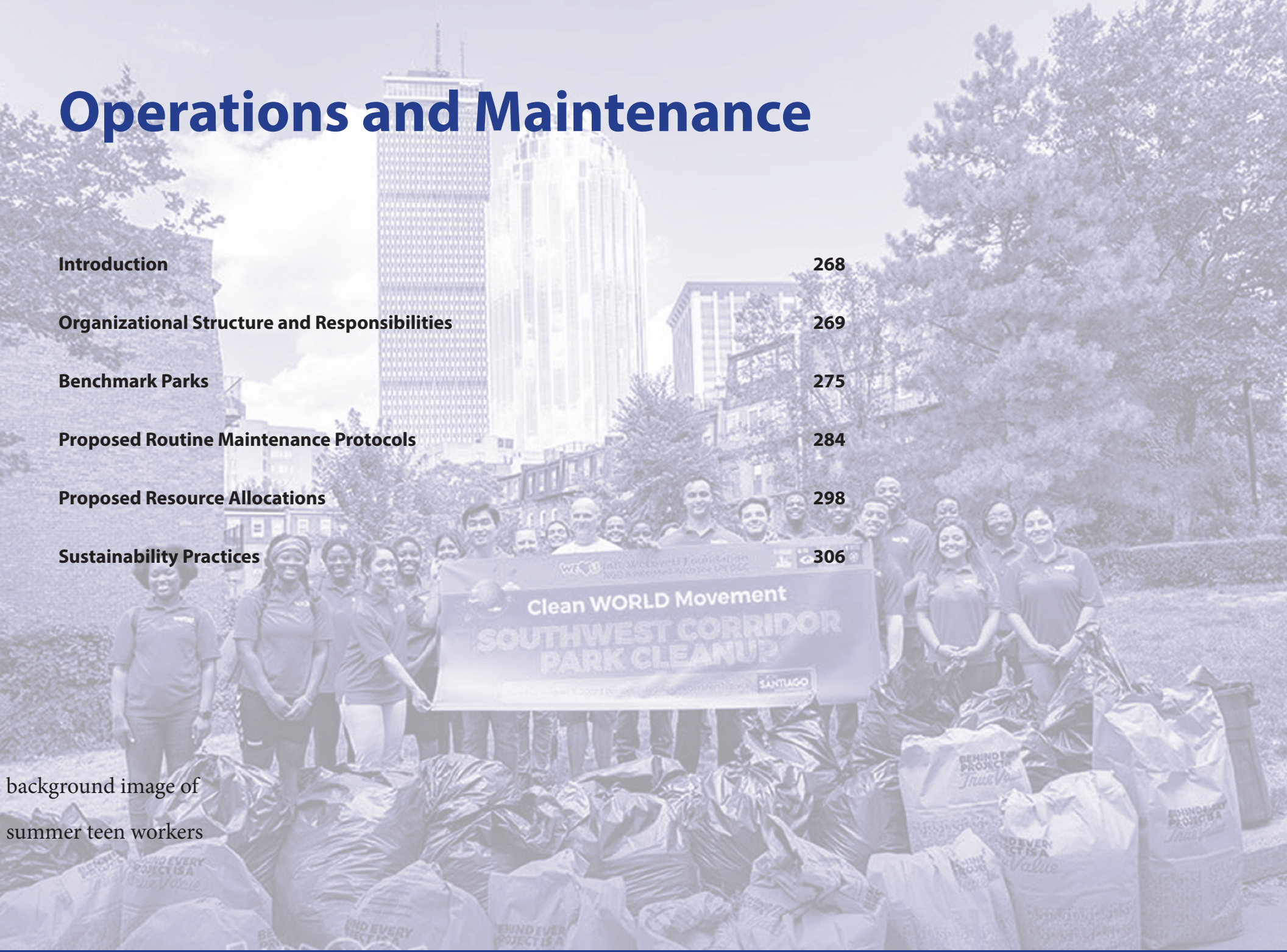
11 Operations & Maintenance

Operations and Maintenance



background image of
summer teen workers

Operations and Maintenance

Introduction

The Operations and Maintenance Chapter provides guidance for the maintenance staff who tend to the Southwest Corridor Park's maintenance needs on a daily basis, as well as benchmarking and budgeting information for decision-makers and advocates. The document outlines the strategies, procedures, and responsibilities essential for the effective management and upkeep of the park, particularly in light of the improvements supported in this Action plan. The Southwest Corridor Park plays a vital role in enhancing community well-being, providing recreational opportunities, and preserving natural habitats, but requires effective and efficient maintenance actions to ensure it meets community needs.

The ultimate success of any capital improvements to the Southwest Corridor Park depends on a strong commitment to implementing and funding maintenance protocols that will ensure their longevity and maximize the value of any new investments.

Organizational Structure and Responsibilities

To understand current and maintenance needs, this section examines the existing organizational structure of the Southwest Corridor Park's Maintenance Division, including the roles and responsibilities of park managers, maintenance crews, and partnering organizations and stakeholders.

Park Ownership and Control

The Southwest Corridor Park has a complex ownership and management structure that adds a layer of difficulty to coordination of maintenance and operational activities. The major entities with ownership or control of elements of the Southwest Corridor Park, and their respective maintenance responsibilities are shown in the table to the right. The public, however, does not generally see this break-out or differentiate between owners or responsible parties.

While this system of owners adds to the complexity of park maintenance, including differing priorities or conflicting interests, it also provides the opportunity for diversified funding sources for maintenance and improvement projects, and the opportunity to learn from other agencies' best practices. Still, coordination and collaboration among the various owners and responsible entities is key to ensuring maintenance efforts are cohesive and offer the best visitor experience. To clarify responsibilities, formal agreements such as maintenance contracts or joint-use agreements could be useful to ensure shared commitment.

Park Ownership/Control and Responsibility

Agency/Organization	Ownership/Control	Maintenance Responsibilities
Massachusetts Bay Transportation Authority (MBTA)	Owns the park land itself. Owns the transit system.	• Empties trash receptacles 2x per week • Plows snow for storms over 1" • Responsible for MBTA plazas, stations, drainage infrastructure and deck structures over the T • Prunes trees on park land that overhang the rail corridor
City of Boston	Controls the roads, roadway lighting, public sidewalks adjacent to streets, as well as intersections, street crossings and curb ramps. This includes intersection signals and traffic lights. Controls the dual path system along Columbus Avenue, from Ruggles to Camden Street	• Maintains public sidewalks (adjacent to streets), curb ramps, street crossings and crosswalks • Maintains intersection signals and traffic lights • Snow removal on city streets and sidewalks • Responsible for roadway lights • Maintains the dual path system along Columbus Avenue, from Ruggles to Camden Street • Responsible for planting and pruning street trees
Department of Conservation and Recreation (DCR)	Care and custody of the park land and its components such as the shared use path system, signage, playgrounds, courts, splash pads, internal park lighting, community gardens, and site furnishings .	• Maintains the shared use path • Maintains all playgrounds, courts, fields, splash pads, dog parks, and community gardens • Maintains signage and internal path lighting • Maintains site furnishings such as benches, trash receptacles, and drinking water fountains, including graffiti removal • Empties trash receptacles if overflowing between MBTA servicings • Responsible for lawn care, planting and pruning trees, watering vegetation, maintaining shrubs and vines • Responsible for leaf cleanup

Entities with Ownership or Caretaker Roles for the Southwest Corridor Park
Three main entities own, or take care of, the primary elements visitors encounter in the Southwest Corridor Park. The role of Friends Groups, Volunteers and Contracted Services are discussed later in this section.

Current Staff

DCR operations staff has decreased dramatically since the park's opening, limiting the capacity for operations and maintenance. Once fully built-out and operational, the park had 30 employees dedicated to Southwest Corridor Park maintenance and operations. As of 2015, there were 18 staff. Today, that number has decreased to five. In addition to the maintenance demands of the Southwest Corridor Park, the five staff are also responsible for mowing the lawns along four miles of Emerald Necklace Parkways. While technological advances and upgrades to machinery offset some of the decrease in staff, the current staffing still represents a significant decrease in maintenance capacity, and an increased demand on the remaining employees to do more.

When the park was first opened, rangers were present throughout the park, and those individuals were the primary contact for park visitors. Over time, those positions were eliminated and now the maintenance personnel, who are in the parks most weekdays from 6:30 am to 3:00pm field many of the questions, comments and feedback from park visitors.

Currently, staff consist of 1 Field Operations Team Lead, 2 Forest and Park Supervisors and 2 Laborers. Staff work throughout the entirety of the park, and do not have specialized roles. Full-time DCR staff are supplemented with seasonal/temporary workers, including teens from Roca, a local nonprofit group providing support, pre-vocational training, and transitional employment for high-risk young people, as well as detainees from the Department of Corrections. These temporary or seasonal workers work under a DCR staff member. DCR also hires its own seasonal workers, including one person specifically hired to maintain the spray decks in the Southwest Corridor Park.

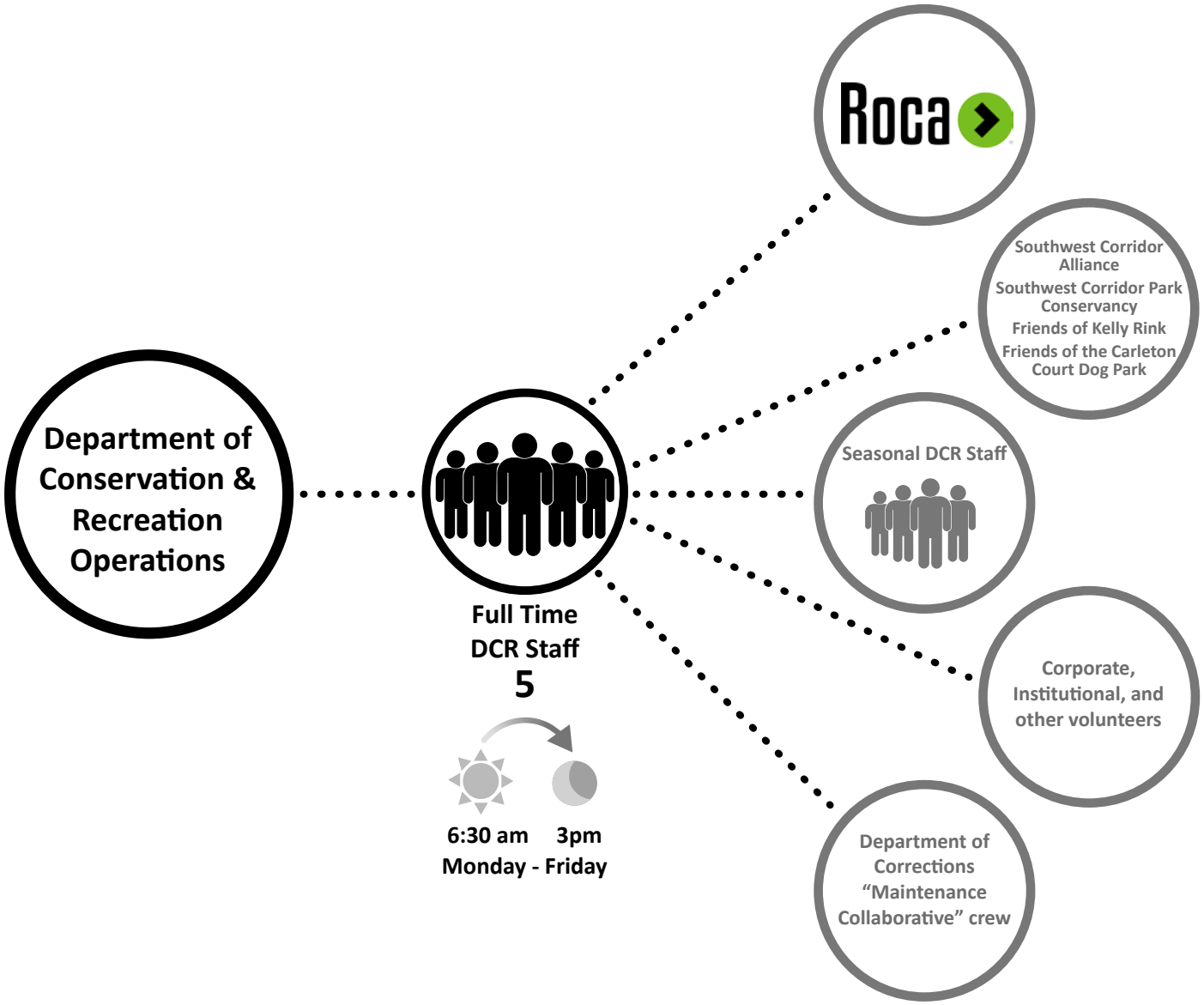
The temporary or seasonal support workers include:

- DCR seasonal hires - 3 long-term seasonal workers, 1 short-term seasonal for spray parks (Memorial Day -Labor Day)
- Roca - 2 to 4 teens for three hours, four days per week during the summer
- Department of Corrections - 1 or 2 people one day each week, though the crew used to be 6 people.

A number of Friends groups along the Corridor provide support through volunteer labor and fundraising. These include the Southwest Corridor Park Conservancy (SWCPC), Southwest Corridor Alliance, and the Friends of Kelly Rink. Boston Cares also hosts a volunteer day once a month, in conjunction with the SWCPC. These Friends groups organize garden and park stewards, who take care of designated areas of the park, typically ornamental planting beds in the South End/Back Bay and Jamaica Plain/Stony Brook segments of the Southwest Corridor Park. The Friends of Kelly Rink operate a skate rental service during public skate sessions and offer ice skating lessons.

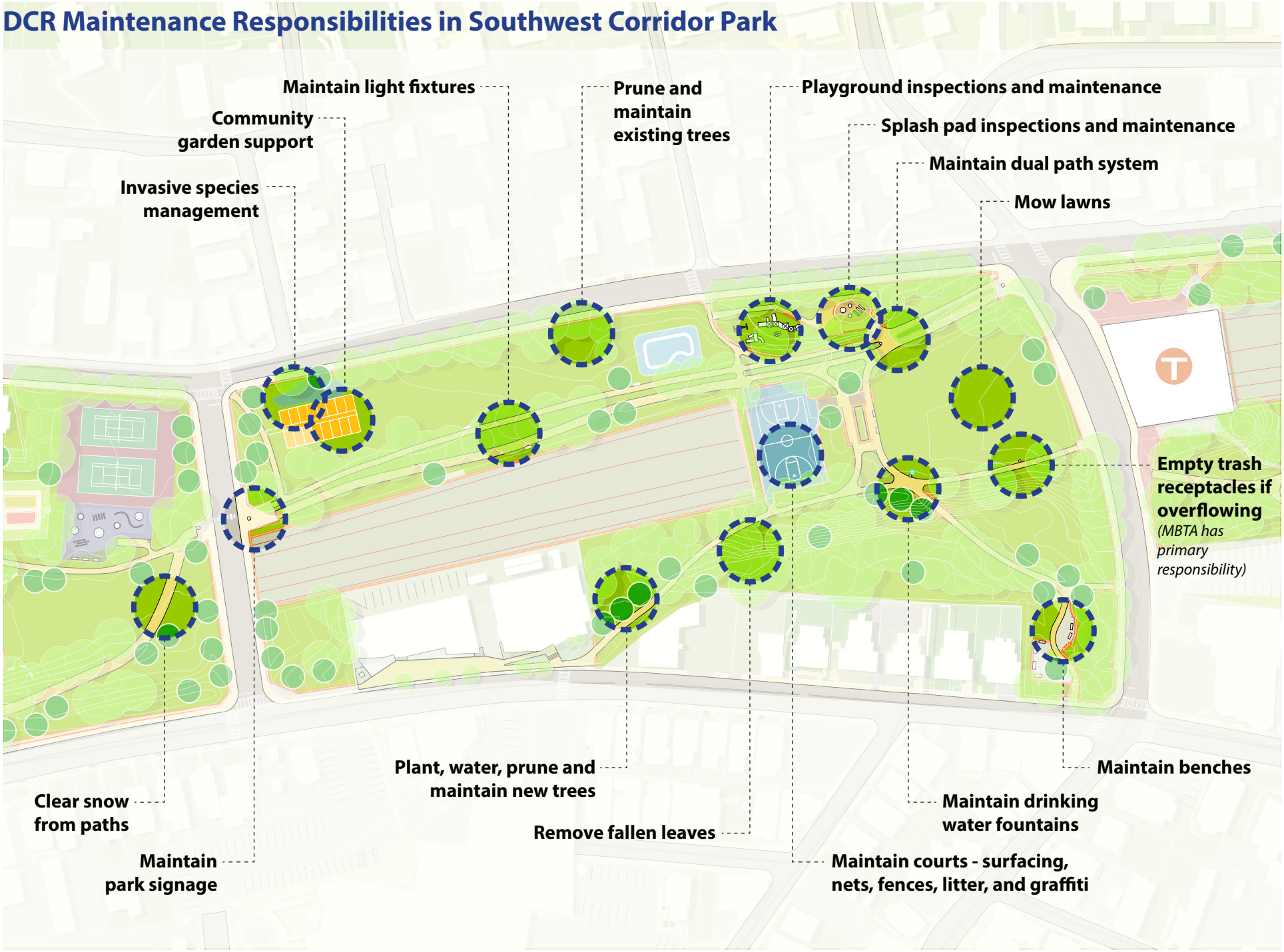
In addition, some corporate, philanthropic, or educational institutions along the corridor, such as Northeastern University and Roxbury Community College host volunteer days, offering their support to segments of the park near their institutions. Finally, a number of smaller volunteer organizations are dedicated to specific sub-segments of the park, such as the Friends of the Carleton Court Dog Park.

Current Park Maintenance Staff, Temporary Workers, and Volunteers



DCR Southwest Corridor Park Operations Staff Main Responsibilities

DCR Maintenance Responsibilities in Southwest Corridor Park



Benchmark Parks

Introduction

The Southwest Corridor Park has a set of unique environmental, social and logistical factors that help define and limit the range of maintenance and operations options available. However, the Southwest Corridor Park can choose to adapt strategies to suit its specific context while still benefiting from general principles and approaches observed in the benchmark parks. In addition, comparing operations and maintenance protocols between similar-sized or similar-function parks can provide several valuable insights and benefits. Some of these include:

- Identifying best practices, such as maintenance techniques or sustainable practices, that have proven effective in other settings and could be relevant for the Southwest Corridor Park
- Streamlining operations by examining how other organizations optimize maintenance schedules, allocate resources or implement cost-saving measures without sacrificing quality
- Examining how other parks handle challenges, such as extreme weather, invasive species, or safety, and how they mitigate the effects of these risks
- Gathering information to establish benchmarks for performance metrics, such as visitor satisfaction, cleanliness, sustainability, or operational efficiency - setting goals based on achievable standards
- Fostering long-term collaboration and cooperation among parks, local communities and supporting organizations - laying the groundwork for shared resources, joint projects, and collective efforts toward enhancing park management practices
- Informing policy decisions related to park management and funding

Benchmark Park Summaries

The benchmark parks were selected for their similarities to the Southwest Corridor Park, in function (multi-use, transit-oriented), layout (primarily linear), and climate (warm summers, cold winters and precipitation year-round). Below is a brief summary of the parks chosen to be examined as maintenance and operations benchmarks for the Southwest Corridor Park.

Charles River Esplanade

The Esplanade was originally created as part of the construction of the 1910 Charles River Dam Bridge. It stretches 3 miles in length, spanning 64 acres from the Museum of Science in the west to Boston University Bridge in the east. The park is the site of Boston's 4th of July celebrations as well as numerous concerts and festivals. The park also provides riverfront access, miles of multi-use trails, playgrounds, and hosts programming year-round.

Emerald Necklace

The historic Emerald Necklace Park system was designed over 100 years ago by famed landscape architect Frederick Law Olmsted. Stretching from downtown Boston to Brookline, MA, the 1,100 acres of parkland receive over 1 million visitors per year. The parks and parkways operate under the Emerald Necklace Conservancy's stewardship, and offer passive and active recreation as well as an arboretum and a zoo.

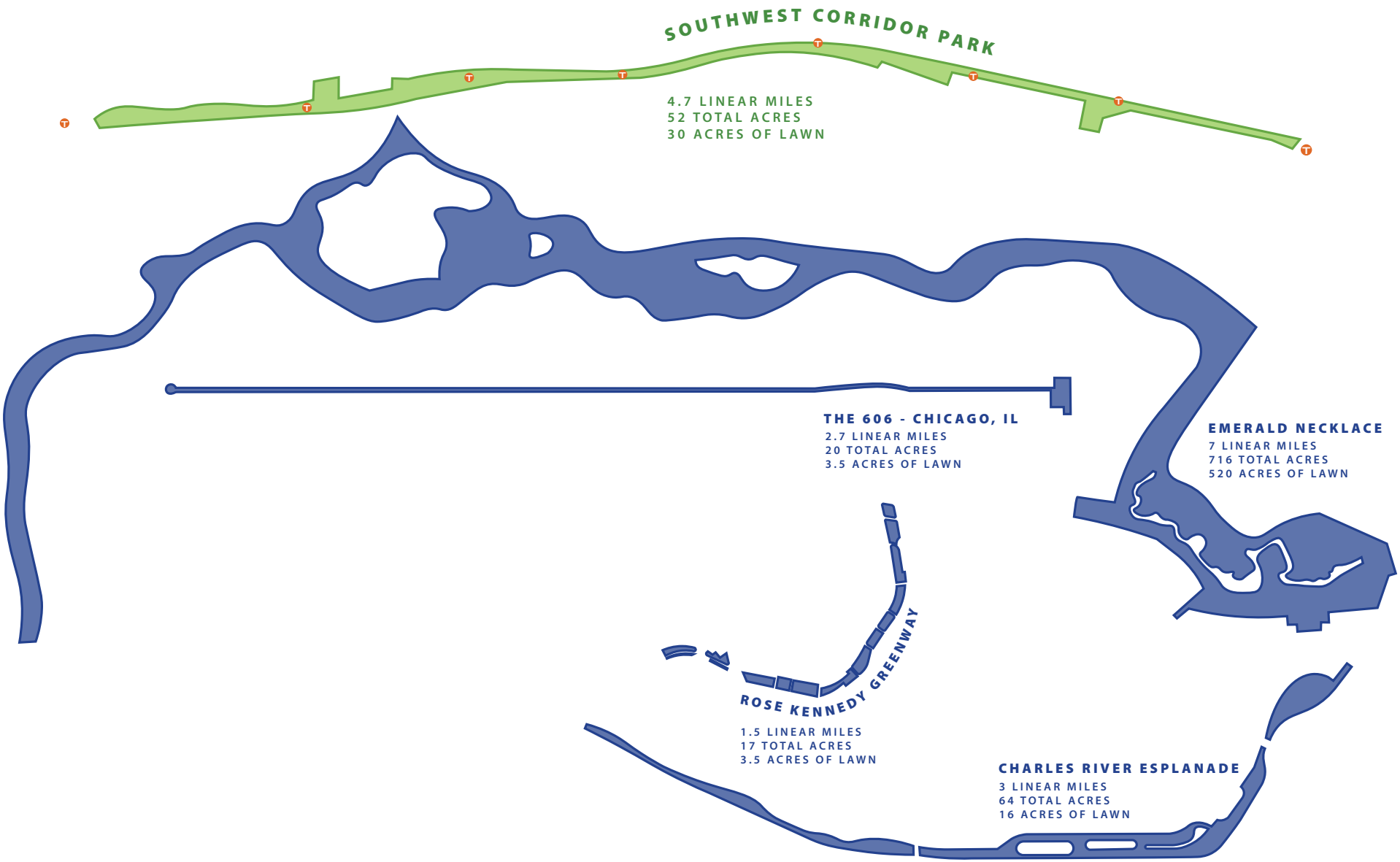
Rose Fitzgerald Kennedy Greenway

Boston's "Big Dig" relocated Interstate 93 into an underground tunnel. The 17 acres of reclaimed space is now the site of the Rose Kennedy Greenway, a 1.5 mile linear park with pedestrian and bike paths that curve through downtown Boston. Like the Southwest Corridor, the Greenway is a commuting corridor and an outdoor activity and play space. The Greenway, which is organically maintained, also hosts farmer's markets, concerts, fitness classes and festivals.

606 - Bloomingdale Trail

Chicago's 606 is the world's first raised, multi-use trail. The 606 was originally the path of the Bloomingdale train line, which moved freight above grade. The route was converted to a multi-use park when the rail line fell into disrepair, re-linking the neighborhoods the rail line had divided. The 2.7 mile 606 includes multiple parks, open lawns, playgrounds, fitness stations, bike-share hubs, and transit stations, connecting neighborhoods and providing access to local businesses and cultural institutions.

Benchmark Park Comparison



Benchmark Park Comparison

Characteristic	Benchmark Parks				
	Southwest Corridor	Esplanade	Emerald Necklace	Rose Kennedy Greenway	The 606
Land Owner	MBTA	DCR	City of Boston	MassDOT	City of Chicago
Primary Caretaker	DCR	DCR	City of Boston	MassDOT (care of Tunnel) Greenway Conservancy (Operational responsibility for Greenway)	Chicago Park District
Acreage	52 acres	64 acres	716 acres	17 acres	20 acres
Length	4.7 linear miles	3 linear miles	7 linear miles	1.5 linear miles	2.7 linear miles
Path length	Approx. 6.5 miles; 9' wide average	Approx. 4 miles; 10' wide average	Approx. 15 miles; 10' wide average	Approx. 2.5 miles; 10' wide average	Approx. 3 miles; 14' wide average
Lawn Area	29.5 acres	16 acres	520 acres	3.5 acres	3.5 acres
Number of Full-Time Staff, Primary Caretaker	5	3	4	12 (Greenway Conservancy)	1.25
Full-Time Equivalent Temporary Staff	0.2 annually 0.9 seasonally	Additional staff for snow removal	Seasonal staff for tree watering	Interns	

Characteristic	Benchmark Parks				
	Southwest Corridor	Esplanade	Emerald Necklace	Rose Kennedy Greenway	The 606
Friends Groups	SWCP Conservancy, Southwest Corridor Alliance, Friends of Kelly Rink, Friends of Carleton Dog Park	Esplanade Association	Emerald Necklace Conservancy	Volunteers, including Zone Garden Assistants, Plant Records Assistants, and individual and corporate volunteers	Friends of the Bloomingdale Trail
Friends Group Maintenance or Administrative Paid/Unpaid Staff	2 volunteers with SWCP Conservancy provide services 30 hours per week, primarily in South End	Fund 3 year-round staff positions: Turf/irrigation specialist Horticulturalist/ arborist Administrator/arborist	2 full-time staff: Volunteer and Field Maintenance Coordinator Field Operations Manager 1 seasonal employee for tree watering	Not Applicable	Administrative only - Fluctuates
Volunteer Maintenance Hours as Full-Time Equivalent	1.5 FTE annually	0.8 FTE annually	1.25 FTE annually	1.65 FTE annually	Unknown
Maintenance Team Organization	1 Field Operations Team Lead 2 Forest and Park Supervisors 2 Laborers	3 staff	1 Foreman 1 Park Keeper 2 Laborers	7 Horticulturalists (and 1 intern) 4 Maintenance Staff [Daily Contracted Services]	1 Project Manager 1 Landscape Maintenance Staff 1 Seasonal laborer [Daily Contracted Services]

Characteristic	Benchmark Parks				
	Southwest Corridor	Esplanade	Emerald Necklace	Rose Kennedy Greenway	The 606
Primary Maintenance Team	Mowing, string trimming, and minor pruning Leaf removal Community garden support Supplemental trash removal Supplemental snow removal Seasonal start-up and winterization of drinking water fountains and water system Lighting maintenance Graffiti, broken furnishings, etc., as time allows	Mowing, string trimming Leaf removal Trash removal Snow removal Seasonal start-up and winterization of drinking water fountains and water system Lighting maintenance Broken furnishings, as time allows.	Mowing, string trimming, and blowing Leaf removal Supplemental snow removal Supplemental trash removal Graffiti, broken furnishings, etc. are logged into City's 311 system.	Pavement repairs and maintenance Water feature/ fountain maintenance Vehicle maintenance Masonry Seasonal set-up and removal of movable furniture Preparation for public art pieces and winter lighting Lighting maintenance Site furnishing repair Drainage	Supplemental snow removal Lawn mowing on adjacent parks Site furnishing repair Planting installation and maintenance Selective trimming and pruning Supplemental trash removal
Other Maintenance Tasks Done by Primary Caretaker	Separate staff complete playground inspections	Separate staff handle inspections and maintenance of playgrounds and spray decks	Separate staff handle inspections of play structures, signs, etc.	Carousel maintenance	- -

Characteristic	Benchmark Parks				
	Southwest Corridor	Esplanade	Emerald Necklace	Rose Kennedy Greenway	The 606
Use of Contracted Services	Pruning above pole-saw height Major pruning	Maintenance pruning before July 4th events Turf contracts at Hatch Shell and Teddy Ebbersol Fields Tree work above ladder height, typically in response to an emergency	Most meadow mowing on slopes	Litter and trash pickup Lawn mowing Snow removal	Litter and trash pickup Snow removal Major pruning Seasonal clean-ups
Mowing Notes	Team also mows 4 miles of the Emerald Necklace Parkways	Large lawn areas handled by Contracted Services	14-day mowing schedule Typically need to defer medians and other secondary areas, to prioritize more active areas	Mowing completed by Contracted Services	Adjacent lawn spaces are mowed on an as-needed basis
Friends Group Staff	Not Applicable	Staff oversee turf contracts at Hatch Shell Oval and Teddy Ebersol Fields Care for ornamental garden beds Do pruning by ladder Manage weekly volunteer group Update tree inventory Maintain 300 benches	Organizing volunteers Fundraising Managing tree care and planting Managing contracts for tree inventories, assessments, and pruning	Not Applicable	Organize Annual Trail Run Coordinate Volunteers Fundraising

Characteristic	Benchmark Parks				
	Southwest Corridor	Esplanade	Emerald Necklace	Rose Kennedy Greenway	The 606
Friends Groups Volunteer	Care of ornamental beds, including weeding Some clean-up Skate rental at Kelly Rink	Litter clean-up Portion of leaf clean-up Bench painting Annual planting	Fund or manage: Portion of tree pruning Portion of invasive management, and Some clean-up	Zone Garden Assistants maintain the park gardens Plant Records Assistants collect and maintain plant records Volunteer days 1x/ month - tasks include weeding, raking, mulching, planting, and pruning Corporate groups, schools, and nonprofits work on horticulture and maintenance projects	Saturday trash clean-ups Studying of bloom times on flowering plants
Revenue Sources	DCR operating budget	DCR operating budget Esplanade Association raises funds for capital projects, and funds design, permitting, and implementation	City of Boston budget Emerald Necklace Conservancy raises funds for tree inventories, assessments, and pruning	Conservancy's operating expenses come from earned income, private funding through a Business Improvement District (BID), and public funding, about equally.	Chicago Park District Budget

Characteristic	Benchmark Parks				
	Southwest Corridor	Esplanade	Emerald Necklace	Rose Kennedy Greenway	The 606
Special Maintenance Practices	--	--	--	Practices organic lawn care. Entire horticulture staff has Accredited Organic Land Care Professional (AOLCP) status Participates in No-Mow May in lesser-used lawn areas - about 1 acre, total	Chicago Park District clears the trail during snow with a brush attachment on a small plow, and uses special snow melt, CMA (Calcium Magnesium Acetate) to protect the landscape and soft trail surface.

Proposed Routine Maintenance Protocols

This section provides detailed guidance for standard maintenance and inspection protocols, based on the implementation of the recommendations contained in the Action Plan. This includes recommended tasks, frequencies, and maintenance triggers based on the types of facilities and assets along the Southwest Corridor Park. These protocols are intended to provide the flexibility for an adaptive management approach for evaluating and modifying maintenance schedules based on field observations, as the action plan is implemented.

Preventative Maintenance

While there will be unexpected maintenance events, the most efficient and effective way to deal with park maintenance is by catching problems before they become major issues. Scheduling routine preventative maintenance for assets helps avoid breakdowns, maintain safety and limit workflow disruptions.

It can be challenging to find time for inspections and other preventative maintenance while also working around routine tasks. However, a successful preventative maintenance effort can make a significant difference in overall operations expenditures in both time and money.

Preventative maintenance tasks are regularly scheduled tasks to inspect and/or fix signs of wear and other issues before they lead to breakdowns or more significant damage. For example, a playground inspection could reveal premature wear on the surface material. Repairing a small section is more economical than delaying the repair until it spreads to a larger area, or causes a drainage problem in addition to a surfacing problem. Regular inspections allows issues to be addressed before repairs are much more expensive and labor-intensive, or require a capital investment. Preventative maintenance should be prioritized for heavily-used facilities or equipment where small problems are likely to escalate quickly, cause a significant disruption to operations, or cause a safety concern. For example - playgrounds, splash pads, and mowers.

Maintenance Tasks Types

The recommended maintenance protocols begin on page 289. The protocols integrate the use of two different approaches to maintenance tasks - one where tasks are completed based on predetermined intervals or seasons, and another approach where tasks are triggered by some criteria or event.

Frequency-Based Maintenance Tasks

Time or frequency-based tasks use predetermined intervals to schedule maintenance activities. Examples include doing a seasonal start-up of the community garden watering systems, or mowing lawns every 7 days. These are straightforward tasks that are appropriate for features or assets that have inspection or maintenance needs that can be anticipated ahead of time.

Benefits:

- Straightforward to schedule
- Less confusing to implement
- Maintenance occurs consistently and at predictable intervals
- Prevents issues from becoming more significant problems
- Ensures proactive upkeep

Challenges:

- Requires reliable scheduling and consistent manpower
- May not align well with the actual maintenance needs, particularly if there are seasonal or event-related influences
- Does not work well for complicated tasks or assets with unpredictable wear and tear

Event-Based Maintenance Tasks

Usage or event-based tasks use milestones or thresholds to trigger a maintenance activity. If a milestone is reached, or a specific condition is met, the maintenance activity gets performed. Use intervals could be miles traveled in a vehicle or hours of use on a string trimmer. Example of a event, condition or threshold is when a court has 20% or more of its lines worn, or addressing episodes of vandalism. This approach can be more complicated because staff need to be aware of the park conditions and be able to schedule activities on the fly. These types of criteria are best used for features that aren't mission-critical and those that won't cause a safety hazard if repairs are delayed.

Benefits:

- Focuses on specific maintenance tasks only when necessary
- Can work well with dynamic schedules where routine work waxes and wanes with the seasons
- Allows for flexibility and responsiveness to emerging issues
- Can reduce labor and costs with more efficient scheduling

Challenges:

- Depends on a system for timely reporting and monitoring
- Reactive nature could lead to increased costs or disruptions to routine tasks
- Risk of overlooking necessary, but less obvious maintenance needs

To optimize resources and ensure all park elements receive the care they need, a combination of both approaches are recommended. Scheduled tasks form the backbone of the system, while event-based approaches for some tasks let the team address unexpected issues as they occur. Regular preventative inspections and a robust system for feedback from park visitors or volunteers can help to keep the event-based tasks from overwhelming the staff by highlighting small problems before they grow larger.

Reducing Lawn Maintenance Demands

Primary Lawns

Secondary Lawns

Meadows

Primary Lawns - Category intended for high use lawn areas. These include event spaces, activity lawns, areas intended for recreation, and the lawns between the dual use paths. High priority maintenance areas to be mowed frequently.

Secondary Lawns - Category intended for low-use lawn areas that are primarily buffer areas or pass-through spaces. These include heavily sloped areas, under tree dense canopies and at the edges of the park. Lower priority maintenance areas to be mowed less frequently.

Meadows - Meadow plantings are intended to be more naturalistic areas, with lower maintenance demands. To be maintained/mowed yearly, once established.

Lawn Categorization

Mowing consumes a significant amount of time for DCR staff. The Action Plan proposes introducing a number of meadow areas to decrease maintenance demands on staff, and to increase biodiversity and habitat value within the park. In addition, the proposed maintenance protocols differentiate between Primary Lawns and Secondary Lawns. The intention is to decrease overall maintenance resource demand by mowing and maintaining the secondary lawn spaces at about one half the resource demands of primary lawns like event spaces and activity lawns.

Proposed Routine Maintenance Protocols

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
Paths and Hardscape			
	Inspect pathways		2x/year
	Repair asphalt pavement	If walkways have an uneven surface, no longer meeting ADA and MAAB requirements If walkways exhibit standing water	
	Repair concrete pavement	If walkways have an uneven surface, no longer meeting ADA and MAAB requirements If walkways exhibit standing water	
	Repair pavers	If walkways have an uneven surface, no longer meeting ADA and MAAB requirements If walkways exhibit standing water	
	Re-paint pavement markings	Worn surfaces exceed 20% of surface	
Existing Trees			
	Inspect trees		Annual/Rely on reporting
	Deadwood pruning	Dead limbs larger than 4" overhanging pathways, courts, playgrounds, etc.	Every 7 years for entire park Every 3 years for trees adjacent to playgrounds or other high-use areas
	Structural pruning	If tree limbs obstruct lights	Every 5 years
	Thinning or crown raising	If limbs are lower than 8' above pathways	As needed
	Watering	In periods of high heat or drought, 1x per week	In periods of high heat or drought, 1x per 2 weeks
	Mulch placement		1x/year

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
	Leaf removal - Primary lawns		Weekly in season
	Leaf removal - Secondary lawns	Remove trash, and mulch in place	Bi-weekly in season
New Tree Planting and Aftercare			
	Planting		Annually, to balance removals
	Stake maintenance		Remove after 2 years
	Fence maintenance		Remove after 2 years
	Watering		1x per week; in periods of high heat or drought, 2x per week
	Structural pruning		Within 2-3 years of planting
Lawns - Primary			
	Pick up trash prior to mowing		
	Mowing	Grass is higher than 4”	1x/5 days spring and fall; 1x/10 days summer
	Aerating		1x/ year
	Fertilizing		As soil tests indicate

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
Lawns - Secondary			
	Pick up trash prior to mowing		Same as mowing frequency
	Mowing	Grass is higher than 6"	1x/7-10 days spring and fall; 1x/10 days summer
	Aerating		1x/2 year
	Fertilizing		As soil tests indicate
Sports Fields			
	Pick up trash prior to mowing		
	Mowing	Grass is higher than 4"	1x/5 days spring and fall; 1x/10 days summer
	Repair surface	If infield, batter's box, pitcher's mound or bases have lips, holes or tripping hazards	Rake/Drag infield, 1x/week
	Topdress and overseed	If there is an uneven playing surface	2x/year
	Aerating		1x/ year
	Fertilizing		As soil tests indicate
Meadows - new (first 3-4 years)			
	Mowing	Vegetation is higher than 8"	+/- 6x/year
	Weeding/herbicides		2x/year
Meadows - established			
	Mowing		1x/year
	Weeding/herbicides	Monitor for tall and aggressive weeds	1x/year

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
Shrub and Vine Maintenance			
	Pruning		1x/year
	Replacement plantings		1x/year
	Mulch placement		1x/year
Ornamental Beds			
	Weeding, pruning, planting	Managed primarily by Park and Garden Stewards of Friends' groups	
Rain Gardens			
	Pruning or brush mowing	If woody vegetation is seen in herbaceous rain gardens	1x/year
	Weeding		Monthly
	Trash removal		Every 2 months
	Overflow clean-out	If overflow is clogged	Spring and Fall
Monitoring Invasive Species			
	Inspect ornamental beds	Reported by volunteers or Garden Stewards	2x/year
	Inspect park edges		2x/year

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
Community Gardens			
	Trash pickup		1x/week in growing season
	Mulch delivery	Coordinated with Southwest Corridor Park Alliance	1x/growing season
	Stonedust replenishment	Coordinated with Southwest Corridor Park Alliance	1x/growing season
	Fence inspection and maintenance	See Fences - Ornamental and Chain Link	1x/growing season
	Water system start-up	Coordinated with Southwest Corridor Park Alliance	Spring
	Water system winterization	Coordinated with Southwest Corridor Park Alliance	Fall
	Water system maintenance	Reported by garden coordinators	As needed
Courts			
	Inspect court	Ensure surface is smooth, level, and well-drained, with no standing water	Annually
	Repair cracks	If surface has large cracks or tripping hazards	
	Repaint court surfaces	When paint is worn from 20% or more of surface, or when graffiti is present	
	Repaint backboard surfaces	When paint is worn from 20% or more of surface, or when graffiti is present	
	Repair court accessories (backboards, nets, etc)	Replace or repair nets when tears or frays exceed 10% of net surface If nets are not properly secured to support posts If support poles for backboards are no longer secure in the ground or are no longer plumb/straight	

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
Playgrounds			
	Inspect playgrounds; Document inspection	Ensure that play equipment and surrounding play areas meet ASTM and National Playground Safety Institute standards	Every month; Major inspection annually
	Repair or replace hardware	If hardware is no longer intact or sound	
	Remove graffiti	If graffiti is present	
	Replace signage	If signs designating age-appropriate play equipment is no longer legible	
	Repair or replace pathways	If internal pathways no longer comply with ADA and MAAB requirements	
	Fall surface repair or replacement	If fall surface is no longer level If fall surface no longer meets ASTM, ADA, MAAB and National Playground Safety Institute Standards If fall surface retains standing water	
Splash Pads			
	Inspect splash pads		2x/month in operating season
	Water system start-up and shut-down/ winterization		Late Spring and Early Fall
	Repair or replace components; Clean nozzles	If fasteners are loose or hazards are present If flow rates are affected If ground sprays are no longer flush with the surface	
	Test controllers and activators	If reports are made by visitors	2x per operating season

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
	Clean play areas	If play pad has litter or debris	1x/week
	Repair drainage grates	If grate fasteners are loose, grate is not flush, or if protrusions are present	
	Clean filters and drains	If filters or drains have visible debris	Every 2 weeks, or per manufacturer recommendations
	Repair surface	If surface has obstructions or tripping hazards, or if puddling occurs	
Dog park			
	Inspect gates and fencing for integrity		Monthly
	Water system start-up and shut-down/ winterization		Spring and Late Fall
	Inspect water sources, repair as needed		1x/year
	Restock bag stations		1x/week
	Empty trash		Daily
	Wash down hard surface areas		Every 2 weeks
	Power-wash hard surface areas		3-4x/year

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
Trash			
	Empty trash receptacles	When trash receptacles are overflowing (MBTA has primary responsibility)	Observe daily
	Remove dumped household trash	If dumped household trash is observed	Observe daily
Graffiti			
	Inspection		Monthly
	Removal	As needed	
Drainage structures			
	Clean debris (managed by MBTA)	If water flow is blocked	Each spring
Lighting			
Path lights			
	Inspect	Ensure electrical control systems are operational and in compliance with appropriate codes Ensure timers are properly set for specific hours of operation Ensure lights provide uniform coverage	1x/2 months
	Repair or replace light fixture	If greater than 5% of lights are non-operational in each segment	
	Repair or replace base or pole	If base or pole is dented, or sharp protrusions are present	
	Repaint	If greater than 20% of paint has been removed/work or if graffiti is present	

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
Court lights			
	Inspect	Ensure electrical control systems are operational and in compliance with appropriate codes Ensure timers are properly set for specific hours of operation Ensure lights provide uniform coverage	1x/2 months
	Repair or replace light fixture	If greater than 10% of lights are non-operational at each court	
	Repair or replace base	If base is dented	
	Repaint or clean	If greater than 20% of paint has been removed If graffiti is present	
Site Furnishings			
Benches			
	Inspect	Ensure slats are smooth and structurally sound	
	Repair or replace	If slats are no longer smooth If hardware is missing or no longer flush with surface If seating surfaces and backs are no longer smooth, or have protrusions or exposed sharp edges	
	Repaint or clean	If painted areas are worn over more than 20% of their surface If graffiti is present	

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
Trash receptacles			
	Inspect	Ensure receptacles are clean, structurally sound, and placed on their designated concrete pads	
	Repair or replace	If receptacle is not structurally sound or rim has sharp protrusions	
	Clean	If graffiti is present	
Fences - Ornamental			
	Inspect		2x/year
	Repair or replace	If pickets, posts, or gate hinges are not structurally sound, or if components are loose	
	Remove rust and repaint	If rust or corrosion is present	
	Remove vegetation	If climbing vines are present or shrubs/saplings are penetrating fence fabric	1x/year
Fences - Chain Link			
	Inspect		2x/year
	Repair or replace	If support rails are sagging or no longer connected to posts If chain link fabric is no longer secured to support rails If fabric is no longer straight, taut and free of sagging If fabric has holes, protrusions or catch points If gates and latches are no longer operational If windscreens (if present) are no longer tightly secured to fencing or if they have tears or holes greater than 2”	2x/year

Task	Subtask	Maintenance Trigger	Recommended Minimum Frequency
	Repaint	If painted areas on posts or rails are worn over 20% of their surface If graffiti is present	
	Remove vegetation	If climbing vines are present or shrubs/saplings are penetrating fence fabric	1x/year
Signage			
	Inspect	Inspect signs to ensure signage is structurally sound	Monthly
	Repair or replace	If signs are no longer legible If posts are bent or no longer plumb	
	Repaint or clean	If painted areas are worn over 20% of their surface If graffiti is present	
Drinking Fountains			
	Water system start-up and shut-down/ winterization		Spring and Late Fall
	Inspect	Inspect water fountains to ensure function	Monthly, or as reported
	Repair or replace	If water function is impaired	
	Repaint or clean	If debris has accumulated in the bowl If painted areas are worn over 20% of their surface If graffiti is present	

Proposed Resource Allocations

With the recommendations for improvements and expanded recreation areas contained in this document, it is necessary to re-evaluate the current tasks and responsibilities of the maintenance and operations staff to understand the magnitude of the future resources needed to implement the recommendations in the Action Plan.

To obtain the most reliable assessment of the staffing and resources needed to implement the recommendations of the Action Plan, DCR should consider conducting a time-task analysis of their existing operations and maintenance activities in the Southwest Corridor Park. This type of analysis involves breaking down all existing maintenance activities into specific tasks, evaluating the time required for each task, and examining how the time required compares to the existing FTEs - from DCR as well as supporting organizations, and volunteers. Organizations with existing work order systems would utilize that system to begin this sort of analysis. Without a formal work order system, staff would need to log how they spend their time to gain the information. A time-task analysis can lay the foundation for planning and allocating resources, managing labor efficiently, and maintaining high standards of park care. This type of analysis can also produce a per-acre cost for maintenance operations across the entire park.

The full-time and seasonal/temporary maintenance staff for the Southwest Corridor Park has decreased over time. While the current staffing level manages to keep the park functioning, it is not enough to maintain the park in the condition that is desired by visitors. As a time-task analysis is not available, a proxy system is evaluated here, where the focus is on how the Recommended Maintenance Protocols' minimum frequencies compare to the existing major tasks for which DCR has rough data, along with consideration of how the square footage of various amenities (e.g. rain gardens, courts, dog parks) are proposed to be added or removed if the Action Plan recommendations are implemented. Resource allocation information from the Benchmark Parks were also considered.

The analysis results presented here are an approximation of the appropriate staffing and resources required for a well-maintained future Southwest Corridor Park. The increases are an estimate and should be used only as a framework to view the impact of the Action Plan on DCR's overall maintenance obligations within the Southwest Corridor Park. The estimates are representative of a scenario where the Action Plan is implemented all at once, today. It does not take into account phasing and because of the variability in the costs of contracted services, only proposed FTE for DCR staff are provided. It also does not detail the ways in which the City of Boston or MBTA maintenance responsibilities might be affected by the Action Plan.

Proposed Additional Resource Needs

Task/Element	Current Status	Proposed Change (in Size, Quantity or Frequency)	Recommended Party	Additional DCR Staff FTE Estimate
Paths and Hardscape	Major repairs handled as capital projects Minor repairs, as time allows Snow removal over 2" by Contracted Services (only Forest Hills to West Canton) Snow removal under 2" by DCR staff	Pathway widening will increase overall amount of pavement Addition of 3,750 linear feet of new bituminous pathway Addition of approx. 1,000 linear feet of a stonedust path in Greenway area, which will require regular replenishment	DCR Staff	0.5 FTE
Existing Trees	Prune low branches as time allows Pruning over sensitive areas done by contracted services Pick-up leaves (Requires entire workdays in fall and early winter)	Prune all trees on a 7-year cycle Prune trees in sensitive areas on a 3-year cycle Water existing trees, as conditions warrant Mulch leaves in place, where possible	DCR staff for leaf cleanup Contracted Services for pruning	0.5 FTE
New Tree Planting and Aftercare	As Time Allows	Planting, watering, pruning	DCR Seasonal Staff for watering Contracted Services for planting, establishment, and structural pruning	0.5 FTE, seasonal

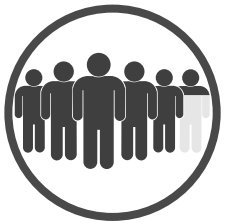
Task/Element	Current Status	Proposed Change (in Size, Quantity or Frequency)	Recommended Party	Additional DCR Staff FTE Estimate
Lawn Mowing and Trimming	Mowing and trimming 29.5 acres of lawn takes 7-8 working days for 4 people.	Increase in frequency of mowing primary lawns; Decrease of about 8.3 acres, being transitioned to secondary lawn, meadow, or rain garden	DCR Staff, or Contracted Services - as seasonal contract	1.5 FTE
Secondary Lawn Mowing and Trimming	Not Applicable	6 acres; Mow on cycle twice as long as primary lawn cycle	DCR Staff, or Contracted Services - as seasonal contract	Decrease of 0.4 FTE
Meadows	Not Applicable	1.6 acres; Mow annually once established	Contracted Services for establishment phase Contracted Services for annual mowing; DCR staff for annual mowing if brush mower is purchased	- -
Rain Gardens	Not Applicable	.7 acres	Volunteers for weeding Contracted Services for annual mowing of herbaceous rain gardens; DCR Staff for annual mowing if brush mower is purchased	- -
Shrub and Vine Maintenance	Usually not enough staff to address. Staff prioritizes shrubs near playgrounds. MBTA manages plants extending through right-of-way fence over rail line.	Small increase in area proposed Regular maintenance proposed	Contracted Services - Horticulturalists	- -

Task/Element	Current Status	Proposed Change (in Size, Quantity or Frequency)	Recommended Party	Additional DCR Staff FTE Estimate
Ornamental Planting Beds	Managed by Volunteers	No Significant Change	Volunteers to continue primary responsibility, expand into entire park DCR staff, supporting role	No Significant Change
Rain Gardens	Not Applicable	.7 acres	Volunteers for weeding Contracted Services for annual mowing of herbaceous rain gardens; DCR Staff for annual mowing if brush mower is purchased	- -
Invasive Species	Monitoring done as time allows Removal by Contracted Services	Monitoring done regularly Pesticide Application/ Invasive Removal beyond small-scale weeding by Contracted Services	DCR staff for observation DCR staff for small-scale weeding (with training) Contracted Services for pesticide application and removal	0.2 FTE
Community Garden Support	Seasonal start-up and winterization Mulch and stonedust delivery Fence maintenance	2 proposed community garden expansions; 1 reduction; 2 new community gardens Planned community garden improvements will reduce maintenance on fencing and trimming	DCR staff	Minor increase for material delivery and trash; Estimate 0.1 FTE annually

Task/Element	Current Status	Proposed Change (in Size, Quantity or Frequency)	Recommended Party	Additional DCR Staff FTE Estimate
Courts	Minor repairs, as time allows Major repairs through capital projects or contracted services	Adding 3 courts or skate park spaces Maintaining court markings, nets, etc. on regular basis	DCR Staff Contracted Services (major recoating)	0.2 FTE
Playgrounds	DCR staff erect barriers if a hazard is observed. Repairs by Contracted Services.	Addition of 2 playgrounds Regular inspections and prompt repairs	DCR Staff for inspection, monitoring, and minor repairs Contracted Services for major repairs	0.25 FTE
Splash Pads	Johnson Park requires daily start-up and shut-down	Regular inspections and repair	DCR Staff	0.1 FTE, seasonal
Dog Parks	General maintenance Volunteers monitor Dog Park	1 additional dog park	Volunteers to have primary responsibility for dog park	Minor increase for trash removal; Estimate 0.1 FTE annually
Trash Removal	As needed, if trash is overflowing Daily check	No Significant Change	DCR Staff	No Significant Change
Drainage Structures	Responsibility of MBTA	Some drainage structure addition/conversion with new rain gardens	Contracted Services, secured in coordination with MBTA	- -
Lighting	DCR, as needed Replacement or new poles by Contracted Services	Continue replacement of lamps, as needed. Minimal impact as they are LEDs.	DCR staff for lamp replacement Contracted Services or Capital Projects for new poles	No Significant Change

Task/Element	Current Status	Proposed Change (in Size, Quantity or Frequency)	Recommended Party	Additional DCR Staff FTE Estimate
Site furnishings	Repair and graffiti removal, as time allows Replacement, as funds allow	56 additional benches Proactive, regular repair and maintenance of benches and trash receptacles. Recommended benches will reduce maintenance.	DCR staff for graffiti removal and minor repairs Contracted Services or Capital Projects for new benches, bench pads, or trash receptacles	0.1 FTE
Fences	Repair and graffiti removal, as time allows Replacement through capital projects	Regular inspection and repair, minor painting	DCR Staff for inspection, graffiti removal, minor repairs and painting Contracted Services or Capital Projects for major repairs	0.2 FTE
Signage	Graffiti removal, as time allows Repair or replacement through capital projects	Graffiti removal, as observed Regular inspection and repair	DCR Staff for graffiti removal and minor repairs Capital Projects for major repairs	0.1 FTE
Drinking Fountains	Seasonal start-up and winterization Clean-up, as observed Repair through larger DCR organization	5 additional drinking water fountains Regular inspection and clean-out	Dedicated DCR staff plumbing technician, or Contracted Services, seasonal	0.2 FTE, seasonal
Mechanical Repairs	Rely on DCR staff from other areas of the DCR system.	Mechanic dedicated, in part, to Southwest Corridor Park	DCR staff	1 FTE
				Total: 5.15 FTE

Additional DCR Southwest Corridor Park Operations Staff Allocation



5.15
ADDITIONAL FTE

0.5 FTE **Paths and Hardscape**
Pathway widening, addition of bituminous and pea stone

0.5 FTE **Existing Trees**
Mulch leaves in place

0.5 FTE **New Tree Planting**
Tree watering

1.5 FTE **Primary Lawn Mowing & Trimming**
More frequent mowing

-0.4 FTE **Secondary Lawn Mowing & Trimming**
Mow on cycle twice as long as primary lawn cycle

0.2 FTE **Invasive Species**
Observation, small scale weeding

0.1 FTE **Community Garden Support**
Material delivery and trash

0.2 FTE **Courts**
Mainting court markings, nets

0.25 FTE **Playgrounds**
Inspection and repairs

0.1 FTE **Splash Pads**
Inspections and repair

0.1 FTE **Dog Parks**
Trash removal

0.1 FTE **Site Furnishings**
Graffiti removal and repairs

0.2 FTE **Fences**
Inspection, repairs, graffiti removal, painting

0.1 FTE **Signage**
Repairs, graffiti removal

0.2 FTE **Drinking Fountains**
Plumbing technician

1.0 FTE **Mechanic Repairs**
Dedicated mechanic

Prioritizing and Expanding Park Operations

The resource needs analysis recommends roughly doubling current DCR operations staff dedicated to the Southwest Corridor Park's care. A time-task analysis of existing operations and maintenance activities and improved task-tracking should also be considered. Adequate staffing is the foundation for maintaining park safety, cleanliness and function. However, to effectively implement the Action Plan and maintain the proposed improvements, the current gaps in funding, operational oversight, and support must also be addressed.

At present, additional staff are needed to allow DCR to be more proactive in their management of maintenance needs. Subsequently, added staff should support the elements that are put into place, according to the priority structure in the implementation section. Having operations staff in place for the early action projects ensures those projects are implemented with maintenance and operations concerns in mind.

The resource analysis also points to the need for specialized tasks, such as invasive species management, large-scale pruning, and horticulture, to be handled by contracted services or staff hired through the Friends' groups. DCR may develop these specialties internally in the future, but at this time, those tasks would be best performed by outside entities. As noted in the Implementation chapter, consolidating, professionalizing and expanding the Friends groups' volunteer workforce could provide additional support for the day-to-day maintenance of the park, supplementing DCR's efforts and ensuring continuous care through structured volunteer engagement and fundraising. As groups expand their roles, a defined staffing plan and formal agreements on responsibilities can ensure that maintenance tasks are handled efficiently.

Sustainability Practices

Implementing more sustainable practices can increase overall resilience, offer environmental and social benefits, and reduce costs by decreasing the time and manpower needed for maintenance. As an added consideration, many sustainability projects or purchases qualify for grants, subsidies or other incentives, which may offset some of the initial investment costs.

Key Benefits

Water Conservation

- Efficient or smart irrigation systems can use weather-based indicators or soil moisture-based controllers to minimize water usage.
- Native, drought-tolerant plantings require less water, reducing expenses and the time staff spend on watering duties.
- Rainwater harvesting, such as from the park's DCR maintenance building, could provide water that could be used for irrigation.

Lower Emissions

- Ensuring vehicles and equipment are well-maintained reduces greenhouse gas emissions and air pollution.
- Incorporating electric or hybrid vehicles and battery-powered tools and equipment reduces air pollution and provides a healthier working environment for staff.

Energy Efficiency

- LED lighting is already in use in the park. But incorporating solar-powered fixtures could further reduce energy usage and utility costs, and decrease the park's carbon footprint.

Reduced Chemical Usage

- While the use of fertilizers and herbicides in the park are limited, organic lawn care and integrated pest management could further reduce the release of harmful chemicals into the environment and enhance worker safety.

Sustainable Landscaping

- Native plants are more likely to be adapted to local conditions, requiring less maintenance and fewer chemical inputs, lowering the labor and material costs it takes to maintain them.
- Native plantings and wildlife corridors support local wildlife and biodiversity, connecting natural habitats.
- Pollinator gardens help sustain bee, butterfly, and other pollinator populations.
- Grind pruned branches and removed trees to use as mulch.
- Leave grass longer in secondary lawn areas - those areas that are primarily transitional or buffer spaces. This reduces the demand on staff for mowing and helps prevent soil compaction.

Waste Management

- Provide recycling bins and encouraging park visitors to recycle.
- Compost organic waste from park maintenance and use it as fertilizer.
- Minimize the use of plastic products, especially single-use plastics, and promote reusable alternatives.

Material Longevity

- Durable, and sustainable materials can provide longer-lasting assets, such as benches, surfacing, light fixtures, etc. While initially more expensive, spending more on high quality materials and equipment can reduce replacement and repair costs.

Resilience and Climate Adaptation

- Native and drought-tolerant plants, along with efficient water management practices, help make landscapes more resilient to changing climate conditions.
- Durable materials can be more resilient to extreme weather events, reducing replacement costs and downtime.

Green Infrastructure

- Installing permeable surfaces reduces stormwater runoff and recharges groundwater.
- Incorporating rain gardens into the stormwater management system can filter runoff, temporarily store rainfall from storms to minimize flooding impacts on the storm drainage system, and provide water for vegetation.
- Address soil compaction to improve water infiltration and soil health. Limit overuse of lawn areas and avoid driving vehicles on unpaved surfaces.

Future Monitoring and Metrics

To monitor progress toward improving sustainability, DCR may consider tracking the following metrics:

- Water consumption
- Fuel – gasoline/diesel consumption for vehicles and equipment
- Electric consumption
- Waste generation
- Recycled/reused waste