 28	2.	<b>Term.</b> 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.
28 29 30 31 32 33 34 35	3.	<b>Waiver.</b> 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.	<b>Default</b> . 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.
36 37 38 39	5.	<b>Default Remedy</b> . 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.
<ul> <li>39</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>44</li> <li>45</li> <li>46</li> <li>47</li> </ul>	6.	<b>Indemnification.</b> 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.
48 49 50	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.
50 51 52		WITNESS WHEREOF, the Developer and Surety have executed this obligation under seal s day of, 20

1 2	SEAL	[DEVELOPER REPRESENTATIVES NAME]	
3		L J	
4		[Signature]	
5		By: Name: [Print]	
6 7		Title: [Print]	
7 8 9	SEAL/WITNESS:	[SURETY NAME]	
10		[Signature]	
11		By: Name: [Print]	
12		Title: [Print]	
13			
14 15	[Note: All signatures must be	e notarized.]	
16	Countersignature of Maryland	Resident Agent:	
17 18		[Name]	
19		[Address and Zip Code]	
20			
21		[Registration No.]	
22		[Telephone No.]	
23			
24 25	Note: This information must	be provided completely in order for bond to be approved.	
26 27	must be filed with the bond.	ower of Attorney of the person signing for the Surety Company A corporate acknowledgment is required when a principal is a	
28	corporation.		
29 30	STATE OF MARVI AND		
31	STATE OF MARYLAND COUNTY OF PRINCE GEORGE'S		
32			
33	I hereby certify that before m	e, the subscriber, a Notary Public in and for the State and County	
34		[Developer representative's name], [title], who acknowledged that	
35		cute the above agreement for the reasons and purposes stated	
36	therein.		
37			
38			
39	Witness my hand and official	seal this day of, 20	
40		[0]	
41 42		[ <u>Signature]</u> Notary Public	
43		My commission expires:	
44		My commission expires	
45			
46			
47	STATE OF MARYLAND		
48	COUNTY OF PRINCE GE	ORGE'S	
49			
50	I hereby certify that before m	e, the subscriber, a Notary Public in and for the State and County	

51 aforesaid, personally appeared [Surety representative's name], [title], who acknowledged that

1 2 3	he/she is authorized to execute therein.	the above	agreement for th	ne reasons and pu	rposes stated
4 5	Witness my hand and official seal	this	_ day of	, 20	
6 7		Signatural			
8			Notary Public		-
9		My commis	sion expires.		
10					
11					
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1	Sample Form D-6: Escrow Agreement
2	
3 4 5 6 7 8	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
9 10 11 12 13	<b>WHEREAS</b> , 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
14 15 16 17	<b>WHEREAS,</b> 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
18 19 20	<b>WHEREAS,</b> the Commission has accepted the Developer's offer to provide private recreation facilities in lieu of mandatory dedication; and
21 22 23 24	<b>WHEREAS</b> , 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
25 26 27	<b>WHEREAS,</b> the Commission agrees to hold said escrow until the completion of the terms of said Recreation Facilities Agreement.
28 29 30 31	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:
32 33 34 35 36 37 38	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.
<ol> <li>39</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>44</li> </ol>	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.
44 45 46 47 48 49 50	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

51 Recreation.

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2 In the event that the amount held in escrow is utilized by the Commission due to the 3 Developer's failure to satisfy the terms and conditions of the RFA, or failure to complete 4 the construction of any required recreation facilities, the Developer shall save and hold 5 harmless the Commission for the construction or completion of said recreation facilities, 6 and the Developer shall still remain financially liable for same. Upon completion of the 7 construction and/or installation of the recreation facilities, the Commission shall return the 8 amount held in escrow, or any remainder thereof, to the Developer. This paragraph shall 9 survive the termination of this Escrow Agreement. 10

- 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.
- 19 5. Interest. The Commission shall maintain the funds held in escrow in a noninterest bearing
  20 account.
  21
- 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.
- 27 7. Entire Agreement. This instrument contains the entire agreement between the parties and
  28 shall not be modified except by written agreement signed by the parties and attached hereto.
  29
- 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.
- 38 10. Waiver. The failure of the Commission to enforce any part of this Agreement shall not be deemed as a waiver thereof.
- 41 11. The above recitals shall be incorporated herein.

IN WITNESS WHEREOF, the parties hereto have caused this Escrow Agreement to beexecuted on the day and year first written above.

47	SEAL:	[Developer Representative's Name]
48		
49		Signature
50		Name: [Print]
51		Title: [Print]
52		

		LAND-NATIONAL CAPI PLANNING COMMISSI	
By:	By:		
By: (INSERT NAME) Secretary-Treasurer	ŗ	(INSERT NAME) Executive Director	
STATE OF MARYLAND COUNTY OF PRINCE GEOF	₹GE'S		
I hereby certify that before me, aforesaid, personally appeared [I he/she is authorized to execut therein.	Developer rej	presentative's name], [title],	who acknowledged
Witness my hand and official sea	al this	day of	, 20 .
,			
	[Signa	ture]	
	-	Notary Public	
	My co	mmission expires:	
	1129 00		



- 1 2
- 3 Bond No.:
- 4 (Must be submitted on Surety's letterhead)
- 5

6 KNOW ALL PERSONS BY THESE PRESENTS that on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_ 7 [name and business address of Developer], as Principal (hereinafter called the "Developer"), 8 and [name, business address of bonding company], as Surety, (hereinafter the "Surety"), are 9 held and firmly bound under this obligation unto The Maryland-National Capital Park and 10 Planning Commission, Department of Parks and Recreation, Attention: Park Planning & 11 Development Division, 6600 Kenilworth Avenue, Riverdale, Maryland 20737 as Obligee, 12 (hereinafter the "Commission"), in the amount of \_ Dollars 13 The Developer and Surety hereby obligate and bind themselves, their heirs, (\$\_\_\_\_). 14 executors, administrators, successors and assigns, jointly and severally, for payment of said sum 15 as set forth below:

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31

- 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.
- 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.
- 32 4. Default. Upon default under the REA by the Developer and notice to the Surety, the
  33 Surety shall promptly remedy the default within 30 days or pay to the Commission the
  34 amount bound under this obligation.
- 36 5. Default Remedy. To remedy any default of the Developer, the Surety shall either pay the
   37 Commission the amount bound under this obligation, or fulfill the terms and conditions of
   38 the REA.
- 40 6. Indemnification. The Commission shall not incur any liability or responsibility for the
  41 construction or completion of any work specified in said REA, and the Surety and
  42 Developer shall save and hold harmless the Commission from and against all actions,
  43 liability, claims, suits, damages, costs or expenses of any kind incurred due to the failure of
  44 the Developer, his/her successors or assigns to comply with the requirements of the REA
  45 or any authorized modifications thereto, or due to the negligence of the Developer, his/her
  46 employees or agents.
- 47
- 48 7. Forum. This obligation shall be enforced in a court of competent jurisdiction in Prince49 George's County, Maryland, in accordance with the laws of Maryland.

1 2	INI WITTNESS WILLEDE	OF, the Developer and Surety have executed this obligation under seal
3	this day of	
4 5 6	SEAL	[DEVELOPER REPRESENTATIVE' NAME]
7		[Signature]
8		By: Name: [Print]
9		Title: [Print]
10		<u> []</u>
11 12	SEAL/WITNESS:	[SURETY NAME]
13		Signature
14		By: Name: [Print]
15		Title: [Print]
16		
17	Note: All signatures mu	ast be notarized.]
18	. 0	
19	Countersignature of Mar	yland Resident Agent:
20	Ū	
21		[Name]
22		[Address and Zip Code]
23		
24		[Registration No.]
25		[Telephone No.]
26		
27	Note: This information	must be provided completely in order for bond to be approved.
28		
29		of Power of Attorney of the person signing for the Surety Company
30		bond. A corporate acknowledgment is required when a principal is a
31	corporation.	
32		
33	STATE OF MARYLAN	
34	COUNTY OF PRINCE	GEORGE'S
35	T1 1	
36 37		ore me, the subscriber, a Notary Public in and for the State and County
38		eared [Developer representative's name], [title], who acknowledged that
38 39		execute the above agreement for the reasons and purposes stated
39 40	therein.	
40 41	Witness my hand and of	ficial seal this day of, 20
42	whiless my name and on	nciai sear tills tay of, 20
42 43		[Signature]
44		[Signature] Notary Public
45		My commission expires:
43 46		ny commission capitos
40 47		
48		
49	STATE OF MARYLAN	ID
50	COUNTY OF PRINCE	
51	South of Hunde	

1 2 3 4 5	<ul><li>aforesaid, personally appeared [Surety repres</li><li>he/she is authorized to execute the above</li><li>therein.</li></ul>	entative's nam	e], [title], who ac	knowledged that
6		day of	. 20	
7		_ any or	,	
8	8			
9				
10	0 Notary	Public		
11 12	1 My commission ex	pires:		
12				
14				
15				
16				
17				
18				
19 20				
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	Sample Form D-8: Recreation Facilities Certification (Public)
ТО	: Department of Parks and recreation, Park Planning and Development Division, The Maryland-National Capital Park and Planning Commission
	BJECT: Project Name
DS	P/SDP Number (s):
	ereational Facilities Agreement (RFA): Recorded in Liber @ Folio mit Number(s):
	creation Facilities covered by this Certification:
Thi my	s is to certify that based upon inspection of the above-named facilities by myself, or unc supervision, these facilities have been properly installed in accordance with all of t owing:
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).
	All applicable standards of the Handbook for Public Playground Safety (latest editionalished 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:

		ion Equipment Substitu	ation Request			
Project Name						
10jeet 1 vanie						
Section or Phase of Development:						
Name and Address of Applicant:						
Authorization:						
[	, Dev	eloper/Owner of the ab	ove-referenced sub			
im requesting sub	bstitution of the equip	ment specified below. ( cape plan #	Originally indicated			
Sig	nature					
Previousl	y Approved Items	Proposed	l Substitutions			
		Name of Item				
Manufacturer		Manufacturer				
Manufacturer Catalog Number		Manufacturer Catalog Number				
Manufacturer Catalog Number Cost		Manufacturer Catalog Number Cost				
Manufacturer Catalog Number Cost Quantity In the space below	w, justify the substitution	Manufacturer Catalog Number Cost Quantity on by comparing pertiner	nt factors affecting			
Manufacturer Catalog Number Cost Quantity In the space below durability to prove detailing, etc. Att for both the origina	w, justify the substitutio e equality or superiority tach complete specificat ally specified item and th	Manufacturer         Catalog Number         Cost         Quantity         on by comparing pertiner         r, i.e., wood treatment, finions and cut sheets or ot         ne proposed substitution.	nt factors affecting nishing, connecting ther graphic repres			
Manufacturer Catalog Number Cost Quantity In the space below durability to prove detailing, etc. Att for both the origina	w, justify the substitution e equality or superiority tach complete specificat ally specified item and th	Manufacturer         Catalog Number         Cost         Quantity         on by comparing pertiner         r, i.e., wood treatment, fin         ions and cut sheets or ot         ne proposed substitution.	nt factors affecting nishing, connecting ther graphic repres			
Manufacturer Catalog Number Cost Quantity In the space below durability to prove detailing, etc. Att for both the origina	w, justify the substitution e equality or superiority tach complete specificat ally specified item and th	Manufacturer         Catalog Number         Cost         Quantity         on by comparing pertiner         r, i.e., wood treatment, finitions and cut sheets or othe proposed substitution.	nt factors affecting nishing, connecting ther graphic repres			
Manufacturer Catalog Number Cost Quantity In the space below durability to prove detailing, etc. Att for both the origina	w, justify the substitution e equality or superiority tach complete specificat ally specified item and th	Manufacturer         Catalog Number         Cost         Quantity         on by comparing pertiner         r, i.e., wood treatment, fin         tions and cut sheets or ot         ne proposed substitution.	nt factors affecting nishing, connecting ther graphic repres			
Manufacturer Catalog Number Cost Quantity In the space below durability to prove detailing, etc. Att for both the origina	w, justify the substitution e equality or superiority tach complete specificat ally specified item and th	Manufacturer         Catalog Number         Cost         Quantity         on by comparing pertiner         r, i.e., wood treatment, fin         tions and cut sheets or ot         ne proposed substitution.	nt factors affecting nishing, connecting ther graphic repres			
Manufacturer Catalog Number Cost Quantity In the space below durability to prove detailing, etc. Att for both the origina	w, justify the substitution e equality or superiority tach complete specificat ally specified item and th	Manufacturer         Catalog Number         Cost         Quantity         on by comparing pertiner         r, i.e., wood treatment, fin         tions and cut sheets or ot         ne proposed substitution.	nt factors affecting nishing, connecting ther graphic repres			
Manufacturer Catalog Number Cost Quantity In the space below durability to prove detailing, etc. Att for both the origination FOR OFFICE US	w, justify the substitution e equality or superiority tach complete specificat ally specified item and th	Manufacturer         Catalog Number         Cost         Quantity         on by comparing pertiner         r, i.e., wood treatment, fin         ions and cut sheets or ot         ne proposed substitution.	nt factors affecting nishing, connecting ther graphic repres			



#### TABLE 1: MEDIAN PER ACRE RESIDENTIAL LAND VALUE (2014-2018)

SERVICE AREA	LAND VALUE	LAND VALUE PER ACRE		
SERVICE AREA	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





#### 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 Specifi cations-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**

Geteration News		Site	Light	Drought	Salt	Deer
Scientific Name	Common Name	Hydrology Tree	Reqs	Tolerance	Tolerance	Tolerance
Maanalia		e		-		
Magnolia		Watta	En11 and to			
virginiana 'Green Mile'	Survey of the out Magne align	Wet to	Full sun to		Yes	ILinh
	Sweetbay Magnolia	medium wet	part sun		res	High
Magnolia		Wet to	Full sun to			
virginiana 'Jim Wilson'	Sweetbay Magnolia				Yes	Uich
Platanus	American	Wet to	part sun Full sun to		res	High
occidentalis		medium wet				
occidentaris	Sycamore	Wet to	part sun Full sun to			
Quercus bicolor	Swamp White Oak	medium wet				
Quercus bicoloi Quercus phellos	Willow Oak	medium wet	part sun			
Quercus prierios	willow Oak	mealum wet				Sugartible og e
						Suseptible as a
		Wet to	Full sun to			sapling, resistant once
A a an multimum	Dedmonte	medium wet		Var	No	established
Acer rubrum	Red maple	mealum wet	part sun	Yes	INO	
A a an multimum	Ostahan Clamy	Watta				sapling, resistant once
Acer rubrum	October Glory	Wet to	En11 and	Var	Na	
'October Glory'	maple Willow Oak	medium wet	Full sun	Yes	No	established
Quercus phellos		Average				
0	White Oak, Stave	<b>A</b>				
Quercus alba	Oak	Average				
Quercus coccinea	Scarlet oak	Average				
Original falls of	C	<b>A</b>				
Quercus falcata	Southern Red Oak Swamp chestnut	Average				
Quercus michauxii	oak, cow oak	Average				
<u>`</u>	Water oak	Average				
Quercus nigra Quercus palustris	Pin oak	Average				
Quercus paiusiris	Chestnut Oak,	Average				
Quercus prinus	Rock Oak	Augraga				
Quercus prinus	Black oak,	Average				
Quaraus valuating		Auguaga				
Quercus veluntina	quercitron oak	Average	Dout any to			
Come alha	Maalamput Higham	1100000	Part sun to			
Carya alba	Mockernut Hickory	Average	shade Full sun to			
Comro alabra	Dignut Highows	Augraga				
Carya glabra Quercus veluntina	Pignut Hickory Black oak	Average	part sun Full sun	Yes		
Quereus veruntuna		to dry Medium dry	Full Sull	1 05		
Quaraus alles	White Oak, Stave	Medium dry				
Quercus alba	Oak	to dry				

		Site	Light	Drought	Salt	Deer
Scientific Name	<b>Common Name</b>	Hydrology	Reqs	Tolerance	Tolerance	Tolerance
		Medium dry	_			
Quercus coccinea	Scarlet oak	to dry				
		Medium dry				
Quercus falcata	Southern Red Oak	to dry				
					Unknown,	
					related	
					species	
		Medium dry	Part sun to		have poor	Once
Carya alba	Mockernut Hickory	•	shade	Yes	tolerance	established
		Medium dry	Full sun to			
Carya glabra	Pignut Hickory	to dry	part sun			
		Shru	ıb			
Cephalanthus						
occidentalis 'Sugar	Sugar Shack	Wet to	Sun to			
Shack'	Buttonbush	medium wet	part sun	No	Yes	
Ceanothus						
americanus	New Jersey Tea	Average				
Comptonia						
peregrina	Sweet Fern	Average				
		Gras	55			
Deschampsia	Golden Dew	Wet to	Sun to			
cespitosa 'Goldtau'	Tufted Hair Grass	medium wet	Part Shade	No		
Eriophorum		Wet to				
virginicum	Tawny Cottongrass	medium wet	Sun	No	Low	Moderate
		Wet to				
Juncus effusus	Soft Rush	medium wet	Sun	No		Moderate
Juncus effusus 'Big		Wet to				
Twister'	Rush	medium wet	Sun	No		
Rhynchospora	White-topped Star	Wet to				
colorata	Sedge	medium wet		No		High
Dicanthelium		Wet to	Part sun to			
clandestinum	Deer-Tongue Grass	medium wet	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	Northwind			Yes		
'North Wind'	Switchgrass	Average	Sun	(VERY)	Moderate	High

		Site	Light	Drought	Salt	Deer
Scientific Name	Common Name	Hydrology	Reqs	Tolerance	Tolerance	Tolerance
Panicum virgatum	Purple Tears		Sun to			
'Purple Tears'	Switchgrass	Average	part sun	Yes	Moderate	High
Panicum virgatum	Shenandoah		Sun to			
'Shenandoah'	Switchgrass	Average	part sun	Yes	Moderate	High
Schizachyrium	Blaze Little Blue					
scoparium 'Blaze'	Stem	Average	Sun	Yes	High	High
Schizachyrium						
scoparium	Chameleon Little					
'Chameleon'	Bluestem	Average	Sun	Yes	High	High
Schizachyrium						
scoparium	Standing Ovation					
'Standing Ovation'	Little Bluestem	Average	Sun	Yes	High	High
Sorghastrum						
nutans	Indian Grass	Average	Sun	Yes	Moderate	High
Sorghastrum						
nutans 'Golden	Yellow Prairie		Sun to			
Sunset'	Grass	Average	part sun	Yes	Moderate	High
Sporobolus						
heterolepsis	Prairie Dropseed	Average				
Sporobolus	Dwarf Prairie					
heterolepsis 'Tara'	Dropseed	Average				
Andropogon		Medium dry				
gerardii	<b>Big Bluestem</b>	to dry	Sun	Yes	Moderate	High
Andropogon						
gerardii	Blackhawks Big	Medium dry				
'Blackhawks'	Bluestem	to dry	Sun	Yes	Moderate	High
Andropogon						
gerardii 'Karls	Karl's Cousin Big	Medium dry				
Cousin'	Bluestem	to dry	Sun	Yes	Moderate	High
Andropogon						
gerardii 'Red		Medium dry				
October'	Red Big Bluestem	to dry	Sun	Yes	Moderate	High
Andropogon						
ternarius 'Black	Black Mountain	Medium dry				
Mountain'	Beard Grass	to dry	Sun	Yes	Low	High
Andropogon		Medium dry				
virginicus	Broomsedge	to dry	Sun	Yes	Low	High
		Medium dry	Sun to			
Danthonia spicata	Poverty Oat Grass	to dry	shade	Yes		
Eragrostis		Medium dry				
spectabilis	Purple Love Grass	to dry	Sun	Yes	Moderate	High

		Site	Light	Drought	Salt	Deer
Scientific Name	Common Name	Hydrology	Reqs	Tolerance	Tolerance	Tolerance
Panicum amarum		Medium dry	Sun to	* 7	<b>TT</b> 1	
'Dewey Blue'	Bitter Switchgrass	to dry	part sun	Yes	High	
Panicum virgatum		Medium dry				
'Dallas Blues'	Blue Switchgrass	to dry	Sun	Yes	High	High
Schizachyrium		Medium dry				
scoparium	Little Bluestem	to dry				
Schizachyrium						
scoparium 'Ha Ha	Ha Ha Tonka Little	Medium dry				
Tonka'	Bluestem	to dry	Sun	Yes	High	High
Sporobolus		Medium dry		Yes		Moderate to
wrightii	Giant Sacaton	to dry	Sun	(VERY)	High	high
Sporobolus						
wrightii 'Wind	Windbreaker Giant	Medium dry		Yes		Moderate to
Breaker'	Sacaton	to dry	Sun	(VERY)	High	high
		Perent	nial			
		Wet to				
Aruncus dioicus	Goatsbeard	medium wet				
		Wet to				
Aruncus 'Horatio'	Horatio Goatsbeard	medium wet				
Asclepias		Wet to				
incarnata	Swamp Milkweed	medium wet	Sun	No	Low	High
Asclepias	1					0
incarnata	Cinderella Swamp	Wet to				
'Cinderella'	Milkweed	medium wet	Sun	No	Low	High
Asclepias						8
incarnata 'Ice	White Swamp	Wet to				
Ballet'	Milkweed	medium wet	Sun	No	Low	High
Duilet	TTIIK V CCU	Wet to	Sun to	110	Low	mgii
Chelone glabra	Turtlehead	medium wet	shade	No	Low	Moderate
Chelone obliqua	Turtieneuu	Wet to	Sun to	110	Lew	modelate
'Tiny Tortuga'	Tiny Turtlehead	medium wet	part sun	Yes	Low	Moderate
Chelone lyonii	Hot Lips	Wet to	Sun to	105	Low	Wiodelate
'Hot Lips'	Turtlehead	medium wet	part sun	Yes	Low	Moderate
Coreopsis	i ui ticiicau		part sull	105	LUW	modelate
pallustris 'Summer		Wet to				
Sunshine'	Swamp Tickseed	medium wet	Sun	No		
Allium cernuum	Nodding Onion	Average	Juli	INU		
Amorpha		Average				
canescens	Lead Plant	Avoraça				
Amsonia 'Blue Ice'	Blue Star	Average				
		Average				
Amsonia	Hubricht's Blue	<b>A -</b>				
hubrichtii	Star	Average				

		Site	Light	Drought	Salt	Deer
Scientific Name	Common Name	Hydrology	Reqs	Tolerance	Tolerance	Tolerance
Aquilegia						
canadensis			Sun to			
'Corbett'	Corbett Columbine	Average	part sun	No		High
Aquilegia						
canadensis 'Little	Little Lanterns		Sun to			
Lanterns'	Columbine	Average	part sun	No		High
Aquilegia						
canadensis 'Pink	Pink Lanterns					
Lanterns'	Columbine	Average				
Armeria maritima	Sea Pink	Average				
Armeria maritima		0				
'Morning Star						
White'	White Sea Pink	Average				
Baptisia australis	Wild Blue Indigo	Average	Sun	No	Low	High
Baptisia 'Crème de	0	Trenage	5 uii	110	1011	111811
Menthe'		Average				
Baptisia 'Dutch		Tronuge				
Chocolate'		Average				
Baptisia 'Ivory		Average				
Towers'		Augraga				
		Average				
Baptisia 'Purple Smoke'		<b>A</b> - 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2				
		Average				
Baptisia						
sphaerocarpa						
'Screamin'						
Yellow'		Average				
Baptisia ×	Twilight Prairie					
variicolor 'Twilite'	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				
			Sun to			
Monarda 'Fireball'	Dwarf Bee Balm	Average	Part Shade	No		High

Coloradia Norma		Site Light		Drought	Salt	Deer
Scientific Name	Common Name	Hydrology	Reqs	<b>1</b> olerance	Tolerance	Tolerance
Monarda 'Grand		A				
Marshall'		Average				
Monarda 'On						
Parade'		Average				
Rudbeckia						
'American Gold						
Rush'	Black Eyed Susan	Average				
Symphotrichum			shade to			
cordifolium	Blue Wood Aster	Average	shade			
Symphotrichum			Dappled			
cordifolium	Avondale Wood		shade to			
'Avondale'	Aster	Average	shade			
Veronicastrum						
virginicum		Average				
virginicum						
'Album'		Average				
Veronicastrum						
virginicum						
'Challenger'		Average				
millefolium	Yarrow	to dry				
Achillea pt.		Medium dry				
'Walther Funcke'	Salmon Yarrow	to dry				
Achillea x	Moonshine Yellow	Medium dry				
'Moonshine'	Yarrow	to dry				
Agastache 'Black	Black Adder	Medium dry				
Adder'	Hyssop	to dry				
Agastache 'Blue	· · ·	Medium dry				
Boa'	Blue Boa Hyssop	to dry				
Agastache 'Blue	Blue Fortune	Medium dry				
Fortune'	Hyssop	to dry				
Agastache 'Crazy	Crazy Fortune	Medium dry				
Fortune'	Hyssop	to dry				
Allium stellatum	Prairie Onion	to dry				
Artemisia		Medium dry				
ludoviciana	Prairie Sagebrush	to dry				
Asclepias tuberosa	Butterfly Weed	to dry				
Asclepias	· · · · · · · · ·	Medium dry				
verticillata	Whorled Milkweed	to dry				
		-				
Coreopsis	Lance-leaf	Medium dry				
lanceolata	Tickseed	to dry				

		Site	Site Light		Salt	Deer
Scientific Name	Common Name	Hydrology	Reqs	Tolerance	Tolerance	Tolerance
Coreopsis	Whorled Leaf	Medium dry	Sun to			
verticillata 'Zagreb'	Tickseed	to dry	part sun			High
Coreopsis 'Crème	Creme Brulee	Medium dry				
Brûlée'	Tickseed	to dry	Sun	Yes		High
Coreopsis 'Gilded	Gilded Lace	Medium dry				
Lace'	Tickseed	to dry	Sun	Yes		High
	Purple Prairie	Medium dry				
Dalea purpurea	Clover	to dry	Sun	Yes	Moderate	Moderate
		Ground	Cover			
		Wet to	Full sun to			
Packera aurea	Golden Ragwort	medium wet	shade	Yes	Yes	High
Anemone	Crowfoot					
canadensis	Anemone	Average				
	Canadian Wild		Part shade			
Asarum canadense	Ginger	Average	to shade	No	Low	High
Chrysogonum						
virginianum	Green and Gold	Average				
	Woodland Stone					
Sedum ternatum	Crop	Average	Part shade	Yes		High
Tradescantia x	Blushing Bride		Part sun to			
'Blushing Bride'	Spiderwort	Average	part shade			
Tradescantia x	Maiden's Blush		Part sun to			
'Maiden's Blush'	Spiderwort	Average	part shade			
	-	Annu	al			
Chamaecrista						
fasciculata	Partridge Pea	Average				
Coreopsis 'Cherry	Cherry Lemonade					
Lemonade'	Coreopsis	Average	Sun			High
Coreopsis 'Jive'	Jive Coreopsis	Average	Sun			High
	Little Penny					
Coreopsis 'RP1'	Coreopsis	Average	Sun			High
Coreopsis	Strawberry					
'Strawberry	Lemonade					
Lemonade'	Coreopsis	Average	Sun			High

# TABLE B: TREES RECOMMENDED FOR "AROUND" HORSES

Scientific Name	Common Name					
Shade Trees						
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					
Evergreen Trees						
Juniperus virginiana	Eastern Redcedar					

# TABLE C: DEER RESISTANT PLANTS

Scientific Name	Common Name	Comments
	Shade Trees	
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	
	Evergreen Trees	
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	
	<b>Ornamental Trees</b>	
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					
Shrubs, Vines, and Ground Covers							
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	<b>Common Name</b>	Comments					
Shrubs, Vines, and Ground Covers							
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.	Уисса						

# 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		
Acer rubrum	Red Maple		Х		Leaves (wilted)	Do not plant; remove if present. One of most poisonous trees to horses
Acer saccharum	Sugar Maple, Rock Maple, Hard Maple		Х		Leaves	
Acer saccharinum	Silver Maple, Soft Maple, White Maple		Х		Leaves	
Aconitum spp.	Monkshood, Aconite, or Wolfsbane	Х		Х	Leaves, roots, all	
Actaea spicata	Baneberry			Х	Berries, root, foliage	
Aesculus hippocastanum	Horse Chestnut, Buckeye	Х	Х		All parts, esp. young shoots, seeds, and leaves	Do not plant; well fed horses will usually leave these alone; reduce access to existing trees
Agrostemma githago	Corn Cockle	Х	Х		Seeds	
Allium spp.	Commercial Onions, Wild Onions, Swamp Onions, and Chives		Х	Х	Bulbs, leaves	
Amianthium muscaetoxicum	Fly poison, Staggergrass, Crow poison		Х		All parts	
Amsinckia intermedia	Fiddleneck		Х		Seeds	
Apocynum spp.	Dogbane	Х	Х		Rhizomes, leaves, stems	
Arisaema spp.	Jack-in-the- Pulpit	Х		Х	All parts	

Scientific Name	Common Name	Toxic to:		Poisonous Part	Recommendations	
		Humans	Horses	Dogs		
Asclepias spp.	Milkweeds		Х		Leaves, fruit, stems	
Asclepias spp.	Milkweeds		Х		Leaves, fruits, stems	
Astragalus and Oxytropis spp.	Locoweed, Milk Vetch		Х		Flowers, leaves, stems	Do not plant; remove if present. One of most poisonous plants to horses.
Atropa belladonna	Nightshade	Х		Х	All parts	
Brassica spp., Raphanus spp., Descurainia spp.	Mustards, Crucifers, Cress, Tansymustards	Х	Х		Roots, seeds	
Cassia obtusifolia and Cassia occidentalis	Coffeepod, Sicklepod, Coffee senna, Coffee weed		Х		Pods, seeds, wilted foliage. Seeds are most toxic.	
Centaurea repens and Centaurea solstitialis	Yellow Star Thistle, Russian Knapweed, Barnaby's Thistle		Х		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		Х	X		
Chenopodium album	Lambs Quarters	Х	Х		All parts	
Cicuta spp.	Water Hemlock		Х	Х	Roots, stem base, young leaves	

Scientific Name	Common Name	Т	oxic to:		Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Conium maculatum	Hemlock		Х	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	Х		Х	All parts	
Coronilla varia	Crown Vetch		Х			
Crotalaria spp.	Rattlebox		Х	Х	All parts, esp. seeds	
Cynoglossum officinale	Hound's Tongue		Х			
Daphne spp.	Daphne	Х		Х	Berries, bark, leaves	
Datura spp.	Jimsonweed, Downy Thornapple, Devils Trumpet, Angels Trumpet	Х	Х	Х	Flowers, leaves, seeds	
Delphinium spp.	Larkspurs	Х	Х	Х	Young plants and seeds	
Digitalis purpurea	Foxglove	Х	Х	Х	Leaves, seeds, flowers	
Elaeagnus angustifolia	Russian Olive, Oleaster		X			Do not plant; remove if present.
Equisetum spp.	Horsetail		Х			
Eupatorium rugosum	White Snakeroot	Х	Х	Х		Do not plant; remove if present. One of most poisonous plants to horses.
Euphorbia spp.	Poinsettia, Spurges, Snow on the Mountain		Х	Х	Leaves, stems, sap	
Fagoypyrum esculentum	Buckwheat		Х			
Festuca arundinacea	Tall Fescue		Х		All parts	Do not plant near equestrian uses. Acceptable in other use

Scientific Name	Common Name	Т	oxic to:		Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Gelsemium sempervirens	Jessamine		X	8_	All parts	
Glechoma spp.	Ground Ivy, Creeping Charlie, Gill over the Ground		X		Leaves, stems	
Haplopappus heterophyllus	Rayless Goldenrod, Burroweed		Х			
Helenium (Dugaldia) hoopesii	Orange Sneezeweed		Х			Limit access
Hypericum perforatum	St. Johns Wort, Klamath Weed				All parts	
Iris spp.	Iris	Х		Х	Rhizomes, rootstocks	
Juglans nigra	Black Walnut		Х		Sawdust	Do not plant; avoid contact with sawdust from this tree; reduce access to existing trees
Kalmia spp.	Laurel, Ivybush, Lambkill		Х		All vegetative parts	
Laburnum anagyroides	Golden Chain, Laburnum	Х	Х	Х	Pods, seeds, all parts	
Lathyrus spp.	Sweet Pea, Tangier Pea, Everlasting Pea,	Х	Х	Х	Seeds, Pods	
Ligustrum spp.	Privet, Ligustrum, Hedge plant		Х		Leaves, fruit	
Lupinus spp.	Lupines, Bluebonnet		Х		Seeds	
Melilotus alba and Melilotus officinalis	White and Yellow Sweetclover		Х		Stem	
Menispermum canadense	Moonseed	Х		Х	All parts	

Scientific Name	Common Name	Т	oxic to:		Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Nandina domestica	Nandina, Heavenly Bamboo, Chinese Sacred Bamboo		Х		Foliage, fruits	Do not plant near equestrian uses. Acceptable in other use
Nerium oleander	Oleander, Rose Laurel	Х	Х	Х	All, leaves, stems	Do not plant; remove if present. One of most poisonous plants to horses.
Onoclea sensibilis	Sensitive Fern		Х		Leaves	
Ornithogalum umbellatum	Star of Bethlehem	Х		Х	Bulbs, flowers, all	
Peganum harmala	African Rue		Х		Seeds, leaves, stems	Unpalatable; eaten only under drought conditions.
Perilla frutescens	Perilla mint, Beefsteak plant		Х			
Photinia spp.	Faser's Photinia, Red Tip Photinia		Х		Foliage, fruits	
Phytolacca americana	Pokeweed	Х	Х	Х	All parts, roots most toxic	
Podophyllum peltatum	Mayapple, Mandrake	Х		Х	Roots, foliage, unripe fruit	
Prunus spp.	Wild Cherries, Black Cherry, Bitter Cherry, Choke Cherry, Pin Cherry		Х	Х	Seeds, leaves	Do not plant; remove if present.
Pteridium aquilinium	Bracken Fern		Х		All parts	Do not plant; remove if present. One of most poisonous plants to horses.
Quercus spp.	Oak species		Х		Acorns, young leaves	Well fed horses will usually leave these alone; reduce access
Ranunculus spp.	Buttercups, Crowfoot		Х	Х	All parts	

Scientific Name	Common Name	Т	Toxic to:		Poisonous Part	Recommendations
		Humans	Horses	Dogs		
Rheum rhaponticum	Rhubarb		Х	X	Leaves	
Ricinus comunis	Castor Bean	Х	Х		Seeds, if chewed, All parts	
Robinia pseudoacacia	Black locust	Х	Х	Х	Bark, leaves, seeds, flowers	Seasonal (summer – fall) concern
Sambucus canadensis	Elderberry	Х		Х	Leaves, twigs, roots, unripe fruits	
Senecio spp.	Senecio, Groundsels, Ragworts		Х		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		Х		Seeds	
Solanum spp.	Common Nightshade, Black Nightshade, Horse Nettle, Buffalo Bur, Jerusalem Cherry	Х	Х	Х	Leaves, shoots, immature fruit	
Sorghum spp.	Sorghum, Milo, Sudan Grass, Johnson Grass		Х		Leaves, stems	Do not plant; remove if present. One of most poisonous plants to horses.
Taxus spp.	Yew		Х			Do not plant; remove if present. One of most poisonous plants to horses.
Trifolium spp.	Alsike Clover, Red Clover, White Clover		Х		All, leaves (nitrate)	

Scientific	Common	Т	oxic to:		Poisonous	Recommendations
Name	Name				Part	
		Humans	Horses	Dogs		
Vicia spp.	Common	Х	Х		Seeds	
	Vetch, Hairy					
	Vetch, Narrow-					
	leaved Vetch,					
	Purple Vetch,					
	Broad Beans					
Xanthium spp.	Cocklebur	Х	Х		Seeds and	
					young	
					seedlings	
Wisteria spp.	Wisteria	Х		Х	Seeds,	
					pods	
Zygadenus spp.	Death Camas		Х		All parts,	
					seeds most	
					toxic	

# **Table E: Mid Atlantic Invaders and Potential Invaders**

Scientific Name	Common Name		
Tr	ree		
Pyrus calleryana	Callery Pear		
Acer platanoides	Norway Maple		
Broussonetia papyrifera	Paper Mulberry		
Paulownia tomentosa	Princess Tree		
Albizia julibrissin	Silk Tree		
Ailanthus altissima	Tree of Heaven		
Morus alba	White Mulberry		
Shrub and	Subshrub		
Lonicera maackii	Amur Honeysuckle		
Elaeagnus umbellata	Autumn Olive		
Berberis thunbergii	Japanese Barberry		
Spiraea japonica	Japanese Meadowsweet		
Viburnum dilatatum	Linden Viburnum		
Lonicera morrowii	Morrow's Honeysuckle		
Rosa multiflora	Multiflora Rose		
Ligustrum obtusifolium, L. ovalifolium, L.	Directo		
sinense and L. vulgare	Privets		
Rubus phoenicolasius	Wineberry		
Euonymus alatus	Winged Burning Bush		
Grass o	r Sedge		
Bambusa vulgaris, Phyllostachys aurea and	Dauchaar		
Pseudosasa japonica	Bamboos		
Schoenoplectus mucronatus	Bog Bulrush		
Phragmites australis	Common Reed		
Microstegium vimineum	Japanese Stiltgrass		
Oplismenus hirtellus ssp. undulatifolius	Wavyleaf Basketgrass		
Herbace	ous Forb		
Perilla frustescens	Beefsteak Plant		
Cirsium arvense	Canada Thistle		
Lespedeza cuneata	Chinese Lespedeza		
Hemerocallis fulva	Common Daylily		
Hesperis matronalis	Dame's Rocket		
Urtica dioica	European Stinging Nettle		
Ficaria verna	Fig Buttercup		
Alliaria petiolata	Garlic Mustard		
Glechoma hederacea	Ground Ivy		
Fallopia japonica	Japanese Knotweed		
Ornithogalum nutans and Ornithogalum umbellatum	Nodding Star of Bethlehem and Sleepydick		
Lythrum salicaria	Purple Loosestrife		

Scientific Name	Common Name		
Centaurea stoebe ssp. micranthos	Spotted Knapweed		
	Vine		
Cynanchum louiseae	Black Swallow-Wort		
Wisteria sinensis	Chinese Wisteria		
Akebia quinata	Chocolate Vine		
Vinca minor	Common Periwinkle		
Hedera helix			
	English Ivy		
Lonicera japonica	Japanese Honeysuckle		
Humulus japonicus Wisteria floribunda	Japanese Hop		
	Japanese Wisteria		
Pueraria montana var. lobata	Kudzu		
Persicaria perfoliata	Mile-a-Minute		
Celastrus orbiculatus	Oriental Bittersweet		
Cynanchum rossicum	Pale Swallow-Wort		
Ampelopsis brevipedunculata	Porcelainberry		
Clematis terniflora	Sweet Autumn Virginsbower		
Euonymus fortunei	Winter Creeper		
	quatic		
Myriophyllum spicatum	Eurasian Water-Milfoil		
Salvinia molesta	Giant Salvinia		
Hydrilla verticillata	Hydrilla		
Myriophyllum aquaticum	Parrot-Feather		
Trapa natans	Water Chestnut		
	ТО WATCH		
Latin Name	Common Name		
	Tree		
Phellodendron amurense	Amur Corktree		
Aralia elata	Japanese Angelica Tree		
Quercus acutissima	Sawthooth Oak		
Shrub an	nd Subshrub		
Kalopanax septemlobus	Castor Aralia		
Rhodotypos scandens	Jetbead		
Mahonia bealei	Leatherleaf Mahonia		
Buddleja davidii	Orange-Eye Butterfly Bush		
(	Frass		
Miscanthus sinensis	Japanese Silvergrass		
Ripidium ravennae	Ravenna-Grass		
Arthraxon hispidus	Small Carpetgrass		
<u> </u>	ceous Forb		
Epipactis helleborinus	Broadleaf Helleborine		
Heracleum mantegazzianum	Giant Hogweed		
Aegopodium podagraria	Goutweed		

Scientific Name	Common Name		
Arum italicum	Italian Arum		
Murdannia keisak	Marsh Dewflower		
Hyacinthoides hispanica	Spanish Bluebells		
Leucojum aestivum	Summer Snowflake		
Lamiastrum galeobdolon	Yellow Archangel		
Vin	е		
Dioscorea polystachya	Chinese Yam		





# APPENDIX

## 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).

Department of Parks and Recreation

#### 2022 RECREATIONAL FACILITY COSTS INCLUDES RECOMMENDED PRIVATE DEVELOPMENT AMOUNTS

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
1. STORM WATER MANAGEMENT		
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

MNCPPC, MD - Parks and Recreation Facilities Design Guidelines

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' x90') (cleared, graded, paved, lined, futsal goals and (1) 6' bench)	\$59,400.00	\$77,220.00
PICKLE BALL COURTS (20' x44') (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)

Department of Parks and Recreation

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
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

Department of Parks and Recreation

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
8. MISCELLANEOUS		
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
9. PARKING		
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
10. PAVILIONS / SHELTERS		
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

Department of Parks and Recreation

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
11. PICNIC / SITTING AREAS		
SITTING AREAS (inc clearing, grading, mulching, landscaping) LARGE (400 SF, 4 benches, 8'long) SMALL (200 SF, 2 benches, 8'long)	\$10,032.48 \$5,573.60	\$13,042.22 \$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
12. PLAYGROUNDS		
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

Department of Parks and Recreation

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

Department of Parks and Recreation

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
15. SITE PREPARATION		
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
16. SKATE PARKS		
SKATE PARK, 3000SF	\$66.00/SF	\$85.80/SF
17. STORAGE		
BICYCLE RACK (3 hoops for bicycles, Inverted U Stainless Steel)	\$1,122.00	\$1,458.60

Department of Parks and Recreation

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

Department of Parks and Recreation

RECREATIONAL FACILITY	ESTIMATED CONSTRUCTION COSTS	RECOMMENDED PRIVATE BOND AMOUNT
20. MISC. SITE ELEMENTS		
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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