



Landscape Architecture Design Standards & Principles

(Updated 02/07/2024)

Parks

DESIGN PRINCIPLES

Design for the Environment

Greater Greening + Climate Change

The Importance of Shade

For human comfort, UV protection and urban heat island mitigation



Design Principles – Design for the Environment

Protecting Trees & Thoughtful Placement



Image Credit: Nancy Owens Studio



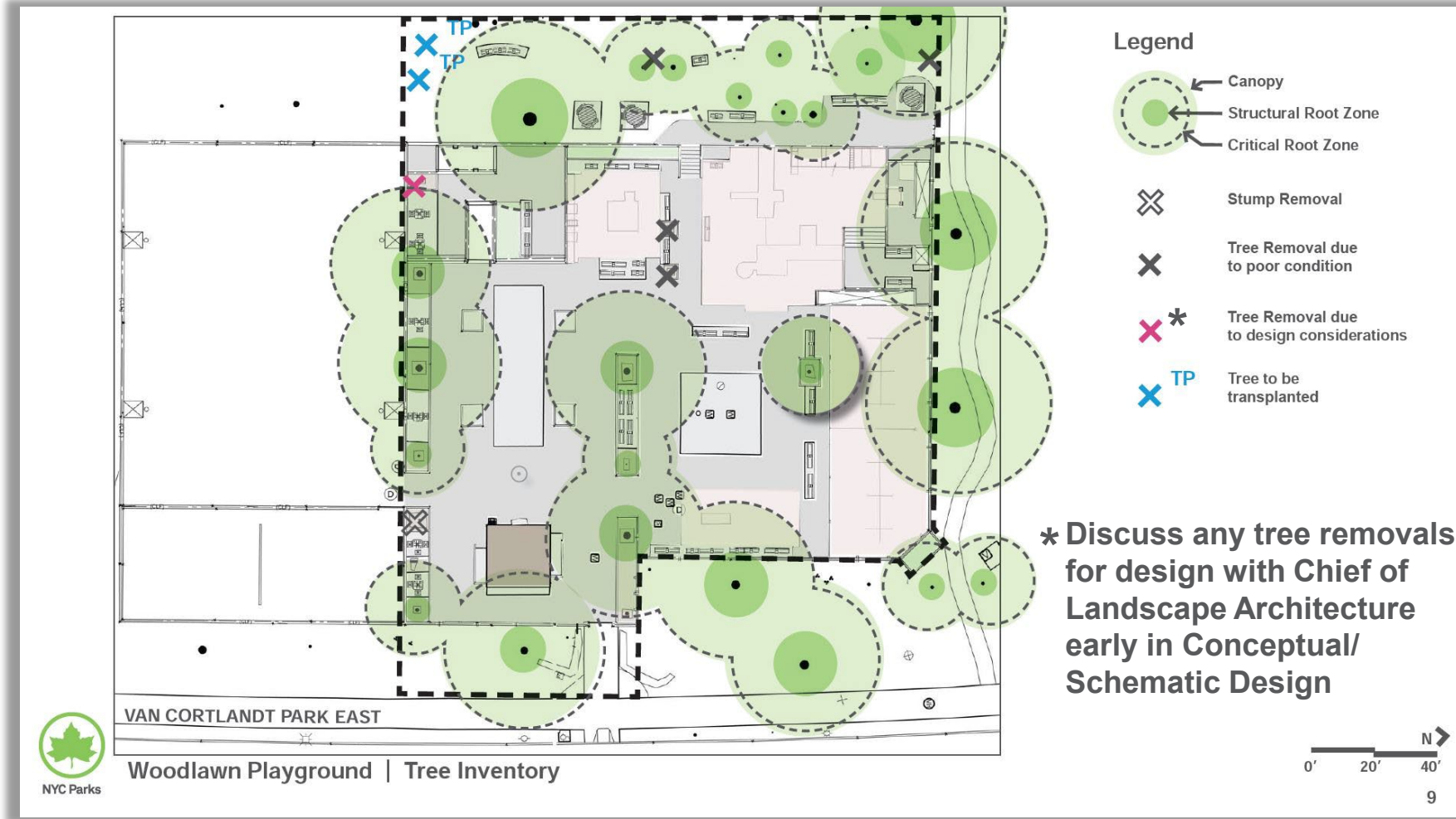
Calvert Vaux Park, Brooklyn



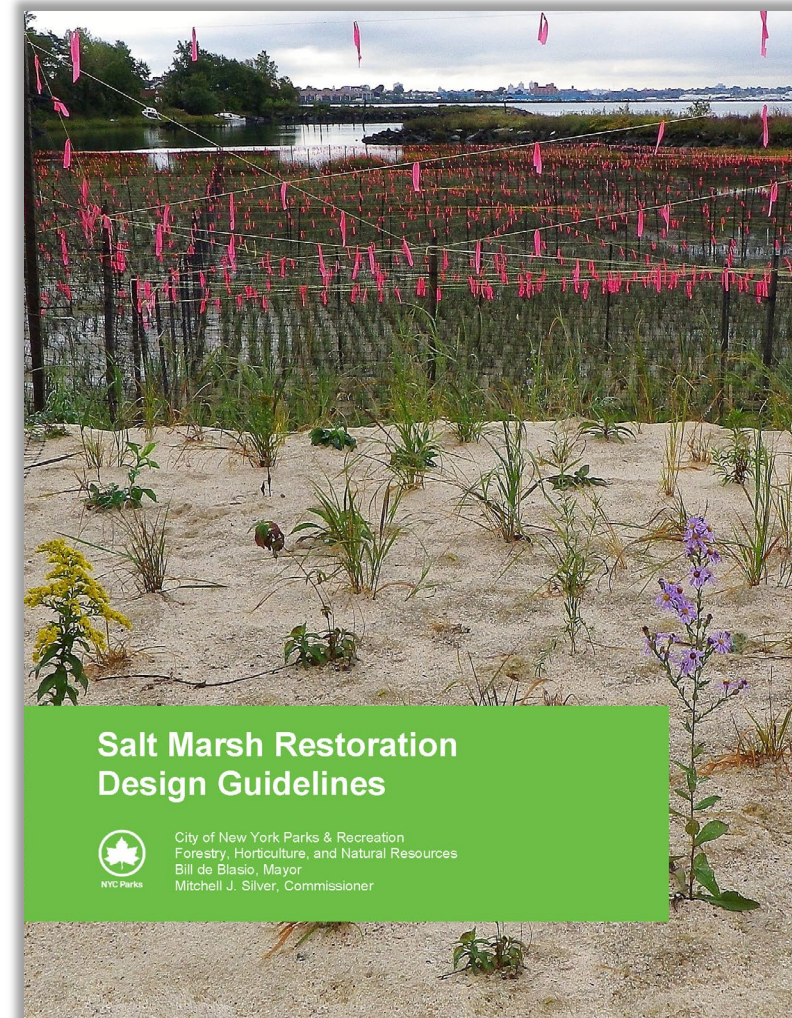
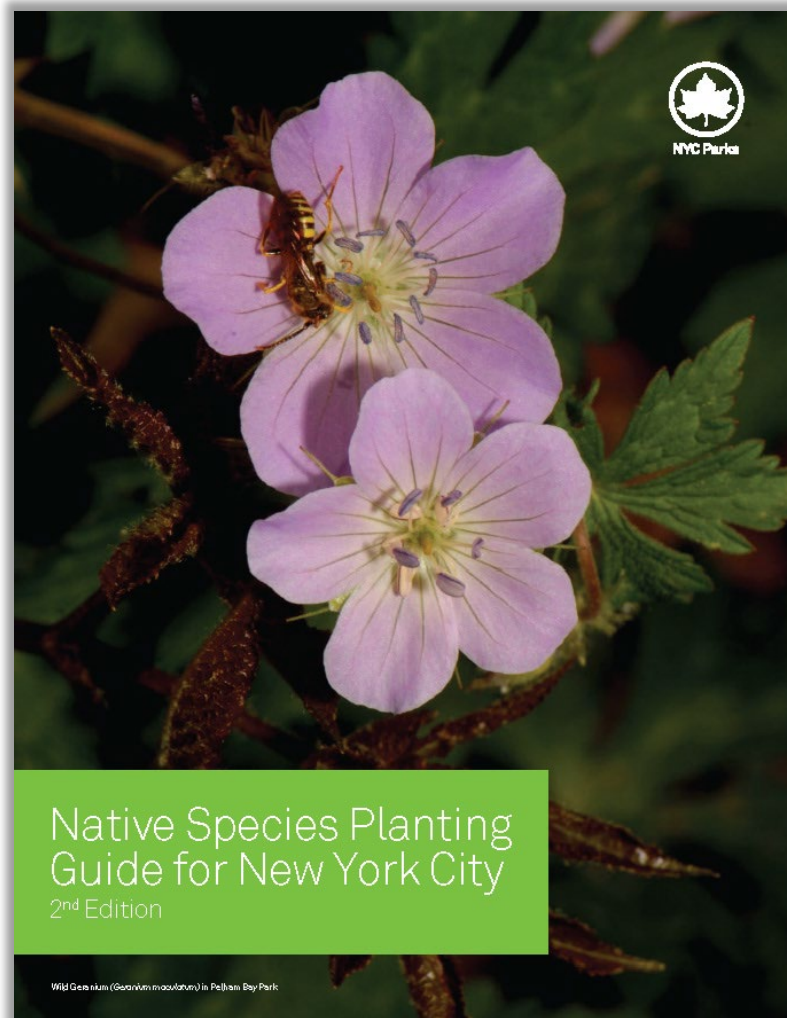
NYC Parks

Design Principles – Design for the Environment

Designing Around Critical Root Zones



Protecting Forests, Marshes & Forever Wild Areas

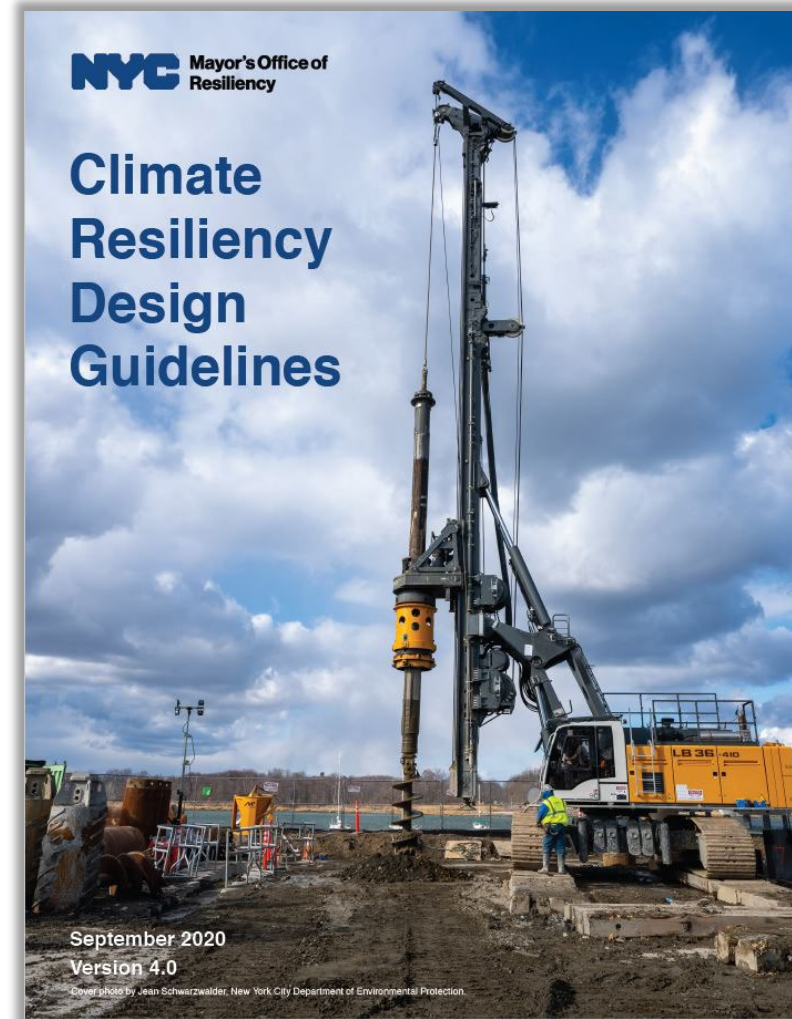
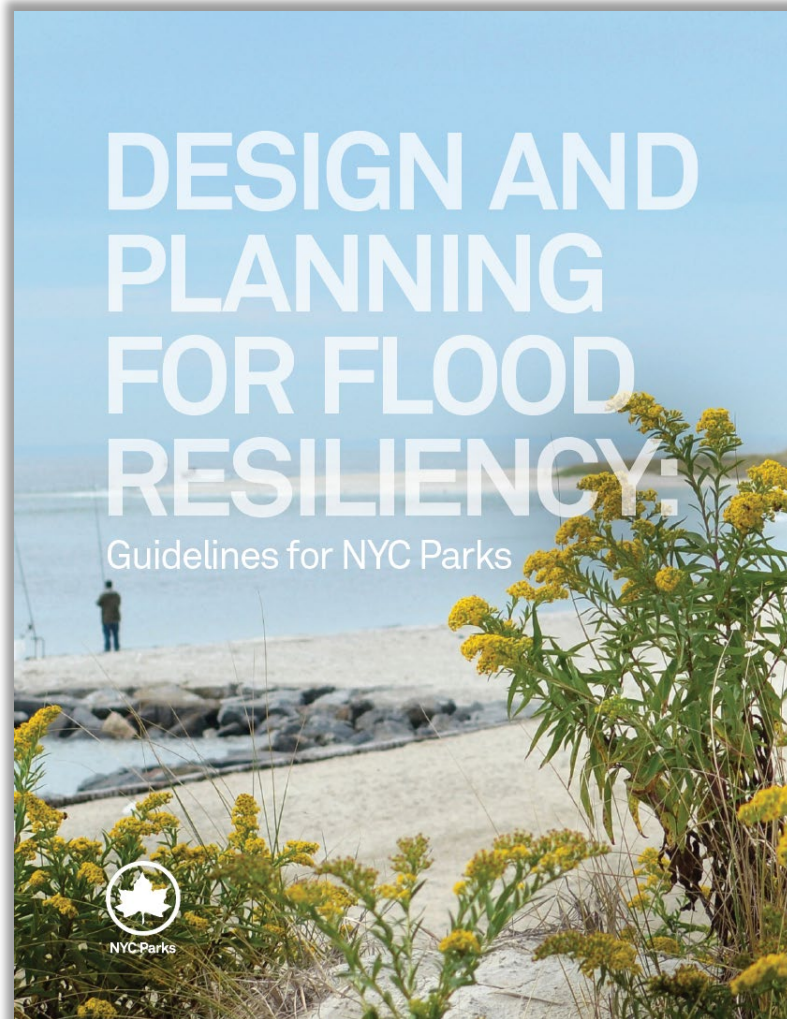


Available at
nycgovparks.org



Design Principles – Design for the Environment

Designing for Storm Resiliency



Available at
nycgovparks.org
and at nyc.gov



Design Principles – Design for the Environment

Site Analysis – Flood & Stormwater



Source: <http://www.nyc.gov/floodhazardmapper>

 **Community Parks Initiative**
Pontiac Playground | Flood Risk (Coastal)

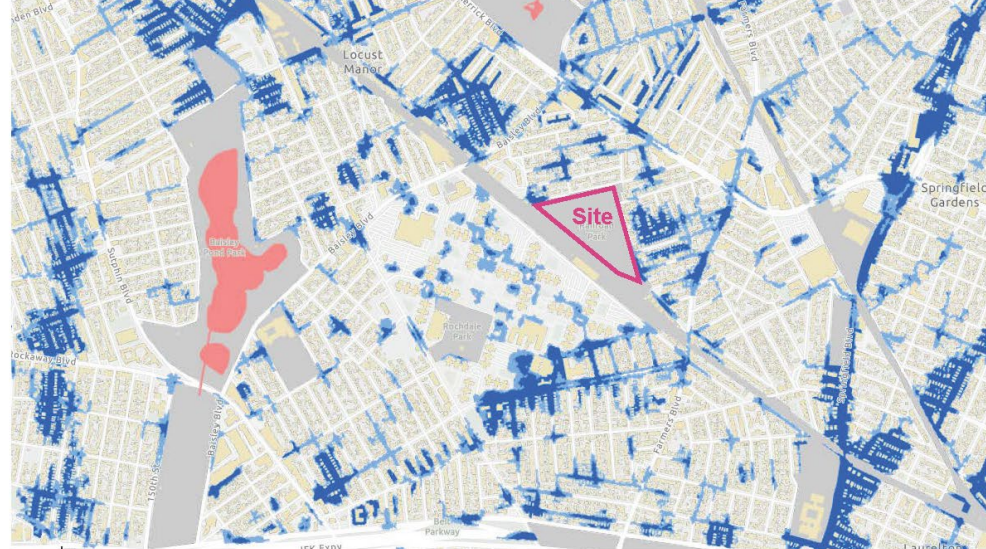
Flood Hazard Zones

2015 Preliminary Flood Insurance Rate Map

- **V Zone (100-year floodplain subject to wave action)**
Areas along coasts subject to inundation by the 1% annual chance flood event with additional hazards associated with storm-induced waves.
- **A Zone (100-year floodplain)**
Areas subject to inundation by the 1% annual chance flood event.

NYC Stormwater Flood Maps

Beta Version



NYC Stormwater Flood Maps (Extreme Flooding)

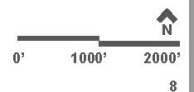
- Area not included in analysis
- Future High Tides 2080
- National Wetlands Inventory
- Deep and Contiguous Flooding (1ft and greater)
- Nuisance Flooding (greater or equal to 4 in and less than 1 ft)

This map:

- Reflects roughly 3.5 inches of rain falling in one hour (also referred to as the 100 year storm, with approximately 1 percent chance of occurrence in any given year).
- Shows an extreme rainstorm that City infrastructure was not designed to handle.
- Reflects 4.8 feet of sea level rise, which is a high estimate for the 2080s.
- Includes impacts of potential blocked storm drains and outfalls from sea level rise.

Flooding from a storm like this would:

- Cause widespread damage and disruption to both private and public property.
- Disrupt roads, subways, regional rail, and potentially power/communication networks.
- Cause flooding across coastal neighborhoods due to sea level rise impacts.



Railroad Park | Flood Risk (Stormwater)



Design Principles – Design for the Environment

Resilient Materials



Design Principles – Design for the Environment

Onsite Stormwater Management & Green Infrastructure



Rain Gardens



Street Stormwater Capture



Permeable Pavers

Bound by a curb or concrete pavement



Dome Grate in a Rain Garden



Design Principles – Design for the Environment

Design for Safety

Welcoming Entrances Aligned with Crosswalks

Supporting DOT's **Vision Zero** Initiative



Design Principles – Design for Safety – Thomas Boyland Park, Brooklyn

Lighting & Sightlines

Pedestrian-scale Lighting and Open Views



Design Principles – Design for Safety

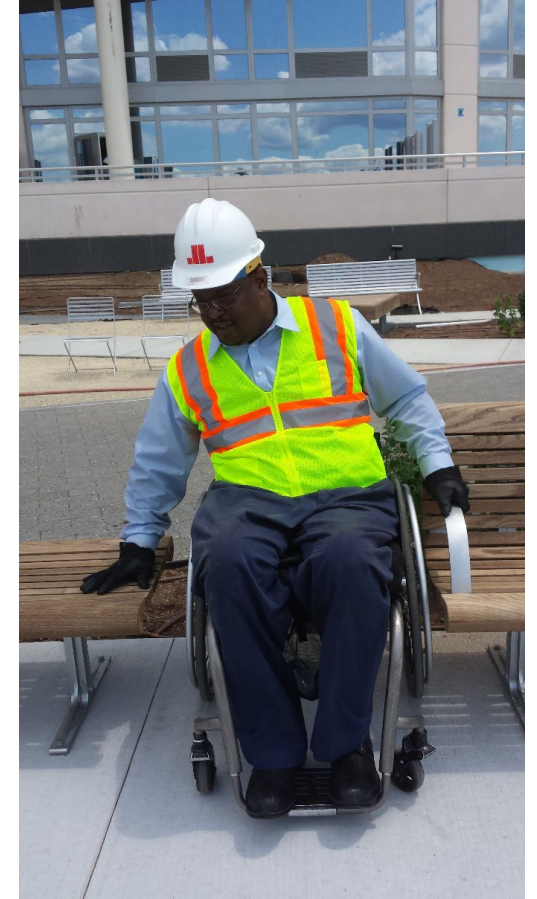
Design for All

Inclusion + Going Beyond ADA

Design for all Abilities

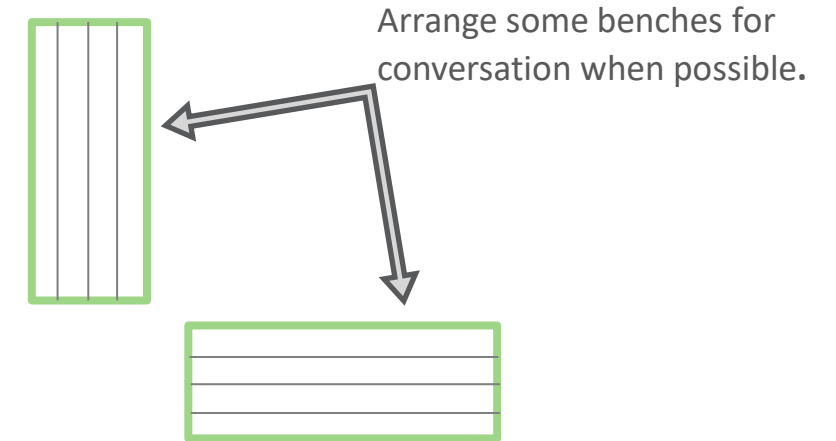
- Increasing accessibility in all parks for those with disabilities.
- Going **beyond** the requirements of the **ADA** to create **Universally Accessible** parks.

Resource: Accessibility Coordinator
christopher.noel@parks.nyc.gov

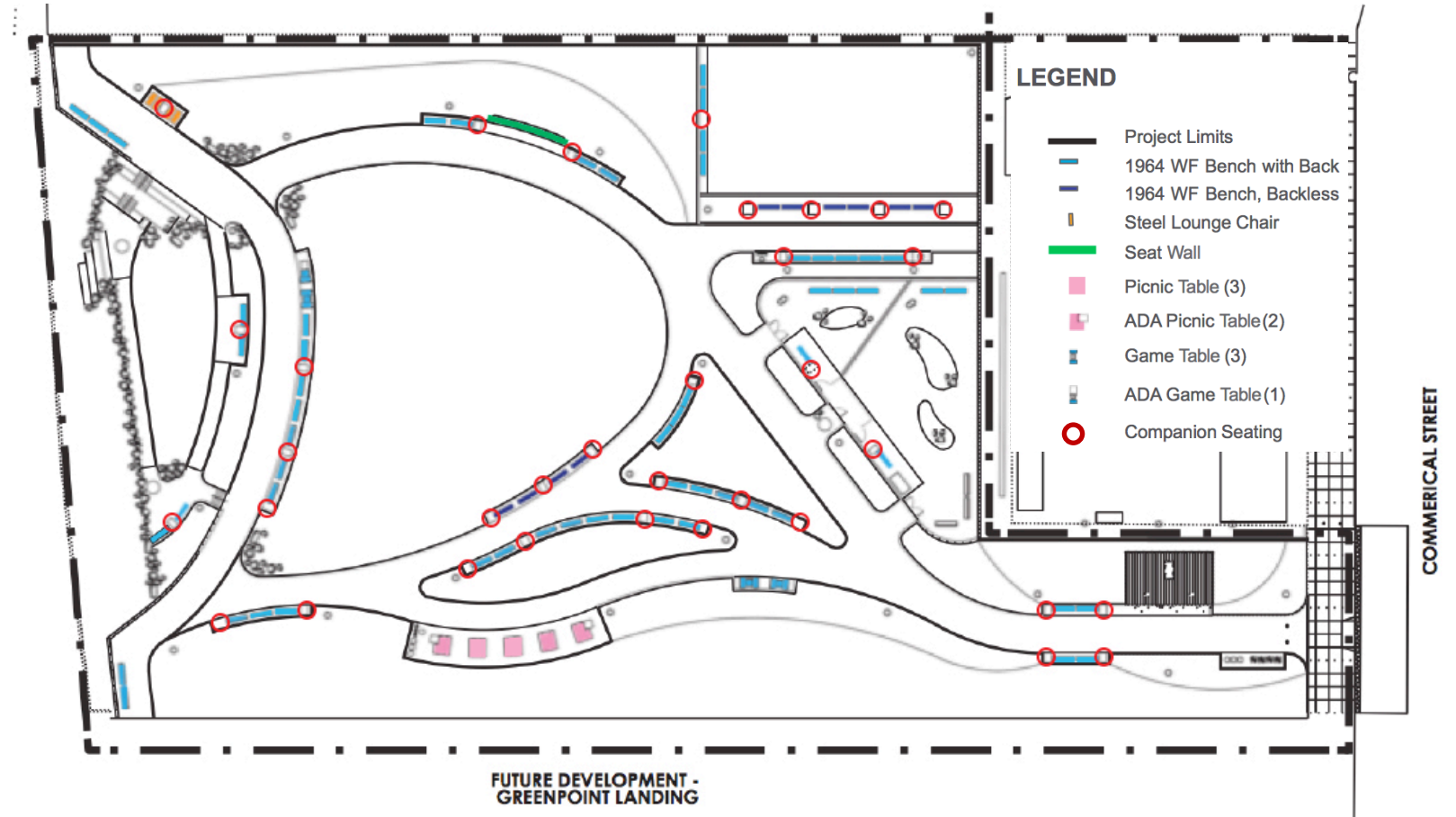


Design Principles – Design for All

Design for Comfort & Accessibility



Companion Seating



Design Principles – Design for All

Guidance 3' Clear Space between benches for companion seating.

Optimum Dimensions for Path with Benches



Not enough space



Nice space for benches across from each other



Design Principles – Design for All

Design with Maintenance in Mind

Simple & Robust Plantings



STANDARD MATERIALS & FURNISHINGS

Historic - Traditional



Type A Bench



Type E Hi-Lo



Black/Dark Green Bottle Filler



Decorative Bin
or Public Space
Receptacle in black



Type B
Luminaire
and Pole

Contemporary - Modern



1964 World's Fair Bench
Good for high salt waterfront sites



Type F Hi-Lo



Silver Bottle Filler



**Public Space
Receptacle Bins**



**Flushing
Meadows
Luminaire
and Pole***

Transitional



Type A Bench



Type F Hi-Lo



Black Bottle Filler



Decorative Bin
or Public Space
Receptacle in
dark grey or black



Flushing
Meadows
Luminaire
and Pole

Thoughtful Placement for Shade & Views





Bench, 1939 World's Fair (Type A Bench)
Back and backless, with painted supports and Cedar RPL



Bench, 1964 World's Fair
Back and backless with Cedar and Weathered Wood RPL



Provide benches for all users

Include sufficient seating for everyone including around spray showers

ADA companion seating

Space for a wheelchair between benches must be provided

Preference

4'-0" and 8'-0" lengths rather than 6'-0"

Thoughtful Placement

Arrange benches in groups to encourage conversation

Use Recycled Plastic Lumber

Standard RPL colors



Weathered Wood



Cedar



Milwaukee Brown

**Italicized names are Standard Items*



Steel Picnic Table [APT #8R by RJ Thomas]
Perforated steel with thermoplastic coating



Picnic Table - Fixed
Black painted supports with RPL slats
Standard and ADA accessible version



Steel Table Set [Ultrasite Single Pedestal Table]
Standard and ADA accessible version
See standard details for other options

Guidance Anova Round Perforated Table is an alternate option. Field paint hardware. Wabash Valley no longer available.



Picnic Table [1939 *World's Fair*
by Kenneth Lynch] RPL



Ultra Slotted Steel Table [Anova]
Steel with thermoplastic coating;
good for high salt environment



**Steel Table – 42" Round with Perforated
Top** [Saxony by Keystone Ridge]



Cafe Table [Catena by Landscape Forms]
Stainless steel, 30" or 36" diameters



Type 'E' Chair
 [Scarborough by Landscape Forms]
 Armless available (custom)



Type 'E'
 [Courtyard Chair by Keystone Ridge]
 Available with arms



Many colors
 available

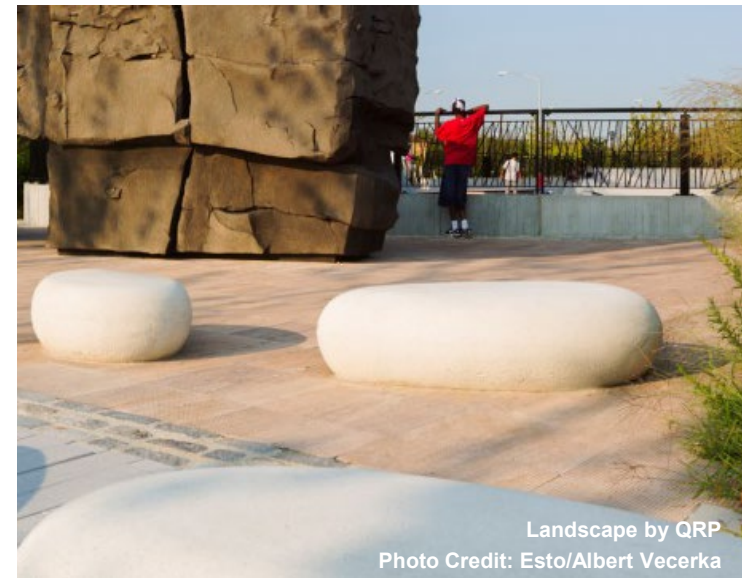
Guidance Consider distance from table
 when choosing arm or armless versions



Lounger [*Sillarga* by Escofet]
Concrete



Lounger [700-720 Series by Maglin]
Painted steel



Pebble Seat [Key Cast Stone Corp]
Precast Concrete*

Guidance Comfort is important;
other options available.

*All precast concrete items need to
have an aggregate speckled finish
and non-white color to deter graffiti.



Standard Materials – Non-Standard, Sometimes Used



With Type E Chairs



ADA table with '39 World's Fair Benches



With '64 World's Fair Benches

Guidance Standard and ADA accessible versions – see standard details



Tot Picnic Table - Accessible
[Puddin Drippins by Keystone Ridge]



Tot Picnic Table – Steel, variety of colors
[Puddin Drippins by Keystone Ridge]



Tot Picnic Table - Concrete
[Kenneth Lynch & Sons]



Tot Picnic Table - RPL
[GT169 by Game Time]



Maintenance Challenges



Skateboard Damage



Graffiti

Guidance

- Only use for soil retention
- Do not include freestanding walls
- Notch to deter skateboard usage

Seatwalls to Retain Soil only

Good example of retaining wall with benches in front.



East Midtown Greenway, Manhattan, Stantec

- Provides age-friendly seats and **required companion seating** for wheelchair users.
- Comfortable Parks-standard benches.
- Skateboard damage unlikely.



Decorative Bins (Historic Properties)



Public Space Receptacle Bins

Also available in black



Trash Compactor Receptacle or Fully Enclosed Trash Receptacle

Non-compacting version available

All units come with foot pedals

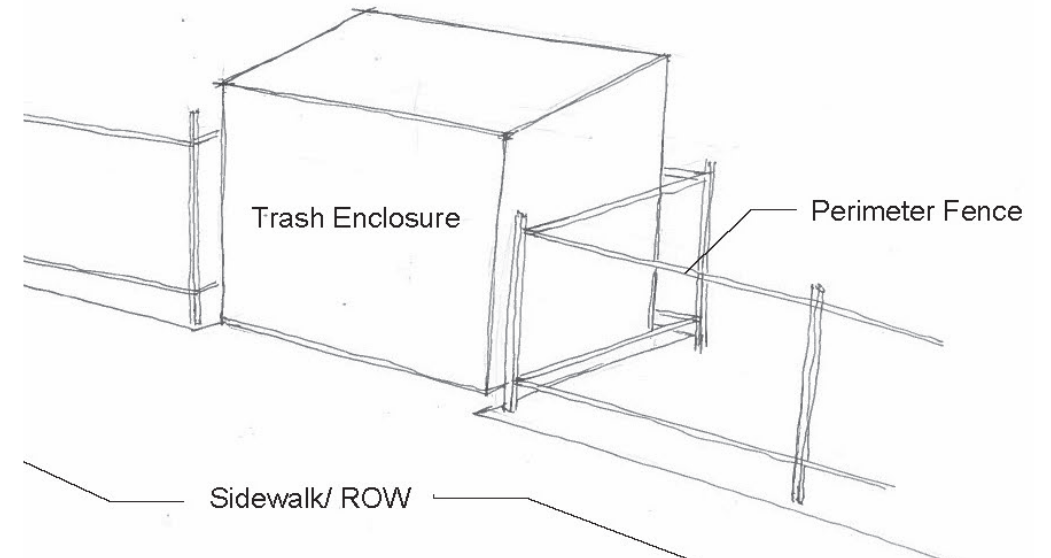
Guidance

- Confirm inclusion of recycling bins with borough maintenance and operations.
- All designs should include space for future recycling bins.



Small Trash Enclosure Features

- Top and front opening
- Lockable
- Steel with black powdercoat finish
- Maximum 4'-0" height
- Rodent-proof





Drinking Fountain - Type F Hi-Lo



Drinking Fountain - Type E Hi-Lo



Building Mounted Hi-Lo

Guidance Type E and F come with bowls for each required ADA ‘Hi-Lo’ height.

- ‘Hi’ for those who have difficulty bending
- ‘Lo’ for wheelchair users

Reference: Design Directive 2015-1 Water Bottle Filler and Drinking Fountains



Bottle Filler w/Hi-Lo Drinking Fountain Basins



Bottle Filler



Bottle Filler w/ Dog Bowl for Dog Runs

New Standard Bottle Fillers

Styles: Bottle Filler, Bottle Filler w/ Dog Bowl, Bottle Filler w/Hi-Lo Drinking Fountain Basins

Colors: silver, black, dark green, blue

Decal: NYC Water Logo



Guidance Bottle fillers are important for sport areas. Preference for a bottle filler paired with a separate drinking fountain.
Reference: Design Directive 2015-1 Water Bottle Filler and Drinking Fountains



Bicycle Rack - Hoop



'CityRack' (Bicycle Rack – Hoop)

- **Finish:** hot-dipped galvanized
- **Color:** silver

Guidance

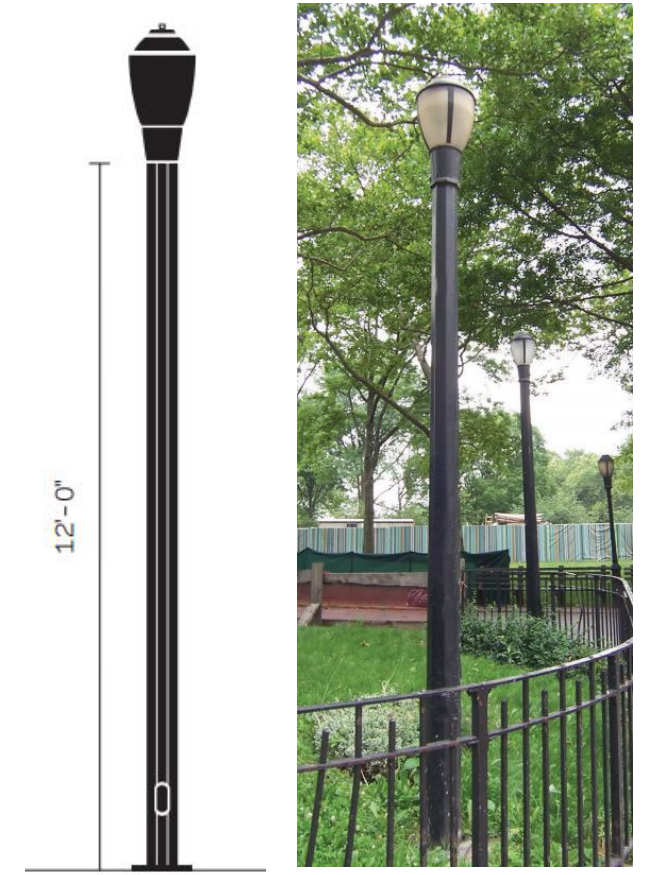
- Locate where people would like to lock their bikes.
- Place near park entrances, basketball courts and active site features.
- See standard detail for space guidance



Riverside Luminaire Type B Pole



Flushing Meadows Luminaire and Pole (Candela)



2085 Luminaire and World's Fair Pole
Note: Do not install with Cobrahead base

Guidance All projects should include park lighting with appropriate light levels per NYC DOT guidelines. Placement coordinated with and maintenance done by DOT.

Reference: NYC DOT Street Design Manual



Standard Materials – Park Pedestrian Lighting



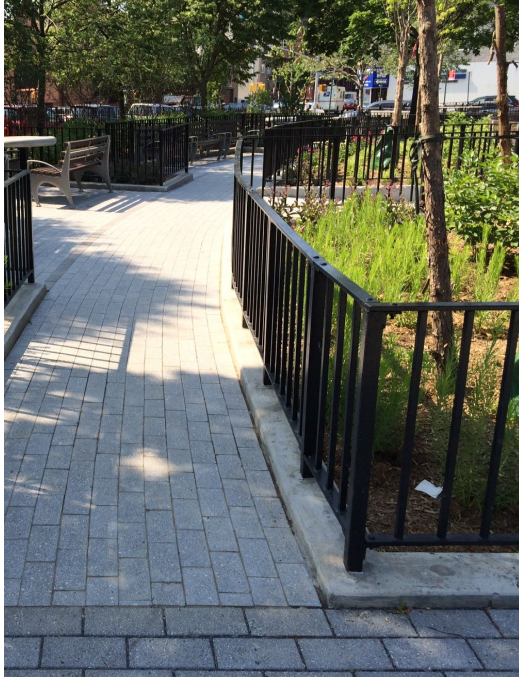
Poor Spacing
Ensure enough space around pole
for planting



Wrong Color
Ensure proper color in shop
drawings and construction
*Flushing Meadows Luminaire and
Pole*



Wrong color and wrong base
*2085 Luminaire and Pole with
Cobrahead Base*



Steel Fence 2'-6" high

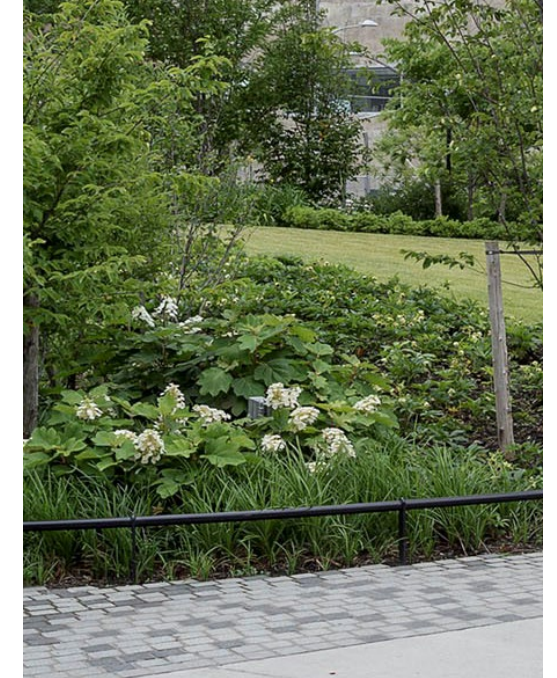
- Only where people are likely to cut through the plant bed
- Not needed for plant beds against a perimeter fence
- Include gate access for maintenance if fully enclosed



Tree Pit Guard



Wicket Fence – 12" high



Single Pipe Plant Fence



Louvered Fence



Guidance

Screening with trees is preferred; add louvered fence when needed.



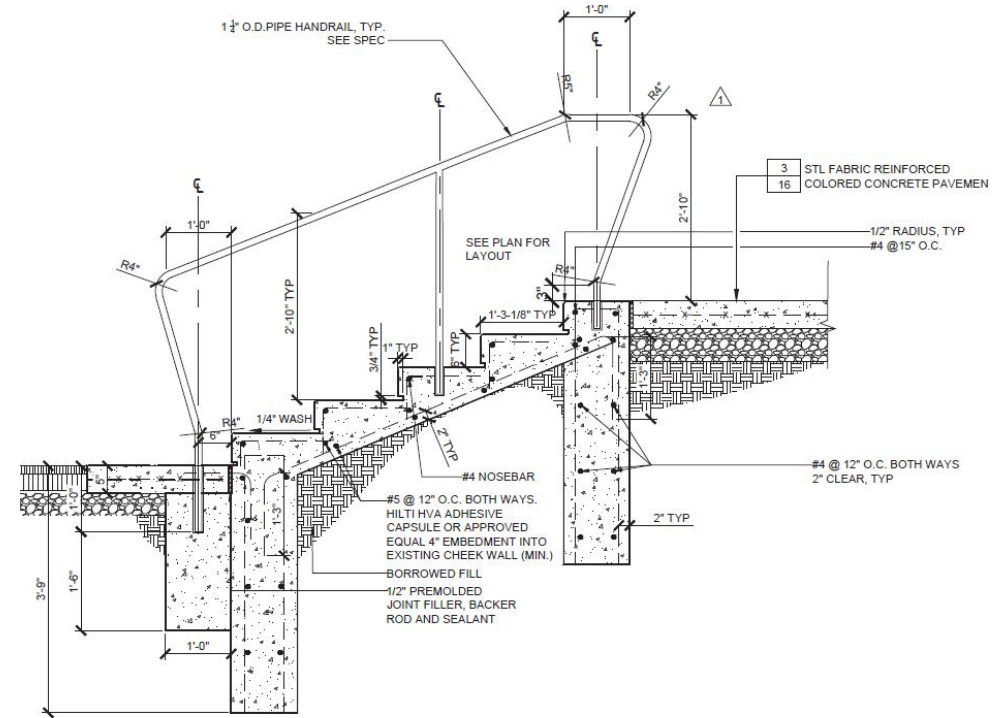
Cable Fence



Cable Mesh Fence



Exposed footings



Guidance Meet current ADA standards for dimensions at top and bottom.
Stainless steel for contemporary designs | Black for Legacy or Landmarked Sites

References:

<https://www.access-board.gov/ada/guides/chapter-4-ramps-and-curb-ramps/#handrails>

<https://www.access-board.gov/ada/guides/chapter-4-ramps-and-curb-ramps/>

<https://www.access-board.gov/ada/guides/chapter-5-stairways/>



Asphalt Block



Accessible Granite Block



Non-Permeable Concrete Paver



Permeable Concrete Paver



Stone on Concrete Base

Bluestone or granite for historic use

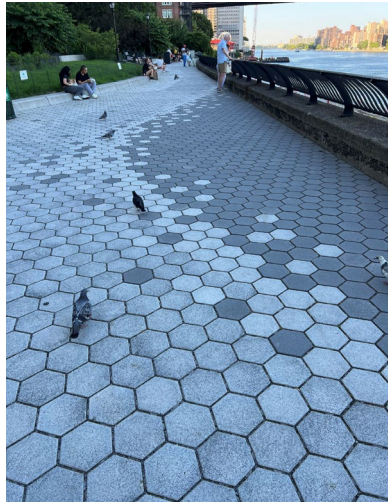


RPL Decking

With approval at marshes and other complex sites

Guidance

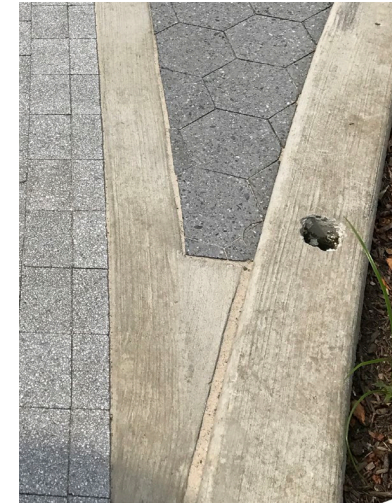
- Various shapes and sizes specified on drawings
- Use pavers with concrete edge; no steel edging
- Use mix of colors or aggregate to hide stains
- Use smaller than 12"x12" for durability
- Use appropriate base for location



Stipple patterned pavers



Sawn joints



Curb with Acute Angle



**Concrete curbs binding
concrete pavers**



**Concrete bench slab in
safety surface**



Embossed concrete



Stone Screenings



Epoxy-bound Woodchips



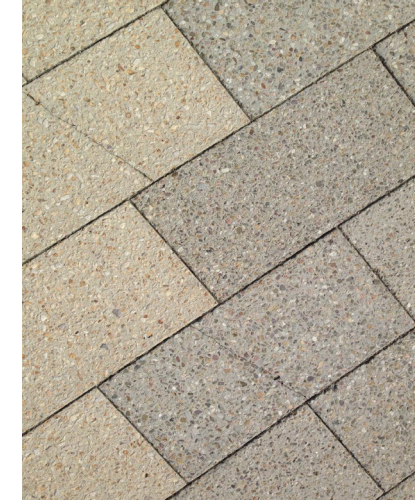
**Asphalt with aggregate
rolled into top course**



Steel or Plastic Edging



Epoxy-bound aggregate



**Pavers too large for
vehicle use**



Concrete pad is not required for ground hydrant when in concrete or in asphalt pavers



This concrete pad for ground hydrant in planting is too large though its location abutting the curb is in a good, unobtrusive location



Avoid unnecessary concrete pads (and small hard to roll asphalt areas)



Scupper with fence



Scupper not required for flush curb if no safety surface



Scupper with plant rail



Simple, dense planting



Galvanized scupper tube with no fence and curb is close to play



Ballast catch basin in safety surface



Dome grate with concrete

PLANTING STANDARDS & PRINCIPLES

See also Planting Guide Specs & Details

Maintenance Overview

- Planting designs should be guided by an understanding of Parks' maintenance regimens and constraints.
- Not all sites receive maintenance from gardeners.
- General maintenance of small parks, playgrounds, ballfields, plazas, and bike paths include trash removal, mulching, trimming to define plant beds, and weeding. These tasks are usually assigned to seasonal workers with limited plant knowledge.
- Maintenance & Operations (M&O) guidelines on weeding are in line with **Parks Inspection Program (PIP)** standards. PIP defines weeds as a *Cleanliness Feature* measured by the percentage of an area infested with weeds, not by any height.
- **Fixed post sites** vs. **mobile sites**: Sites with public rest rooms are more likely to have fixed staff on site year-round, while mobile sites receive less maintenance. Check whether sites are fixed post or mobile.



Fewer

Fewer species

Larger

Larger beds

Denser

Denser placement



Calvert Vaux Park, Brooklyn

Fewer, Larger

- Simple planting masses in larger beds
- Maximize tree planting
- Limit number of species overall in sites
- Limit number of plant beds
- **Avoid small plant beds.** Eliminate or consolidate plant beds under 50sf. Aim for larger beds when possible.
- **Planting should consist of masses** of single species planting. Accent plants should also be massed.
- **Focus on using woody plant material** and limit use of perennials. Shrubs tend to have more longevity than perennials in Parks landscapes.



Denser

- **Decrease spacing between shrubs and groundcovers** and increase the number of plants. Shrubs in parks may never reach mature “full” size, so tight spacing helps create the look of a mature landscape. Ideally **planting should look almost or fully filled in when the park opens** to the public.
- Groupings should contain at minimum: 10-15 plants of one type for groundcovers/perennials and 5 for woody shrubs.



Luther Gulick Playground, Manhattan



YES

Aim for tighter plant spacing and well-defined masses. Avoid large areas of mulch.



NO

Sparse planting is unlikely to establish and grow to mature size.



Planting Standards & Principles – Simple, Bold, and Maintainable Planting Plans



Cast Concrete RPZ



Metal Electrical Box

- Painted green boxes are preferred
- Size should be as small as possible
- Locate everything inside the box

Guidance Screen all utility boxes with evergreen material of sufficient height and understory trees as appropriate



Thornless Honey Locust
Gleditsia triacanthos var inermis



Black Gum
Nyssa sylvatica



Willow Oak
Quercus phellos



Eastern Redbud
Cercis canadensis



American Holly
Ilex opaca



Virginia Rose
Rosa virginiana



Oakleaf Hydrangea
Hydrangea quercifolia



Summersweet
Clethra alnifolia



Switchgrass
Panicum virgatum



Bigroot Geranium
Geranium macrorrhizum



Pitch Pine
Pinus rigida



Eastern Redcedar
Juniperus virginiana



Thornless Honey Locust
Gleditsia triacanthos var inermis



Sassafras
Sassafras albidum



Staghorn Sumac
Rhus typhina



Virginia Rose
Rosa virginiana



Beach Plum
Prunus maritima



Bearberry
Arcostaphylos uva-ursi



Switchgrass
Panicum virgatum



Adam's Needle
Yucca filamentosa



***Do not Use
Tree Grates***

Tree Pits in Pavement

- Tree pits should include at least 50sf of open mulch, with more space allotted for larger trees.
- Edges of pits to be concrete curbs, concrete pavement, or mortared granite block.
- Do not use Plastic or Metal Edging

Existing Tree Pits in Granite Block on Sand

- Existing tree pits should be expanded to 50sf minimum
- Existing granite block on sand should be mortared to reduce complex weeding and maintenance.

Thank You!