

Columbus Recreation and Parks Department

Park Design Guidelines



REV. 12.2022



RECREATION AND PARKS
DEPARTMENT

PROCEDURE

SUBJECT/TITLE:	Park Design Guidelines
SCOPE:	The guidelines reflect CRPD's culture and design principles. The document also demonstrates design intent behind the preferred design elements within our parkland. All sections of CRPD will have their preferred design features reflected through this document.
PURPOSE:	See above scope.
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GLOSSARY OF TERMS

N/A

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RECREATION AND PARKS
DEPARTMENT

APPENDICES

1. Appendix A – CRPD Land Typologies (to be included when available)
2. Appendix B – CRPD Athletic Fields and Courts Design Standards
3. Appendix C – Crime Prevention Through Environmental Design (CPTED) Checklist

POLICY, PROCEDURES & APPROVAL GUIDELINES

POLICY-A statement of the City of Columbus and the Department of Recreation and Parks values, philosophy, and culture. The policy will communicate what the department should expect from the employee, what the employee can expect from the department, and what the community can expect from the department. This document will set rules and guidelines and influence department decision making.

All Policy will be signed and approved by the section manager, the assistant director or deputy director over this section, and the Department Director.

Any policy that has a direct effect regarding compliance with Chapter 913 of Columbus City Code (Recreation and Parks Commission), will in addition to the above, have approval and signature of the commission president.

PROCEDURE-A step by step instruction of the task that may provide a checklist for implementation. This document should define who is responsible for the action, how to achieve a desired outcome, and will continually change for improvements to the operation.

Procedure and process should be signed and approved by the section that oversees the operation, and signed and approved by the assistant director or deputy director that oversees this area.

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Park Design Guidelines

1 INTRODUCTION

Purpose

These Park Design Guidelines ('Design Guidelines' or 'guidelines'), including their appendices and references, provide professional designers with guiding principles, conceptual design guidance, project requirements, department technical requirements, and other information to facilitate the efficient design, construction, and maintenance of Columbus Recreation and Parks Department (CRPD) park facilities.

Designers should use their best judgment on how to apply these guidelines and outlined principles in order to meet CRPD needs. These guidelines do not supersede City/State/Federal laws or codes or generally accepted design practices of professional consultants. If the Consultant identifies any conflict between these guidelines and City of Columbus or other governing codes, they shall notify the CRPD Project Manager and seek a resolution. This resolution must comply with City codes to receive CRPD approval.

CRPD Staff or their designees can use these guidelines as a tool or 'checklist' to review the work of a design professional and to note areas of specificity.

Certain sections in these guidelines include topics that the designer should explore comprehensively through careful conversation with planning, forestry, operations, and maintenance staff. As with all project related communication, CRPD strongly advises the designer to document and share all directives with project participants.

Organization

The Design Guidelines cover the most critical elements of parklands encountered during new development or re-development of park facilities. Refer to these guidelines as applicable to the project and read from beginning to end as necessary.

Principle Strategy

CRPD approaches all projects as a team. This includes department leadership, strategic planning team members, design and construction team members, communications team members, CRPD business unit representatives (such as Operations and Maintenance, Sports, Rentals, or Community Recreation), design consultants, construction contractors, other City representatives, and the construction manager. All team members will base their performance on the following strategic guidance of the Recreation and Parks Department:

- **VISION:** A socially equitable City.
- **MISSION STATEMENT:** "We connect the people of our community through the power of nature, wellness, and creativity."
- **VALUES:**

- **Joy** – Our programs and activities create fun, celebrate culture, and improve our quality of life.
- **Nature** – As stewards of the land, we invest heavily in conserving our natural environment.
- **Legacy** – Our assets provide for generations to come, we must plan for tomorrow, not just for today.
- **Community** – We embed in our neighborhoods, know our participants, and serve as a gathering place for all.
- **Open** – We communicate in multiple languages, design for accessibility, program for inclusion, and hire to represent the people we serve.

Project Goals

- Create park spaces that provide welcoming, inclusive, joyful, safe, and human-scale interaction. Park spaces must reflect the needs of the residents, encourage resident interaction, and reinforce community resilience.
- Develop parkland and greenways that protect and enhance existing natural resource features on site.
- Incorporate sustainable principles that reflect the values of CRPD and the City.
- Consider lifetime operating costs over up-front cost of construction when designing systems while being mindful of project budget and initial costs.
- Reduce maintenance requirements by judicious use of durable materials and methods.
- Integrate art and creativity. Prioritize community centered and historically relevant art.

Foundations

CRPD staff recognize the following as foundational elements which can guide the creative process for design professionals. Consider each of these lenses throughout the design phases to guide the programming, layout, and features of a park space, trail, or facility.

- **DIVERSITY AND INCLUSION:** Provide an inviting and accessible place for all Columbus residents.
- **COMMUNITY SAFETY:** Maintain and protect the health and well-being of residents.
- **RESILIENCE:** Ability of the park space to recover quickly from disruptive natural and manmade events while continuing to provide critical community services.
- **TECHNOLOGY:** Free public Wi-Fi, safety and security, education, programming, and opportunities.
- **PARTNERSHIP:** Accessible collaboration with community groups, organizations; networking in the community and meeting people where they live.
- **SANCTUARY:** Spaces for connection to nature and joyous play/recreation.

Land Typology Classification

Each CRPD property receives one of thirteen land typologies designations. Each classification defines the key amenities and features typical of that typology. [Appendix A](#) provides the complete Land Typology Classification information. CRPD utilizes the following typologies:

Regional Park
Community Park
Neighborhood Park

Land Typology Classification (continued)

- Neighborhood Open Space
- Parkland Reserve
- Conservation Parkland
- Nature Preserve
- Reservoirs
- Multi-Use Trail
- Golf
- Operations
- Special Use Properties
- Street Islands

Commonly Used Acronyms

- American Association of State Highway and Transportation Officials (AASHTO)
- American Society for Testing and Materials (ASTM)
- Americans with Disabilities Act (ADA) and Accessibility Guidelines (ADAAG)
- American Society for Testing and Materials International (ASTM)
- City of Columbus (CoC)
- Columbus Recreation and Parks Department (CRPD)
- Consumer Products Safety Commission (CPSC)
- Crime Prevention through Environmental Design (CPTED)
- Environmental Protection Agency (EPA)
- International Mountain Bicycling Association (IMBA)
- Ohio Administrative Code (OAC)
- Ohio Department of Natural Resources (ODNR)
- Ohio Department of Transportation (ODOT)
- Ohio Revised Code (ORC)
- Professional Trail Builders Association (PTBA)
- Stream Corridor Protection Zone (SCPZ)
- United States Department of Agriculture (USDA)
- United States Golf Association (USGA)

Relevant Regulatory and Reference Documents

- AASHTO Bikeway Design Guidelines
- American Society for Testing and Materials (ASTM)
- Americans with Disabilities Act (ADA) and Accessibility Guidelines (ADAAG)
- City of Columbus Stormwater Drainage Manual (SWDM)
- Consumer Products Safety Commission (CPSC)
- CPETED Checklist
- CRPD Approved Facility Materials List
- CRPD Approved Park Materials List
- CRPD Athletic Fields and Courts Design Standards
- CRPD Educational Gardens Guidelines
- CRPD Facility Design Guidelines

CRPD Integrated Pest Management Policy
CRPD Pollinator Habitat Guidelines
Department of Public Service (DPS) Standard Drawings
Department of Public Utilities (DPU) Approved Plant List for Reservoirs
Franklin County National Flood Insurance Permitting Requirements
ODNR Ohio Boating Facilities Standards and Guidelines
ODNR Rainwater and Land Development Manual
Ohio Building Code (OBC)
Ohio EPA General Permit, 401/404 Permit Requirements
Ohio Revised Code (ORC)
United States Golf Association (USGA) Guidelines and Specifications
US Access Board for Fishing Piers
US Army Corps of Engineer Permitting Requirements
All other applicable local, state, and federal codes and regulations

2 SITE LAYOUT

2.1 OVERVIEW

Consider the following practices throughout the site planning and park design process. This section describes these concepts in further detail with references and examples.

Proper Siting: Locating parks and recreational facilities such that residents and visitors of all ages and abilities can easily access them. The City has a goal to provide park access to every resident within a ten (10) minute walk from their home.

Safety: Increasing safety and the perception of safety within parks and incorporating methods to reduce vandalism and dangerous activities.

Universal Design: Creating parks and recreational facilities with diverse elements that accommodate diverse demographics and residents of all abilities. Creating a fun and enjoyable experience and providing inclusive play areas where feasible.

Aesthetics: Providing aesthetically pleasing and inviting parks and recreational facilities whose character complies, reflects and embraces the surrounding natural, cultural, and historic resources as themes or design features.

Connections: Providing connections to existing transportation networks that includes roadways, pathways, trails, bicycle paths, sidewalks, and mass transit routes to promote easy access to parks and recreational facilities.

Sustainable Design: Incorporating water and energy conservation into landscape, hardscape, and building design to reduce lifetime water and energy usage. Provide infrastructure for recycling and waste reduction best practices. Minimize pollution, erosion, and lifetime energy and water usage through landscape, hardscape, and building design. Procure local materials to assist the local economy

and reduce transportation emissions. Include Zero Energy design concepts when applicable: building orientation, massing, daylighting, passive-natural conditioning, and utility monitoring.

Durability: Utilizing materials and technologies that provide durability, easy maintenance and can withstand detrimental effects of weather, time, and abuse.

Preservation: Preserve plants, animals, endangered species, and natural habitats. Protect agricultural, cultural, historical, and archaeological resources and make efficient use of finite natural resources.

Relevant Reference Documents

- CRPD Athletic Fields and Courts Design Standards ([Appendix B](#))
- CPTED ([Appendix C](#))

2.2 CARRYING CAPACITY OF PARKLAND FACILITIES & ENVIRONMENTAL PROTECTION

A park, trail, or nature preserve can only accommodate a certain amount of recreational activity before the natural resources and quality of visitor experience becomes impacted negatively. Make necessary efforts during planning stages to understand the park, trail, or nature preserve's anticipated carrying capacity, and design with that figure in mind.

- Balance natural and built features to preserve the natural integrity and environment of the park.
For example, use existing open greenspace for athletic fields, hard surfaces, and buildings, rather than clearcutting a woodland area for the same end result.
- Identify opportunities where the layout of the site protects and enhances the existing environmental features of the park.
For example, a natural, low lying depression that sits wet after storm events may be redesigned to serve as a bioretention basin.

2.3 PHYSICAL ACCESS & ADJACENCY COMPATIBILITY

This section gives consideration to requirements of safety, compatibility, privacy, concentration of recreational uses, and ease of operations and administration. Carefully consider the use of each space, the needs of the surrounding communities, and the relationship between recreational uses and future park expansion opportunities. Incorporate the following during planning discussions:

- Parks sustain multi-generational spaces. Evaluate the variety of park user compatibility when determining the adjacency of park features.
- Spatial organization encourages social interaction and user participation, which promotes many diverse activities to occur simultaneously while facilitating site visibility and control.
- Locate recreational uses together to maximize desirable effects (accessibility, control of participants, multi-uses) and apart to minimize undesirable effects (noise and recreational uses with varying degrees of physical activity).
- Locate facilities with broad user attraction near or within view of established public transit routes, such as bus routes, blue way trails/boat launches, or greenway trails. Locating along these routes facilitates alternative modes of travel to the site and encourages non-motorized access to public greenspaces.

- Locate restroom buildings and portable restrooms near recreation fields, children’s play areas, and parking lots. Restroom facilities must provide easy access for maintenance staff.
- Locate maintenance buildings away and screened from children’s play areas and adjacent activities.
- Provide buffers and safety barriers between children’s play areas and parking lots/drives.
- Properly size parking lots and drive capacity to minimize excessive hardscapes.
- Locate parking facilities near major park features (group picnic areas, sport fields, recreation center) to facilitate park users transporting equipment, coolers, or other items to their destination, and discourage driving across parkland to conveniently access park features.
- Locate trash enclosures out of primary view from all buildings, except maintenance buildings, while maintaining relatively easy access for facility staff operations.
- Consider the existing and future land uses of surrounding properties (urban vs residential vs natural) and the resulting influence on user experience and parkland development.

2.4 ACOUSTICS

Sport activities, children’s play areas, dog parks, large group gatherings, and amphitheaters all create potential sources of noise disturbance to the surrounding community. Locate these park features to minimize noise impacts on adjacent land use, such as adjacent residential property owners. In general, for each doubling of distance from a noise source, the sound pressure decreases by 6 decibels.

In addition to location, consider the detailed design of these acoustic features. Spaces such as amphitheaters intended for event use, particularly live music, should have a design and acoustic treatment that directs sound into desired areas and minimizes sound bleeding into undesired areas. Understand the materials selected for the project and whether they reflect and amplify sound or dampen sound. Consider referring to an acoustic consultant to ensure proposed sound impact does not reach excessive levels.

Finally, consider identifying and preserving intentional “quiet space” areas in park development for park users to find peace and connect with nature. Understand the type of noise generated in these areas. Pink noise, including rustling leaves, running water, or wind, can help people connect more easily to nature.

2.5 SECURITY & SAFETY

2.5.1 General Requirements

- Thoroughly consider safety and security during the site planning and design phase by understanding and incorporating strategies of CPTED ([Appendix C](#))
- Provide regulatory signage at all parks at park entry locations. This enables Law Enforcement Officers (LEO) to enforce code.
- Design grading and planting plans for increased sightlines. Park users should see others in the park and others should see them. Avoid mounds, berms, or areas that create hiding places, isolated areas, or entrapment zones.
- Treat walls, signage, and concrete amenities such as tables, benches, and drinking fountains with anti-graffiti material when possible.

- Ensure emergency service vehicles can access parks and trails readily.

2.5.2 Natural Surveillance

- Ensure park visibility from surrounding properties or from a vehicle on the street or in designated parking lots. Passing pedestrian and vehicular traffic contribute to overall safety as natural surveillance assets.
- Cluster recreational activity areas to provide surveillance. For instance, picnic areas adjacent to a playground.
- Select see-through fencing to provide sightlines into and out of parks.
- Provide lighting as needed in high traffic areas, such as shelters, parking areas, pathways, and stairs.
- Avoid security lighting that creates blinding glare or deep shadows. This hinders the view of potential observers. Use shielded or cut-off luminaries to control glare.
- Provide hi-lo security lighting for nighttime use of the park and for increased visibility of park trespassers after dusk when feasible.
- Provide signage with park rules, hours of operations and who to call in case of an emergency near park entry points.

2.5.3 Natural Access Control

- Selectively place entrances, exits, fencing, lighting and landscape to limit access and control flow.
- Intentionally and clearly identify points of entry.
- Eliminate design features that enable unauthorized access to roofs or upper levels.
- Use shrubs to discourage intrusion or crossings of areas that prohibit park guests. Use selective landscaping bushes beneath ground level windows.

2.5.4 Circulation

- A well-connected network of park roads and paths provides an effective means to accommodate all forms of travel and all users. Multiple routes through a park circulation system increases the overall route safety and accessibility.
- Prioritize the safety of pedestrians by separating vehicle and pedestrian facilities and maximizing highly visible sightlines for both users.
- Minimize conflict areas, crossings, and intersections between vehicle roadways and pedestrian paths. Alert drivers with sufficient crossing treatment including signage, pavement markings, Rapid Flashing Beacons, or other acceptable options.
- Minimize obstacles for multi-modal mobility users in trails, sidewalks, and paths. Ensure the placement of signage, benches, and other amenities does not create obstructions or tripping hazards for pathway users.

3 CIVIL SITE DESIGN

3.1 OVERVIEW

The Civil Site Design section covers several elements specific to CRPD that all development projects require. Great site design must understand and accommodate the context of pedestrian interaction and preservation of natural resources. Before any site work begins, perform a careful field review in conjunction with CRPD to understand pertinent field conditions and site specific factors.

Relevant Reference Documents

- 2010 ADA Standards for Accessible Design
- AASHTO Guide for Development of Bicycle Facilities
- CRPD Athletic Fields and Courts Design Standards
- Columbus Storm water Drainage Manual
- Ohio EPA General Permit Requirements
- Rainwater and Land Development Manual

3.2 GRADING

- Minimize grading and reduce soil disturbance to the extent feasible.
- Mimic natural topography where possible.
- Design sites to balance soil cut and fill where feasible.

3.2.1 Slope Table

Type:	Grade:
Sidewalks and Pedestrian Paving	See ADA Requirements, AASHTO Guide for Development of Bicycle Facilities 1.5% min, 5% max running slope 1.56% max cross slope
Multi-Use Paths and Greenways	AASHTO Guide for Development of Bicycle Facilities 1.5% min, 5% max running slope 1.56% max cross slope
Sports Courts	Drain end-to-end at 1%
Tennis and Pickleball Courts	Drain side-to-side or end-to-end at 1% No high point at net
Athletic/Sports Fields	Balanced grade with 1.5% min, 2% max slope. <i>Note: Refer to CRPD Athletic Fields and Courts Design Standards for preferred grading and orientation of field</i>

Type:	Grade:
Softball and Baseball Fields	Skinned and turf infields: 1% crowning from edge of pitching circle; Provide positive drainage away from home plate in all cases; 1% minimum and 2% maximum for turf outfields; Crown grading at centerfield towards foul lines <i>Note: Synthetic turf shall slope per manufacturer's recommendations</i>
Parking and Drive Areas: Asphalt	2% minimum, 5% maximum in any direction; accessible parking requires a 2% maximum slope in any direction including accessible aisles
Natural Turf or Open Lawn Areas	2% min, 33% max (3:1) for mowable slopes
Shrub and Groundcover Areas	2% min
Mulch Areas	2% min, 10% max
Unpaved Paths within Nature Preserves	Grading to follow natural topography and alignment to follow contour lines to avoid steep slopes and low areas, 2% maximum cross slope

3.2.2 Finished Grade

Type:	Grade Depth:
Natural Turf	1" below walks, mow curbs, or other paving
Synthetic turf	Per Manufacturer's recommendation
Shrub, groundcover, or mulch	2" below walks, mow curbs, or other paving, if adding bark mulch

3.2.3 Top Soil

Preserving existing topsoil can aid in establishing native vegetation effectively. With suitable topsoil present, store and apply it within the project limits through excavation, stockpiling, and re-placing topsoil on disturbed areas. Achieving the desired finished grades, texture, and compaction levels may require additional activities, such as tilling and rock hounding.

Conduct soil tests in early design phases (as needed) to determine the health of existing soils. These tests will inform any required amendment activity during construction to improve soil health for vegetation growth and/or adequate stormwater infiltration/drainage.

Plans and specifications shall include language for owner approval of final depth, quality, and condition of the topsoil before installation of grass seed, sod, or any other ground cover.

3.3 SEEDING AND SITE RESTORATION

For disturbances from small construction projects where hydro-seeding is not feasible:

- Specify a pelleted seeding mulch with fertilizer to support quick grass seed germination (preferred).
- Only use seed and straw when project conditions do not justify pelleted seeding mulch. Seed and straw does not perform as well due to wind and water erosion.

For disturbances expected in typical construction projects:

- Specify hydro-seed with the appropriate CMS seed mix.

For disturbances in Downtown or in areas where establishing turf proves difficult:

- Sod areas with the appropriate CMS specification. See Landscaping and Irrigation [Section 10.3 Turf](#).

For disturbances in a Golf Course:

- [Section 15.1 Golf Overview](#)

For all other areas:

- Avoid seeding mats with plastic. Plastic pieces get caught in mowers and become difficult to remove.

3.4 STORMWATER MANAGEMENT

All development must comply with the Columbus Stormwater Drainage Manual, Ohio EPA General Permit Requirements, and the Rainwater and Land Development Manual.

All parkland development design shall follow low impact development practices that use or mimic natural processes. Integrate practices resulting in greater infiltration, evapotranspiration, or use of stormwater to protect water quality and associated aquatic habitat. Furthermore, balance the natural and built features of the parkland to minimize impervious surfaces, concentrated stormwater flows, and native vegetation and tree removals.

All stormwater management features designed for parkland areas must treat stormwater as a resource rather than a waste product. Stormwater management features shall complement and enhance the surrounding environment from ecological, social, and naturally aesthetic lenses. *For example, design a retention basin to meet safety and function requirements and to blend in and enhance the existing environment by the use of incorporating natural perimeter/shapes, native plantings, and educational signage where appropriate.*

Locate stormwater management features strategically to minimize impact to park users. *For example, when locating a bioretention basin near a rental facility, orient the basin, where practical, such that the outlet and rip rap do not intrude upon rental space activity or sight lines. Locate drainage catch basins, manholes, irrigation boxes, and other structures at or protruding above surface level away from any field of play or its immediate surroundings.*

Intentionally select material for stormwater management features that enhance the park user experience and sense of place. *For example, the outlet of a stormwater pond still achieves velocity reduction goals with the use of river stone over rip rap. Rip rap suggests a more industrial/commercial environment whereas river stone suggests a more natural, human-scale environment.*

Evaluate green infrastructure first before gray infrastructure to meet water quality and quantity needs on site. Preferred green infrastructure practices include (but not limited to);

- Vegetated buffers and swales
- Bioretention facilities
- Rain gardens
- Permeable pavements
- Infiltration basins
- Floodplain enlargement/enhancement through sustainable stream restoration design
- Vegetated rooftops

4 NATURAL RESOURCE MANAGEMENT

4.1 OVERVIEW

- CRPD manages approximately 14,000 acres of parkland, encompassing key natural resources such as forests, riparian corridors, streams, wetlands, pollinator habitats, sensitive geological features, and rare and threatened species.
- CRPD manages 20 designated nature preserves, multiple pollinator habitats, and hosts educational gardens at community parks.
- Many parks offer open green space for residents to enjoy via active or passive recreation while conserving riparian corridors and streams.
- CRPD prioritizes the acquisition of sensitive habitats, meaning parkland will often feature wetlands subject to state and federal regulations.
- The removal of invasive species such as honeysuckle and Callery pear enhances native biodiversity, as well as visibility for park users.
- Integrated pest management must follow the CRPD's policy regarding the use of chemical products.
- CRPD parks provide habitat for various state and federally listed species. Carefully plan park developments to minimize impacting this wildlife.

Relevant Reference Documents

- CRPD Pollinator Habitat Guidelines
- CRPD Educational Gardens Guidelines
- CRPD Integrated Pest Management Policy
- Department of Public Utilities' Approved Plant List for Reservoirs (contact Department for latest version)

4.2 NATURE PRESERVES

- Nature preserve code, Chapter 919.27
- Nature preserve management plans
- Nature Preserves at Reservoirs
 - Joint management exists between CRPD & DPU Watershed Management.
 - Refer to [Land Stewardship program](#) for adjacent homeowners—manual.

4.3 POLLINATOR HABITATS

Refer to CRPD’s Pollinator Habitat Guidelines (latest version – last finalized June 2022).

4.4 COMMUNITY GARDENS

Refer to CRPD’s Educational Gardens Guidelines (latest version – last finalized June 2019).

4.5 CONSERVATION PARKLAND

- Install rules signage and, if applicable, a main park sign.
- With available funding, remove invasive species to improve visibility and biodiversity of the park.
- Only use natural surface trails, such as stone aggregate, wood chips, or existing ground cover. Consider other hard surfaces on a case-by-case basis.
- Install minimal amenities, subject to owner approval.

4.6 OPEN GREEN SPACE

- Open green space provides capacity for recreational activities and relaxing.
- Space must have adequate drainage and relative flatness for recreational play, such as football, soccer, and other informal/non-programmed sports. Refer [Section 3.2.1 Slope Table](#).
- Open Green Space may incorporate rolling hills or other interesting topography for visual interest. If space is planned to be frequently mowed, grades should be <5% grades to allow for mowing activities. This topography must adhere to CPTED elements listed CPTED [Appendix C](#).

4.7 STREAM CORRIDOR PROTECTION ZONE

Refer to DPU’s [Stormwater Drainage Manual](#) (latest version).

4.8 PONDS (NATURAL/RECREATIONAL/AESTHETIC)

- Stormwater ponds: see Site Civil Design [Section 3.3](#).
- Fishing Ponds: CRPD stocks several ponds twice a year to provide for recreational fishing.
 - Refer to Ohio Pond Management Handbook from the Ohio Department of Natural Resources.
 - Ponds designed for sport fishing must have more than 1 surface acre as the smaller the pond the more difficult management becomes. Generally, large ponds have better cost efficiencies and offer better, more sustainable fishing.

- When designing a new pond, design for 75% of the pond to 10-12-ft deep. This will deter the growth of rooted plants and algae by limiting the total surface area in which these plants can grow.
- Side slopes must not exceed more than 3:1 without including a littoral shelf (safety shelf). Safety bench requirements may not apply to slopes of 4:1 or gentler.
- Provide 10-ft wide littoral shelves (safety shelves) around pond perimeter at a slope of 10:1 or gentler.
- CRPD prefers designs without islands in the pond.
- Install natural banks instead of concrete or stone banks. Add wetland plants to filter stormwater runoff before it enters the pond and to deter bank erosion. Plant taller vegetation and avoid mowed turf to the edge of the pond to deter Canada geese.
- To promote the health of a pond, add an aeration system. These systems add oxygen to the water, which speeds up plant decomposition while also keeping oxygen levels high enough to sustain fish.

4.9 WETLANDS

- Conserve wetlands during site design. Enhance them by removing invasive plants and planting biodiverse, native plugs.
- Never drive or store equipment in a wetland. Leave a buffer of at least 100-ft around a wetland to avoid any construction-related impacts.
- If site design will impact a wetland, minimize impact, and follow all state and federal permit requirements: a section 401 Water Quality certificate from the Ohio Environmental Protection Agency, and a Section 404 permit from the US Army Corps of Engineers.

4.10 INVASIVE SPECIES MANAGEMENT

Invasive plant species reduce the biodiversity and habitat quality within a park and may also impact a park user's experience. *For example, invasive shrubs such as honeysuckle or privet will dominate an understory and prevent a clear line of sight. This can cause safety concerns in those walking on trails.*

Invasive plant species that occur frequently in CRPD parks and typically require controls include; Callery pear (*Pyrus calleryana*), bush honeysuckle (*Lonicera maackii*, *L. morrowii*, *L. tatarica*), autumn olive (*Elaeagnus umbellata*), multiflora rose (*Rosa multiflora*), Privet cultivars (*Ligustrum* sp.), tree of heaven (*Ailanthus altissima*) and callery pear cultivars (*Pyrus calleryana*).

Control methods:

- **Mechanical/Manual:** physically removing plants from the environment through cutting or pulling. *For example, using a brush bull or hand tools to remove invasive shrubs.*
- **Cultural:** manipulation of habitat to increase mortality of invasive species. *For example, planting native plants to compete with invasive.*
- **Chemical:** herbicide applications to kill plants and inhibit regrowth. *For example, spraying herbicide to control an invasive herbaceous plant.*
- **Combination:** often, methods used in conjunction produce better results. *For example, cut and treat honeysuckle stumps and replant native vegetation.*

When deciding if manual methods can reasonably remove an infestation, weigh the full impacts of manual removal against the impacts of other methods. The negative impacts of manual methods can include:

- Soil disturbance;
- The potential to scatter plant fragments that could then re-sprout;
- The risk that composted materials could re-sprout in new locations;
- The impact of dragging and hauling vegetative material across a site;
- The potential to increase sediments in nearby water, and;
- Disturbance to wildlife caused by an extended construction presence on site.

Manual removal can effectively address smaller infestations. However, in certain cases it produces greater negative effects than other methods, especially in areas of standing water or on steep slopes.

Control best practices:

- CRPD parks contain many naturally occurring (volunteer) and planted native trees such as oaks, maples, sycamores, cottonwood, and dogwoods. Take care to prevent damage to the native trees and shrubs that could result from herbicide or physical impacts.
- Prioritize highest quality habitats first for invasive species management, to preserve uninvaded ecosystems from invasion.
- The control method must occur during native plant dormancy.
- Herbicide applicators must have up-to-date licenses and can readily distinguish invasive species from other native/desirable plant species.
- Consider seed sources of invasive plants. *For example, if a stand of mature Callery pear spreads into an adjacent field, consider removing the mature trees.*
- Refer to CRPD's Integrated Pest Management Policy.

4.11 INTEGRATED PEST MANAGEMENT

Refer to CRPD's Integrated Pest Management Policy. The Integrated Pest Management Policy Statement defines and documents the pest management practices and processes that govern the department's use of pesticides and fertilizers.

4.12 THREATENED AND ENDANGERED SPECIES

- Refer to CRPD's Threatened and Endangered Species Guidance Document.
- Request listed species through the ODNR Natural Heritage Database for capital projects during the planning phase.

5 RESERVOIRS & BLUEWAYS

5.1 OVERVIEW

CRPD manages three (3) reservoirs across central Ohio - Hoover, O'Shaughnessy, and Griggs Reservoirs. These reservoirs provide countless recreational opportunities to several hundred-thousand Columbus residents per year, including boating, kayaking, canoeing, and fishing.

Coordinate early and often with DPU's Division of Water – Watershed Management team for all projects that impact reservoirs and blueways.

Relevant Reference Documents

- [Ohio Department of Natural Resources, "Ohio Boating Facilities Standards and Guidelines"](#)
- [City of Columbus Stormwater Drainage Manual](#)
- [US Access Board Guidelines for Fishing Piers](#)
- Department of Public Utilities' Approved Plant List for Reservoirs (contact Department for latest version)

5.2 BOAT RAMPS AND FLOATING DOCKS

- Refer to Ohio Department of Natural Resources, "Ohio Boating Facilities Standards and Guidelines" for design criteria.
- Minimize the impact to the reservoir riparian area by locating boat ramps in areas with existing parking whenever possible. Locate any additional parking lots away from sensitive habitat and wetland areas.
- Several different sizes of boat facilities use public boat ramps. Design boat ramps to accommodate as many different sizes of boats as possible. Consider the following sizes/types of boats for boat ramp design:
 - Power boats up to 22-ft in length.
 - Sailboats up to 25-ft in length at Hoover, 22-ft in length at O'Shaughnessy, and none permitted at Griggs.
 - All three (3) reservoirs permit and regularly have paddle craft.
- Only source sustainable and environmentally friendly material for floating docks. Avoid the use of tropical hardwoods such as Ipe and Mahogany. Instead opt for Robinia (Black Locust) or a composite material.
- Confirm that CRPD Parks Maintenance Team and DPU Division of Water Reservoir Management team can easily operate and maintain the floating dock product.
- Provide traffic paint pavement markings as guidelines to help guide users backing their boat and trailer into the water, especially if a boat ramp has more than one (1) lane.

5.3 KAYAK LAUNCHES

- Evaluate the inclusion of kayak launch when installing boat ramps and floating docks. If feasible, include an ADA-style launch.
- Consider kayak launches as standalone structures or as attached to boat ramps.

5.4 PIERS

- The type of structure shall minimize fill and impact to existing hydraulic and hydrologic characteristics of the reservoir.
- Design the structure foundation to withstand the forces of ice impact.
- Layout of pier must accommodate adequate and safe ingress, egress, and circulation. Designer to accommodate ADA accessibility, casting movements (for fishing), storage space (for fishing equipment and programming needs), and viewing areas.
- Pier layout to provide pedestrian access to a minimum 10-ft of water depth at the furthest extents of the pier during the average low water elevation of the reservoir.
- Avoid the use of wood material whenever possible. Instead, evaluate the use of either a precast concrete or cast-in-place concrete material. Consider composite material in certain applications.
- Provide a gate at the entrance of the pier to allow the City to close the pier to pedestrians as needed.
- Consider placing collapsible bollards at the entrance to the pier to prevent unwanted vehicle access on the pier.
- Railing along the perimeter of the pier must adhere to ADA requirements and shall follow US Access Board Guidelines for fishing piers.
- Provide lighting on the pier. Preferably, LED down lighting under the perimeter railing and/or solar lighting when feasible.
- Evaluate solar powered blinking lights at the end of the pier for boating navigation.
- Consider optional amenities including: fishing rod/umbrella holders, benches, and planters.
- Avoid use of manufactured shade structure due to maintenance concerns.

5.5 BOARDWALKS

See [Section 17.5](#). (Refer to other section in document)

5.6 BLUEWAYS

Columbus offers over several miles of water to paddle along the Alum Creek, Big Darby, Big Walnut Creek, Olentangy River, and Scioto River within City limits. CRPD provides parks along the waterways, which provides users easy access to the rivers and an unrivaled urban paddling experience.

The Olentangy River provides the most amenities for paddlecraft users, including multiple boat launches, portage routes, and a paddlecraft storage locker.

Consider the following criteria when improving blueway systems:

- Pedestrian/trail bridge crossings may provide an opportunity for installing a boat launch.
- Provide proper wayfinding and regulatory signage.
- Minimize, if not eliminate, the need for tree removal and fill in the floodway.
- For smaller boat launches, consider the use of natural stone materials to reflect the environmental aesthetic. For larger boat launches, use concrete material for durability.
- Provide ADA accessible route to the river whenever feasible.
- Install a paddlecraft storage locker at blueway trailheads in residentially dense, urban neighborhoods.

6 VEHICULAR ACCESS AND ACCOMMODATIONS

6.1 OVERVIEW

This section provides guidance on how to accommodate vehicular traffic in park spaces. The layout and material selected for vehicular access should meet programming needs of the site. Additionally, design vehicular accommodations to limit vehicle speeds, protect pedestrians, and minimize the amount of impervious area added to the park space.

Relevant Reference Documents

- [City of Columbus Department of Public Service \(DPS\) Standard Drawings](#)
- [City of Columbus Building and Zoning/Code Regulations](#)
- [2010 ADA Standards for Accessible Design](#)
- [Ohio Department of Natural Resource's Rainwater and Land Development Manual](#)
- CPTED ([Appendix C](#))

6.2 PARK DRIVES

Most community and regional parks, as well as neighborhood parks when they accommodate vehicular traffic, will contain at least one (1) highly visible, distinct park entry to establish park's identity and sense of transition. All park drives shall connect to a public roadway. The park drive directs vehicular traffic from City roads to and from Park parking lots.

- Provide adequate access and egress for fire, emergency response, waste management providers, and maintenance vehicles. Depending on the site's purpose, consider access for delivery vehicles, shuttles, and vehicles with trailers.
- Provide deliberate focal points, such as a circular drop-off, pull off, or plaza where pedestrian paths and park drives meet.
- Depending on the layout of the park, provide a separated pedestrian path parallel to the park drive so pedestrians can access the park without using the main park drive.
- Incorporate best practices to control vehicular speed, including but not limited to horizontal curvature, signage, pavement markings, speed humps, roadway narrowing, roundabouts, and bump outs to reduce vehicular speeds.
- Consider the location and layout of park drives to avoid them being used to bypass intersections and street traffic.
- Park drives may or may not include curbs. Curbs are preferred if budget allows. If curbs are infeasible, provide best practices to minimize vehicle rutting and off-roading. Best practices may include installation of landscaping (trees, shrubs, and boulders), timber railing/guardrail, and bollard with cable. The use of parking blocks to deter vehicle off-roading is not a preferred practice.

6.3 PARKING LOTS

Provide parking through on-site parking facilities or on adjacent streets. Parkland constrained by topography, sensitive resources, or other site features, or parks less than one (1) acre in size, may not require on-site parking if accessible pedestrian access from the surrounding development exists.

Parking spaces per park will vary based on factors such as park typology, size, amenities offered, recreational programming, and City code and zoning requirements. Consult CRPD Sections responsible for programming park space to confirm an adequate number of parking spaces. Provide adequate quantities of ADA parking stalls.

- Locate parking lots in close proximity to major activity areas within the park.
- Provide a barrier between the parking lot and children's play areas and activity centers, such as timber guardrail, bollard and cable, curbing, and/or parking blocks.
- Provide maintenance vehicle access to the primary park circulation system off the parking lot. Protect access points with gates or collapsible bollards. Maintenance vehicles require an 8-ft to 10-ft path for park access that minimizes pavement edge damage and rutting.
- Provide bicycle parking near the parking lot/high activity areas (such as shelters, trailheads, and sport courts) in high visibility areas to prevent theft.
- Parking lot perimeters may or may not include curbs. When the budget or the site does not enable curbing, evaluate and provide best practices to minimize vehicle rutting and off-roading. Best practices may include installation of parking blocks on perimeter spaces, landscaping (trees, shrubs, and boulders), timber railing/guardrail, and bollard with cable.
- Include curbs along tree islands in parking lots wherever feasible. Uncurbed tree islands shall include heavy duty parking blocks surrounding the perimeter, with additional boulders, timber guardrail, or trees to address gaps. All tree islands must include a 6 - 8-ft gap to allow for mower access and egress.
- Provide vegetated screening, visual barriers, or orient the parking lot to prevent headlights from shining in nearby residential areas.
- Minimum parking stall size to have 9-ft by 18-ft dimensions.

6.4 AGGREGATE SURFACES

Given the high maintenance requirement, only place aggregate surfaces, such as limestone screenings, in strategic or environmentally sensitive locations. Certain scenarios that prohibit asphalt pavement may require limestone screenings. In those circumstances, consider including an aggregate binder with the screenings to minimize surface erosion.

Aggregate surfaces may be used for temporary driveways and parking lots, maintenance needs, or locations that prohibit asphalt paving like environmentally sensitive areas. Otherwise, CRPD discourages the use of aggregate paving for finished parking lots and park drives.

6.5 PERVIOUS PAVEMENT

Include pervious pavement design where appropriate. For site and design criteria of pervious pavement, refer to the latest version of Ohio Department of Natural Resource's Rainwater and Land Development Manual.

7 PEDESTRIAN ACCESS AND ACCOMMODATIONS

7.1 OVERVIEW

This section provides guidance on how to accommodate pedestrians in park spaces. The layout and material selected for pedestrian access should reflect the desires of the community, facilitate needs of the operations and maintenance team, and connect residents to meaningful spaces within the park.

Relevant Reference Documents

- [City of Columbus Department of Public Service \(DPS\) Standard Drawings](#)
- [City of Columbus Building and Zoning/Code Regulations](#)
- [2010 ADA Standards for Accessible Design](#)
- [Ohio Department of Natural Resource's Rainwater and Land Development Manual](#)
- [AASHTO Guide for the Development of Bicycle Facilities](#)
- CRPD Athletic Fields and Courts Design Standards ([Appendix B](#))
- CPTED ([Appendix C](#))

7.2 PEDESTRIAN PATHS

- Pedestrian paths are typically internal loops confined to a park boundary which connects users to major park use areas and provides leisure walking and jogging. Paths may also provide access for CRPD maintenance vehicles to enter and navigate the park. Maintenance vehicles require an 8-ft to 10-ft path for park access that minimizes pavement edge damage and rutting. Protect access points with collapsible or permanent bollards where practical.
- Provide pedestrian paths with 6 to 10-ft widths, depending on the intended circulation route for the path user. Ensure ADA accessibility. Concrete may be a more feasible material for paths with widths less than 8-ft.
- Refer to DPS Standard Drawing for Shared Use Paths (SUP) for pavement section detail.
- Provide pavement markings identifying distance milestones for looped paths.

7.3 SIDEWALKS

- Locate sidewalks at park perimeters and parking lots. Sidewalk locations must provide a logical, convenient, and aesthetic means of accessing the park and/or park features.
- For typical sidewalks in the right of way, provide a 5-ft wide sidewalk. Certain scenarios may require wider sidewalks. Sidewalks wider than 8-ft shall consider the use of removable or collapsible bollards to deter vehicle access while maintaining ADA accessibility.
- Accommodate the growth of street trees by sizing the green space/tree lawn between the sidewalk and edge of roadway pavement to provide at least 8-ft in width, where possible.
- Direct pedestrian entrances toward public transit centers to encourage and facilitate alternative modes of transportation to the park.
- Concrete sidewalk design shall follow DPS Standard Drawings. Certain areas require other finishes, such as buff-washed concrete in downtown limits and brick pavers in historical districts.

7.4 AGGREGATE SURFACES

Given the high maintenance demand, only place aggregate surfaces, such as limestone screenings, in strategic or environmentally sensitive locations. Certain scenarios that limit the opportunity for asphalt pavement may require limestone screenings, such as a path through a nature preserve or conservation area. In those circumstances, consider including an aggregate binder with the screenings to minimize surface erosion.

7.5 PERVIOUS PAVEMENT

Include pervious pavement design where appropriate. Pervious pavement may create an undesirably rough experience for bicycle-users, rollerbladers, and strollers, so consider path use before specifying. For site and design criteria of pervious pavement, refer to the latest version of Ohio Department of Natural Resource's Rainwater and Land Development Manual.

8 GREENWAY TRAILS

8.1 OVERVIEW

Greenway trails weave through parkland, stream corridors, and neighborhoods to connect communities to natural environments. These trails support active transportation and recreational use, such as walking, running, bicycling, and rollerblading. Trails typically travel through CRPD park properties, City Right of Way, and trail easements.

Regional Greenways include trails that typically follow a major river corridor or rail line and extend over many miles, often linking parkland properties. Regional Greenways provide significant east to west trail connections with two or more north-south regional greenways. Nationally recognized trail systems, such as the Ohio to Erie Trail, often encompass regional greenways. CRPD categorizes the following trails as regional greenways: Alum Creek Trail, Big Run Trail, Big Walnut Trail, Blacklick Creek Trail, Camp Chase Trail, Downtown Connector Trail, Eastmoor Greenline, Linden Greenline, Olentangy Trail, and Scioto Trail.

Connector trails provide linkages from regional trails to neighborhoods, destinations, and significant viewpoints.

Relevant Reference Documents

- [AASHTO Guide for the Development of Bicycle Facilities](#)
- [City of Columbus Department of Public Service \(DPS\) Standard Drawings](#)
- [MORPC Central Ohio Greenways Design Guidelines](#)
- [City of Columbus Building and Zoning/Code Regulations](#)
- [2010 ADA Standards for Accessible Design](#)
- [Ohio Department of Natural Resource's Rainwater and Land Development Manual](#)
- CPTED ([Appendix C](#))

8.2 SITE CRITERIA

Determine trail alignments through preliminary studies that evaluate and prioritize the following elements:

- Maximizing the preservation of the environment's natural features while ensuring feasible accessibility.
- Minimizing or avoiding impacts to wetlands, trees, and sensitive habitats wherever possible.
- Aligning trails to maximize strong connections to high density neighborhoods, community resources, and places of work.

8.3 DESIGN CRITERIA

- Provide a minimum of 8-ft for a connector trail.
- Provide a minimum of 10-ft for a regional trail. Depending on location, expected traffic volume, surrounding barriers, such as bridge abutments and decks, walls, buildings, and high use recreational areas, trail widths can expand to 12-ft to 14-ft widths.
- Pavement section shall follow DPS Standards for Shared Use Paths (SUP). Evaluate the use of boardwalks if the trail crosses an environmentally-sensitive area. CRPD discourages permeable pavement for trails due to poor surface riding quality.
- Install trail edging flush with surrounding grades, promote positive drainage off trail surface.

8.4 TRAIL SECURITY AND ACCESS

- Use a combination of collapsible bollards and permanent bollards at access points and curb cuts to prevent unauthorized vehicular access. Center collapsible bollards on trail pavement and install permanent bollards on either side of the trail.
- Coordinate with Metro Parks and CRPD Operations and Maintenance to confirm maintenance and access needs.
- Avoid abrupt grade changes on the path. Follow ADA requirements.
- Safe trails should avoid "hallways" with barriers along both sides of the path. Maximize sight distance for users at trail intersections, turns, and landscaping. Refer to CPTED strategies, particularly Isolated Routes and Entrapment Areas, for more information.

8.5 TRAIL AMENITIES AND FURNISHINGS

- Provide wayfinding to trail users through the use of signage and pavement markings. Follow CRPD Central Ohio Greenway standards for sign design.
- Strategically place trail counters along the regional trail network to collect cyclist and pedestrian activity data. Consult the CRPD Capital and Strategic Planning Section to determine optimal locations of trail counters. Trail counters shall provide automatic and wireless data transmission, remote reading, and a professional online data analysis software. CRPD currently uses [Eco-Visio counters and software](#).
- When constructing a trail connector in a park to provide regional trail access, consider installing a trail head. Size the trail head for appropriate parking, signage, visibility, and maintenance

access. Consider the following features for trail head design: parking lots, bicycle racks, open air shelters, picnic tables, portable restroom facilities, and drinking fountains where feasible.

8.6 STRUCTURAL ELEMENTS

Trails may require pedestrian bridges, railings, retaining walls, boardwalks, and other structural elements to build out the alignment. Structural elements included in greenway trail alignment must reflect the natural, historical, and cultural environment through detailed design elements. The colors, materials, and structures specified in the design can capture these elements.

9 SPORT COURTS AND FIELDS

9.1 OVERVIEW

- Reference the latest version of “Athletic Fields and Outdoor Courts Design Standards”, authored by CRPD’s Sports section, for detailed standards and design elements of CRPD sport fields and courts ([Appendix B](#)).
- Reference the hierarchy of fields, based on level of service, to determine a field category. Categories include: Prime Facilities, Athletic Fields, and Green Space.
- Reference the hierarchy of hard surface courts, based on level of service, to determine a court category. Categories include Competition or Recreational facilities.
- Typically, Neighborhood Parks and Neighborhood Open Spaces would only have Recreational level facilities and either Athletic Fields or Green Space. Regional Parks, Community Parks, and Special Use Properties would typically have Competition level facilities or Recreational and either Prime Fields or Athletic Fields.
- Determine the level of service during the project scoping and planning phases while consulting with Strategic Planning and Sports sections.
- Reference applicable nationally recognized sports authorities to ensure sport court and field dimensions meet regulation standards.

Relevant Reference Documents

- Reference the latest version of “Athletic Fields and Outdoor Courts Design Standards”, authored by CRPD’s Sports section, for detailed standards and design elements of CRPD sport fields and courts ([Appendix B](#))
- Reference to [Section 11.2](#) for lighting.

10 LANDSCAPING AND IRRIGATION

10.1 OVERVIEW

In order to create sustainable landscaping for CRPD management, ensure the design takes into account existing site conditions, maintenance needs, and appropriate plant material. CRPD’s Forestry section must approve any planting or removal of any trees in parks. Projects must follow the standards detailed

in the CRPD Tree Technical Manual. Irrigation systems must conserve water and allow for easy operation and maintenance.

Relevant Reference Documents

- CRPD Tree Technical Manual (expected completion by spring 2023)
- Refer to [OAC 901:5-30-01](#) for the Ohio Department of Agriculture's list of invasive plants

10.2 LANDSCAPED AREAS

- Landscape designs must minimize disruptions to existing plant habitats through a sensitive and appropriate approach for the project site. Planting designs should incorporate biodiversity, native plants, and water conservation.
- Desirable design elements in new park designs include naturally occurring landscape features like tree groves, streams, and rock features or other features that enhance the natural character of the site. Protect these features when already existing on-site.
- Landscaping along ADA path of travel shall avoid using plant materials that drop capsules, leaf litter, buds, or any other plant material that could impede travel.
- In areas with security issues, visibility into and out from the park should remain unobstructed by landscape plant materials.
- Utilize a combination of dense landscaping, screen walls, berms or mounding to screen service areas, loading zones, maintenance areas, storage areas, trash enclosures, utility cabinets, or other similar elements. When creating maintenance areas, reduce or eliminate permanent decorative materials like garden fence surrounds, below-grade gardens, elevated gardens, statues, memorials, and up-lighting.
- Avoid obstructions within landscape beds that impede the ability to perform maintenance activities, such as the removal of leaf litter and pruning of woody plants, or that impede the natural growth of trees and shrubs.
- Provide landscape buffering or screen plantings between trails, playgrounds, and park boundaries for noise control. Consider this buffer especially when the parkland has nearby homes or other incompatible adjacent areas.
- Locate all plantings to allow for the proper operation of irrigation systems and the effective use of mechanized maintenance equipment.
- Plant locations and spacing shall permit normal plant development without undue crowding or trimming. Increase spacing between plants during installation to avoid overcrowding over time. Avoid overplanting for "instant impact" because it causes issues over time as plants grow.
- Design landscaping to maximize energy conservation, such as incorporating windbreaks, shade trees along southern exposures, and drought-tolerant native plants.

10.3 TURF

- Select turf types that require less mowing and water use. Turf species must conform to climate requirements.
- Size and orient turf areas to permit the most effective use of mechanized maintenance equipment and reduce edging.

- For athletic fields, choose the turf type most suitable to desired play. See [Appendix B](#) for CRPD Sport Court and Field Design Standards.
- Consider if the park setting accommodates synthetic turf. As a general rule, limit synthetic turf to Prime Facilities. Other complexes or playgrounds can have synthetic turf based on owner or maintenance direction.

10.4 PLANT MATERIAL

- Use climate appropriate drought tolerant plants to support the design intent.
- Do not use invasive plant materials. Refer to [OAC 901:5-30-01](#) for the Ohio Department of Agriculture's list of invasive plants.
- Select only those species considered relatively disease and pest-free, with low maintenance requirements.
- Near walkways, avoid using plant species poisonous to humans or pets, have thorns, or produce fruit or seeds that create unsafe walking conditions.
- Prioritize the use of native plant species first, then non-native non-invasive plants.
- Avoid planting only one (1) species, creating a monoculture. Instead, plant a diverse mix of species.
- Select species appropriate to the greenspace character, habitat, surrounding neighborhood, and context.

10.5 TREES

- Refer to CRPD Forestry's Tree Technical Manual (expected completion by spring 2023) for City Code references, tree species lists, tree planting and maintenance best practices, tree protection, and tree mitigation. City Forestry shall approve all proposed tree planting locations and species.
- Select space-appropriate native trees. Large trees provide the most benefits, and parks present an ideal location for them because of the large amount of soil volume.
- Prioritize tree planting in spaces where park users gather, to cool the air and provide shade: around sports fields, playgrounds, trails, parking lots, and entrances to facilities.
- Locate trees planted in turf areas adjacent to the street or walkways a minimum of six feet (6-ft) from the curb face or edge of paved path. This set back distance may depend on selected tree species. Trees planted next to raised objects should allow enough space for mowing (10-ft). These raised objects include: curbs, parking stops, poles, benches, trash cans, tables, and benches.
- Plant trees with sufficient space from athletic field surfaces and fence lines to avoid branches encroaching into the field of play. For a small-class tree, plant at least 10' from the field. Plant medium class trees 15-ft from the field, and large class trees at least 20-ft away.
- Do not plant trees within fifteen feet (15-ft) of light poles, to ensure the tree does not obscure the light when it matures.

10.6 IRRIGATION

- Design irrigation systems to prevent run-off, drainage from low head, over spray, and other similar inefficient conditions where irrigation water flows onto non-targeted areas, such as adjacent properties, paved areas, roadways or structures.
- Design irrigation head spacing to provide one hundred percent (100%) coverage conforming to the maximum design radius of the specified nozzle.
- Design all irrigation systems to allow for the application of summer-peak water amounts between the hours of 10 p.m. and 6 a.m.
- When designing a new irrigation system for an existing park, measure the static water pressure, dynamic or operating pressure, and the water supply flow rate at the point of connection from the water purveyor. Obtain this information during the design phase. The Developer or Contractor must field verify information prior to installation. Base the irrigation design on accurate pressure information and produce an irrigation system which efficiently and uniformly applies water throughout the site.
- Determine relevant information such as soil type and infiltration rate and reference this information when designing irrigation systems.
- Design the irrigation system utilizing water conservation standards and equipment.
- Irrigation lines shall run horizontally (level and parallel to the slope contours) to minimize line drainage and pressure differentiation.
- Include automatic irrigation timers and controllers in the irrigation design to allow for easy operation.

11 LIGHTING AND UTILITIES

11.1 OVERVIEW

Reference this section for park development projects that include electrical and lighting improvements for parking lots, parking drives, trails, sport courts, fields, and pavilions. In general, locate utility service corridors away from features subject to disturbance from future repairs. Reference CRPD Facility Design Guidelines for vertical construction work.

Relevant Reference Documents

- Incorporate Facility Design Guidelines Division 26 for all electrical and lighting considerations.
- Refer to the CRPD Approved Materials List for approved lighting fixtures.
- See CRPD Facility Design Guidelines; Division 33 for utility standard operating procedures and Division 28 for information regarding security cameras (CRPD to provide upon request).
- Refer to the [NCAA Best Lighting Practices](#) for college lighting standards per sport.

11.2 SPORT COURT LIGHTING

- Reduce light spill-over. Spill-over should not affect neighboring residential areas.
- Utilize the minimum number of fixtures necessary to achieve IES standard levels for the sport or activity being played.

- Coordinate with the CRPD project manager to determine user operation via push-button timers or if fixed time schedule and remote management requirements better suit the site.
- Utilize high efficiency LEDs for all lights.
- Refer to the International [Dark-Sky Association](#) for materials that minimize light trespass and sky glow.

11.3 SECURITY LIGHTING

- Coordinate with CRPD project manager to determine where and when to implement lighting for specific security concerns.
- Use shielded or cut-off luminaires to avoid glare and deep shadows.
- Locate plantings so that tree growth does not diminish security lighting.

11.4 SITE LIGHTING

- Locate site lighting on poles or building exteriors at a height that discourages ground-level tampering and remains accessible by 8-12-ft ladder.
- Locate site lighting in mulch bed areas when possible, or along walkways with a minimum 10-ft width mow clearance. Preferably, locate parking lot light poles in parking lot tree islands.
- CRPD discourages ground level or below-grade recessed lighting.
- All light poles must have a concrete pier base below frost line to a minimum of 3-ft above grade.

11.5 ELECTRICAL PEDESTALS AND RECEPTACLES

- CRPD highly discourages exterior locking in-use style receptacle covers. When required, provide a heavy-duty locking enclosure to fully contain receptacles. This enclosure should have holes or gaps provided in the bottom for routing of electric extension cords.
- Refer to Special Event [Section 16.2](#) for pedestals dedicated to special event purposes. Generally, special events require at least 100A service.

11.6 EV CHARGING STATIONS

- Pending City-wide policy, discussed during design. Refer to City code for direction.

11.7 TRENCHING AND SLEEVING

- Do not utilize shared-use trenches of different utility types. Do not install trenched utilities parallel or overtop of other utility lines.
- For all buried utilities, provide some means of locating, such as low voltage control wire. All buried utilities regardless of type shall have 3" diameter metallic tape located a minimum of 12" above the utility line.
- All irrigation pipes below paved surfaces shall have sleeves with a pull box at either end of long driveway or parking lot runs.

11.8 Wi-Fi

- CRPD has a vision of implementing Wi-Fi in public areas. Discuss Wi-Fi implementation during the project scoping. If the park design will include Wi-Fi, reference the Facility Design Guidelines Division 28.

12 PARK FURNISHINGS

12.1 OVERVIEW

This section provides guidance on the selection of park furnishings and their placement within parks.

Relevant Reference Documents

- CRPD Approved Material List (CRPD to provide upon request).
- CRPD Standard Drawings (CRPD to provide upon request).
- CRPD Signage Manual (CRPD to provide upon request).

12.2 GENERAL CRITERIA

- Promote a sense of continuity and aesthetic design within the park by installing furnishings of the same design family.
- Select furnishings made with durable materials to increase vandal resistance. Thoroughly vet any selected furnishing not available on the CRPD Approved Materials List.
- Install site furnishings over a hard surface, preferably a concrete pad.
- General siting criteria for locating park furnishings include the following:
 - Locate furnishings outside of the tree dripline, which ends at the edge of the canopy of the tree, to maintain integrity of the tree roots.
 - Provide a minimum of 8-ft clearance around furnishings for mowing.
 - Provide a minimum of 4-ft clearance around furnishings on hard surfaces for servicing and maintenance.
 - Locate furnishings at least 10-ft from underground utilities, irrigation lines and sprinklers, and any other type of utility.
 - Install furnishings at a level grade. Identify locations that would minimize grading limits around the furnishing to achieve a level grade.
 - Locate furnishings in areas of the park where people can socialize and congregate.
 - Install furnishings parallel or perpendicular to the path of travel whenever possible.

12.3 PARK BENCHES

- Locate park benches adjacent to a walking path or in a field. When along a path, place park benches on concrete pads and immediately adjacent to hard surfaces. Concrete pad should not be sloped > 1% for bench users' comfort.
- ADA benches consist of an approved park bench, a wider concrete pad, and a connection to an accessible hard surface. Parks with accessible walking paths shall include at least one (1) ADA accessible bench.

- Provide park benches at key locations throughout the park. Key locations include: park entry, equal intervals along the main circulation path, and at recreational facilities to support the visual supervision of children.
- Park bench locations should consider the view from the bench – CRPD prefers a long sightline (>50-ft) with some to many focal points.
- All park benches 6-ft or longer shall include a center armrest, unless directed otherwise by CRPD.
- Select surface mounted park benches that have ubiquitous or readily accessible mounting hardware for maintenance, should the bench require removal and replacement.
- Park benches do not include playground benches. Refer to [Section 13.8](#) for locating playground benches inside of playground borders.

12.4 PICNIC TABLES

- Parks that contain picnic tables shall include at least one (1) ADA accessible table.
- Locate ADA accessible picnic tables on a concrete pad immediately adjacent to other ADA accessible paths or surfaces.
- Surface mount or embed picnic tables on a concrete pad.

12.4.1 Open Air Picnic Tables

- CRPD prefers concrete for picnic tables and accompanying benches due to its high durability. Other materials require owner approval. However, CRPD discourages the use of wood material.
- Preferred picnic table models allow for the replacement of table sections when damage occurs. *For example; benches separate from table or bench and table tops with bolted connections to the table frame.*
- Locate picnic tables in areas with enjoyable views and ample shade. Orient them perpendicular to walkways to discourage skateboard use.

12.4.2 Picnic Tables under Shelters

- CRPD prefers a wooden composite picnic table. CRPD may approve other materials as proposed.
- Include at least one (1) ADA compliant picnic table in every open air shelter. Thoughtfully locate the ADA table for unobstructed access to and from the approach walk.

12.5 GRILLS

- Place grills near shelters and/or picnic tables at a safe distance away from trees/vegetation and other amenities to eliminate potential fire hazards.
- When located near a shelter, include an extension of the concrete slab out from under the roof line or a separate concrete pad to host the grill. Securely affix the grill to the concrete (embedded preferred) and at least 10-ft away from the roofline.
- When located away from hard surfaces, embed the grill per manufacturer specifications.
- All grills shall have appropriate ADA access.
- Selected grills must conform to commercial grade standards and have high weather and corrosion resistance.
- Only install grills in parks that contain shelters and/or picnic tables.

12.6 HOT ASH RECEPTACLES

- Only install hot ash receptacles in parks that contain grills. Locate them close to grills, outside of tree drip lines, and generally avoiding trees/vegetation.
- Only install hot ash receptacles with easy to remove ash features in CRPD parks. Operations and Maintenance must approve this product before installation.
- Securely mount hot ash receptacles on concrete pads.
- Selected hot ash receptacles must conform to commercial grade standards and have high weather and corrosion resistance.
- All ash receptacles shall include a sign which provides caution to the user.
- One (1) ash urn may service up to four (4) grills.

12.7 LITTER RECEPTACLES

- Parks utilize both decorative steel litter receptacles and litter barrels. Park designs should include decorative trash cans to service the intended use of the park. When parks require additional receptacles, CRPD Parks Maintenance will place trash barrels in the park to supplement. Do not include trash barrels in park designs for normal service levels.
- Locate decorative litter receptacles near all parking areas, entrances to structures, playgrounds, and other recreation areas, such as sport courts.
- The quantity of decorative litter receptacles depends on the level of programming and number of amenities provided by the park. More programming/amenities should correlate with more receptacles.
- Preferably, place litter receptacles adjacent to paths with a minimum width of 8-ft such that maintenance vehicles can service them easier.
- Decorative litter receptacles shall receive trash from the top of the can, but shall open from the side for trash removal service.

12.8 BICYCLE RACKS

- CRPD recommends bicycle racks for most neighborhood, community and regional parks. Parks that provide a parking lot for vehicles and connect to a trail must have bicycle racks.
- CRPD recommends a capacity study to ensure the number of bicycle racks installed meet the needs of the community.
- Locate bicycle racks in a highly visible and, if applicable, illuminated area to deter vandalism and theft.
- Generally, within a park, locate bicycle racks near a parking lot, community center, trailhead, or similar hub. Consider the addition of a park bench, picnic table and/or bicycle repair station in close proximity to bicycle racks. Locating these amenities in close proximity to each other provides cyclists with access to security, aid, and rest.
- CRPD prefers installing bike racks through concrete embedment into a concrete pad located near parking lots, trails, or other access paths.
- CRPD prefers an embedded “U” style bicycle rack. Install several singular “U” style bicycle racks (holds 2 bicycles per rack) in line on the same concrete pad instead of installing one (1) multi-

rack with several openings (holds multiple bicycles). Singular bicycle racks allow for the user to secure their bicycle more soundly with a singular rack versus a multi-rack.

- The selected bicycle rack width of steel tube/pipe shall accommodate standard U-Locks.
- For community parks, consider the additional of a cover for the bicycle rack to protect bicycles from the elements.

12.9 DUMPSTER ENCLOSURES AND PADS

- Dumpster Enclosures must adhere to all applicable City codes.
- All dumpsters shall have enclosures. Install dumpsters at parks that have a community center, athletic complex, club house, enclosed shelter house or a heavy sports program presence.
- Locate enclosures away from park users, to minimize offensive odors, but close enough for CRPD staff to easily access the enclosure.
- Locate enclosures such that front load equipment can enter and exit the parking lot using driveways to avoid backing maneuvers. If the site cannot accommodate a through driveway, provide sufficient maneuvering areas to allow collection equipment to turn around.
- Enclosures should have a level access, a clear approach, and concrete pads positioned to allow the trash truck to approach the container's head. Provide reinforced concrete slabs and bollards for trash and dumpster enclosures.
- Keep the area in front of all enclosures types clear of obstructions. These areas must have signage, paint, stripes, or markings that indicate "no parking".
- CRPD prefers pressure treated wood, cedar or southern yellow pine material for enclosures. Provide a natural wood or stained finish. For paint finish, furnish paint with the color warm wassail (1062-7).

12.10 PORTABLE RESTROOM ENCLOSURES AND PADS

- Programming demands for the park shall dictate the number of portable restrooms for each park. Consult the Operations and Maintenance section for this quantity, given they manage the maintenance contracts with portable restroom service providers.
- Locate enclosures near parking lots or 8-ft wide paths for adequate service vehicle access and egress.
- CRPD prefers level concrete pad surfaces for portable restrooms. Install the pad flush with existing grade. Pad area to extend a minimum of 6-in beyond screening features and 3-ft beyond portable restroom door such that door does not swing into a line of traffic.
- If a portable restroom connects to an asphalt surface, the pad can extend the asphalt surface instead of installing a concrete pad.
- CRPD prefers pressure treated wood, cedar or southern yellow pine material for enclosures. Provide a natural wood or stained finish. For paint finish, furnish paint with the color warm wassail (1062-7).

12.11 WATER FOUNTAINS

- Typically, CRPD does not install water fountains in all parks. Consider the following criteria to determine the validity of a water fountain installation:

- Water fountain will serve a major trailhead or CRPD designated bike hub.
- Water fountain located in park with magnified risk of dehydration and heat stroke.
- Water fountain located at a regional park where the park could hold tournaments, or already contains a water service line, serving a dog park, splash pad, or pool.
- Select water fountains that have frost-proofing and weather resistance.
- Select ADA-compliant water fountain models that have high and low bowl options.
- CRPD prohibits water fountains that provide a dog bowl because dog bowls can spread disease. Instead, provide a fountain that offers a water bottle filler.
- Locate water fountains to not obstruct pathways.

12.12 SHADE STRUCTURES

- Consider shade structures for parks with limited tree coverage.
- Primarily locate shade structures around playgrounds and exercise equipment stations.
- Select free standing shade structures with a set minimum height of 12-ft. Determine the actual height based on the play equipment underneath of the structure. Select a height that ensures users on the play equipment cannot touch the shade structure even from the equipment's highest point.
- The selected shade structure must reflect the park and community character in both style and color.
- When feasible, CRPD prefers permanent shade structures without fabric shades. Shade structures consisting of fabric shade sails should have simple connections at the posts for ease of removal and installation before and after the winter season.
- Size shade sails that require seasonal removal such that a crew of 3-4 individuals can safely perform the removal and installation.

12.13 FENCING AND GUARDRAIL

- Consider installing fencing and guardrails to establish a park perimeter and activity boundaries for activities such as tennis, basketball, and playgrounds. Use guardrails to protect parkland and park users from off-roading vehicles.
- Install a temporary 6-ft chain link fencing during construction to protect the site/prevent access during construction where needed.
- Refer to the Playground [Section 13](#) for use with playgrounds.
- Consider using perimeter fencing to control access routes into and out of the park. Perimeter fencing must match the character and style of the park.
- Consider installing timber guardrails along roadways, park drives, and uncurbed parking lots to prevent vehicles from driving through the park and parking on the grass. Strategically place timber guardrails in areas of concern rather than continuously.
- Use the following to select fencing for activity boundaries:
 - All fenced-in courts must have at least 2 entry and exit openings/gates.
 - Tennis courts and pickleball courts must always have fencing. See CRPD Standard Details for preferred heights.
 - Futsal courts that do not have existing boundaries may consider fencing.
 - Basketball courts may consider partial fencing, depending on proximity to roadways.

- Baseball/softball fields must have fencing behind the catcher to meet safety standards.

12.14 VEHICULAR GATES

- Typically, Operation and Maintenance and the Rental Section use vehicular gates at facility access drives to prevent access by pedestrians. At sport parks, the strategic placement of these gates provide additional entrance and exit locations during tournaments and other high-attendance events.
- Consult all relevant CRPD Sections to determine if a park requires a vehicular gate.
- Refer to CRPD Standard Details for preferred materials and dimensions for vehicular gates.

12.15 BOLLARDS

- Bollards protect buildings, pedestrian paths, and utilities from vehicle impact. Strategically locate bollards around parking lots to prevent vehicles from driving through the park.
- Strategically locate collapsible and permanent bollards on greenways to prevent unauthorized vehicle access.
- CRPD utilizes the following types of bollards for site/pedestrian protection:
 - Timber bollards
 - Timber bollards with cable
 - Metal bollards
 - Collapsible bollards (use instead of removable metal bollards due to ease of maintenance, operation, and safety)
 - Large planter bollard
 - Boulders

12.16 SIGNAGE

- Refer to CRPD Signage Manual for standard sign templates.
- All parks must include a main park entry sign and regulatory signage for rule/code enforcement.
- All main entry signs must include registered addresses.
- When feasible, place educational signs near important natural features, such as wetlands, pollinator habitats, and rain gardens. For pollinator habitats, use the artwork in the Pollinator Habitat Guidelines.
- Consider wayfinding signage for spatially large park and sport destinations that include several amenities.
- Greenway trails signs shall use Central Ohio Greenway (COG) sign family branding.

12.17 PICK UP POOP (PUP) STATIONS

- [PUP Stations](#) provide dog owners waste bags and a small trash bag. The Department of Public Utilities coordinates with CRPD Parks Maintenance for the installation of these stations in CRPD parks.
- All dog parks require these doggie stations.

13 CHILDREN PLAY AREAS

13.1 OVERVIEW

CRPD provides high quality playgrounds across the City in accordance with the City of Columbus goals of meeting the community needs, which include improvement of the parks and providing facilities for youth and adult fitness and wellness. Use the design guidelines and standards below to design and build creative, durable, long-lasting, engaging, and fun playgrounds for all users.

Best Practices

- When designing a playground, prioritize safety above all else.
- Use equipment which has high durability, thus, lasting for a longer time than equipment that has a low durability. This will ultimately make the equipment more vandal-proof.
- Do not functionally link playground structures for 2-5 and 5-12 year old age groups.
- The playground equipment and site layout shall encourage physical exercise.
- Playgrounds shall include active, passive, creative, imaginative, social, and sensory play.
- Playgrounds shall comply with the current version of the CoC Stormwater Drainage Manual.
- Playground designs shall address site grading and drainage.
- Design playgrounds for inclusivity and accessibility.

Relevant ASTM Standards

- F1292-17 – Impact Attenuation of Surfacing Materials within Use Zone of Playground Equipment
- F1487-17 - Standard Consumer Safety Performance Specification for Playground Equipment for Public Use
- F1918 – Contained Play Systems
- F1951 – ADA Standards for Accessible Surface Design
- F2049 – Standard for Fencing / Barriers for Playgrounds
- F2075 – Engineered Wood Fiber Safety Surfacing
- F2223 – Guide for ASTM Standards on Playground Surfacing
- F2373 – Playground Equipment for Children Under age 2
- F2479 – Poured-in-Place Rubber Surfacing
- F3012 – Loose-Fill Rubber Surfacing
- CRPD Standard Drawings (CRPD to provide upon request).

13.2 LAYOUT AND SPATIAL CONSIDERATIONS

- Locate and orient transfer stations to the closest hard surface access path.
- Take caution, a playground exceeding 10,000-SF will require post-construction stormwater controls.
- Locate playgrounds for easy visibility from surrounding areas.
- Never locate outdoor fitness equipment in the same footprint as play equipment.
- Do not locate play equipment near parking lots or roads if park size allows for separation.
- Whenever possible, provide shade over or near to the playground.

- Playgrounds must stay outside of the drip line, canopy, and root zones of the trees.
- Whenever possible, locate the playground near other recreation spaces, such as a grassy field, for additional play activities
- To accommodate mowers, CRPD requires a minimum of 10-ft of space between the playground border and nearby hard surfaces.

13.3 EQUIPMENT

- All playgrounds must meet current ADA standards for accessible design (F1951)
- Composite structures shall have 5-in steel posts.
- Only use durable, easy to repair equipment. Prioritize equipment with ubiquitous and readily available parts.
- Designers and CRPD staff shall select playground manufacturers from the CRPD pre-qualified playground supplier list.

13.4 SWINGS

- Select swing set posts composed of steel.
- Include at least 1 ADA accessible swing.
- Each swing bay must include, at most, 2 swings.
- All swings must conform to ASTM standards.

13.5 CLIMBING EQUIPMENT

- Cover all Climbing equipment with a non-slip coating.

13.6 SLIDES

- Locate slide exits in non-congested areas per ASTM standards.

13.7 SURFACING

- Ensure playgrounds provide a level surfacing and do not exceed allowable slopes defined by the current ADA standards.
- Utilize Engineered Wood Fiber (EWF), Poured in Place (PIP) Rubber, or Rubber Tile for playground surfacing. CRPD prefers Engineered Wood Fiber in most cases. However, CRPD prefers tiles over PIP due to ease of maintenance and replacement of worn areas.
- All playgrounds serving community centers must have a rubberized surface path connecting the hard surface path to the playground transfer station.
- Do not use sand, pea gravel, and/or loose rubber fill.
- Playground border options include 6-in by 6-in wolmanized timber or 6-in by 12-in concrete curb. Other options subject to owner approval.
- Locate playground borders outside of all use zones. Provide a 1-ft buffer between the use zone and the border.
- Provide a minimum 10-ft grass buffer between playground border and a hard surface walking path.

13.8 SEATING AND FURNISHINGS

- As part of the playground design, the designer shall include benches within the play surfacing. Include an adequate number of benches to promote sightlines that cover entire playground area.
- CRPD prefers the Dumor Bench Model #11-60PL in tan color. Playground manufacturers can supply benches from their respective product line for installation in the play surfacing, given CRPD approval.
- Locate all playground benches adjacent to the nearest border and closer to hard surface access. Provide a 1-ft buffer between the edge of the bench and the border.
- Design seating to meet ADA standards.

13.9 SHADE STRUCTURES

- Only include shade structures when playgrounds do not have sufficient tree covering or when budget allows.

13.10 SIGNAGE

- Provide signage to appropriately designate age-dependent play equipment with the correct age group.
- All new playgrounds require a communications panel/sign. Locate this sign in an easily visible space within the playground footprint.

13.11 UNIVERSALLY ACCESSIBLE PLAYGROUNDS

- Design all playgrounds to be inclusive, however, design playgrounds at Community Parks to be universally accessible such that children using mobility devices can access the play structure via ramp in lieu of a transfer platform. Community Parks are centrally located to serve a larger population and typically provide ample parking infrastructure for more residential access.
- Design universally accessible playgrounds with rubberized surfacing; tiles (preferred) or PIP.

13.12 DISAPPROVED EQUIPMENT

- Metal slides.
- Closed tubes, tunnels, or any other enclosed components.
- Plexiglass or lexan panels.
- Stepping pods with chain and connection at the bottom.
- Talking tubes.
- Spinning ground level equipment, unless Operations and Maintenance section approves product.

14 MULTI-GENERATIONAL RECREATION ELEMENTS

14.1 OVERVIEW

CRPD provides unique recreational assets for residents of all ages, including work out stations, dog parks, and skateparks. The following design guidelines for specialized recreational elements help ensure a creative, durable, and fun park feature.

Relevant ASTM Standards

- F1292-17 – Impact Attenuation of Surfacing Materials within Use Zone of Playground Equipment
- F1487-17 - Standard Consumer Safety Performance Specification for Playground Equipment for Public Use
- F1951 – ADA Standards for Accessible Surface Design
- F2223 – Guide for ASTM Standards on Playground Surfacing
- F2479 – Poured-in-Place Rubber Surfacing

14.2 ACTIVE EQUIPMENT

14.2.1 Fitness Station

- Group and locate exercise equipment near community centers and along walking paths.
- Design exercise equipment for ADA access and to ensure durability with the least amount of maintenance required.
- When placing fitness stations, consider providing shade in the form of tree cover or shade structures.

14.2.2 Fitness Station Surfacing

- Active Equipment areas must have either Poured-In-Place (PIP) or Rubber Tile Surfacing regardless of fall height.
- Design fitness stations for Ages 13+.
- Footprint size of fitness stations varies per the amount of equipment.
- CRPD prefers to locate exercise equipment in areas with sufficient access and visibility to the playground.
- Provide a 10-ft grass buffer between the hard surface and the fitness station to ensure easy mowing access.

14.3 DOG PARKS

Site Criteria

- Avoid locations near prime athletic complexes/fields, designated natural areas/wildlife habitats, natural bodies of water, and areas that can have toxins from previous uses.
- Locate the site at least 200-ft from a playground/youth area and from roadways.
- Promote positive drainage.
- Consider the proximity of existing dog parks in surrounding areas before installing.

Design Criteria

- If feasible, provide a minimum size of one acre. For larger dog parks, provide 2 to 4 acres. Consider optional dog play elements for a larger dog park.
- Provide for separate fenced areas for large and for small dogs. This also allows the ability to rotate impact levels on each area.
- Consider providing an alternative surface, such as synthetic turf or a sand-based soil mixture to promote good drainage and minimize maintenance needs.
- Include black vinyl chain link fencing, minimum 5-ft tall around the perimeter of the park. Bury fence panels to a depth of six inches to avoid digging and escaping.
- The main entrance to the fenced dog park should have a dual gate system, allowing a person and their dog to enter a confined space and close the gate behind them, before opening the second gate into the fenced park. Provide at least 16 square feet for this vestibule space.
- Provide a separate 10 foot maintenance gate into the park.
- Provide ADA accessible paved entrance path to the dog park and within as needed.
- Provide shade to park users either through shade trees, a shade structure, or both.
- Provide dog park specific regulatory signage.
- Consider the following optional items: water fountains for human use only, benches, and picnic tables. See Site Furnishings [Section 12](#).

14.4 BICYCLE SKILLS COURSE

- Design single-track courses using guidelines such as IMBA Trail Solutions Guide, Bike Parks - IMBA's Guide to New School Trails, and USDA Construction and Maintenance Notebook.
- The Consultant/Designer shall have a minimum of 5 years of continuous professional design and construction installation experience of a similar or a more expansive single-track/mountain bike trail/bike park experience/pump track. Experience must relate to work performed for public agencies. CRPD will evaluate other applicable experience on a case-by-case basis
- The Consultant/Designer shall have completed a minimum of 5 purpose built mountain bike single track trails/pump tracks including skills features or bike park design and installation projects in the past 5 years.
- Single-track Consultant shall have membership in good standing with the [Professional Trailbuilders Association](#) (PTBA).
- Confine single-track corridors in a forested environment to within 3'-0" of approved trail centerline. Locate the trail centerline to minimize tree removal and conform to the general topography of the site to reduce ponding issues.

14.5 SKATEPARKS AND PUMP TRACKS

- Skateparks are highly unique and specialized park features. Skateparks may vary vastly in size and elements they offer, whether hosting primarily "street" elements, flowy "bowl" elements, or a combination of the two. Skatepark design does not have a one-size-fits-all approach. The layout should reflect the character and desires of the community.
- Skatepark design and construction to follow guidelines outlined in the Public Skatepark Development Guide, also accessible online via publicskateparkguide.org.

- The Consultant/Designer must conduct community engagement to get specific feedback on the desired skatepark features.
- The Consultant/Designer shall have a minimum of 5 years of previous experience in design and construction installation of similar or more expansive skatepark design and construction installation. The Consultant/Designer's experience shall include at least 6 installations or renovations of similar or more expansive skateparks over the last 3 years.

15 GOLF

15.1 OVERVIEW

CRPD currently has 6 exceptional golf courses to offer to the public: Airport, Champions, Mentel Memorial, Raymond Memorial, Turnberry, and Wilson Road. Each facility has unique and diverse designs, course offerings, and amenities provided to the public. Any improvements made to existing golf courses must preserve the historical and cultural characteristics of the site.

Relevant Reference Documents

- [United States Golf Association \(USGA\) Guidelines and Specifications](#)

Greens

- Design the green to provide a uniform, disease free, smooth, and consistent surface across the golf course. Coordinate with the Golf section to achieve the appropriate seed mix and topsoil depth.
- Strategically locate the greens such that they receive a minimum of 8 hours of direct sunlight per day during the golf season.

Tee Boxes

- Provide weed free, level, and firm tee boxes with full grass cover.
- Each hole should have tee boxes sized appropriately for the number of rounds played and for the respective hole being played.
- Strategically locate tee boxes such that they receive a minimum of 8 hours of direct sunlight per day during the season.

Fairways

- Fairways shall have high quality, dense, uniform, and healthy grass. Coordinate with the Golf section to achieve the appropriate seed mix and topsoil depth.

Rough

- Primarily, the Rough shall consist of grass, trees and other landscaping. The rough must shape the fairway, but provide adequate clearance for golfers. Coordinate with the Golf section to achieve the appropriate seed mix.

Bunkers

- Bunkers shall provide aesthetic value to the golf course and adequate challenges to golfers. Coordinate with the Golf section to achieve the appropriate sand mix and depth.
- Line bunkers to provide a defined edge/border and to prevent weeds or other vegetative impediments.

Sod

- When replacing sod, ensure the turf grain aligns in the same direction as existing turf.
- Keep turf removed during projects alive and replace as feasible instead of introducing new sod.
- When needing new sod, the Golf Section must approve the turf variety prior to installing.

Tree Planting

- Locate trees such that tree shade and root growth does not impact play surfaces, greens, or tee boxes.
- Strategically place trees to create a fair but challenging golf course design.

Ponds

- Ponds may serve as many functions on a golf course (aesthetic, water hazard, stormwater control, and/or irrigation supply), and vary per course and location.
- CRPD shall identify the primary function of the pond before providing design criteria to the designer.
- Ponds equipped with a supplemental recharge shall have an automatic fill attached to the controller to maintain adequate water levels.
- Refer to [Section 3.3](#) (Civil Site Design) for best practices for stormwater management.

Natural Areas

- Strategically locate native vegetation to create natural areas, promote pollinator habitat, support native wildlife, and to enhance overall biodiversity of the golf course.
- Provide native areas with appropriate signage to designate them as “no mow” and “Local Rules Apply” areas.

15.2 IRRIGATION

- Most courses require irrigation to provide supplemental water to the plant life to promote growth, reduce disease, and establish acceptable playing conditions
- Irrigation systems shall have specified automatic controllers.
- Reference Irrigation [Section 10.6](#)

15.3 CART PATHS

- Use asphalt pavement for cart paths to accommodate both cart and pedestrian golfer use. Install concrete paths and curbs in areas where appropriate. Carefully consider the required site access for construction vehicles to access the sites in the most direct manner as possible. This access shall minimize impact to existing greens, roughs, natural areas, and trees.

- Provide a minimum of 8-ft wide for cart paths to allow for 2 golf carts to pass in opposite directions. Consider wider paths for bridge approaches, bridge decks and for tight corners with low visibility and bridges.
- Typically, these paths do not require pavement markings.

15.4 CART STORAGE FACILITIES

- All golf courses require cart storage facilities to serve as a storage location and to protect golf carts when not in use. The golf section may identify further programmatic uses of the facility as appropriate.
- Design cart storage facilities to maximize the efficiency of golf cart storage by strategically locating access and egress locations for an orderly flow of traffic.

15.5 CLUB HOUSE

- All golf courses have Club House facilities on site, which may serve as a pro-shop, rentable venue, eatery, golf store, and more.
- The designer shall work closely with the Golf Section to determine purpose, functions, and amenities the Club House shall have.
- Refer to CRPD Facility Design Guidelines for all facility project work.

15.6 SIGNAGE

- At a minimum, each golf course requires a signage package to cover the following:
 - Directional signage.
 - Putting greens and driving range rules.
 - Club house or pro-shop.
 - Tee signs to call out the hole number, yardage, and map of the hole.

16 SPECIAL EVENTS

16.1 OVERVIEW

Parkland provides opportunities for communities to gather and celebrate events. Consult the Strategic Planning and Special Events sections during project scoping and planning phases to determine which parks will provide facilities for small (<300 people) , mid-size (300 - 500 people), or regional gatherings (500+ people).

The following factors will determine whether a park should accommodate special events: community requests, Mayor's initiatives, park size, park location, existing infrastructure (parking lots, utilities), density of residents around the park, and community demographics. Each park has unique layouts, topography, and existing features. During the planning and design of park development, a one-size-fits-all approach for special events will not work.

16.2 DESIGNATING EVENT SPACES

- Identify spaces in a park area to designate as event spaces during park development based on historical use at the existing park.
- Event spaces should include open lawn areas without obstructions that affect site lines.
- Consider spaces adjacent to existing walkways nearby to facilitate hauling special event equipment to the area without requiring vehicles to enter lawn areas.
- Due to their limited size, street islands do not provide an ideal active event area. When considering street islands as an event space, prioritize the safety of participants for accessing and leaving the site.

16.3 DESIGN CRITERIA FOR SPECIAL EVENT SPACES

Include an open air shelter or gazebo with the following amenities/design criteria:

- Provide ADA accessible routes to get to and from structures.
- The surrounding lawn area must have adequate drainage to provide lawn seating.
- Include minimal landscaping near event areas, as running cords, equipment, and people can easily damage landscaping. Locate trees at least 20-ft away from event space for proper sightlines, safety of participants, and to minimize damage to trees during events.
- With available or scope of work with water service, provide a hose bib for easy cleaning where needed.
- Provide vehicle access within 100-ft of structure for loading and unloading event hosts' gear.
- Provide walkways to facilitate hauling tables, supplies, and other equipment to the area, if the site does not provide a vehicle access road.
- Install collapsible bollards at vehicle access points to prevent unauthorized vehicles from accessing the structure or park space.
- Provide a portable restroom pad and blind to allow for temporary dumpster or portable restrooms as needed.
- Provide a heavy-duty, weather-proof panel that houses both heavy duty breakers and receptacles. To reduce unwanted activities, locate receptacles inside the panel.
- Locate the power pedestal near the event structure. Orient the pedestal in a way to not block views for pedestrians.
 - CRPD prefers a typical power pedestal to supply around 100 amps total (with 4 to 5 20 amp receptacles). Total amperage can include a circuit for lighting.
- Position the Shelter, Gazebo, or Structure so the portable sound systems face away from adjacent residences.
- Provide parking and pedestrian access options that fit the needs of the community. *For example, parks with no houses nearby need more parking at the park to accommodate people traveling by car to the event.* Parks in dense neighborhoods need to maximize access to the park through sidewalks and trails.
- Aim for consistency between all regional special event spaces when considering the installation of amenities.

16.4 OUTDOOR AMPHITHEATERS AND STAGES

- Only locate Amphitheaters at Special Use Parks (SUPs).
- Consider the size and anticipated use of the amphitheater or stage when locating benches and picnic tables for people to sit. Amphitheaters may not need permanent benches or tables to provide more flexibility for larger crowds.
- Locate amphitheaters at the bottom of a hill or valley to provide easy visibility.
- Design Amphitheaters and Stages to shed water away from the stage platform as well as the base of the structure.
- Seating areas shall not face west.
- Do not place landscaping around the base of stages or gazeboes.
- Provide stormwater sewer system for adequate drainage.
- Provide proper mounting fixtures for lights and signage on stages and gazeboes.
- Include ADA accessibility for all stages and gazeboes.

17 STRUCTURES

17.1 OVERVIEW

- Reference the Facility Design Guidelines for construction of all vertical facilities. These guidelines include the following vertical facilities:
 - Community Centers
 - Athletic Complexes
 - Aquatic facilities
 - Indoor pools
 - Outdoor pools
 - Spraygrounds
 - Clubhouses
 - Enclosed Rental Shelters
- Latest version of American Association of State Highway and Transportation Officials (AASHTO) LRFD Bridge Design Specifications.
- Latest version of Ohio Department of Transportation (ODOT) Bridge Design Manual.
- Eliminate design features which provide access to roofs or upper levels.
- Design of structures should consider unique cultural or historical neighborhood aspects and should preserve established environments and themes.
- Surface treatments should welcome patrons while maintaining durability and vandal resistant.
- Design of exterior eaves and overhangs shall discourage bird nesting or rodent intrusion.

3 – Season Shelters

- Currently, CRPD has no 3-season shelters due to concerns with winterization.

Gazebos

- CRPD typically prefers open air shelters over gazebos.

- If planned as part of new construction, clearly designate the gazebo's intended purpose (concerts, weddings, general use) and consult the appropriate CRPD section accordingly.

17.2 OPEN AIR SHELTERS

- Site layout should consider availability of nearby parking and access for pickup/drop-off of supplies.
- Provide a standing seam metal roof, either dark green or dark brown in color. Determine the final color during design.
- Provide a minimum roof height of 12-ft to discourage climbing access. Avoid half walls or column bases that can enable climbing and thereby roof access.
- Interior roof should have no spaces for nesting birds. Avoid nooks, ledges, or any platform that can provide nesting.
- CRPD discourages fireplaces.
- Avoid knee-walls as these collect wind-blown debris.
- Extend the shelter's concrete slab base a minimum of 2-ft out from roof line and ensure a finish elevation above existing grade. Additionally, the concrete pad needs to promote positive drainage. Tie back into the existing grade with topsoil at a maximum 3:1 grade.
- Include an ADA accessible approach for the concrete slab base.
- Mount the picnic tables to the concrete floor under the roof and provide spacing such that users have separation during use. CRPD discourages recycled plastic tables and bench tops. See Park Furnishings [Section 12.4](#) for more information.
- Consider the installation of a grill. When included, provide an extension of the concrete slab out from under the roof line to host the grill. Securely affix the grill to the concrete and far enough away from the roofline as to not create a fire hazard. Grills must conform to commercial grade standards and have high weather and corrosion resistance. See Park Furnishings [Section 12.5](#) for more information.

17.3 PERMANENT RESTROOM FACILITIES AND PORTABLE RESTROOMS

- CRPD currently provides permanent restroom facilities at Genoa Park, Bicentennial Park, Dorrian Green, and Berliner Sports Park.
- Incorporate permanent restroom facilities for regional parks that have maintenance staff to regularly maintain the restrooms. Most parks use portable restrooms ([See Section 12.10 Portable Restroom Enclosures](#)). Provide a screened enclosure for portable restrooms to preserve natural aesthetics.
- During design, discuss the following requirements for restrooms: permanent or portable, amount, spacing, location, and access.

17.4 PEDESTRIAN BRIDGES

- Typically, CRPD locates pedestrian bridges along the greenway trail network and within golf courses.
- Design each bridge to reflect the unique environmental, cultural, and historical context of the site where the bridge will reside. Intentionally design the following bridge features to create a

cohesive statement: superstructure and substructure type, railing type, materials specified, and colors. Consider additional features where applicable.

- Provide a minimum deck width of 12-ft for pedestrian bridges (inside railing to inside railing), unless otherwise directed by CRPD. Golf bridge decks must have a minimum width of 12-ft.
- Minimize impact to floodway, floodplain, and stream corridor protection zone (SCPZ) wherever possible. Minimize obstructions in the floodway where log jams could occur. When feasible, CRPD prefers a clear span bridge instead of piers in the waterway if feasible.
- Consider and evaluate the use of lighting on the bridge. Down lighting from rails or up lighting on bridge may add dimensionality to the bridge and add to safety for bridge users during dark hours.
- Include anti-graffiti applications on surfaces where graffiti activity could occur.
- Include plaques stating the build year and the maximum load capacity on all new bridges.

17.5 BOARDWALKS

- Evaluate the use of boardwalks for continuing trails through sensitive habitats, riparian zones, SPCZ, wetlands, or bodies of water.
- The selected type of structure must minimize fill and impact to existing hydraulic and hydrologic characteristics of the existing site.
- Depending if located in floodplain or floodway, consider the potential for debris build up in or over boardwalk.
- CRPD strongly encourages the use of precast or cast-in-place concrete material. Wood material can substitute for concrete decking when applicable.
- Provide a minimum railing height of 42-in to meet AASHTO and ADA Guidelines.

17.6 RETAINING WALLS

- Greenway trail corridors utilize retaining walls to achieve the following: minimize disturbances to existing land during trail construction, preserve existing trees and infrastructure, and provide cost containment. Contemplate a combination of all three when considering a retaining wall.
- Designers shall consider the use of natural products, like sandstone, limestone, or greenwall for gravity, masonry, or modular blocks walls. Piling and cantilever walls may include a decorative form liner to maintain the natural aesthetics of the trail or park area.
- All retaining walls with a natural/textured surface shall include anti-graffiti coating. Consider the use of murals to deter graffiti on concrete retaining walls without form liner.

End of Main Document – Start of Appendix

18 APPENDIX A – CRPD LAND TYPOLOGIES

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CRPD LAND TYPOLOGIES

Last revised 2.3.2023

CRPD LAND TYPOLOGY SUMMARY TABLE				
Land Typology	Definition	Service Area	Use Determination	Examples
Street Islands	Property serving as a median or island in the middle of a roadway. May be mowed or have trees, but lacks other park amenities.	N/a	Non-park	Connie Street Island; Ambleside Street Island
Special Use Properties	Property that contains a specialized recreation facility or cultural resource without substantial greenspace; property that is operated by another entity which restricts access through an admissions fee or other qualifications for participation; or property that is a cemetery.	Primary- 5 miles (10 minute urban drive) Secondary - 10 miles (15 minute drive may include highway)	Park or Non-Park	Facility with no greenspace- Cultural Arts Center, Gillie Recreation Center; Entity which restricts access- COSI, Columbus Zoo.
Operations	Property that serves administrative or operations purposes and are not intended for public recreation. Examples include maintenance facilities and the tree nursery.	N/a	Non-park	Alum Creek Maintenance Headquarters; Shadeville Nursery
Golf	Property used as a standalone golf course where golf is the primary recreation opportunity. Open to the public for secondary recreation opportunities during hours and seasons when Golf is not in operation.	Primary- 5 miles (10 minute urban drive) Secondary - 10 miles (15 minute drive may include highway)	Park	Raymond Memorial Golf Course; Champions Golf Course
Multi-use Trail	Property acquired for the construction of a trail. The primary purpose is to provide connectivity rather than to offer additional recreational amenities; often linear.	N/a	Non-park	Majestic Paint Parkland

Reservoirs	Parkland and water associated with the three in-stream drinking water reservoirs that were created by constructed dams and co-managed by the Columbus Department of Utilities.	Primary- 5 miles (10 minute urban drive) Secondary - 10 miles (15 minute drive may include highway)	Park	Hoover Reservoir Parkland
Nature Preserve	Parkland which displays each of the characteristics of Conservation Parkland but has been officially designated through the process established in the City of Columbus Nature Preserve Code 919.27.	Primary- 5 miles (10 minute urban drive) Secondary - 10 miles (15 minute drive may include highway)	Park	Hayden Falls; Beechwold Park
Conservation Parkland	Parkland acquired to protect and preserve natural areas such as forests, wetlands, and riparian corridors. The primary purpose is conservation of natural resources.	N/a	Park	Cherrybottom Park; Wango Park
Parkland Reserve	Property acquired to preserve greenspace with the intent of developing parkland in an unspecified future timeframe.	N/a	Park	Dysart Run Parkland; West Case Park
Neighborhood Open Space	Developed park that serves as an open space for residents' passive recreation. Does not include a playground or other active recreational facilities. Parks Maintenance Level of Care includes regular mowing and trash collection (if applicable). See below for more details	Half (1/2) a mile (10 min walk)	Park	Driving Park Circle; Old Oaks Park; Linwood Park
Neighborhood Park	Developed park with emphasis on both active and passive uses that are usually self-directed (non-facilitated/non-programmed). Usually serves residents of the immediately surrounding neighborhood, or within a half (1/2) mile radius. Length of visit: 1/2 hour to 2 hours; Core Programs: 1 – 3	Half (1/2) a mile (10 min walk)	Park	Greene Countrie Park; Northern Woods Park; Sharon Meadows Park; Southern Pines Park; Millbrook Park; Karns Park

	See below for more details			
Community Park	Developed park with both active and passive uses. Serves two (2) or more neighborhoods. Has the capacity for programmed and facilitated recreation. Length of visit: 1 - 2 hours. Core Programs: 3 – 4 See below for more details	Primary- 5 miles (10 minute urban drive) Secondary - 10 miles (15 minute drive may include highway)	Park	Maloney Park; Hard Road Park; Woodward Park; Franks Park; Barnett Park; Glenwood Park;
Regional Park	Developed park that has a metropolitan draw and serves multiple communities for both active and passive uses. Serves as a destination for tourism, enhances the identity of the region, and provides for a half to full day experience. Hosts large-scale organized events such as sporting events and festivals. [Length of visit: 2 - 4 hours] [Core Programs: 3 - 4] See below for more details	Primary- 5 miles (10 minute urban drive) Secondary - 10 miles (15 minute drive may include highway)	Park	Bicentennial Park; Big Run Park; Berliner Park; Whetstone Park; Three Creeks Park; Future Kilbourne Run Park

Additional Considerations and Characteristics for Developed Parks

Neighborhood Open Space

- [Key Amenities May Include](#): mowed regularly, picnic tables, benches, and public art.
- [Supporting Amenities May Include](#): street lighting and trash receptacles
- [Amenity Considerations](#): May include area/security lighting- often includes street lighting. Also could include trash receptacles, only if picnic tables and benches are present. Site characteristics such as size, access and layout are often the limiting (distinguishing) factors that keep a park at the open space vs becoming a neighborhood park.
- [Access](#): Pedestrian level access from the surrounding neighborhood. Access may be achieved via access easement. Preference for direct access via sidewalk or bikeway connector. On-street parking may be available.

Neighborhood Park

- [Key Amenities May Include](#): the baseline amenities offered in the typology above, in addition to playground, open- air shelter, sports courts, and multi-purpose fields.

- **Supporting Amenities May Include:** the supporting amenities listed above, fitness stations, security lighting, bike rack, and portable restrooms.
- **Amenity Considerations:** the amenity considerations above, fitness stations or other active recreation feature if community parks are not available in service area, open-air shelter (Lit, 4 table space, Non-reservable), 1- 2 sports courts (often half court vs full court basketball). Often includes open greenspace but may include athletic field; pedestrian path/ circulation within park and potentially connecting to neighborhood; if lighting, likely limited to area/security lighting rather than for sports. Parking lot within park is not as common as on-street parking.
- **Access:** Pedestrian level access from the surrounding neighborhood. Access may be achieved via access easement. Preference for direct access via sidewalk or bikeway connector. Vehicular access may be supported but often gained via on-street parking on local or neighborhood streets.

Community Park

- **Key Amenities May Include:** the baseline amenities offered in the typology above, in addition to community center, athletic complex, pool, splash pad, paths, trail head, amphitheater, enclosed shelterhouse, dog park, and grills/ ash urns. Specialized athletic amenities such as disc golf and skate parks.
- **Supporting Amenities May Include:** the supporting amenities listed above, sports lighting, dumpster blinds, and parking lot.
- **Amenity Considerations:** the amenity considerations above, sports courts (Usually 1 to 3 types; May support programmed recreation on one or more (may be lit and reservable), one or more multipurpose fields (may be numbered in capacity to handle league play or CRPD instructional programming, may be reservable); Pedestrian path/ circulation to core programs and to surrounding community. May include trail head or hub. May offer performance space with electrification. Parking may be available within park and ideally should have the capacity to support 2 core programs concurrently. Facilitated programs may be limited by parking lot capacity.
- **Access:** Vehicular access often from arterial or collector streets. Transit access often available. Bike/Ped access often available via sidewalk, shared use path or regional path connection to park.

Regional Park

- **Key Amenities May Include:** the baseline amenities offered in the typology above, in addition to aquatic centers and regional trailheads.
- **Supporting Amenities May Include:** the supporting amenities listed above.
- **Amenity Considerations:** the amenity considerations above, sports courts (numbered in capacity to handle league play or CRPD instructional programming, often lit, reservable), and multiple multipurpose fields (numbered in capacity to handle league play or CRPD instructional programming, may be lit, often include championship field; reservable). Parking must support carrying capacity for all core programs concurrent to a season.
- **Access:** Vehicular access from arterial streets; often nearby an interchange. Sometimes accessible via transit. Pedestrian access often available through regional trail system.

19 APPENDIX B – CRPD ATHLETIC FIELDS AND COURTS DESIGN STANDARDS

Columbus Recreation and Parks Department

Sport Court and Field Design Standards



REV. 12.2022

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1 OVERVIEW

The Columbus Recreation and Parks Department (CRPD) pledges to provide the finest facilities for all communities. The guidelines in this document inform the design of new and the renovation of existing athletic facilities and fields. This document ensures the Department achieves the maximum value and use out of these spaces while enacting CRPD’s mission and values.

This document outlines descriptive guidelines. The designer shall use standard industry practices and abide by applicable regulations and ADA requirements. These guidelines do not supersede City/State/Federal laws or codes or generally accepted design practices of professional consultants. If the Consultant identifies any conflict between these guidelines and City of Columbus or other governing codes, they shall notify the CRPD Project Manager and seek a resolution. This resolution must comply with City codes to receive CRPD approval.

References for Standard Court and Field Dimensions

- [Tennis Court](#)
- [Basketball Court](#)
- [Baseball Field](#)
- [Softball Field](#)
- [Futsal Court](#)
- [Soccer Field](#)
- [Hockey Rink](#)
- [Cricket Pitch](#)
- [Pickleball Court](#)
- [Volleyball Court](#)

References for Standard Adaptive Sport Court and Field Dimensions

- [Blind Hockey](#)
- [Blind Soccer](#)
- [Boccia Ball](#)
- [Adaptive Marksmanship](#)
- [Wheelchair Basketball](#)
- [Adaptive Track and Field](#)
- [Wheelchair Rugby](#)
- [Wheelchair Tennis](#)
- [Wheelchair Softball](#)
- [Wheelchair Football](#)

2 HIERARCHY OF FIELDS – BALL DIAMONDS AND MULTI-PURPOSE FIELDS

CRPD uses a hierarchy of fields; based on level of service. This includes Prime Facilities, Athletic Fields and Green Space. CRPD encourages the development of predominantly athletic fields and green space within the City. Prime Facilities should prioritize locations with easy access to major routes of travel or with adequate space for capacity growth. Use the following criteria for all three types:

Ball Diamond Hierarchy			
Item	Prime Facilities	Athletic Fields	Green Space
Size	Regulation size for appropriate age groups with multiple layouts.	Regulation size for appropriate age groups or close to it.	Resident and space driven.
Layout	Multiple fields in one location.	May include multiple fields or just one field.	No official designated field layouts.
Maintenance Standard	Fields prepared to a Gold Level maintenance standards, all other services at additional cost.	Fields prepared to a Silver Level maintenance standards, all other services at additional cost.	Fields prepared to a Bronze Level maintenance standards, all other services at additional cost.
Restrooms	Permanent restrooms at Prime Facilities.	Portable restrooms at minimum - designated concrete pads for restroom locations.	Portable restroom provided by park. The permit holder may need to rent additional units to meet restroom requirements.
Parking Lot	Designated asphalt or gravel lot with a minimum of 50 parking stalls per field - option for overflow parking.	Designated asphalt or gravel lot with a minimum of 25 parking stalls per field - option for overflow parking.	Limited on-site parking using existing lots - option for overflow parking.
Benches	Covered dugouts with player benches.	Player benches.	May or may not include player benches.
Bleachers	Bleachers for 75 people per field.	Youth oriented facilities will have seating for 50 per field - Adult oriented facilities may or may not have bleachers.	No bleachers.
Fencing	Outfield Fencing, additional fencing if needed.	Limited fencing.	Minimal/No fencing.

Turf Grass	Highly managed athletic turf grass.	Moderately managed athletic turf grass.	Low maintenance athletic turf grass.
Orientation	North/South layout for multipurpose fields.	Field preparation by Permit holder or optional fee based services.	Field preparation by Permit holder.
Crew	Grounds Crew on site.	Grounds Crew 4-5 days per week.	Grounds Crew 2-3 days per week.
Concessions	Concession Stands.	Provided concessions vary.	No concessions provided.
Lights	Field Lights and Common Area security lights.	Usually no lights.	No lights.
Amenities	Drinking fountains, shade structures, and picnic tables.	Some additional amenities fee based.	No other amenities.

Multi-Purpose Fields (Soccer, Football, Lacrosse and other Field Sports) Hierarchy			
Item	Prime Facilities	Athletic Fields	Green Space
Size	Regulation size for appropriate age groups.	Regulation size for appropriate age groups or close to it with ability to rotate all fields 90 degrees.	Resident and Space driven.
Layout	Multiple fields in one location, oriented North and South, whenever possible with ability to shift field a minimum of 20 yards in any direction.	Includes multiple fields or just one field.	No official designated field layouts.
Maintenance Standard	Fields prepared to a Gold Level maintenance standards, all other services at additional cost	Fields prepared to a Silver Level maintenance standards, all other services at additional cost	Fields prepared to a Bronze Level maintenance standards, all other services at additional cost

Restrooms	Permanent restrooms at Prime Facilities.	Portable restrooms at minimum - designated concrete pads for locations.	Portable restroom provided by park. The permit holder may need to rent additional units to meet restroom requirements.
Water Service	Four season capable plumbing with heated and insulated backflow preventer.	No potable water source.	
Parking Lot	Designated asphalt or gravel lot with a minimum of 25 parking stalls per field - option for overflow parking.	Designated on-site parking or use of existing parking lots - option for overflow parking.	Limited on-site parking - option for overflow parking.
Benches	Bench areas for each team with benches.	Player benches.	May or may not include player benches.
Bleachers	Bleachers for 75 people per field.	Youth oriented facilities will have seating for 50 per field - Adult oriented facilities may or may not have bleachers.	No bleachers.
Fencing	Security fencing around any synthetic turf fields.	Protective netting to limit balls traveling outside playing field.	No fencing.
Turf Grass	Highly managed athletic turf grass.	Moderately managed athletic turf grass.	Low maintenance athletic turf grass.
Orientation	North/South layout for multipurpose fields.	Field preparation by Permit holder or optional fee based services.	Field preparation by Permit holder.
Crew	Grounds Crew on site.	Grounds Crew 4-5 days per week.	Grounds Crew 2-3 days per week.
Concessions	Concession Stands.	May provide concessions.	No concessions provided.

Lights	Field Lights and Common Area security lights.	Usually no lights.	No lights.
Warm Up Areas	Designated warm up areas.	If available, surrounding Green Space can be used for warm ups.	
Amenities	Shade structures, shooting nets, and picnic tables.	Some additional amenities fee based.	No other amenities.

3 ATHLETIC FIELD AND COURT LAYOUT

- Design the field layouts based on the largest field size (soccer) in order to accommodate a variety of sports fields.
- All fields should include at least one alternate layout for seasonal field rotation.
- Orientate the fields North and South to reduce solar glare on participants and to decrease snow removal activities.
- Locate the fields close to parking lots as to reduce travel distances for people with limited mobility. Place multiple fields close together to overlap the use of hard surface connection paths, the use of amenities, and the field maintenance.
- Ensure all Prime Facilities and Athletic Fields have layouts that meet regulation sizes and have the capacity for ADA events.
- Max hours correlates to maximum programming hours for non-synthetic turf. This guideline informs Sports staff on how much programming (practices and games) can occur on a field space while maintaining a quality field surface. Designers should work with Sports staff to account for the estimated max hours per field and plan for field rotation schedules per site. *For example, irrigated fields can handle more programming hours versus a non-irrigated fields.*

Athletic Field and Court Layout			
Facility Type	Space	Size	Max Hours
Ball Diamonds	Space	Size	Max Hours
Baseball or adult slow pitch	3-4 acres	Multiple sizes 60' to 90'	1000 for Prime Facilities 700 for Athletic Fields 500 for Green Space
Fast pitch or adult slow pitch	2-3 acres	Multiple sizes, 60' to 80''	
Community Centers	1-2 acres	One size	

			Unlimited for synthetic surfaces
Multipurpose Fields	Space	Size	Max Hours
Soccer	2 acres	225' x 360', 20' min sideline clearance	500
Football, Rugby, Field Hockey	1.5 acres	160' x 360', 10' min sideline clearance	500
Lacrosse	1-2 acres	180' x 360', 20' min sideline clearance	500
Ultimate Frisbee	1 acres	120' x 210' with 60' end zones, 10' min sideline clearance	500
Sport Courts	Space	Size	Max Hours
Basketball	.15 acres	50' x 94', 5' min sideline clearance	unlimited
Tennis	.20 acres	36' x 78', 10' min sideline clearance	unlimited
Volleyball	0.10 acres	30' x 60', 10' sideline clearance	unlimited
Pickleball	.15 acres	20' x 44', 6' min sideline clearance	unlimited
Futsal	0.20 acres	75'-138' x 48'-81' (min-max), 5' min sideline clearance	unlimited
Hockey	0.20 acres	145' x 65', 42" board height	unlimited

3.1 BASEBALL AND SOFTBALL ELEMENTS

The tables below provide further detailed description on sport-specific elements for Prime, Athletic, and Green Space facilities.

Baseball and Softball Elements				
Element	Description	Prime Facility Standards	Athletic Facility Standards	Green Space Standards
Backstops	Design to limit foul balls into spectator areas through appropriate lengths and widths.	30' tall, six panels, 10' per panel, 6 gauge, black chain link	20' tall, 4 panels, 10' per panel, 6 gauge, black chain link.	
Fencing	Sideline, outfield fencing, foul poles and safety capping on all fences 10' and under.	Black chain link, provide covered dugouts 30' long, Seating for 15 players, optic yellow foul poles and yellow safety capping on outfield fence.	Chain Link Fencing, player bench seating for 10 players.	No fencing.
Base/Anchors	Heavy-gauge rubber bases with textured surface to minimize slipping. Secure bases with anchors depending on the field designation.	Heavy Duty channel Anchor 1.5" into the ground, 0.5" max below the surface. CRPD prefers Bolco 175 MLB Bases.	No anchors provided.	
Irrigation	Adequate water to grow a safe and playable surface.	Automatic Irrigation mandatory; see specs below in Section 6.	Provide two quick couplers on each side of foul territory for manual irrigation.	No irrigation.
Drainage	Pipe drain used to divert any water draining adjacent to or onto the playing surface.	Provide surface drainage swales to divert water draining from adjacent surfaces and from the playing surface.	Establish the field grade as the site's high point. Divert any oncoming water via surface drainage swales around the field.	Grade the site so all water drains in one or two directions across the site
Arc	Arc distance shall conform to USSSA baseball/softball field dimensions. Measure the arc radius from the front center of mound for maximum base distance.			

Slope	The infield slope establishes adequate site drainage. Create a conical grade using the mound as the center point.	Infield - Maximum 0.5% conical grade from mound out to 125' radius. Outfield - Maximum of 1.5% conical grade from 125' radius to outfield and sideline fence.	Infield - Maximum 0.5% conical grade from mound to a point 10' outside the arc. Outfield - Maximum of 1.5% conical grade from 125' radius to outfield and sideline fence.	Grade the site so all water drains in one or two directions across the site at a minimum slope of 1.5%.
Infield materials	Provide a quality playing surface.	DuraEdge Classic Infield Mix, 3" minimum depth and top-dressed with $\frac{3}{8}$ " of Turface MVP calcined clay.	MAR-CO Washington Ball Mix, 3" minimum depth.	
Outfield Grass Seed	Provide a safe, playable, and aesthetically pleasing surface.	Landmark Seed Bluegrass Sports HD 2.0 at 130 pounds per acre.		Green Velvet Sports Mixture at 260 pounds per acre.
Outfield Grass Sod	Transition between other surfaces and seeded areas.	Elite Kentucky Bluegrass Sod.		Turf Type Tall Fescue Sod.
Grass Seed Establishment Dates	These dates provide the optimal weather for planting grass seed; encourage optimal root growth while discouraging excessive top growth.	<p><i>Spring</i> - Not before May 1 or after May 21.</p> <p><i>Fall</i> - Not before August 1st or after September 15.</p>		
Grass Seed Establishment Specs	Ensure proper germination and establishment seed.	<p>Seeding completed with slit or dimple seeder going two directions with half rate of seed applied in each direction.</p> <p>Application of 1:2:1 ratio starter at seeding at a rate of 1 pound of Phosphorus per thousand square feet.</p> <p>After seeding, top-dress seed bed with $\frac{1}{8}$" of Com-Til Plus compost.</p> <p>After topdressing, roll seed bed with 1-2 ton roller.</p>		
Grass Sod Establishment	Ensure proper rooting and establishment of sod.	<p><i>Spring</i> - Not before March 1 or after May 21.</p> <p><i>Fall</i> - Not before August 21 or after November 30.</p>		

Lighting	All future systems should include Musco brand or equivalent, connect to cell phone system, and have a minimum 15 year warranty.	Provide lighting to as many prime facility fields as possible, including security lighting.	No lighting.
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3.2 MULTI-PURPOSE FIELD ELEMENTS

The tables below provide further detailed description on sport-specific elements for Prime, Athletic, and Green Space facilities.

Multi-Purpose Field (Soccer, Football, Lacrosse and other Field Sports) Elements				
Element	Description	Prime Facility Standards	Athletic Facility Standards	Green Space Standards
Fencing	Security fencing to prevent unauthorized use or vandalism.	Black chain link, with 10' high fence and minimum 16' gates.	No fencing.	No fencing.
Warm Up Area	Designated area for teams to warm up prior to next game.	50' X 50' area for each team.	Use green space.	Use green space.
Irrigation	Provide a safe and playable surface.	Automatic Irrigation mandatory; see specs below in Section 6.	Quick couplers available every 300' on the long sides of fields.	No irrigation.
Drainage	Provide a safe, playable, and aesthetically pleasing surface.	Grade the site so water drains in one or two predominant directions across the site. Use pipe drains to divert any water draining adjacent to or onto the playing surface. Install these drains at 50' intervals perpendicular to grade or sand slit drainage on all playing surfaces.		Grade the site so water drains in one or two predominant directions across the site.
Slope	Establish sufficient fall for water to exit playing surface.	Develop grade from center of pitch with 0.75% minimum slope.	Balanced grade with a minimum slope of 1.5%.	
Root Zone Mix	Provide a quality	Native soil with 20% by	Native Soil.	

	playing surface.	volume incorporation of Surface Field and Fairway to a depth of 6".	
Natural Grass Seed	Provide a safe, playable, and aesthetically pleasing surface.	Landmark Seed Bluegrass Sports HD 2.0 at 130 pounds per acre.	Green Velvet Sports Mixture at 260 lb/ac
Natural Grass Sod	Transition between other surfaces and seeded areas.	Elite Kentucky Bluegrass Sod.	Turf Type Tall Fescue Sod.
Natural Grass Seed Establishment Dates	Ensure proper germination and establishment seed.	<i>Spring</i> - Not before May 1 or after May 21. <i>Fall</i> - Not before August 1st or after September 15.	
Grass Seed Establishment Specs	Ensure proper germination and establishment seed.	Seeding completed with slit or dimple seeder going two directions with half rate of seed applied in each direction. Application of 1:2:1 ratio starter at seeding at a rate of 1 pound of Phosphorus per thousand square feet. After seeding, top-dress seed bed with ½" of Com-Til Plus compost. After topdressing, roll seed bed with 1-2 ton roller.	
Natural Grass Sod Establishment	Ensure proper rooting and establishment of sod.	<i>Spring</i> - Not before March 1 or after May 21. <i>Fall</i> - Not before August 21 or after November 30.	

3.3 CRICKET PITCH ELEMENTS

The tables below provide further detailed description on sport-specific elements for Prime, Athletic, and Green Space facilities.

Cricket Pitch Elements				
Element	Description	Prime Facility Standards	Athletic Facility Standards	Green Space Standards
Square - Base	Base for primary playing surface.	4" mesh reinforced concrete over 6" limestone base. 166' X 10' to include square and runups.		
Square - Surface	Primary playing surface for the bowler and batsman.	Woven nylon, ¾" pile synthetic turf with minimum 5mm shockpad. 168' X 12' to allow for attachment to perimeter nailer board. 10" X 3" rectangular hole cut 10.06 meters from center of square for stumps on each end of square.		
Fencing	Security fencing to prevent unauthorized use or vandalism.	Black chain link, with 6' high fence and minimum 16' gates.	No fence.	
Warm Up Area	Designated area for teams to warm up prior to next game.	50' X 50' area for each team.	Use green space.	
Irrigation	Provide a safe and playable surface.	Automatic Irrigation mandatory; see specs below in Section 6.	Quick couplers available every 300' on long side of fields.	No irrigation.
Drainage and Grade	Provide a safe, playable, and aesthetically pleasing surface.	Grade the site and use pipe drains to divert any water draining adjacent to or onto the playing surface.	Grade the site so water drains in one or two predominant directions across the site. Divert water from higher elevation around the playing surface through grading.	
Slope	Establish sufficient fall for water to exit playing surface.	Envelope grade from the square with 0.75% minimum slope.	Balanced graded with a minimum slope of 1.5%.	
Root Zone Mix	Provide a quality playing surface.	Native soil with 20% by volume incorporation of Turface Field and Fairway to a depth of 6".	Native soil.	

Natural Grass Seed	Provide a safe, playable, and aesthetically pleasing surface.	Landmark Seed Bluegrass Sports HD 2.0 at 130 pounds per acre.	Green Velvet Sports Mixture at 260 pounds per acre.
Natural Grass Sod	Transition between other surfaces and seeded areas.	Elite Kentucky Bluegrass Sod.	Turf Type Tall Fescue Sod.
Natural Grass Seed Establishment Dates	Ensure proper germination and establishment seed.	<i>Spring</i> - Not before May 1 or after May 21. <i>Fall</i> - Not before August 1st or after September 15.	
Grass Seed Establishment Specs	Ensure proper germination and establishment seed.	Seeding completed with slit or dimple seeder going two directions with half rate of seed applied in each direction. Application of 1:2:1 ratio starter at seeding at a rate of 1 pound of Phosphorus per thousand square feet. After seeding, top-dress seed bed with ½" of Com-Til Plus compost. After topdressing, roll seed bed with 1-2 ton roller.	
Natural Grass Sod Establishment	Ensure proper rooting and establishment of sod.	<i>Spring</i> - Not before March 1 or after May 21. <i>Fall</i> - Not before August 21 or after November 30.	

3.4 SPORT COURT ELEMENTS (TENNIS, BASKETBALL, PICKLEBALL)

The tables below provide further detailed description on sport-specific elements for Competition and Recreational facilities.

- For prime facilities that typically host tournaments/events, consider installing a cushioned sport court surface. This cushioning system uses multiple layers of rubber coatings beneath a standard acrylic color surface to provide a resilient but firm championship surface. For CRPD branding, refer to the CRPD Color Guide.
- The table below refers to the following colors: Blue - Pantone 287, Green - Pantone 3415, Red - Pantone 1797, and Grey - Pantone 429.

Sport Court Elements		
Elements	Competition	Recreational
Lighting	Lighting required for all courts. Use Musco brand or equal. Include a controller with photocell capabilities. Evaluate the inclusion of a user-operated push button to extend lights on a timer.	Lighting optional.
Tennis	Competition	Recreational
Base	6" of compacted 304 aggregate base. For tournament facilities, consider 6" Post tension concrete slab. Typically, 3" of asphalt with 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat between) suffices.	6" of compacted 304 aggregate base with 3" of asphalt, 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat between)
Surfacing	Athletic court surfacing with cushion system; blue inside the court, green outside the lane, all lines must have 2" widths and white color. Include CRPD branding where appropriate.	Athletic court acrylic surfacing. Blue inside the court and green outside the lane, all lines must have 2" widths and white color. Consider adding junior lines and pickleball lines as requested.
Nets	Heavy duty vinyl-coated headband. 3.5mm braided polyethylene net body. 5/8" wooden dowels. 42' length overall.	
Posts	3.15" square box-section steel. Polyester powder coated. Brass winder.	
Fencing	Black chain link fence, 10' high, 8 gauge California cut corners with a full maintenance gate, min 10' sideline clearance. Fencing should include top, middle and bottom rail.	
Location	Strategic placement near the active edge and the main parking lot. Consider having courts side by side and overlays with pickleball depending on demand and competition schedules.	Locate near the main parking lot and/or the active edge. If existing courts, locate nearby. CRPD prefers pickleball overlay for recreational.

Basketball	Competition	Recreation
Base	6" of compacted 304 aggregate base. For tournament facilities, consider 6" Post tension concrete slab. Typically, 3" of asphalt with 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat between) suffices.	6" of compacted 304 aggregate base with 3" of asphalt, 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat between).
Surfacing	Athletic court acrylic surfacing; blue inside the lane, green outside the lane, all lines must have 2" widths and white color. 3 point line at 19'9" for high school regulation. Provide additional lines to accommodate college or professional games as requested. Include CRPD branding where appropriate.	Athletic court acrylic surfacing; light green in the paint and dark green outside, all lines must have 2" widths and white color. 3 point line at 19'9"; Branding of CRPD where appropriate. Avoid beige color paint, as it shows shoe markings, dirt, and creates surface glare.
Hoops	Hercules Gold Basketball System with competition grade (double rim) breakaway rim with nylon net, or approved equal. Consider padding around post for tournament facilities.	Fortin Ironworks custom basketball goal with 72" x 42" white steel backboard, First Team Sports, Inc. Model #FT172D rim (or approved equal), 1" wide nylon webbing net, and 5' deep by 3' diameter footer with (4) 1"x 38" anchor bolts.
Fencing	Black chain link fence, 8' high, 8 gauge, with a full maintenance gate, 5' min sideline clearance. Competition courts or courts designed close to walking paths or roadways should consider 12' high fencing.	Black chain link fence, 8' high, 8 gauge, with a full maintenance gate, 5' min sideline clearance.
Location	Strategic placement near the active edge and main parking lot. Consider placing two courts side by side or a half court design depending on park location.	Place CRPD prefers a half court layout. Otherwise consider overlaying the basketball court with a compatible sport court layout, futsal or hockey.
Pickleball	Competition	Recreation
Base	6" of compacted 304 aggregate base. For tournament facilities, consider 6" Post tension concrete slab. Typically, 3" of asphalt with 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat between) suffices.	6" of compacted 304 aggregate base with 3" of asphalt, 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat between).
Surfacing	Athletic court surfacing with cushion system; blue inside the court, green outside the lane, all lines must have 2" widths and white color. Branding of CRPD where appropriate.	Athletic court acrylic surfacing. Blue inside the court and green outside the lane, all lines must have 2" widths and white color.

Nets	Heavy duty vinyl-coated headband. 3.5mm braided polyethylene net body. 5/8" wooden dowels. 20' length overall.	
Posts	3.15" square box-section steel. Polyester powder coated. Brass winder.	
Fencing	Black chain link fence, 10' high, 8 gauge California cut corners with a full maintenance gate, min 10' sideline clearance. Fencing should include top, middle and bottom rail.	
Location	Strategic placement near the active edge and main parking lot. Consider placing two courts side by side depending on park location and expected demand.	Locate near the main parking lot and/or the active edge. If existing courts, locate nearby. CRPD prefers tennis court overlay for recreational.
Futsal	Competition	Recreation
Base	6" of compacted 304 aggregate base. For tournament facilities, consider 6" Post tension concrete slab. Typically, 3" of asphalt with 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat between) suffices.	6" of compacted 304 aggregate base with 3" of asphalt, 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat between).
Surfacing	Athletic court acrylic surfacing; blue inside the lane, green outside the lane, all lines must have 2" widths and white color. Branding of CRPD where appropriate.	Athletic court acrylic surfacing; light green in the paint and dark green outside, all lines must have 2" widths and white color. Avoid beige color paint.
Goals	The goalposts and crossbars must have different colors than the pitch, generally white finish. The net must accommodate a 10' x 6' goal. CRPD prefers the Forza ALU110 Socketed Futsal (3M x 2M) Goal. Consider Franklin Sports, KwikGoal, or an approved equal.	
Fencing	Black chain link fence, 8 gauge, 10' high at goal ends, California cut corners with a full maintenance gate, min 5' sideline clearance. Fencing can have 4' fencing on the sides. Fencing should include top, middle and bottom rail.	Fencing similar to Competition standards where applicable. Otherwise, shorter fencing when available.
Location	Strategic placement. Consider a sport court overlay if the demand permits. Locate near other sports courts or parking lots and main roads.	Locate near the main parking lot and/or the active edge. If existing courts, locate nearby. CRPD prefers sport court overlay.
Hockey	Competition	Recreation
Base	6" of compacted 304 aggregate base. For tournament facilities, consider 6" Post tension concrete slab. Typically, 3" of asphalt with 2 lifts (1 ¾" intermediate course and 1 ¼" surface course	6" of compacted 304 aggregate base with 3" of asphalt, 2 lifts (1 ¾" intermediate course and 1 ¼" surface course with tack coat

	with tack coat between) suffices.	between).
Surfacing	Athletic court acrylic surfacing; blue inside the lane, green outside the lane, all lines must have 2" widths and white color. Branding of CRPD where appropriate.	Athletic court acrylic surfacing; light green in the paint and dark green outside, all lines must have 2" widths and white color. Avoid beige color paint.
Goals	The goalposts and crossbars must have different colors than the rink. The NHL style net must accommodate a 4' x 6' goal and have nylon knotless net with 1-1/2" mesh or approved equal.	
Fencing	Riley Sports R5A Aluminum Dasher Board System with 42" high by 8' long frame panels and upper containment system of a minimum 4' high or approved equal. Install scorer, penalty and timekeeper boxes depending on tournament demand and available space.	Fencing similar to Competition standards. 4' high containment system and 42" high panel system. No additional structures.
Location	Locate near the main parking lot and/or the active edge. Consider overlay with another sport court depending on surrounding demand and available space.	Locate near the main parking lot and/or the active edge. If existing courts, locate nearby. CRPD prefers sport court overlay for recreational.

4 SYNTHETIC FIELDS/SURFACES

The main advantages of synthetic turf surfaces include greatly reduced water requirements and the reduced need for weekly maintenance and striping. Synthetic turf provides an even and consistent playing surface for year-round use that remains unaffected by the weather.

Requirements for synthetic turf include:

- Adequate underdrain system with off-field drainage (connection to stormwater drain where needed).
- Provide lining for multiple sports.
- Consider if the park setting accommodates synthetic turf. As a general rule, limit synthetic turf to Prime Facilities. Athletic Field complexes or playgrounds can have synthetic turf based on owner or maintenance direction.
- These fields should have fully fenced areas with locking gates.
- Use proper edging (ex. concrete mow strip).

5 IRRIGATION

All Prime Facilities and Fields should have automatic irrigation systems. Without adequate water, fields will go dormant and with continued use, turf damage will occur to the fields. Additional requirements for prime field irrigation:

- Use heated and insulated backflow preventer enclosures to enable watering during the athletic field season and not the irrigation season.
- Locate irrigation valve boxes outside of playing fields, including alternate layouts.
- Isolation valves before the first and after the last lateral on each section of main line.
- Use controllers that allow for multiple program settings and enable web connection for remote adjustment, on/off capabilities, and water saving features.
- Separate athletic field zones from other park zones, such as common areas and off field areas.
- Locate grow-in zones with mister heads at goal mouths, player position areas, or other high traffic areas.
- Install quick coupler systems by asphalt, concession areas, etc. to allow for maintenance washing and cleaning at installed irrigation locations.
- Rain sensor and weather station equipped.
- Install a quick coupler system to allow for maintenance washing at available irrigation locations.

6 ACCESSIBILITY

All Sports Facilities and Prime Fields shall provide equal access for individuals with disabilities. CRPD welcomes all residents to these Sport Facilities and makes every effort to ensure that all individuals feel safe and included.

Requirements for accessibility in Sports Facilities and Prime Fields to include the following elements:

- ADA accessible path with ADA approved surface materials to enter/exit and access spectator areas, playing fields, and restrooms.
- Playgrounds provide access from ADA approved surface materials.
- All sites have ADA compliant permanent and/or portable restrooms.
- Provide adaptive equipment and facilities at designated sites for respective sports.
- ADA Pad/Miracle Field to accommodate Adult and Youth play at each Prime Field site. The custom-designed Miracle Field provides a cushioned, rubberized turf to help prevent injuries, wheel-chair-accessible dugouts, and a completely flat, barrier-free surface to provide accessibility for visually impaired players or players in wheelchairs.

Through CRPD's Therapeutic Recreation, the Adaptive Sports Club offers recreational level programs with opportunities to pursue Paralympic competitions. The Adaptive Sports Club offers 13 programs varying from blind hockey to rowing to wheelchair rugby and more. When designing new or renovating old sport courts, consider including the capacity to accommodate these adaptive sports. *For example, when installing a new sport court consider approved alternate hoops that can accommodate various levels of ability with an adjustable rim height and consider additional lining to accommodate other adaptive sports.*

References for Standard Adaptive Sport Court and Field Dimensions

- [Blind Hockey](#)
- [Blind Soccer](#)
- [Boccia Ball](#)
- [Adaptive Marksmanship](#)
- [Wheelchair Basketball](#)
- [Adaptive Track and Field](#)
- [Wheelchair Rugby](#)
- [Wheelchair Tennis](#)
- [Wheelchair Softball](#)
- [Wheelchair Football](#)

7 INCLUSION

CRPD welcomes all residents to these Sport Facilities and makes every effort to ensure that all individuals feel safe and included. All Sports Facilities and Prime Fields shall provide inclusive amenities and design for diverse demographics. Requirements for inclusivity in Sports Facilities and Prime Fields to include the following elements:

- Add features to Sport Facilities that aid in the comfort and increased reception of safety to the LGBT+ community. These features can include gender neutral or unisex restrooms, private/family style locker rooms and changing rooms.
- Organizations have a responsibility to protect the right for everyone to access facilities based on their gender identity, regardless of preferences or negative attitudes. Provide privacy options or spaces that anyone in a changing room may use. *For example, add curtains or stalls around showers and changing areas.*
- Provide adequate signage and markings to identify safe spaces for LGBT+ youth at Sport Facilities. Although spaces and programs may serve all, members of the LGBT+ community can feel more comfortable engaging and accessing these spaces when CRPD signs and staff explicitly support this invitation.
- Understand the surrounding demographics to incorporate cultural inclusion in the Sport Courts or Fields. Create spaces that can accommodate religious or cultural preferences for sports. *For example, provide curtains or netting to create capacity for women only environments and enable the participation of Muslim women.*
- Understand the surrounding demographics to install new sport court or field layouts to accommodate a variety of sports. Confirm with the Sports section and project owner for any sport court or field layouts not included in this document.

8 PARKING AND ACCESS PLANNING

Parking studies must occur during the planning and design phases for prime and athletic fields and courts to understand the necessary size of parking facilities for the anticipated programmed events. Additionally, design parking drives and access roads to ensure smooth vehicle ingress and egress through the park during high attendance events. Consider the use of timber guardrails, barriers, and/or curbs around parking lots and drives to minimize vehicles from driving on turf and parking under trees. Work with Sports, Special Events, Community Recreation, and Rental Permits to designate areas for overflow parking in the event of unexpected increased demand.

Make all necessary efforts during the design process to include alternate transportation options into and out of the park, including sidewalks, and trail connections. Refer to Section 6 in the Park Design Guidelines for additional vehicular access and accommodations.

End of Document

20 APPENDIX C - CPTED CHECKLIST

Crime Prevention Through Environmental Design (CPTED) Checklist Instructions

This checklist is designed to assist the project proponent in demonstrating how CPTED principles have been met. This goal can **also** be met by submitting a written explanation as to how each of the three design principles of *Natural Surveillance*, *Access Control*, and *Ownership* has been met.

The checklist has been prepared to provide guidance and assistance in regard to the integration of CPTED principles into proposed project designs. The purpose of the checklist is to assist a project proponent in identifying and incorporating design strategies that implement the CPTED principles identified in *Federal Way City Code* (FWCC) Section 22-1630.

CPTED principles, performance standards, and strategies are used during project development review to identify and incorporate design features, which reduce opportunities for criminal activity to occur. The effectiveness of CPTED is based on the fact that criminals make rational choices about their targets. In general:

- (1) The greater the risk of being seen, challenged, or caught; the less likely they are to commit a crime.
- (2) The greater the effort required, the less likely they are to commit a crime.
- (3) The lesser the actual or perceived rewards, the less likely they are to commit a crime.

Through use of CPTED principles, the built environment can be designed and managed to ensure:

- (1) There is more chance of being seen, challenged, or caught;
- (2) Greater effort is required;
- (3) The actual or perceived rewards are less; and
- (4) Opportunities for criminal activity are minimized.

CPTED Design Principles

CPTED design principles are functionally grouped into three categories:

- (1) *Natural Surveillance*. This category focuses on strategies to design the built environment in a manner that promotes visibility of public spaces and areas.
- (2) *Access Control*. This category focuses on the techniques that prevent and/or deter unauthorized and/or inappropriate access.
- (3) *Ownership*. This category focuses on strategies to reduce the perception of areas as “ownerless” and therefore available for undesirable uses.

How to Use This Checklist

This checklist has been prepared to assist in identifying appropriate strategies to incorporate CPTED design principles into proposed projects in Federal Way. The guidelines included in this checklist expand on the principles found in FWCC Section 22-1630.

It is recommended that the principles be reviewed initially to identify the approaches used to implement CPTED. Subsequent to this initial review, this checklist should be reviewed to identify additional strategies that may be applicable for a proposed project. Not all strategies are applicable to all projects. In addition, the CPTED principles may be addressed through strategies that are not listed.

Checklist Design

The checklist has been organized in the following manner:

Functional Area <i>Specific design element addressed by CPTED principles</i>	Section and Performance Standard	Functional Area Performance Standard Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
Performance Standard <i>What is the desired outcome of applying CPTED principles to this functional area</i>	Section 1.0:	Natural Surveillance	
Strategy <i>Technique which can be used to implement CPTED principles</i>	1.1	Blind Corners <i>Avoid blind corners in pathways and parking lots.</i>	___ Conforms ___ Revise ___ NA Comments:
Check Box <i>Indicate by checking this box if this strategy has been used in the proposed project</i>		<input type="checkbox"/> Pathways should be direct. All barriers along pathways should be permeable (see through) including landscaping, fencing etc. ■	
Strategy Write-in <i>This section can be used to write in a strategy which is not specifically listed but is employed in the project</i>		<input type="checkbox"/> Consider the installation of mirrors to allow users to see ahead of them and around corners. ⊖	
Process Applicability <i>Indicates when in the review process the identified guideline should be assessed</i>		<input type="checkbox"/> Other strategy used: _____ _____ _____	

Site Plan and Building Permit Review

Certain guidelines and techniques are best applied during different points in the review process. To assist in facilitating CPTED review, guidelines which are best considered during site plan review are indicated with a "■" symbol. Guidelines that are most appropriately applied during building permit review are indicated with a "⊖" symbol.



Crime Prevention Through Environmental Design (CPTED) Checklist

Directions

Please fill out the checklist to indicate which strategies have been used to implement CPTED principles in your proposed project. Please check all strategies that are applicable to your project for each of the numbered guidelines. You may check more than one strategy for each guideline.

Your responses will be evaluated by City Staff, and will be integrated into the Site Plan and/or Building Permit review process.

Section and Performance Standard	✓	Functional Area Performance Standard Strategy <input type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only
Section 1.0		Natural Surveillance	
1.1		Blind Corners <i>Avoid blind corners in pathways and parking lots.</i> <hr/> <input type="checkbox"/> Pathways should be direct. All barriers along pathways should be permeable (see through) including landscaping, fencing etc. <input type="checkbox"/> <input type="checkbox"/> Consider the installation of mirrors to allow users to see ahead of them and around corners. ⊖ Other strategy used: _____ <input type="checkbox"/> _____ _____ _____	<input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments:
1.2		Site and Building Layout <i>Allow natural observation from the street to the use, from the use to the street, and between uses</i>	<input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments:

Section and Performance Standard	✓	Functional Area Performance Standard Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
For Non-Single Family Development	<input type="checkbox"/>	Orient the main entrance towards the street or both streets on corners. ■ <input type="checkbox"/> Position habitable rooms with windows at the front of the dwelling. ■ Access to dwellings or other uses above commercial/ retail development should not be from the rear of the building. ■ <input type="checkbox"/> Offset windows, doorways and balconies to allow for natural observation while protecting privacy. ■	
For Commercial/ Retail/ Industrial and Community Facilities	<input type="checkbox"/>	Locate main entrances/exits at the front of the site and in view of the street. ■ <input type="checkbox"/> If employee entrances must be separated from the main entrance, they should maximize opportunities for natural surveillance from the street. ■ <input type="checkbox"/> In industrial developments, administration/offices should be located at the front of the building. ■	
For Surface Parking and Parking Structures	<input type="checkbox"/>	Avoid large expanses of parking. Where large expanses of parking are proposed, provide surveillance such as security cameras. ■ <input type="checkbox"/> Access to elevators, stairwells and pedestrian pathways should be clearly visible from an adjacent parking area. ■ <input type="checkbox"/> Avoid hidden recesses. ■ <input type="checkbox"/> Locate parking areas in locations that can be observed by adjoining uses. ■	
For Common/ Open Space Areas	<input type="checkbox"/>	Open spaces shall be clearly designated and situated at locations that are easily observed by people. Parks, plazas, common areas, and playgrounds should be placed in the front of buildings. Shopping centers and other similar uses should face streets. ■ Other strategy used: _____ <input type="checkbox"/> _____ _____ _____	

Section and Performance Standard	<div>✓</div> Functional Area Performance Standard Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
1.3	Common/Open Space Areas and Public On-Site Open Space <i>Provide natural surveillance for common/open space areas.</i> <hr/> <div> <input type="checkbox"/> Position active uses or habitable rooms with windows adjacent to main common/open space areas, e.g. playgrounds, swimming pools, etc., and public on-site open space. ■ </div> <div> <input type="checkbox"/> Design and locate dumpster enclosures in a manner which screens refuse containers but avoids providing opportunities to hide. ■ </div> <div> <input type="checkbox"/> Locate waiting areas and external entries to elevators/stairwells close to areas of active uses to make them visible from the building entry. ⊖ </div> <div> <input type="checkbox"/> Locate seating in areas of active uses. ⊖ </div> <div> Other strategy used: _____ <input type="checkbox"/> _____ _____ </div>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>
1.4	Entrances Provide entries that are clearly visible. <hr/> <div> <input type="checkbox"/> Design entrances to allow users to see into them before entering. ■ </div> <div> <input type="checkbox"/> Entrances should be clearly identified (Signs must conform to FWCC Section 22-1569(D). Permit Exceptions. (<i>Applicable during <u>Certificate of Occupancy Inspection</u></i>)). </div> <div> Other strategy used: _____ <input type="checkbox"/> _____ _____ </div>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>
1.5	Fencing <i>Fence design should maximize natural surveillance from the street to the building and from the building to the street, and minimize opportunities for intruders to hide.</i>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>

Section and Performance Standard	<div>✓</div> Functional Area Performance Standard Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
	<div> <input type="checkbox"/> Front fences should be predominantly open in design, e.g. pickets or wrought iron, or low in height. ⊖ </div> <div> <input type="checkbox"/> Design high solid front fences in a manner that incorporates open elements to allow visibility above the height of five feet. ⊖ </div> <div> <input type="checkbox"/> If noise insulation is required, install double-glazing at the front of the building rather than solid fences higher than five feet. ⊖ </div> <div> <input type="checkbox"/> Other strategy used: _____ _____ </div>	
1.6	Landscaping <i>Avoid landscaping which obstructs natural surveillance and allows intruders to hide.</i> <hr/> <div> <input type="checkbox"/> Trees with dense low growth foliage should be spaced or their crown should be raised to avoid a continuous barrier. ■ </div> <div> <input type="checkbox"/> Use low groundcover, shrubs a minimum of 24 inches in height, or high-canopied trees (clean trimmed to a height of eight feet) around children's play areas, parking areas, and along pedestrian pathways. ■ </div> <div> <input type="checkbox"/> Avoid vegetation that conceals the building entrance from the street. ■ </div> <div> <input type="checkbox"/> Other strategy used: _____ _____ </div>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>
1.7	Exterior Lighting <i>Provide exterior lighting that enhances natural surveillance. (Refer to FWCC Section 22-1635(g)(1) for specific lighting requirements.)</i> <hr/> <div> <input type="checkbox"/> Prepare a lighting plan in accordance with Illuminating Engineering Society of America (IESA) Standards, which addresses project lighting in a comprehensive manner. Select a lighting approach that is consistent with local conditions and crime problems. ■ </div>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>

Section and Performance Standard	<div>✓</div> Functional Area Performance Standard Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
	<div> <input type="checkbox"/> Locate elevated light fixtures (poles, light standards, etc.) in a coordinated manner that provides the desired coverage. The useful ground coverage of an elevated light fixture is roughly twice its height. ■ </div> <div> <input type="checkbox"/> For areas intended to be used at night, ensure that lighting supports visibility. Where lighting is placed at a lower height to support visibility for pedestrians, ensure that it is vandal-resistant. ⊖ </div> <div> <input type="checkbox"/> Ensure inset or modulated spaces on a building facade, access/egress routes, and signage is well lit. ⊖ </div> <div> <input type="checkbox"/> In areas used by pedestrians, ensure that lighting shines on pedestrian pathways and possible entrapment spaces. ⊖ </div> <div> <input type="checkbox"/> Place lighting to take into account vegetation, in its current and mature form, as well as any other element that may have the potential for blocking light. ⊖ </div> <div> <input type="checkbox"/> Avoid lighting of areas not intended for nighttime use to avoid giving a false impression of use or safety. If danger spots are usually vacant at night, avoid lighting them and close them off to pedestrians. ⊖ </div> <div> <input type="checkbox"/> Select and light “safe routes” so that these become the focus of legitimate pedestrian activity after dark. ■ </div> <div> <input type="checkbox"/> Avoid climbing opportunities by locating light standards and electrical equipment away from walls or low buildings. ⊖ </div> <div> <input type="checkbox"/> Use photoelectric rather than time switches for exterior lighting. ⊖ </div> <div> <input type="checkbox"/> In projects that will be used primarily by older people (retirement homes, congregate care facilities, senior and/ or community centers, etc.) provide higher levels of brightness in public/common areas. ⊖ </div> <div> <input type="checkbox"/> Other strategy used: _____ _____ </div>	
1.8	Mix of Uses In mixed use buildings increase opportunities for natural surveillance, while protecting privacy.	<input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments:

Section and Performance Standard	✓	Functional Area Performance Standard	Evaluation for Agency Use Only
		Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	
		<input type="checkbox"/> Where allowed by city code, locate shops and businesses on lower floors and residences on upper floors. In this way, residents can observe the businesses after hours while the residences can be observed by the businesses during business hours. ■ <input type="checkbox"/> Include food kiosks, restaurants, etc. within parks and parking structures. ■ Other strategy: used _____ _____ <input type="checkbox"/> _____ _____ _____	
1.9		Security Bars, Shutters, and Doors <i>When used and permitted by building and fire codes, security bars, shutters, and doors should allow observation of the street and be consistent with the architectural style of the building.</i>	__ Conforms __ Revise __ NA Comments:
		<input type="checkbox"/> Security bars and security doors should be visually permeable (see-through). ⊖ Other strategy used: _____ <input type="checkbox"/> _____ _____	

Section and Performance Standard	✓	Functional Area Performance Standard	Evaluation for Agency Use Only
		Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	
Section 2.0		Access Control	
2.1		Building Identification <i>Ensure buildings are clearly identified by street number to prevent unintended access and to assist persons trying to find the building. Identification signs must conform to FWCC, Section 22-1569(D). Permit Exceptions.</i>	__ Conforms __ Revise __ NA Comments:
		<input type="checkbox"/> Street numbers should be plainly visible and legible from the street or road fronting the property. ⊖	

Section and Performance Standard	<div>✓</div> Functional Area <i>Performance Standard</i> Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
	<div> <input type="checkbox"/> In residential uses, each individual unit should be clearly numbered. In multiple building complexes, each building entry should clearly state the unit numbers accessed from than entry. In addition, unit numbers should be provided on each level or floor. ⊖ </div> <div> <input type="checkbox"/> Street numbers should be made of durable materials, preferably reflective or luminous, and unobstructed (e.g. by foliage). ⊖ </div> <div> <input type="checkbox"/> For larger projects, provide location maps (fixed plaque format) and directional signage at public entry points and along internal public routes of travel. ⊖ </div> <div> <input type="checkbox"/> Other strategy used: _____ _____ </div>	
2.2	Entrances <i>Avoid confusion in locating building entrances.</i> <hr/> <div> <input type="checkbox"/> Entrances should be easily recognizable through design features and directional signage. (Signs must conform to FWCC Section 22-1569(D). Permit Exceptions. ■ </div> <div> <input type="checkbox"/> Minimize the number of entry points. ■ </div> <div> <input type="checkbox"/> Other strategy used: _____ _____ </div>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>
2.3	Landscaping <i>Use vegetation as barriers to deter unauthorized access.</i> <hr/> <div> <input type="checkbox"/> Consider using thorny plants as an effective barrier. ⊖ </div> <div> <input type="checkbox"/> Other strategy used: _____ _____ </div>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>
2.4	Landscaping Location <i>Avoid placement of vegetation that would enable access to a building or to neighboring buildings.</i>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>

Section and Performance Standard	<div>✓</div> Functional Area <i>Performance Standard</i> Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
	<div> <input type="checkbox"/> Where exits are closed after hours, ensure this information is indicated at the parking area entrance. ⊖ Other strategy used: _____ <input type="checkbox"/> _____ _____ </div>	
Section 3.0	Ownership	
3.1	Maintenance Create a “cared for” image <hr/> <div> <input type="checkbox"/> Ensure that landscaping is well maintained, as per FWCC Section 22-1569, in order to give an impression of ownership, care, and security. (<i>Ongoing</i>). <input type="checkbox"/> Where possible, design multi-unit residential uses such that no more than six to eight units share a common building entrance. ■ Other strategy used: _____ <input type="checkbox"/> _____ _____ </div>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>
3.2	Materials <i>Use materials, which reduce the opportunity for vandalism.</i> <hr/> <div> <input type="checkbox"/> Consider using strong, wear resistant laminate, impervious glazed ceramics, treated masonry products, stainless steel materials, anti-graffiti paints, and clear over sprays to reduce opportunities for vandalism. Avoid flat or porous finishes in areas where graffiti is likely to be a problem. ⊖ <input type="checkbox"/> Where large walls are unavoidable, refer to FWCC Section 22-1564(u) regarding the use of vegetative screens. ⊖ <input type="checkbox"/> Common area and/or street furniture shall be made of long wearing vandal resistant materials and secured by sturdy anchor points, or removed after hours. ⊖ Other strategy used: _____ <input type="checkbox"/> _____ _____ </div>	<div> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </div>