



CARMEL CLAY PARKS LIFE-CYCLE ASSET MANAGEMENT PLAN

December 2018



LIFE-CYCLE ASSET PLAN

ACKNOWLEDGMENTS

This park assessment was completed by SmithGroup and Williams Architects as part of Live Play Carmel, the 2020-2024 Parks & Recreation Master Plan led by PROS Consulting. We wish to extend our sincere appreciation to the following individuals for their leadership throughout the planning process:

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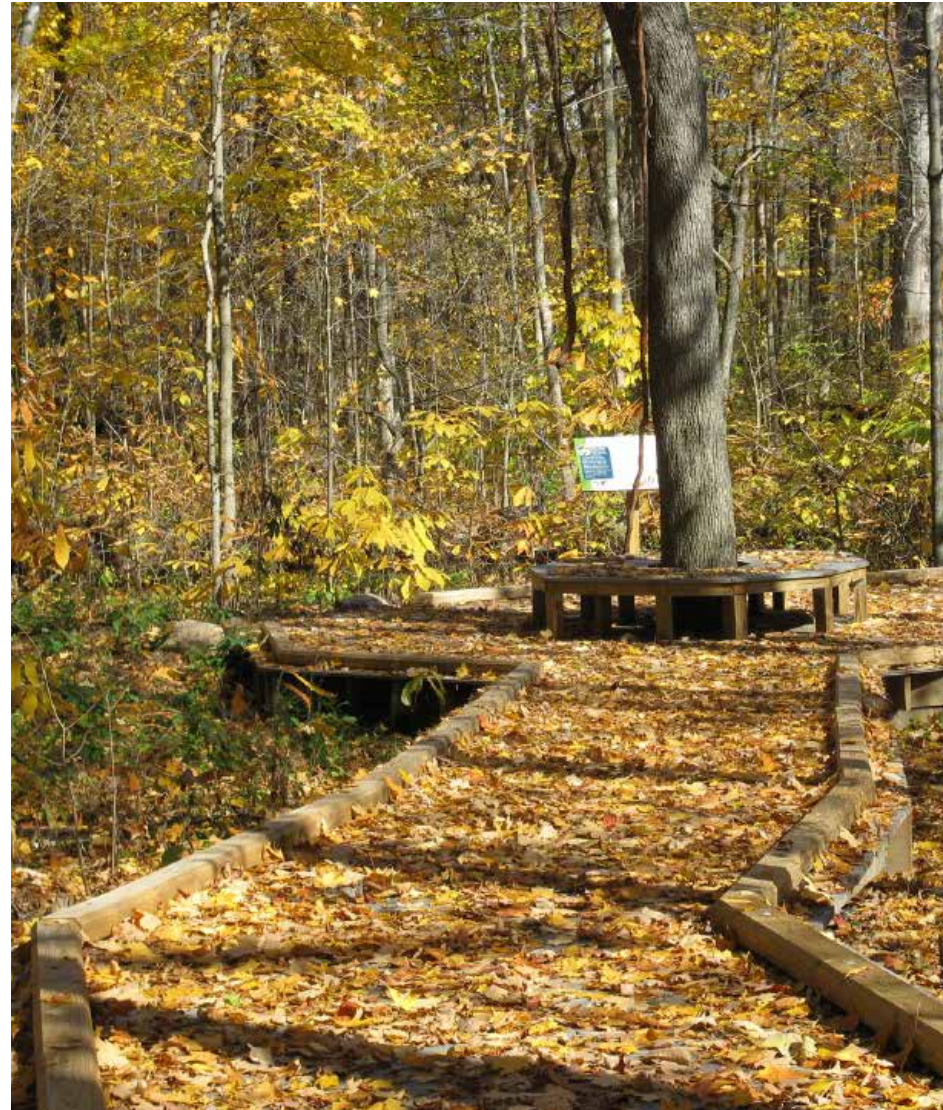


Carmel • Clay
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LIFE-CYCLE ASSET PLAN

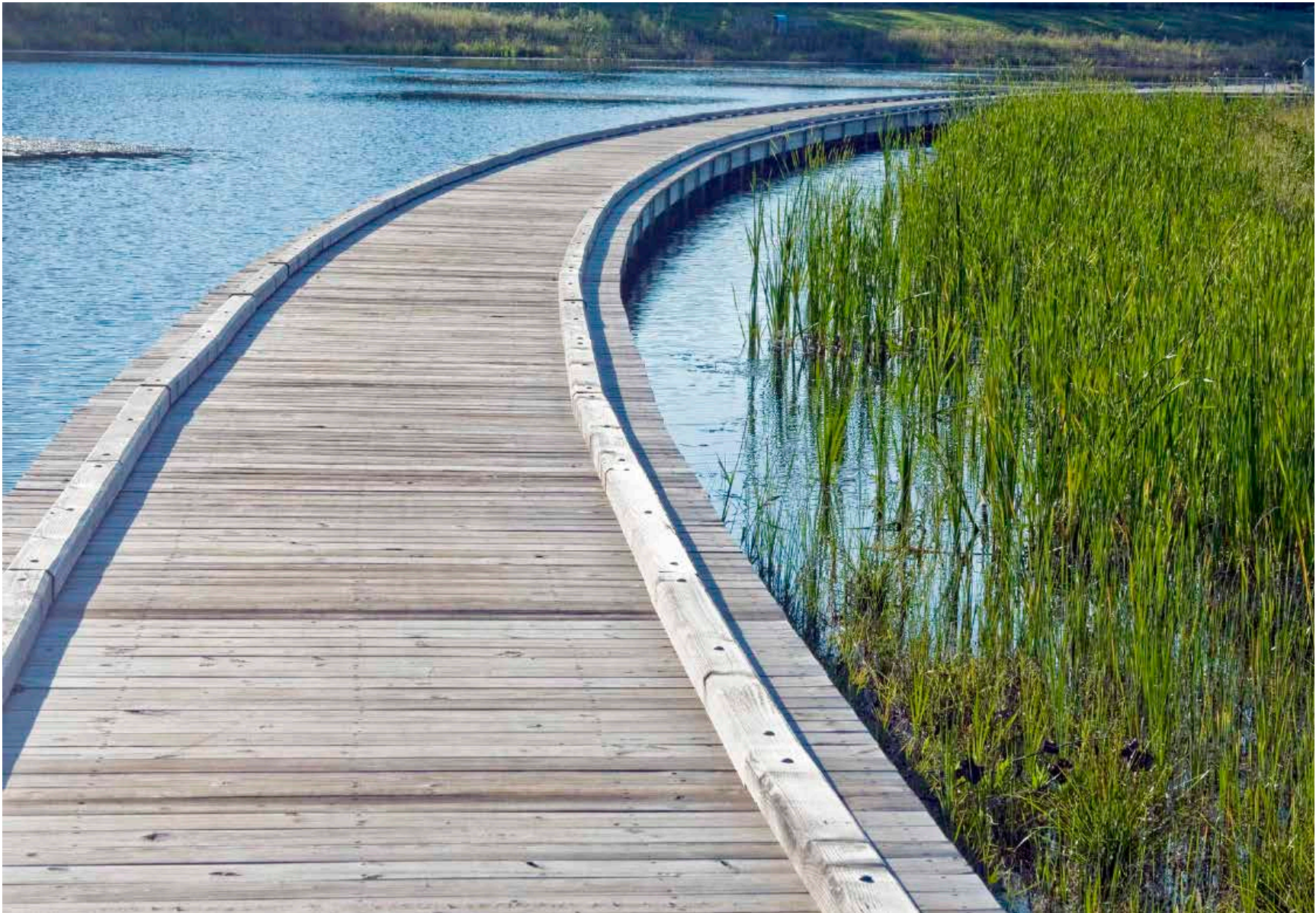
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INTRODUCTION

LIFE-CYCLE ASSET MANAGEMENT



LIFE-CYCLE ASSET MANAGEMENT

PARK ASSESSMENT PROCESS

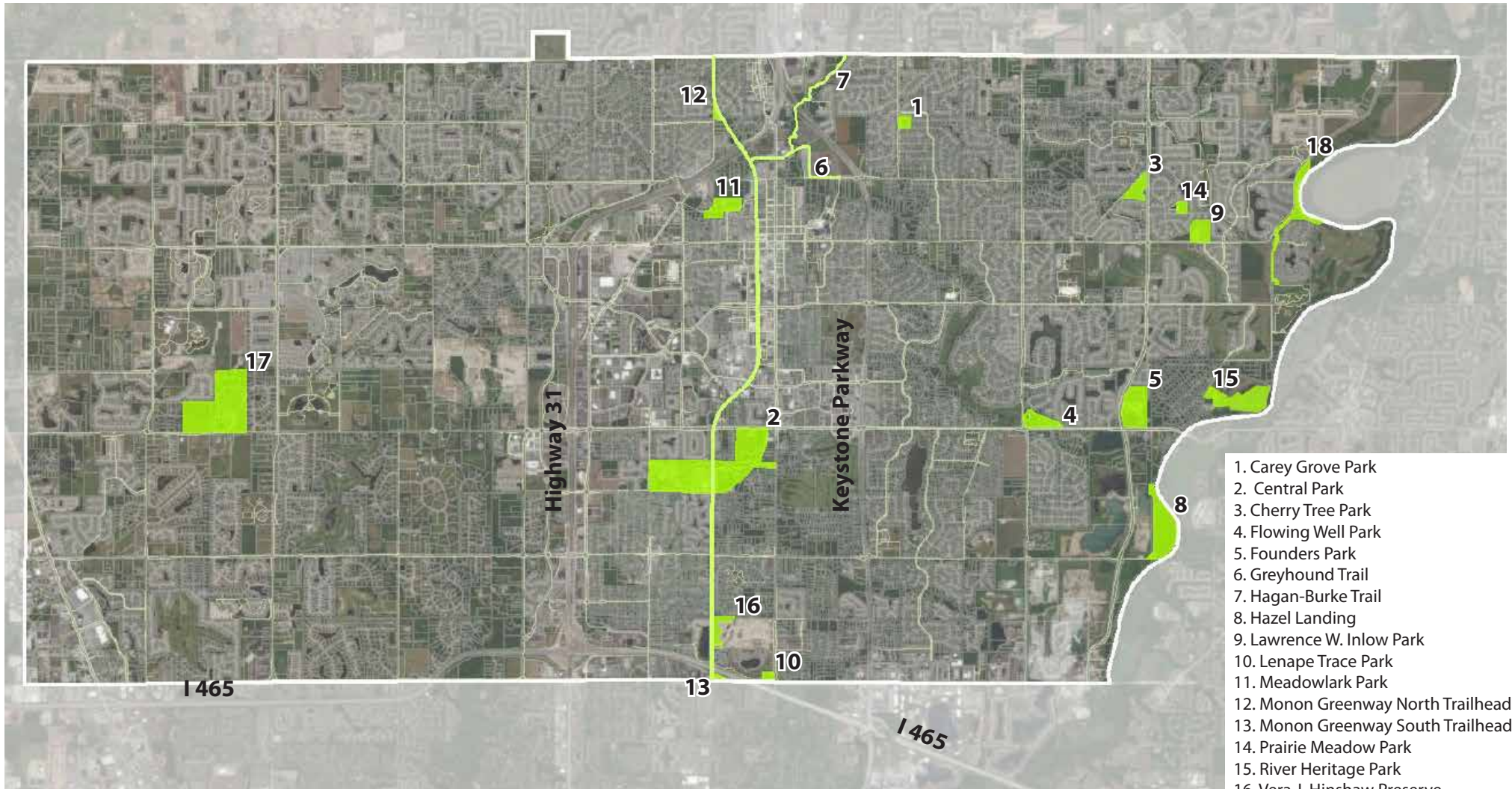
The project team was retained by Carmel Clay Parks & Recreation (CCPR) to complete a life-cycle management plan for the entire park system as part of the new Parks & Recreation Master Plan. The goal of life-cycle asset management planning is to evaluate the condition of existing park infrastructure and to forecast the capital budget necessary to replace facilities, providing for continued delivery of park services for the community.

The process began with a three-day, detailed condition inventory and assessment for all CCPR park assets, including buildings and surrounding sites, multi-use fields, playgrounds, aquatic facilities, natural areas, parking lots, and trails. Following this evaluation, a spreadsheet tool was created that details the condition of individual facilities and forecasts the required cost to renovate or replace assets that fall short of meeting park user expectations. Capital budget requirements were projected through 2030, broken into near term (2018-2020), mid-range (2021-2025), long-range (2026-2030) and future (beyond 2030) asset replacements. This report complements the working spreadsheet tool by documenting the locations of the individual facilities inventoried for each park, and by providing a summary of the capital budget projections including yearly escalations and estimated soft costs.



CARMEL CLAY PARKS

PARK LOCATION MAP



1. Carey Grove Park
2. Central Park
3. Cherry Tree Park
4. Flowing Well Park
5. Founders Park
6. Greyhound Trail
7. Hagan-Burke Trail
8. Hazel Landing
9. Lawrence W. Inlow Park
10. Lenape Trace Park
11. Meadowlark Park
12. Monon Greenway North Trailhead
13. Monon Greenway South Trailhead
14. Prairie Meadow Park
15. River Heritage Park
16. Vera J. Hinshaw Preserve
17. West Park
18. White River Greenway

PARK, TRAIL & OPEN SPACE ASSESSMENTS

LIFE-CYCLE ASSET MANAGEMENT



PARK ASSESSMENTS

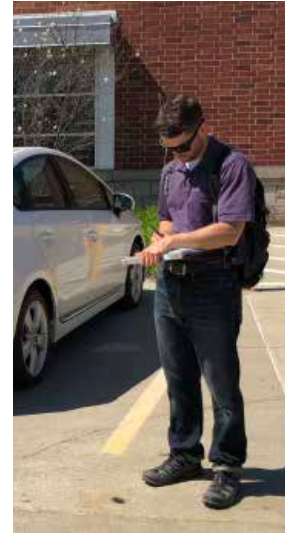
PARK, TRAIL & OPEN SPACE ASSESSMENTS

The project team conducted a three-day, detailed inventory and assessment of all CCPR park assets in May 2018. The team broke into two groups to document the condition of both architectural assets and park site features. CCPR staff joined the team on the tour, sharing their extensive knowledge on park history, maintenance challenges, and planned facility updates.

All park assets were coded based on the following scale for condition:

- 4 - Exceeds Expectations, Replace beyond 2030
- 3 - Meets Expectations, Replace 2026-2030
- 2 - Marginally Meets Expectations, Replace 2021-2025
- 1 - Below Expectations, Replace 2018-2020

The following section is organized by park classification, grouping the parks by size into regional, community and neighborhood parks. Special use parks are divided into nature preserves/open space and greenways/trails. Maps of the individual parks provide locations of all features inventoried, with observations noted on strengths and opportunities for potential improvements and needed repairs or replacements.



CARMEL CLAY PARKS

PARK CLASSIFICATIONS

REGIONAL (≥100 acres)

- Central Park
- West Park

COMMUNITY (10-100 acres)

- Founders Park
- Lawrence W. Inlow Park
- Meadowlark Park
- River Heritage Park

NEIGHBORHOOD (5-10 ACRES)

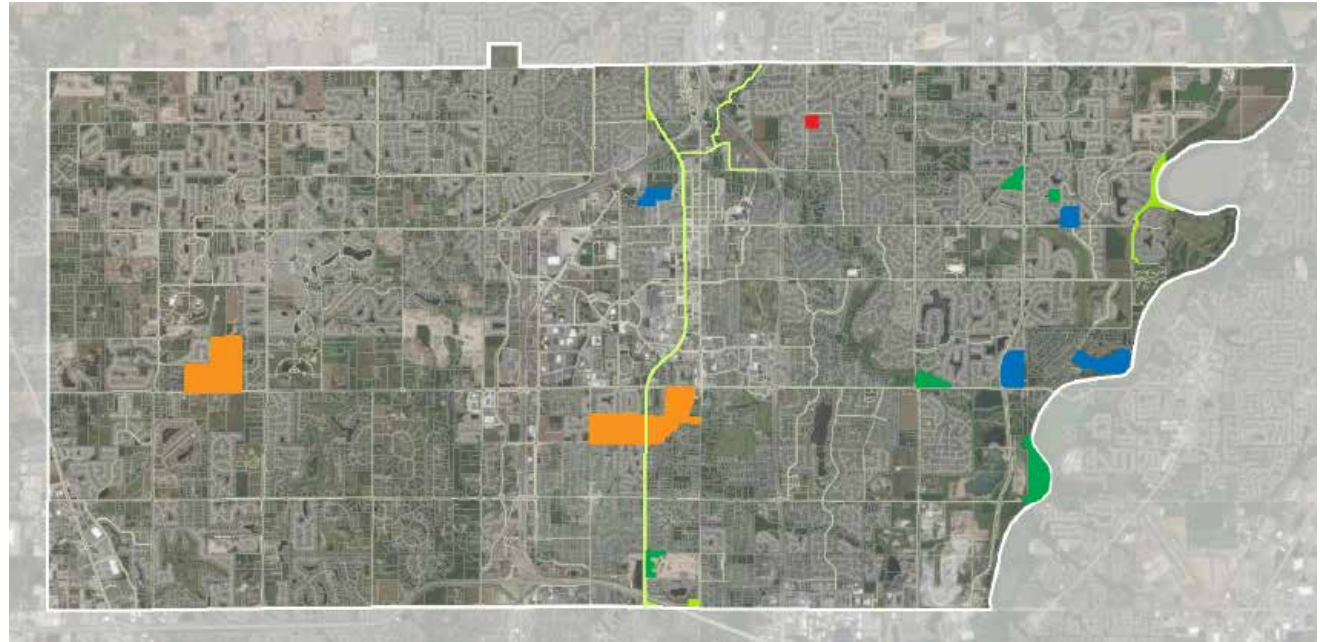
- Carey Grove Park

NATURE PRESERVES / OPEN SPACE

- Cherry Tree Park
- Flowing Well Park
- Hazel Landing Park
- Prairie Meadow Park
- Vera J. Hinshaw Preserve

GREENWAYS / TRAILS

- Greyhound Trail
- Hagan-Burke Trail
- Lenape Trace
- Monon Greenway and Trailheads
- White River Greenway



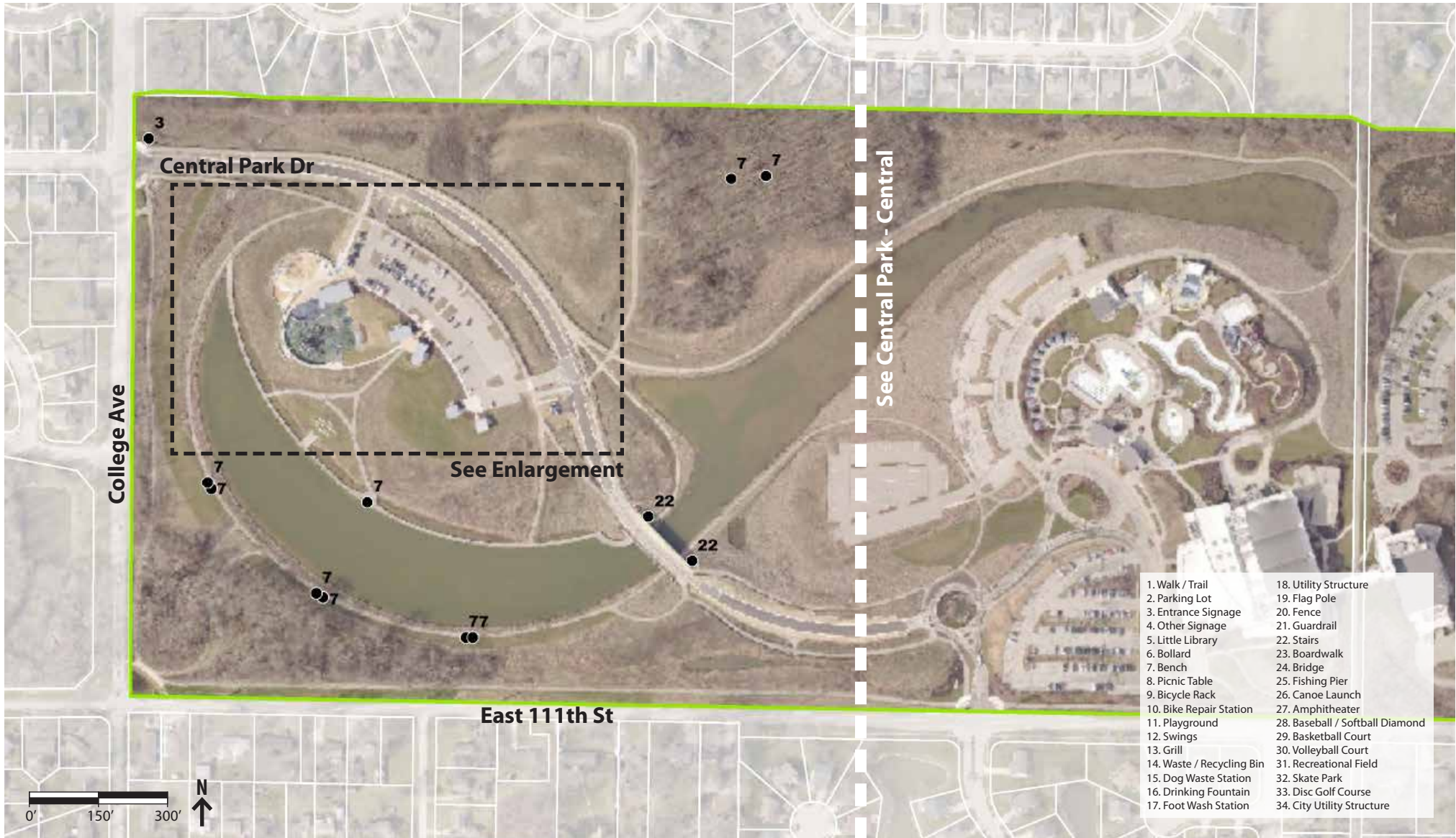
CARMEL CLAY PARKS

REGIONAL PARKS



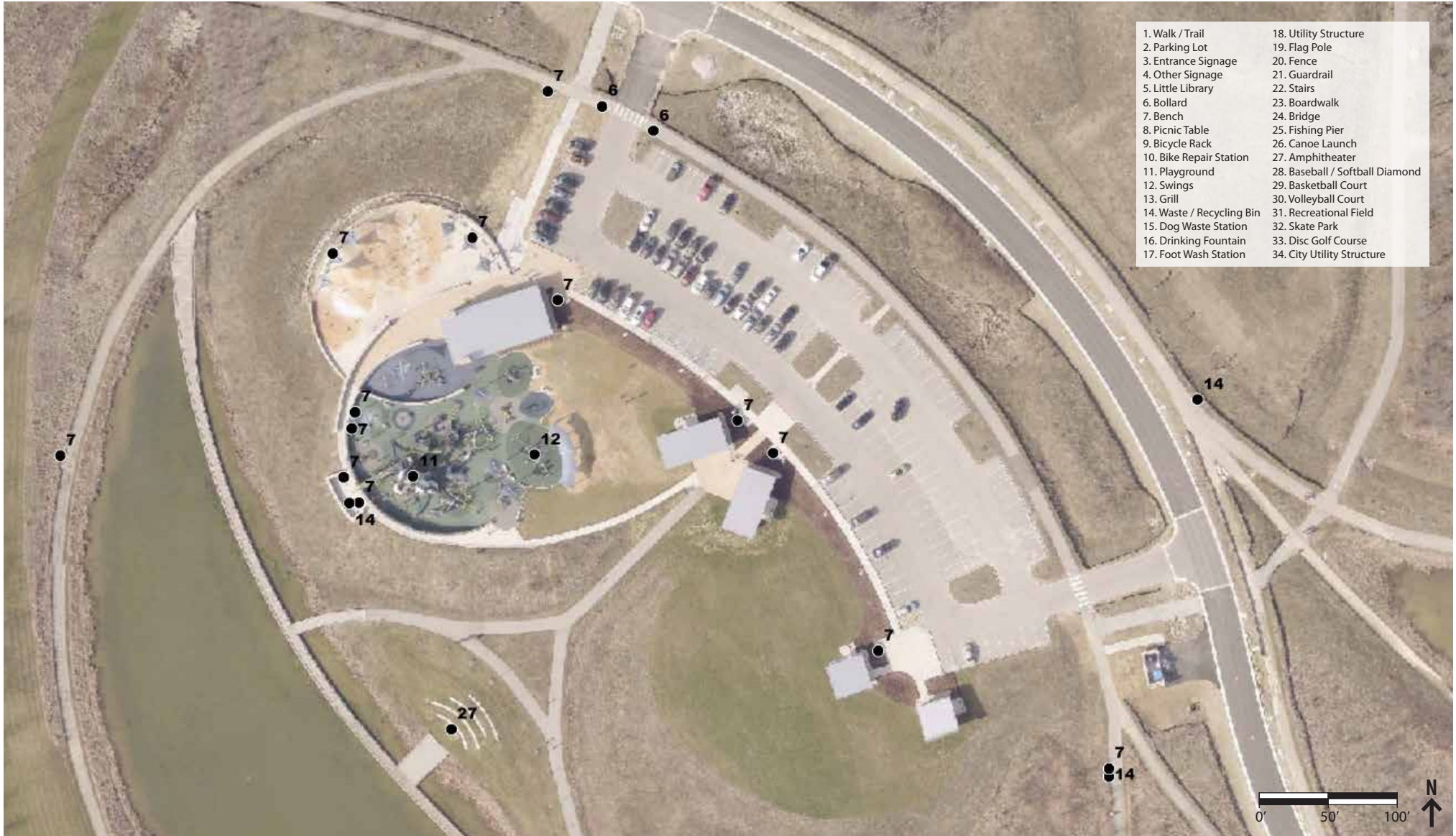
CENTRAL PARK - WEST

SITE INVENTORY - PLAN



CENTRAL PARK - WEST

SITE INVENTORY - ENLARGEMENT



CENTRAL PARK - WEST

SITE ANALYSIS

STRENGTHS

- Newly installed playground, shelters, and park amenities.
- Lagoon is stocked by DNR Urban Fishery Program and it is a popular destination for fishing.
- Trail system is well used.
- The splashpad and shelters are in excellent condition exceeding expectations. Construction was completed in 2016.



OPPORTUNITIES

- Install stepped revetment fishing access along portions of the south edge of the lagoon.
- Identify and address issues contributing to algae growth in the lagoon.
- Provide additional boardwalk fishing and seating nodes.
- Incorporate inner loop trail along the southern edge.
- Reestablish emergent vegetation along the northern lagoon edge.
- Add play / exercise nodes along the southern edge of lagoon trail.



CENTRAL PARK - CENTRAL

SITE INVENTORY - PLAN



- | | |
|---------------------------|---------------------------------|
| 1. Walk / Trail | 18. Utility Structure |
| 2. Parking Lot | 19. Flag Pole |
| 3. Entrance Signage | 20. Fence |
| 4. Other Signage | 21. Guardrail |
| 5. Little Library | 22. Stairs |
| 6. Bollard | 23. Boardwalk |
| 7. Bench | 24. Bridge |
| 8. Picnic Table | 25. Fishing Pier |
| 9. Bicycle Rack | 26. Canoe Launch |
| 10. Bike Repair Station | 27. Amphitheater |
| 11. Playground | 28. Baseball / Softball Diamond |
| 12. Swings | 29. Basketball Court |
| 13. Grill | 30. Volleyball Court |
| 14. Waste / Recycling Bin | 31. Recreational Field |
| 15. Dog Waste Station | 32. Skate Park |
| 16. Drinking Fountain | 33. Disc Golf Course |
| 17. Foot Wash Station | 34. City Utility Structure |

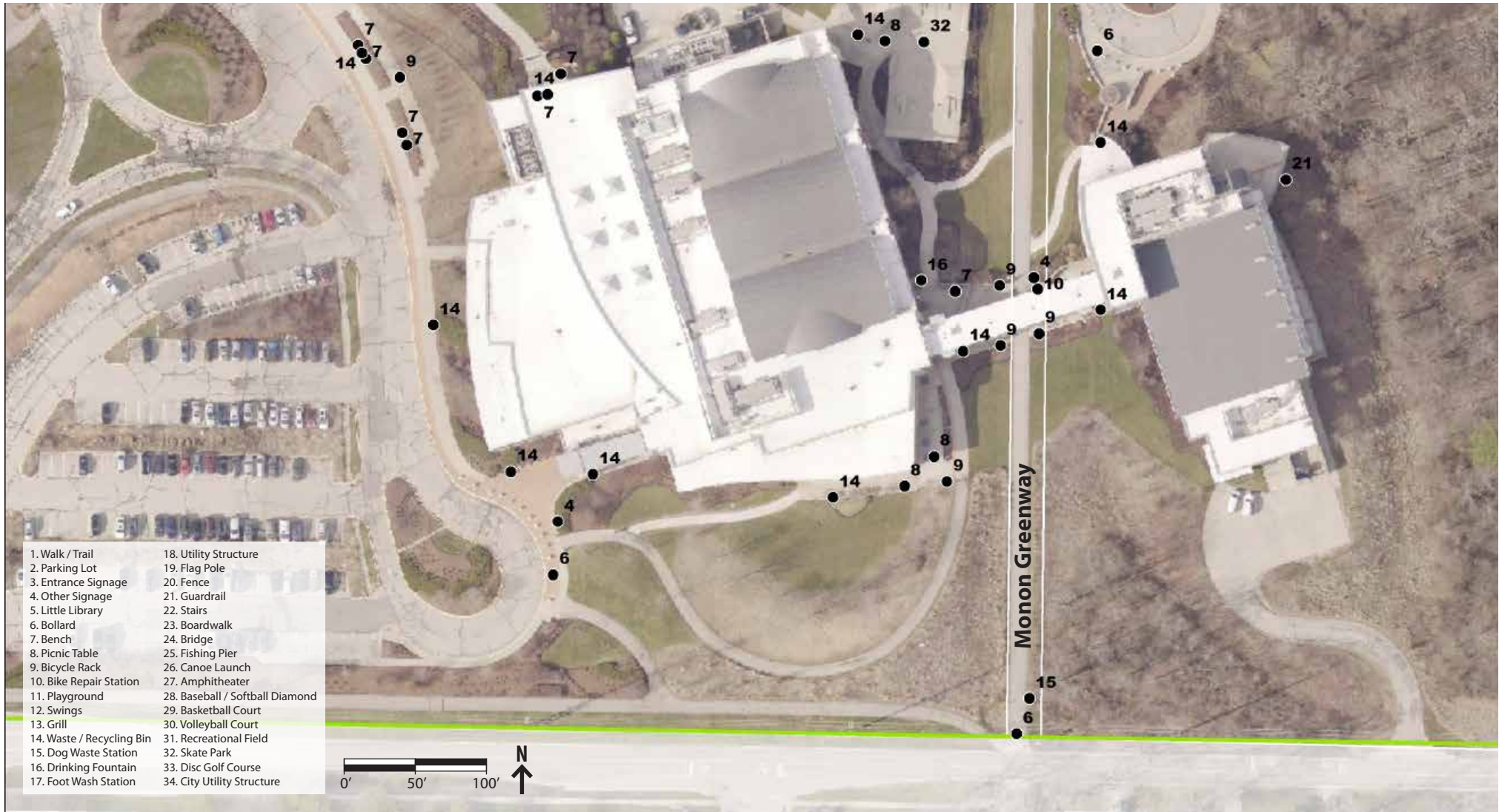
CENTRAL PARK - CENTRAL

SITE INVENTORY - WATERPARK ENLARGEMENT



CENTRAL PARK - CENTRAL

SITE INVENTORY - COMMUNITY CENTER ENLARGEMENT



CENTRAL PARK - CENTRAL

SITE ANALYSIS

STRENGTHS

- Park wide lighting updated in Spring 2018.
- Newly resurfaced Monon Greenway is in good condition.
- Sloped lawn south of Monon Community Center is utilized by recreation programs and summer camps.

OPPORTUNITIES

- Reset paving and bollards or explore alternative circulation control devices.
- Reset or replace brick and concrete pavement that is beginning to fail.
- Identify funding source for skate park bowl replacement.
- Replace rusting bike racks along the Monon Greenway.
- Improve drainage along the staff parking entrance drive to prevent further erosion.
- Expand entrance traffic circle to improve large vehicle circulation.



CENTRAL PARK - CENTRAL

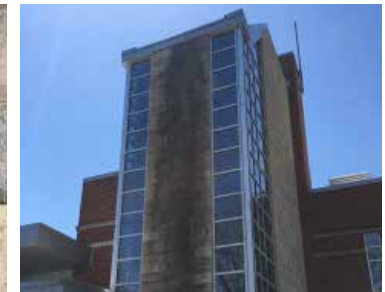
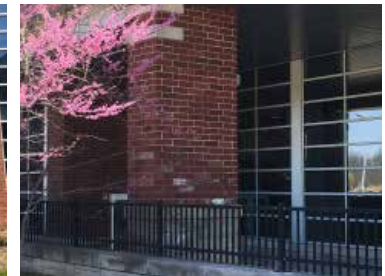
SITE ANALYSIS - MONON COMMUNITY CENTER BUILDING ENVELOPE

OBSERVATIONS

The Building Envelope at the Monon Community Center is in good condition, exceeding expectations with continued maintenance. The following summarizes observed conditions that will require attention in the future.

- Rusting on the sunshade supports.
- Faded paint on the west building entrance canopy.
- Staining of the limestone is generally visible on the north elevation.
- East Building: Rusting steel on the terrace.
- East Building: Staining of limestone on stair tower.
- East Building: Crack at masonry corner.
- East Building Terrace: Erosion of the concrete subbase on the south side. Immediate remediation is recommended to prevent further deterioration.

- East Building: Terrace drainage erosion under the terrace was observed. Immediate remediation is recommended to prevent further erosion.
- Roofing warranty is near the end. Anticipate replacement in the next 5-7 years.



CENTRAL PARK - CENTRAL

SITE ANALYSIS - MONON COMMUNITY CENTER INTERIOR

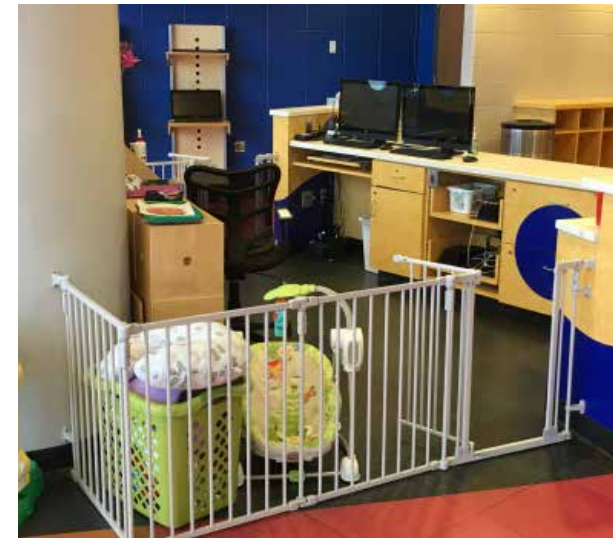
GENERAL

- The Monon Community Center interior finishes are in good condition, exceeding expectations. Normal wear of finishes was observed due to usage. Replacement/updated finishes have been implemented in both the East Building, Bridge, West Lobby and Fitness.



FITNESS

- Fitness carpeting requires replacement. Projected replacement in 2018.
- Laundry room flooring requires replacement. Epoxy flooring is recommended.
- Saunas: Water damage was observed on the seating and doors.



CHILDCARE

- Finishes are worn in the childcare, expected replacement in the next 2 years.



OPPORTUNITIES

- The play structure replacement is being explored to accommodate an interactive play experience.

CENTRAL PARK - CENTRAL

SITE ANALYSIS - MONON COMMUNITY CENTER

AQUATICS

- Aquatics Equipment Room: Excessive rusting was observed in the mechanical space including the structural beam and fire protection piping. Immediate remediation is recommended to prevent further deterioration.
- Natatorium: Excessive rusting/oxidation was observed on the door frames and hardware. Normal maintenance would alleviate the oxidation.
- Natatorium: Rusting was observed on the slide tower railings and support structure.
- Natatorium: Fading of the body flume slides was observed. A re-coating application is recommended.

INFRASTRUCTURE

- Pool systems are generally in good condition, meeting expectations. The UV sanitation has significant rusting on the equipment.
- Aquatic mechanical space is not adequately ventilated. Additional ventilation is recommended.

- Generally, all mechanical units are in good condition, meeting expectations. Normal maintenance has occurred with replacement of units and compressors. Anticipate replacement of rooftop units as they are nearing their life expectancy in the next 3 - 5 years.

OPPORTUNITIES

- Explore energy saving measures by converting to LED lighting in the facility.
- Explore higher efficiency roof top unit with energy recovery to increase energy savings.
- Explore replacement of sand filters for the aquatics with regenerative media for water savings.



CENTRAL PARK - CENTRAL

SITE ANALYSIS - WATERPARK

MAIN FILTRATION BUILDING

- The Main Filtration Building is in good condition, exceeding expectations with continued maintenance. Constructed in 2005.
- Rusting of steel beams was visible due to the corrosive environment.
- The limestone has staining with efflorescence on the brick.
- The PVC roofing is presently under warranty. Replacement is expected within the next 10 years.
- Rusting was observed on the incoming water service due to the corrosive environment.
- Filtration system of pool requires replacement due to meeting life expectancy. Explore replacement of sand filters at the Waterpark with regenerative media for water savings.

expectations with continued maintenance.

- The brick has efflorescence on the exterior.



FLOWRIDER FILTRATION BUILDING

- The Flowrider filtration building is in good condition, exceeding

CENTRAL PARK - CENTRAL

SITE ANALYSIS - WATERPARK

ENTRY CONTROL BUILDING

- The Entry Control Building is in good condition, exceeding expectations. Completed in 2005 with a modification in 2015.
- The exterior building envelope has staining on the limestone.
- The HVAC and condensing unit in the concession were installed in 2017.
- The PVC roofing is presently under warranty, replacement is anticipated within the next 10 years.

- The plunge area for a future tube slide does not have filtered water. Remediation may be required if an additional slide is provided.
- The filtration system on the Flowrider requires normal maintenance.



WATERPARK FEATURES

- The Waterpark features consist of a leisure pool, lap pool, lazy river, slides, plunge pool, tot pool, deep well pool. Facilities were constructed in 2005 with the exception of the Flowrider. The features are in good condition, meeting expectations. Proper maintenance of the facility was observed. Features in the leisure pool were replaced in 2015.
- Minor concrete deterioration was observed under the lap pool gutter and deep well pool.

CENTRAL PARK - EAST

SITE INVENTORY - PLAN



CENTRAL PARK - EAST

SITE INVENTORY - EAST WOODS PICNIC AREA ENLARGEMENT



CENTRAL PARK - EAST

SITE INVENTORY - DOG PARK ENLARGEMENT



CENTRAL PARK - EAST

SITE ANALYSIS - EAST WOODS

STRENGTHS

- Carmel Creek is a unique attraction.
- Understory vegetation north of the roadway is well-maintained, native vegetation.
- Formalized log trail helps define the pedestrian space.
- Timber guardrails and specialty pavement in roadways along Central Park Drive East enhance the sense of place and help regulate vehicle speeds.
- Picnic grove shelters are well utilized.
- Trex boardwalks are aesthetically pleasing and individual planks are easily replaceable by park staff.
- The east grove shelters are in good condition and meets expectations with continued maintenance.
- The exterior restrooms are in good condition and exceed expectations with continued maintenance.

OPPORTUNITIES

- Reestablish prairie vegetation in areas currently void of vegetation along road.
- Prevent unauthorized parking and

U-turns along the entrance drive.

- Improve drainage from the Central Park Drive to the east woods.
- Consider removal of central bench from boardwalk nodes where possible to improve circulation for maintenance vehicles.
- Monitor log curbs along trail to prevent exposed rebar and remove curbing that blocks access to benches and signage.
- The cedar shingles roofing on the shelter is nearing the warranty period. Anticipate a replacement in the next 8 to 10 years. Staining was observed at the base of the limestone.
- The solar panels on the exterior restroom are nearing the end of their life cycle. Anticipate replacement in the next 8-10 years.
- The cedar shingle roofing on the exterior restroom is nearing the warranty period. Anticipate replacement in the next 8-10 years.



CENTRAL PARK - EAST

SITE ANALYSIS - DOG PARK

STRENGTHS

- The dog park is heavily used. Currently there is a waiting list for users. Expansion currently under construction will help meet the demand by community members.
- Parking lot utilizes permeable parking.
- Flexible use lawn, picnic shelter, and restrooms adjacent to dog park.
- The Dog Park shelter and exterior restroom are in good condition, exceeding expectations with continued maintenance. These structures were recently completed in 2017.

- Look to incorporate dog parks in other areas of Carmel-Clay park system.
- Rust staining was observed on the shelter stone due to iron deposits in the irrigation well water.



OPPORTUNITIES

- Create trail connection to the main area of Central Park.
- Improve vehicle entrance to parking area. The existing turning radii is tight for most vehicles.
- Attach utility box to restroom facility and cover well utility structure.
- Overseed dog park lawn with fescue to establish a deeper-rooted turf system.



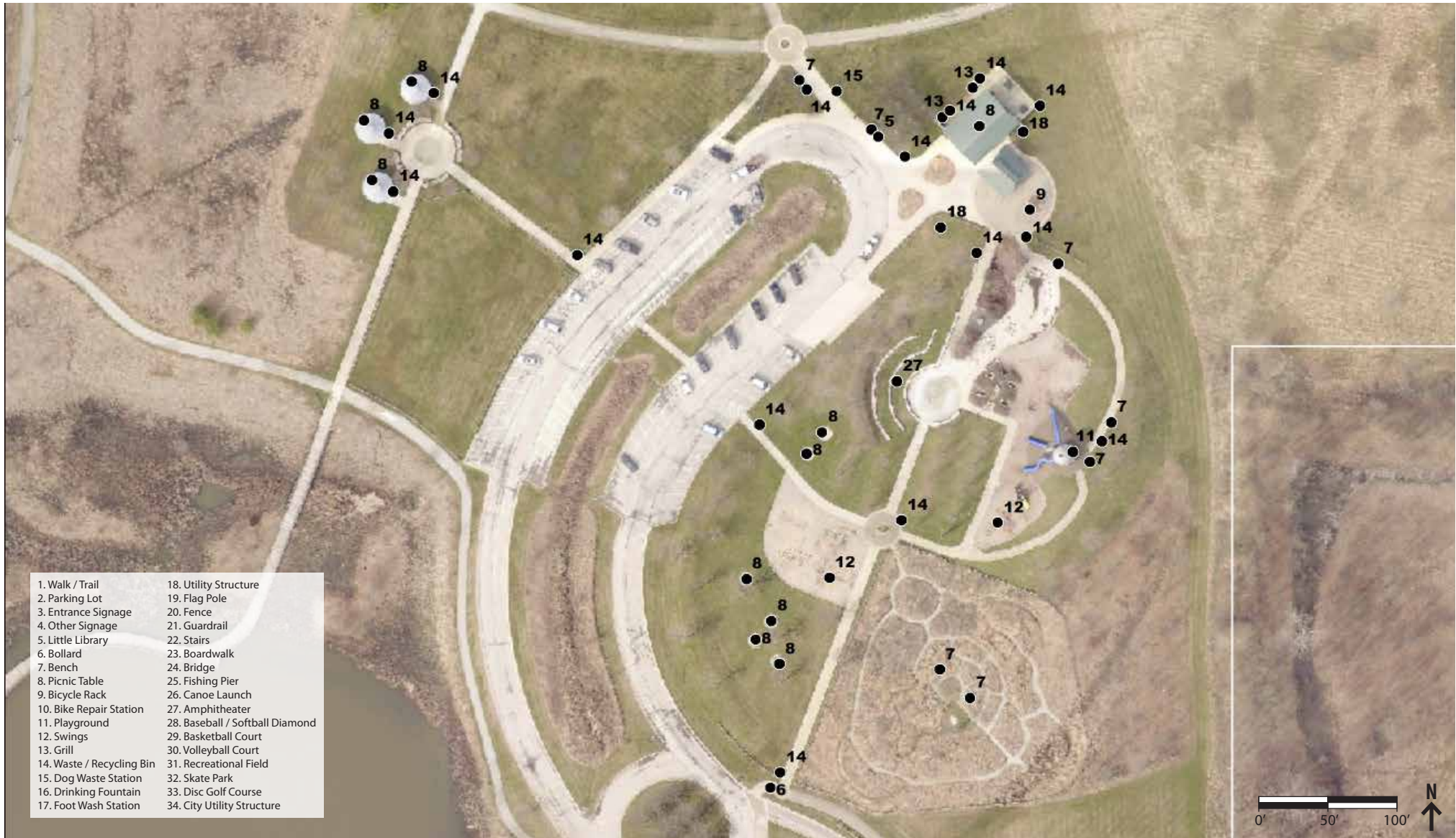
WEST PARK

SITE INVENTORY - PLAN



WEST PARK

SITE INVENTORY - ENLARGEMENT



WEST PARK

SITE ANALYSIS

STRENGTHS

- Heavily utilized as the only western park in the system.
- Large amount of program amenities including a pond with boardwalks, playgrounds, splashpad, amphitheater, rentable shelters, open lawn, and looped trails.
- Diverse natural systems such as wetlands, prairies, and forests.
- Currently in the process of updating features following the current park master plan.
- The circular shelters are in fair condition, marginally meeting expectations.
- The large shelter is in fair condition, marginally meeting expectations.
- The exterior restrooms are in good condition, meeting expectations with continued maintenance.
- The splashpad is in fair condition, marginally meeting expectations. The features of the splashpad have exceeded their life expectancy.

OPPORTUNITIES

- Continue implementing the current park master plan.
- Explore the feasibility of a community center for west Carmel.
- The column bases and snow guards on the circular shelters are rusting.
- The cedar soffits are deteriorating at the large shelter. The masonry walls have excessive efflorescence and the metal roof has signs of rusting. Remediation may be required.
- The cedar structure is partially deteriorating at the exterior restrooms. Efflorescence is visible on the masonry.



WEST PARK

MASTER PLAN

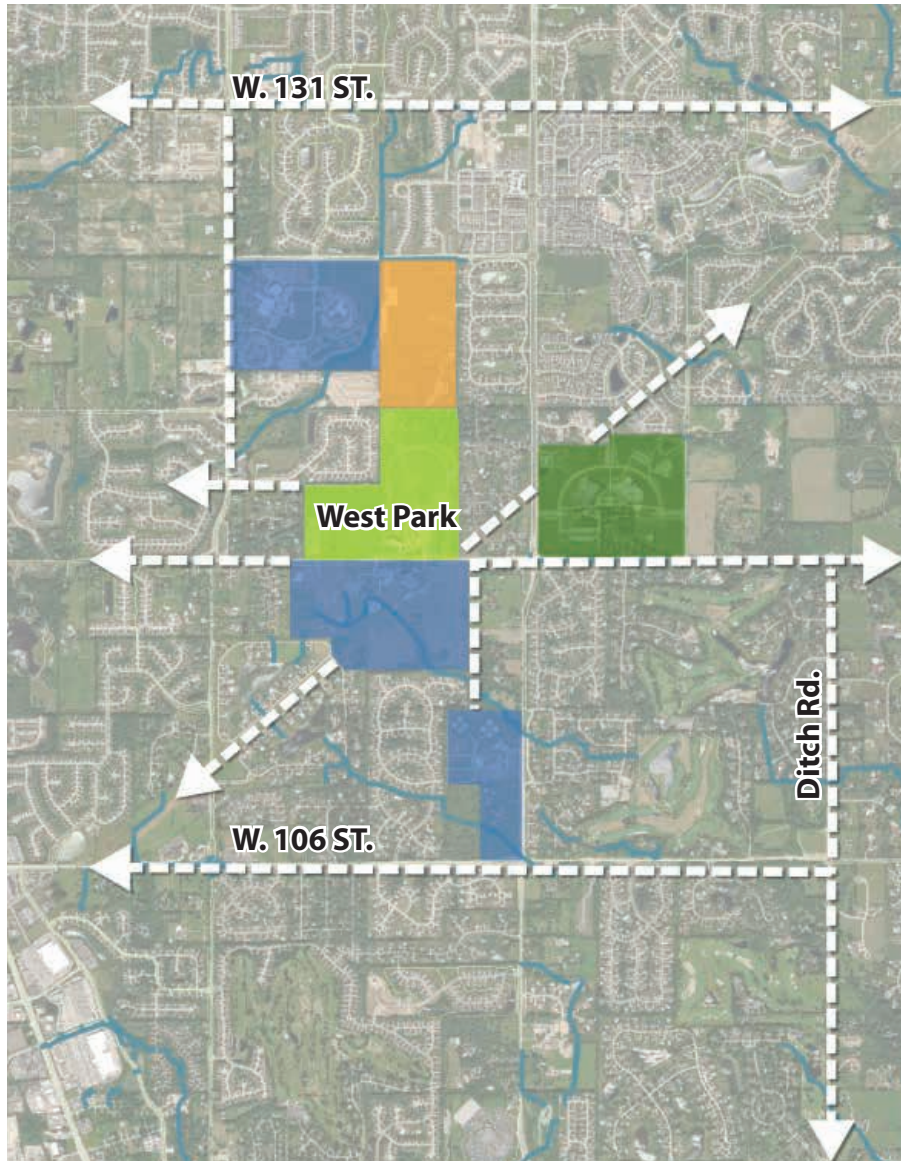


A master plan was completed for West Park in December 2016, which is guiding the replacement of current park facilities. The Groves park expansion is presently under construction, adding a program pavilion, woodland walking loop with a nature play area, a new entrance, and additional parking. In addition to the improvements currently under construction, future program elements will include:

- Renovated shelters and splashpad
- Destination playground
- Additional picnic areas
- Expanded trail connections
- Outdoor activities such as a fitness course
- Integrated programs such as educational and cultural events
- Restoration of ecological resources and expanded pond areas
- Year-round activity spaces

CARMEL CLAY PARKS

WEST REGIONAL CONNECTIVITY DIAGRAM



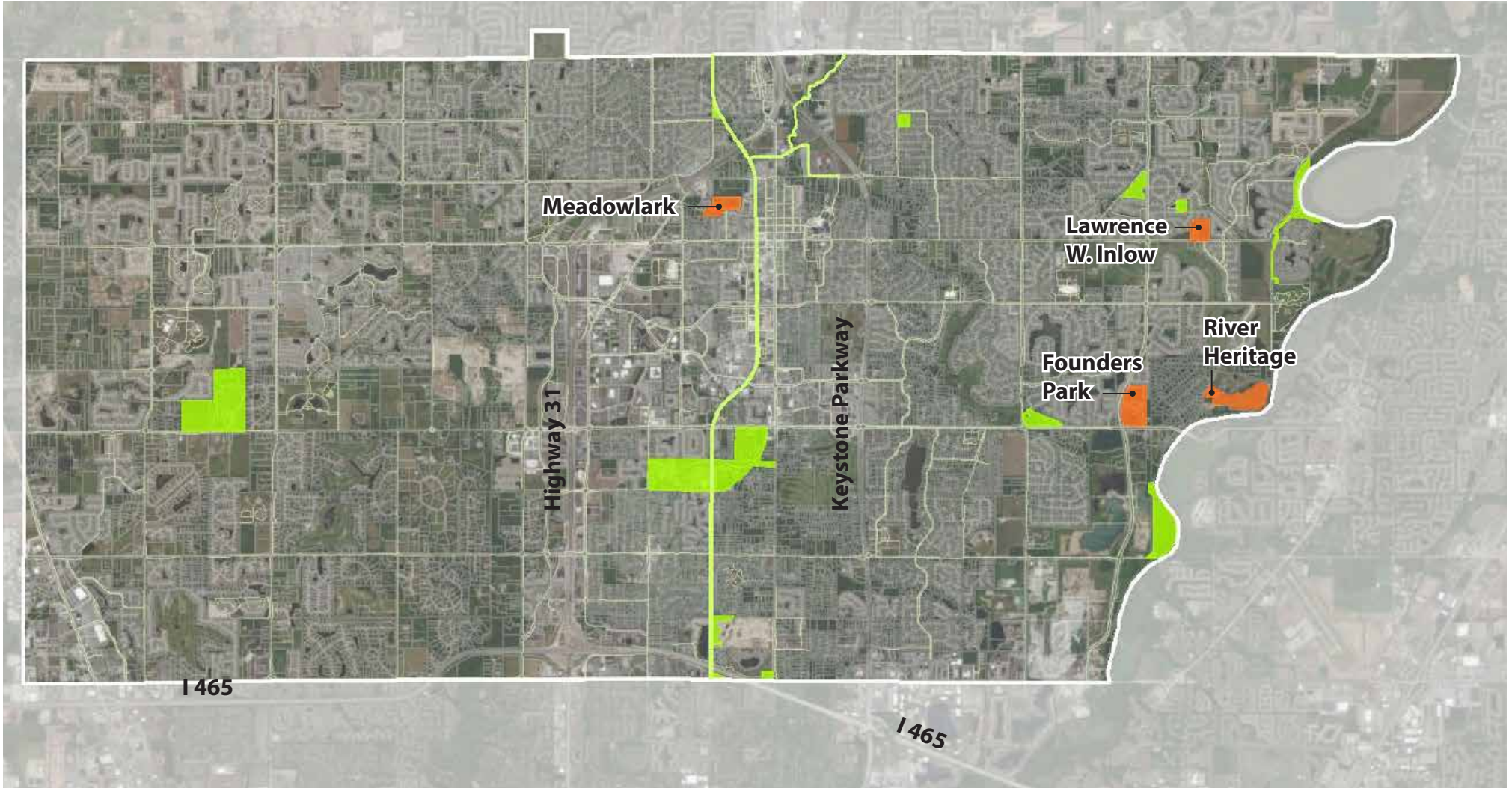
West Park is transforming into the regional hub for west Carmel-Clay, with close proximity to Hamilton County's Coxhall Gardens, the Carmel Dads' Club CCCSC-Shelborne Fields athletic complex, and multiple schools including West Clay Elementary School, Towne Meadow Elementary School and University High School of Indiana. Connections between these compatible sites can create an integrated regional corridor of linked recreational facilities.

LEGEND

- Coxhall Gardens
- West Park
- Schools
- Carmel Dads' Club
- Proposed Trail Connection
- Drainageways

CARMEL CLAY PARKS

COMMUNITY PARKS



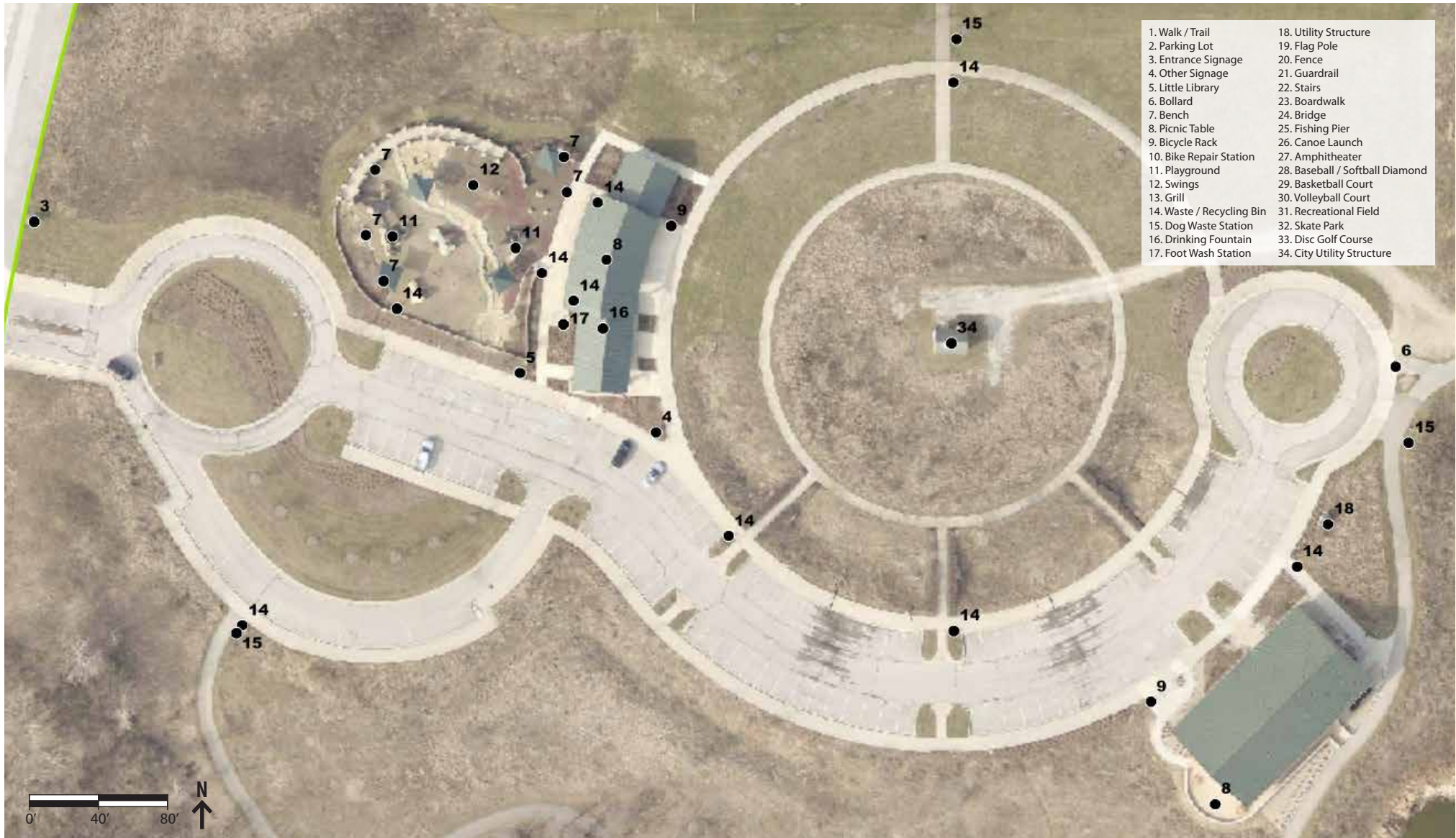
FOUNDERS PARK

SITE INVENTORY - PLAN



FOUNDERS PARK

SITE INVENTORY - ENLARGEMENT



FOUNDERS PARK

SITE ANALYSIS

STRENGTHS

- Playground structure is ADA accessible.
- Parking areas drain into bioswales.
- Largest flexible use recreational field space in park system.
- The Wilfong Pavilion structure was dedicated in May 2014. The building structure systems and interiors are well maintained and exceed expectations.
- The shelter, toilets and garage were dedicated in August 2012. The structures are well maintained and exceed expectations, with continued maintenance.

OPPORTUNITIES

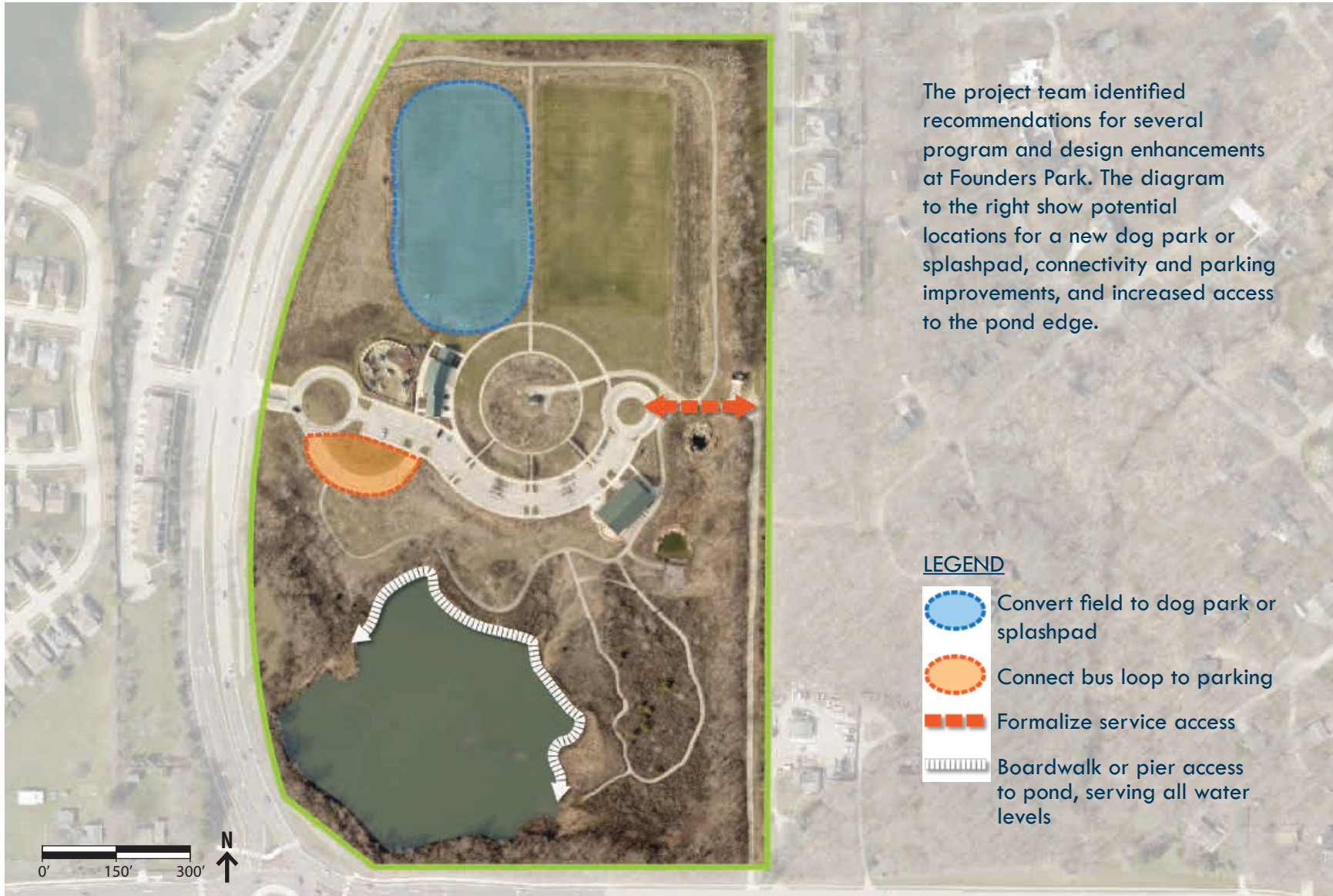
- Convert the existing bus parking loop to a dog park or additional car parking.
- Provide access to the pond.
- Improve the current parking configuration with alternative uses.
- Convert one of the flexible use recreational fields to additional programmed spaces.

- Improve access to trash enclosure.
- Improve drainage from parking lot to bioswales.
- Create trail connection to River Heritage Park.
- Explore acoustical control options in the multi-purpose rooms of the Wilfong Pavilion.
- Consider an alternate flooring material in the Wilfong Pavilion to meet programmatic needs in the multi-purpose room.
- Wood fascias on the garage building are experiencing dry rot due to the lack of a gutter. Recommend replacing the rotted fascia and providing aluminum fascias to deter further rotting.



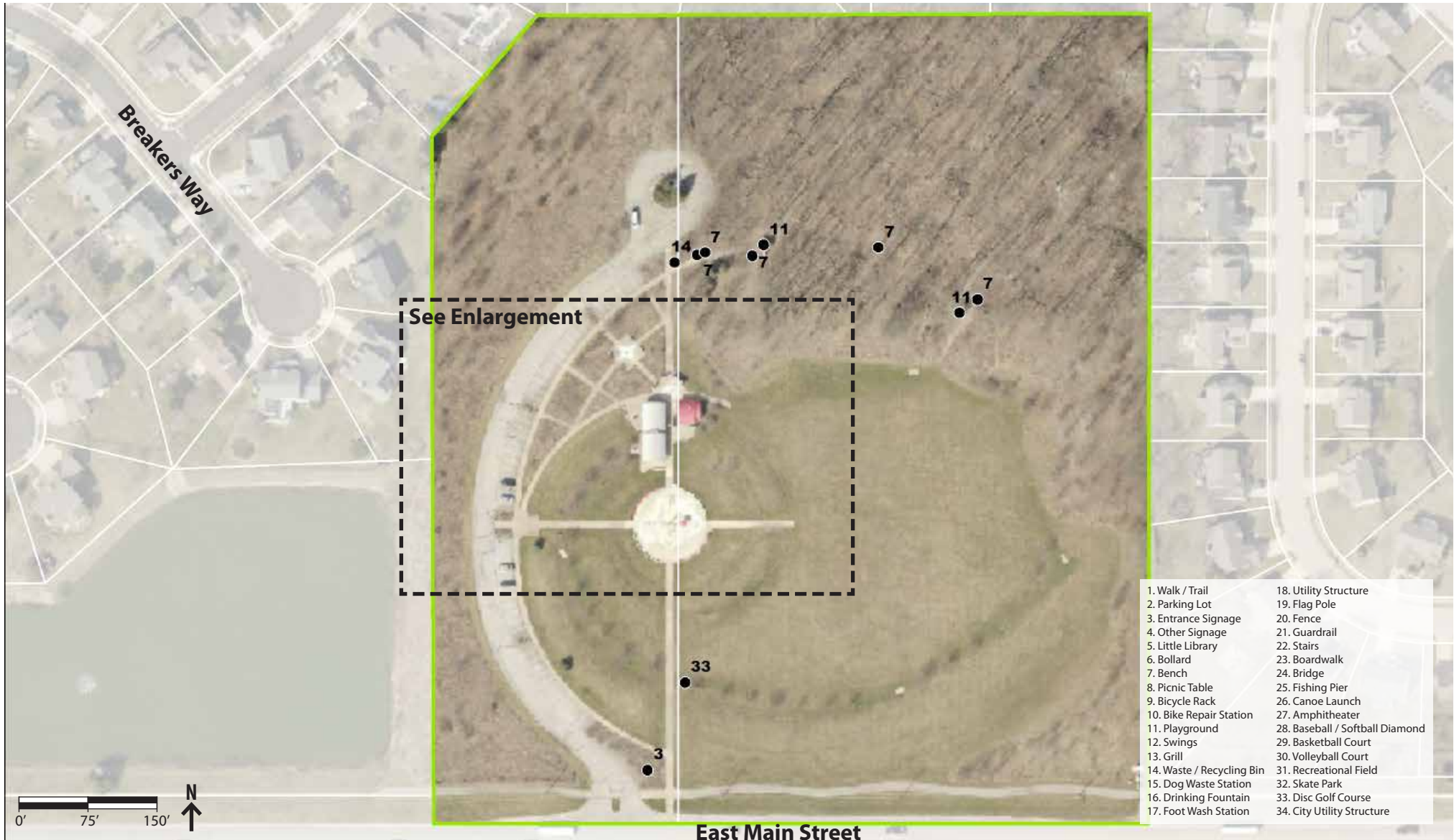
FOUNDERS PARK

PARK IMPROVEMENTS DIAGRAM



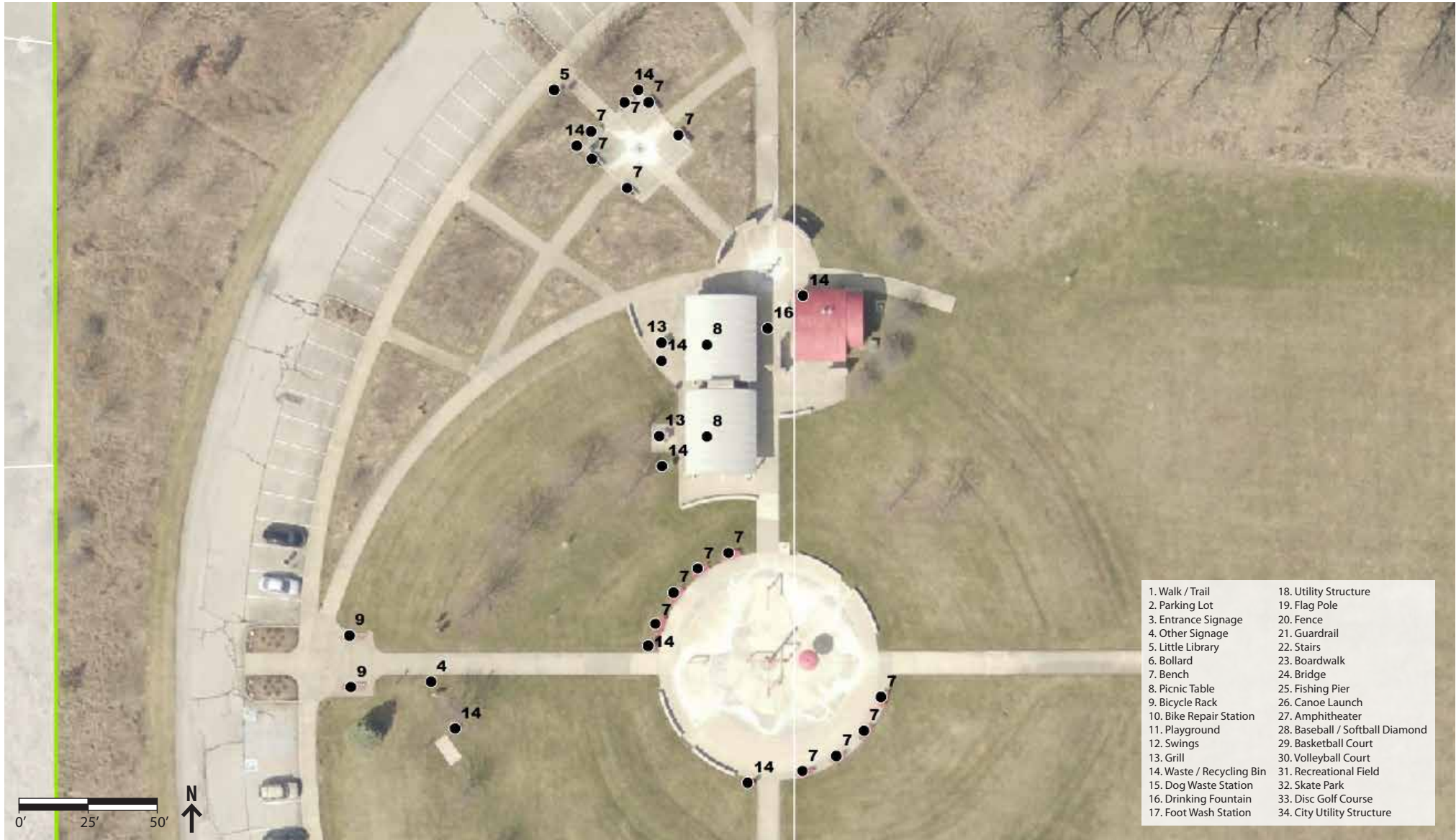
LAWRENCE W. INLOW PARK

SITE INVENTORY - PLAN



LAWRENCE W. INLOW PARK

SITE INVENTORY - ENLARGEMENT



- | | |
|---------------------------|---------------------------------|
| 1. Walk / Trail | 18. Utility Structure |
| 2. Parking Lot | 19. Flag Pole |
| 3. Entrance Signage | 20. Fence |
| 4. Other Signage | 21. Guardrail |
| 5. Little Library | 22. Stairs |
| 6. Bollard | 23. Boardwalk |
| 7. Bench | 24. Bridge |
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| 10. Bike Repair Station | 27. Amphitheater |
| 11. Playground | 28. Baseball / Softball Diamond |
| 12. Swings | 29. Basketball Court |
| 13. Grill | 30. Volleyball Court |
| 14. Waste / Recycling Bin | 31. Recreational Field |
| 15. Dog Waste Station | 32. Skate Park |
| 16. Drinking Fountain | 33. Disc Golf Course |
| 17. Foot Wash Station | 34. City Utility Structure |

LAWRENCE W. INLOW PARK

SITE ANALYSIS

STRENGTHS

- Large community park with a diverse program including sheltered picnic space, splashpad, disc golf, playgrounds and forested trail.
- Currently in the design process of updating playground and splashpad spaces.
- Large unprogrammed lawn space.
- The shelter was completed in September 2000 with an expansion in 2003. The structure is in good condition and meets expectations, with continued maintenance.
- The exterior restrooms were completed in September 2000. The building's structure, systems and interior are well maintained and in good condition, but lack the ability to heat, limiting use to warm months. The building meets expectations, provided continued maintenance.
- The splashpad was completed in September 2000. The splashpad is in fair condition, marginally meeting expectations. The features of the splashpad have exceeded their life expectancy.

OPPORTUNITIES

- Improve drainage around berm in lawn space to simplify park infrastructure. Aerial drains are currently required to drain lawn.
- Replace park amenities per the updated plans.
- The cedar structure at the shelter and exterior restrooms is weathered with some splitting timber and rusted connections. Remediation may be required.
- Replacement of the splashpad may be considered to improve the recreation experience and sightlines with the playground. Recommendation to provide a more interactive application.



MEADOWLARK PARK

SITE INVENTORY - PLAN



MEADOWLARK PARK

SITE INVENTORY - ENLARGEMENT



MEADOWLARK PARK

SITE ANALYSIS

STRENGTHS

- Neighborhood park with proximity to the downtown Arts and Design District and Monon Greenway.
- Park amenities include: basketball court, playground, picnic shelter, pond with fishing pier and unprogrammed lawn spaces.
- The shelter is in fair condition, meeting expectations with continued maintenance.



OPPORTUNITIES

- Facilities are generally outdated. A new master plan should be completed prior to replacement, including a wetland delineation as part of the planning process.
- Relocate playground and shelter out of floodplain.
- Stabilize bridge abutments.
- Fishing pier is failing. Replace with ADA accessible pier. Grant funding may be available.
- Minor rusting was observed on the shelter, including metal roofing fasteners and structure.



RIVER HERITAGE PARK

SITE INVENTORY - PLAN



RIVER HERITAGE PARK

SITE ANALYSIS

STRENGTHS

- Playground area and rentable shelter are popular destinations for park visitors.
- Volleyball courts are programmed frequently.
- Forested area fronts the White River.
- The shelter is in fair to good condition, meeting expectations with continued maintenance.
- The exterior restroom are in good condition, meeting expectations with continued maintenance. Restroom lacks heat for winter use and has no interior sinks.
- The silo is original to the site, a historic remnant from farming usage. The silo is constructed of concrete strapped panels, and appears structurally sound except for peeling paint.

OPPORTUNITIES

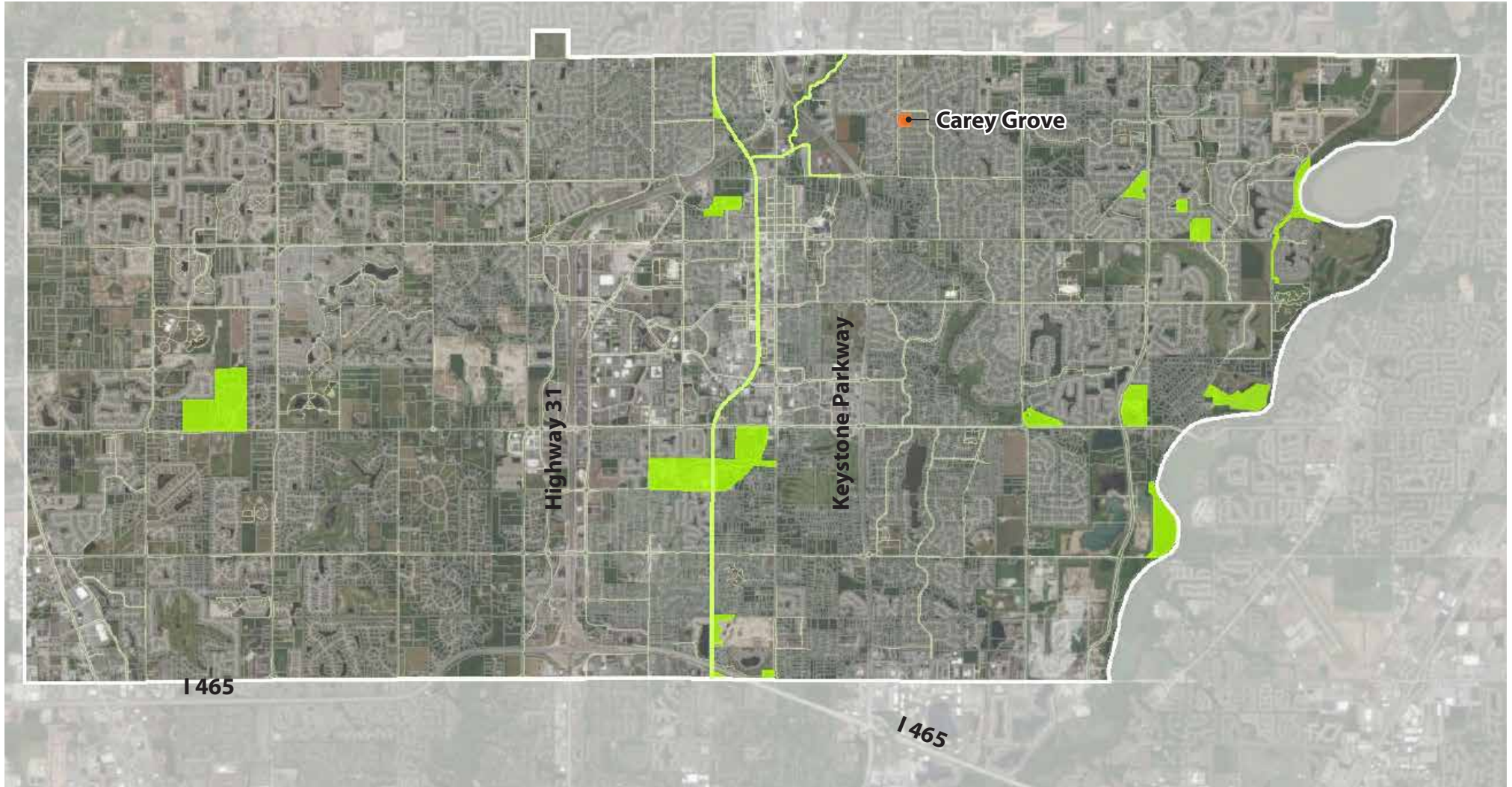
- Before making significant park improvements, acquire property from City of Indianapolis or establish a long-term lease for use of the land.

- Facilities are generally outdated. A new master plan should be completed prior to replacement, including a wetland delineation as part of the planning process.
- Revise the grading plan to remove grassed berms which are difficult to maintain.
- Improve visual connectivity to White River.
- Create a trail connection to Founders Park.
- Consider permeable paving when replacing the current gravel lot.
- The shelter structure's paint is poorly applied, requiring reapplication.
- The cedar structure at the exterior restroom is aging, demonstrating water damage.
- The masonry walls at the exterior restroom are stained at the base with areas of efflorescence. General cleaning would remediate the issue.



CARMEL CLAY PARKS

NEIGHBORHOOD PARKS



CAREY GROVE PARK

SITE INVENTORY - PLAN



CAREY GROVE PARK

SITE ANALYSIS

STRENGTHS

- Mature canopy trees.
- Includes a variety of programmed spaces.
- Looped trail provides access around the perimeter.
- Shelter is structurally stable and in good condition with minor water stains on the cedar decking.



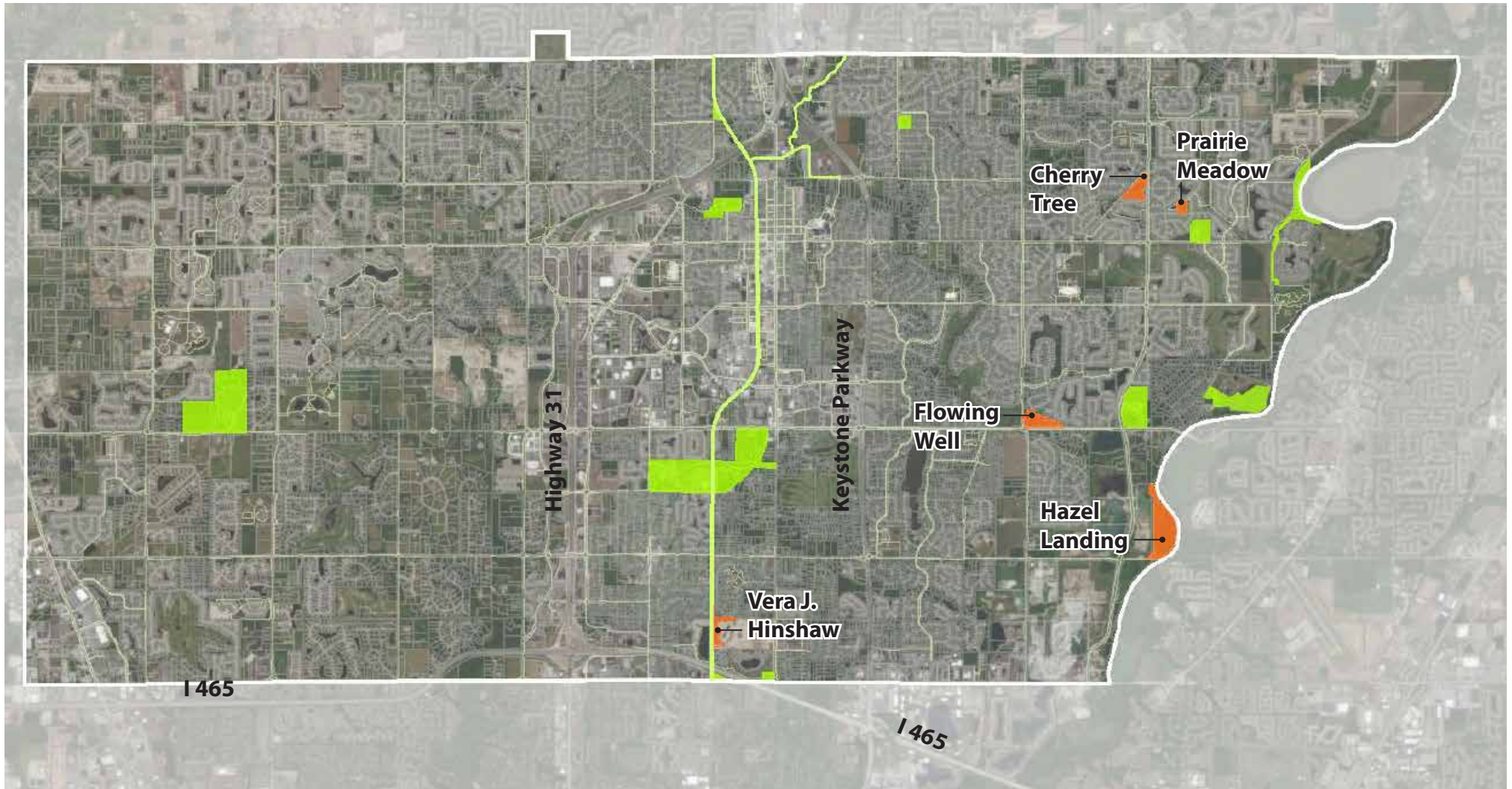
OPPORTUNITIES

- Facilities are generally outdated. A new master plan should be completed prior to replacement.
- Resurface parking lot and trails and reset wheel stops.
- Improve accessibility to the bike racks and drinking fountain.
- Update entrance signage to current standard.
- Replace aging park amenities such as the waste and recycling bins, benches and playground.



CARMEL CLAY PARKS

NATURE PRESERVES / OPEN SPACE



CHERRY TREE PARK

SITE INVENTORY - PLAN



CHERRY TREE PARK

SITE ANALYSIS

STRENGTHS

- Mowing is the only reoccurring maintenance required.
- Large canopy trees.

OPPORTUNITIES

- Determine future use for park.
Create a park master plan prior to development.
- Convert portions of park to low-mow fescue or prairie to reduce the amount of weekly mowing.



FLOWING WELL PARK

SITE INVENTORY - PLAN



FLOWING WELL PARK

SITE INVENTORY - ENLARGEMENT



FLOWING WELL PARK

SITE ANALYSIS

STRENGTHS

- Artesian spring is popular attraction for community members. Bottling of spring water is a common occurrence.
- Natural trails along creek are well used and do not require surfacing. Bridges are in good condition
- Sand beaches along creek are unique attractions during summer months.
- Well structure is a well maintained aging wood frame, meeting expectations.
- The well pump is operational, requiring normal maintenance.
- Picnic shelter structure is in fair condition, meeting expectations. The wood roof structure is aging.

- Update entrance signage and trail map. Replace existing weathered interpretative signage throughout park.
- Anticipate a roofing replacement for both the well structure and shelter in the next 1-3 years.
- Remediation of masonry seat wall at well structure is warranted.
- Regular maintenance is required on the structural steel at the shelter. Rusting was observed.



OPPORTUNITIES

- Significant erosion of outer stream banks requires attention within the near future.
- Improve space surrounding the well and pedestrian access to limit cutting through landscape beds.

FLOWING WELL PARK

PARK IMPROVEMENTS DIAGRAM



HAZEL LANDING PARK - NORTH

SITE INVENTORY - PLAN



HAZEL LANDING PARK - SOUTH

SITE INVENTORY - PLAN



- | | |
|---------------------------|---------------------------------|
| 1. Walk / Trail | 18. Utility Structure |
| 2. Parking Lot | 19. Flag Pole |
| 3. Entrance Signage | 20. Fence |
| 4. Other Signage | 21. Guardrail |
| 5. Little Library | 22. Stairs |
| 6. Bollard | 23. Boardwalk |
| 7. Bench | 24. Bridge |
| 8. Picnic Table | 25. Fishing Pier |
| 9. Bicycle Rack | 26. Canoe Launch |
| 10. Bike Repair Station | 27. Amphitheater |
| 11. Playground | 28. Baseball / Softball Diamond |
| 12. Swings | 29. Basketball Court |
| 13. Grill | 30. Volleyball Court |
| 14. Waste / Recycling Bin | 31. Recreational Field |
| 15. Dog Waste Station | 32. Skate Park |
| 16. Drinking Fountain | 33. Disc Golf Course |
| 17. Foot Wash Station | 34. City Utility Structure |

HAZEL LANDING PARK

SITE ANALYSIS

STRENGTHS

- Disc golf course is heavily used both recreationally and competitively.
- Scenic picnic grove along the White River.
- Canoe / kayak launch.

OPPORTUNITIES

- Dependent on the final location of the planned bridge connection across the White River, relocate or improve the entrance to the park. The current road configuration and rough condition do not signal to visitors that they are entering a public park. As part of the design of the entry configuration, create an overall park master plan.
- Identify a location for the proposed bike pump park.
- Update park entrance signage to current park standard, as the current small sign is difficult to read.



PRAIRIE MEADOW PARK

SITE INVENTORY - PLAN



PRAIRIE MEADOW PARK

SITE ANALYSIS

STRENGTHS

- Looped trail connects to adjacent neighborhood association trail.
- Trail signage is the only park amenities to maintain.

OPPORTUNITIES

- Resurface trail.
- Remove pear trees and other invasive species from the prairie.
- Update park signage to match current standard.



VERA J. HINSHAW PRESERVE

SITE INVENTORY - PLAN



VERA J. HINSHAW PRESERVE

SITE ANALYSIS

STRENGTHS

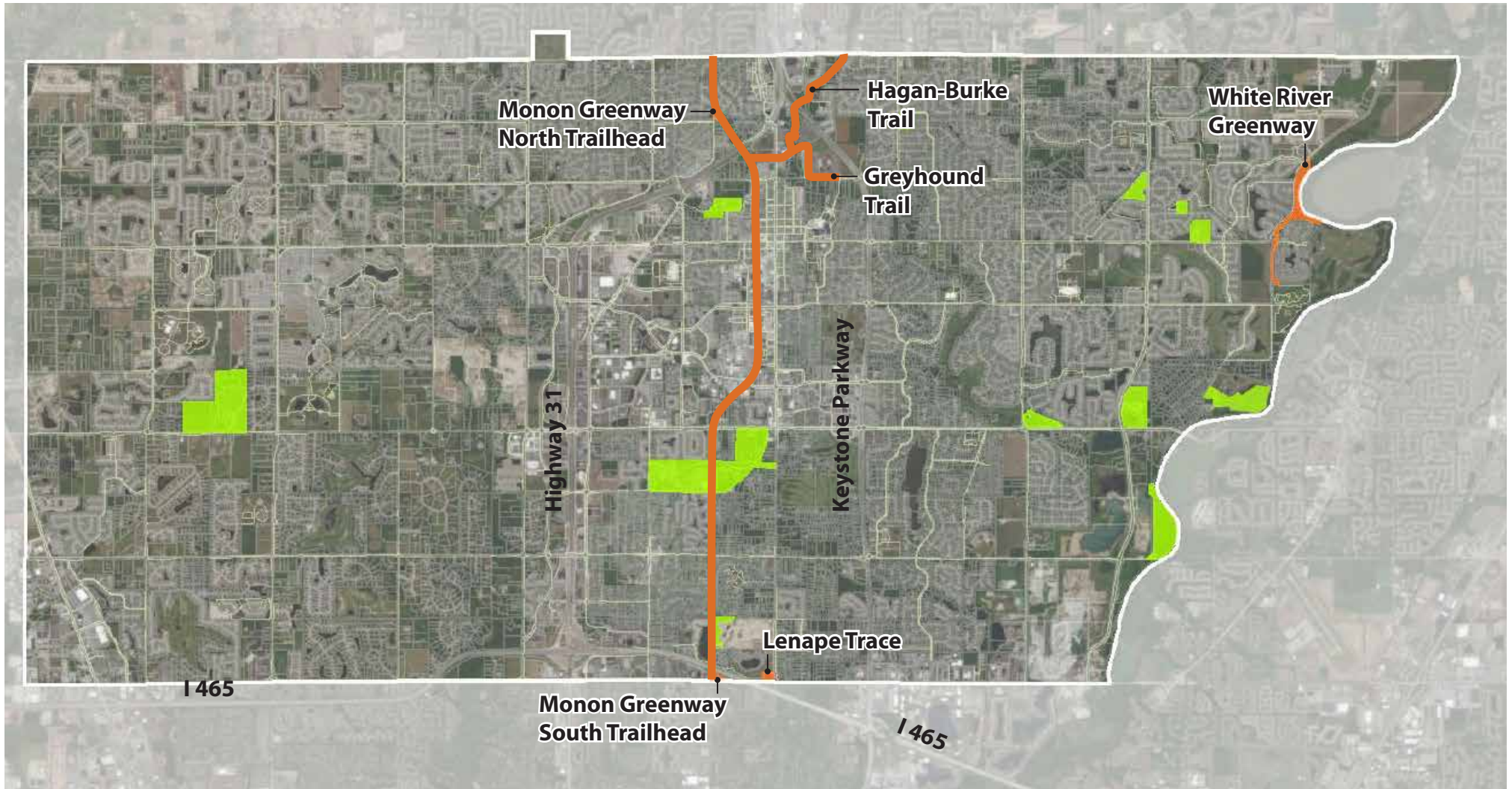
- New park with direct connection to the Monon Greenway.

OPPORTUNITIES

- Add boundary signage for woodland preserve area along adjacent residences.
- Transfer of ownership of adjacent developed park space from neighborhood to CCPR must occur before park improvements such as signage and park amenities are added.



CARMEL CLAY PARKS GREENWAYS / TRAILS



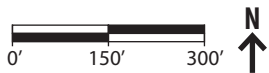
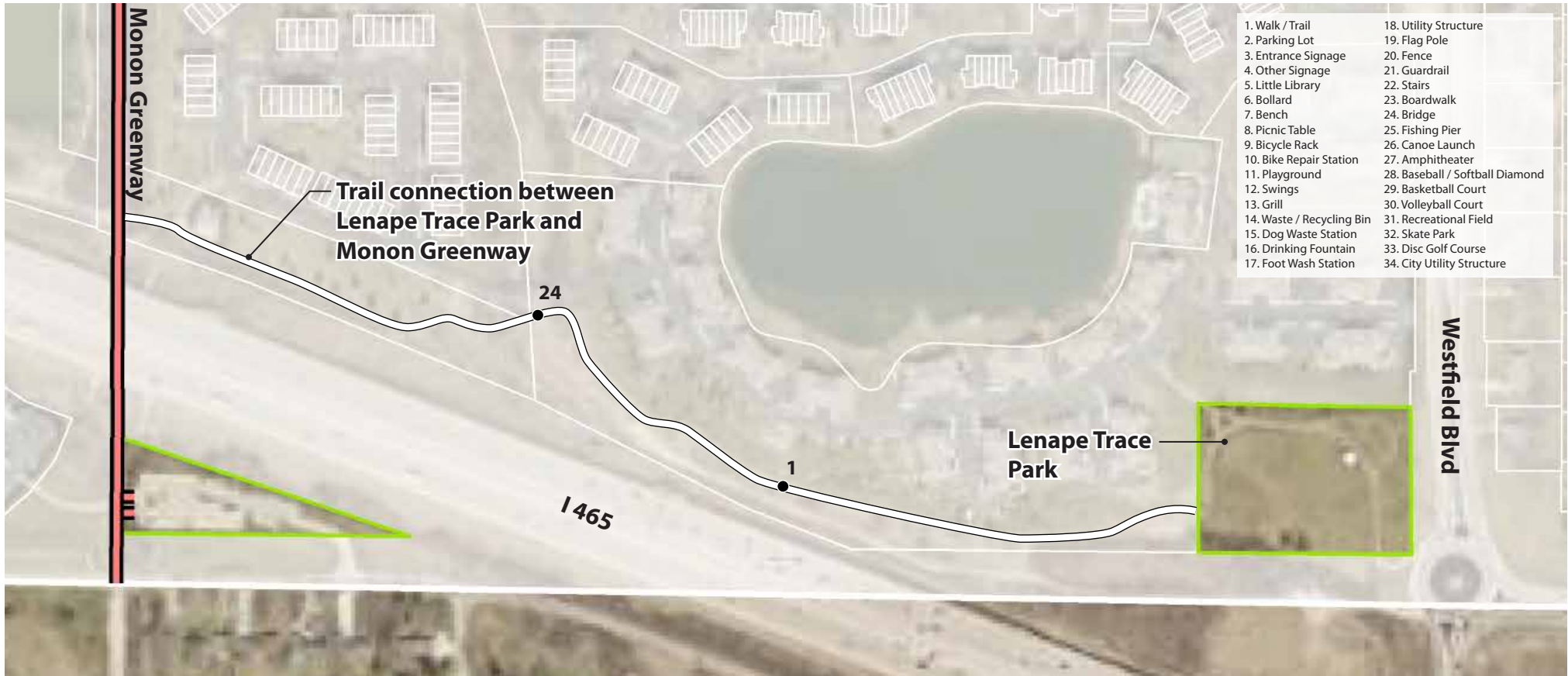
LENAPE TRACE PARK

SITE INVENTORY - PLAN



LENAPE TRACE PARK

SITE INVENTORY - MONON GREENWAY CONNECTION



LENAPE TRACE PARK

SITE ANALYSIS

STRENGTHS

- Large open lawn space.
- Trail system through park connects to the adjacent Monon Greenway.
- The shelter is in good condition and meets expectations.

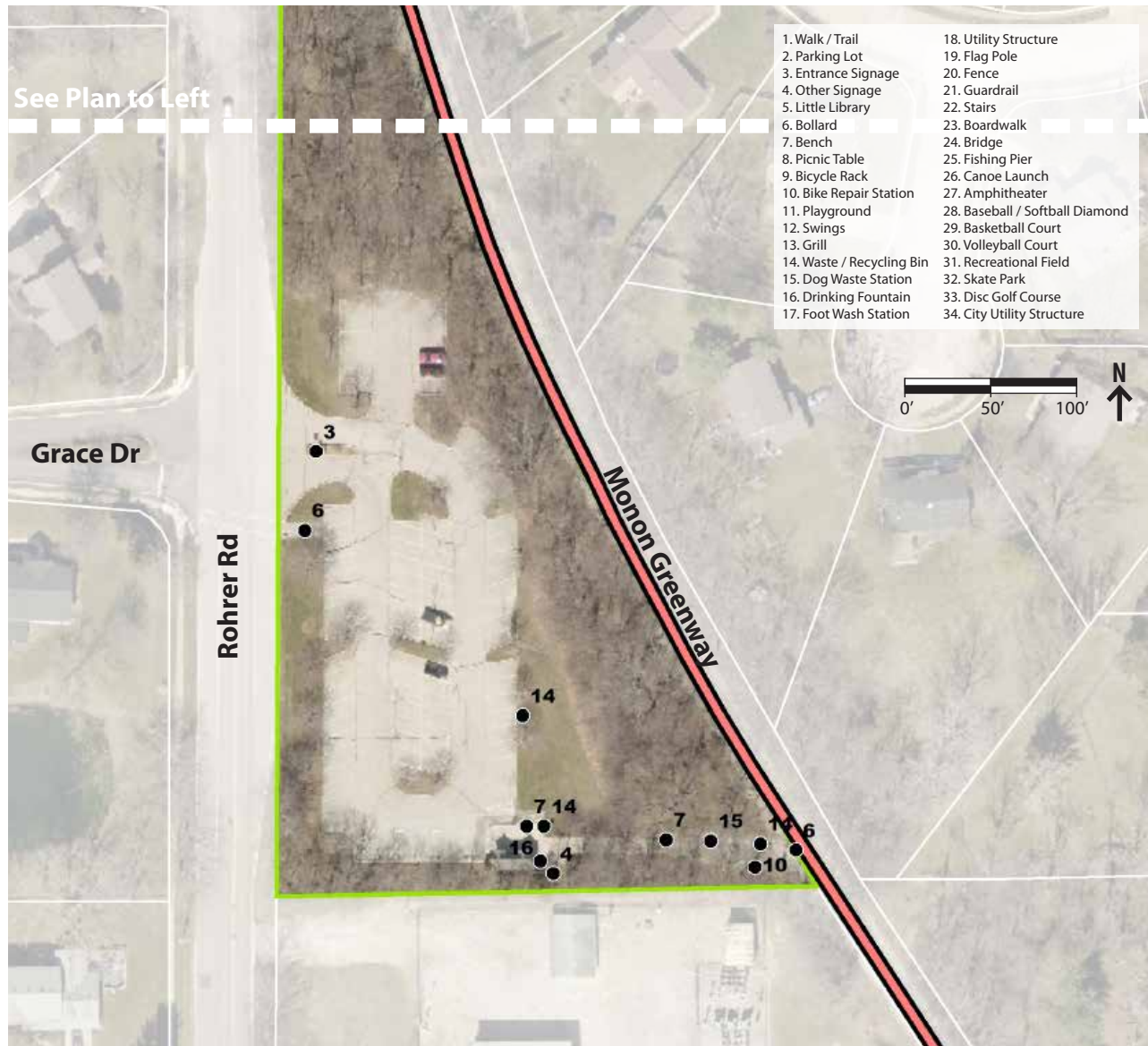
OPPORTUNITIES

- Extension of 96th Street will affect the southern edge of the park. Synchronize park improvements with anticipated restoration from highway infrastructure project.
- Improve signage to existing parking lot within the adjacent neighborhood development. Current signs create appearance that there is no public access to the park.
- Minor rusting was observed on the structural steel at the shelter.



MONON GREENWAY

SITE INVENTORY - NORTH TRAILHEAD PLAN



MONON GREENWAY

SITE INVENTORY - SOUTH TRAILHEAD PLAN



MONON GREENWAY TRAILHEADS

SITE ANALYSIS

STRENGTHS

- Free parking is provided at each trailhead, as well as Carmel City Hall.
 - Clear signage and visual connection to trailhead from adjacent roadways.
 - Restrooms, drinking fountains, bike repair stations, and benches are provided at each trailhead.
 - Trailheads are well spaced along the greenway within the community.
 - The exterior restrooms were completed in January 2004. The structures are in good condition and exceed expectations with continued maintenance.
 - The shelter at the south trailhead is in fair condition, marginally meeting expectations.
- Minor staining was observed on the limestone base of the exterior restrooms at the north trailhead.
 - Rusting was observed on the doors of the exterior restrooms at both trailheads.
 - The roofing at the south trailhead shelter requires replacement. Severe rotting of the wood roof was observed.



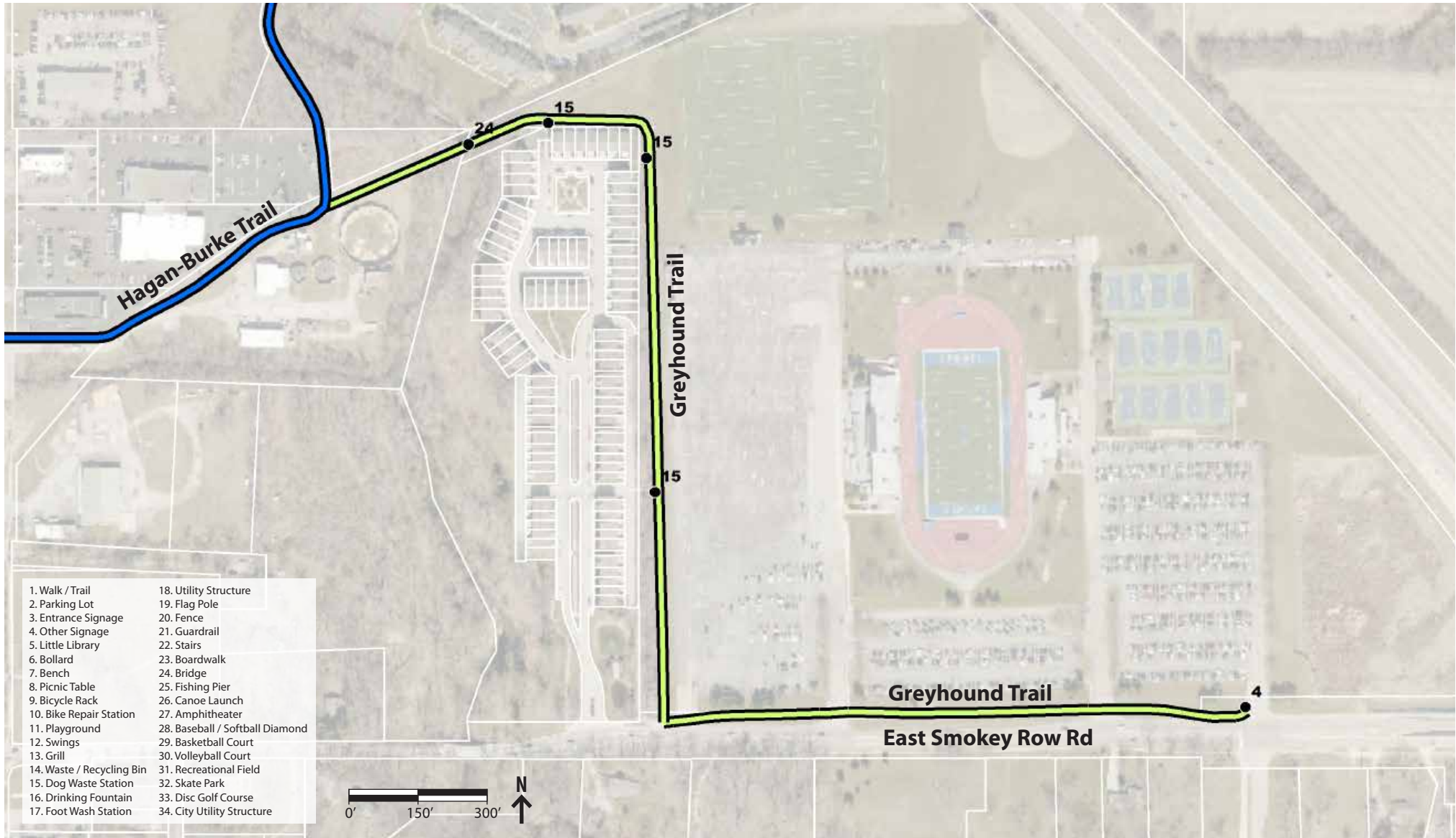
OPPORTUNITIES

- Improve connectivity to the Monon Greenway from downtown Carmel. Improve signage from intersecting roadways.



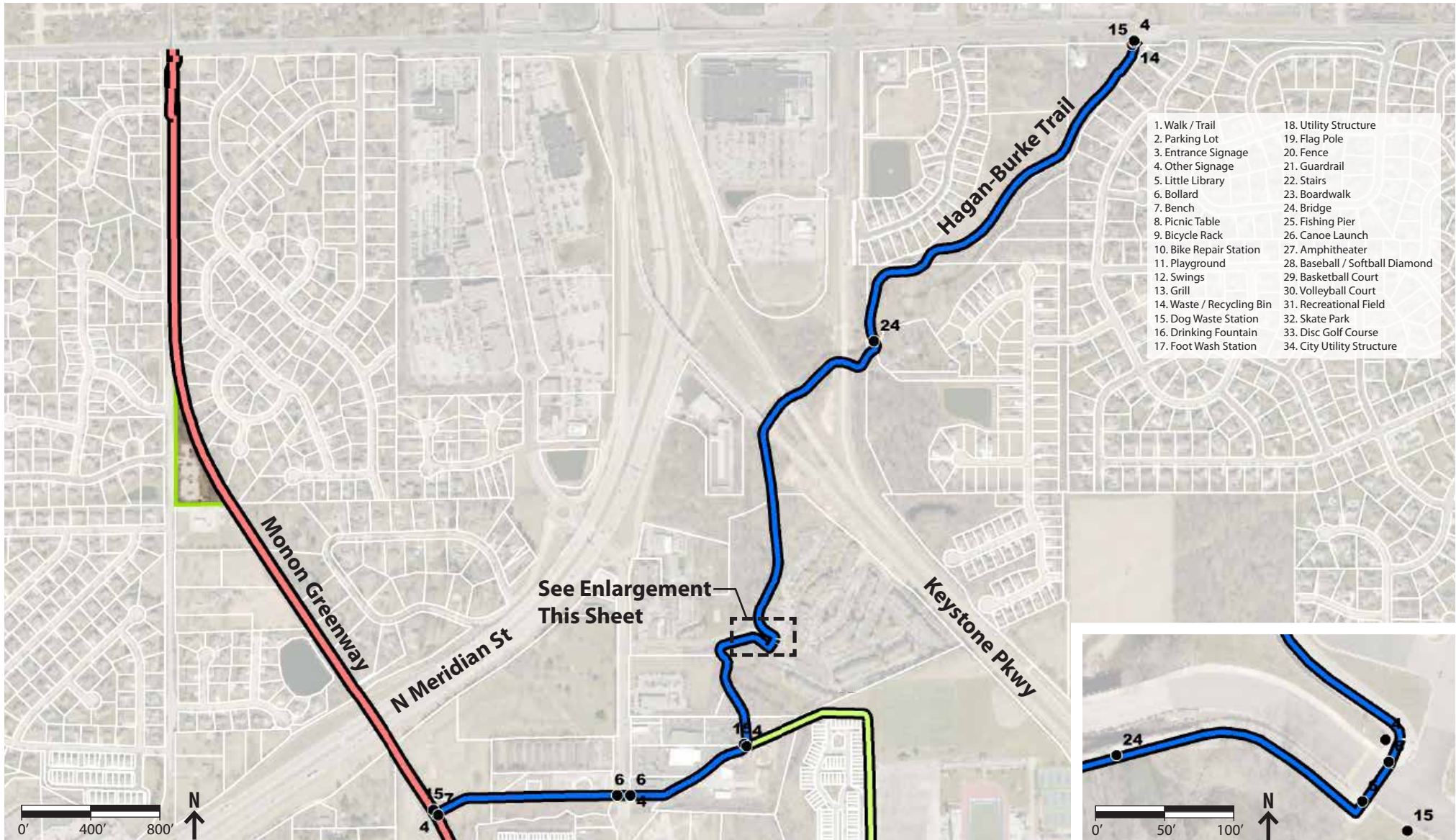
GREYHOUND TRAIL

SITE INVENTORY - PLAN



HAGAN-BURKE TRAIL

SITE INVENTORY - PLAN



TRAIL SYSTEMS

SITE ANALYSIS

STRENGTHS

- The three trails form a well connected, contiguous system.
- As of Spring 2018, the southern section of the Monon Greenway was resurfaced.
- Greyhound Trail is in good condition and connects Carmel High School to the trail system.

OPPORTUNITIES

- Establish a consistent wayfinding scheme across all major trail systems. Color coding of wayfinding maps should match trail signage and amenities.
- Ensure the gravel shoulders of the trails are flush with the paved surface.
- Timber railing is in good condition along the Monon Greenway but replace aggregate shoulder where erosion is occurring.
- Include signage for trail system at all intersections of major bisecting roadways. Reverse side of trail stop signs may be an ideal location for trail identification signage.



WHITE RIVER GREENWAY

SITE INVENTORY - PLAN



WHITE RIVER GREENWAY

SITE ANALYSIS

STRENGTHS

- Only trail in Carmel along the White River.

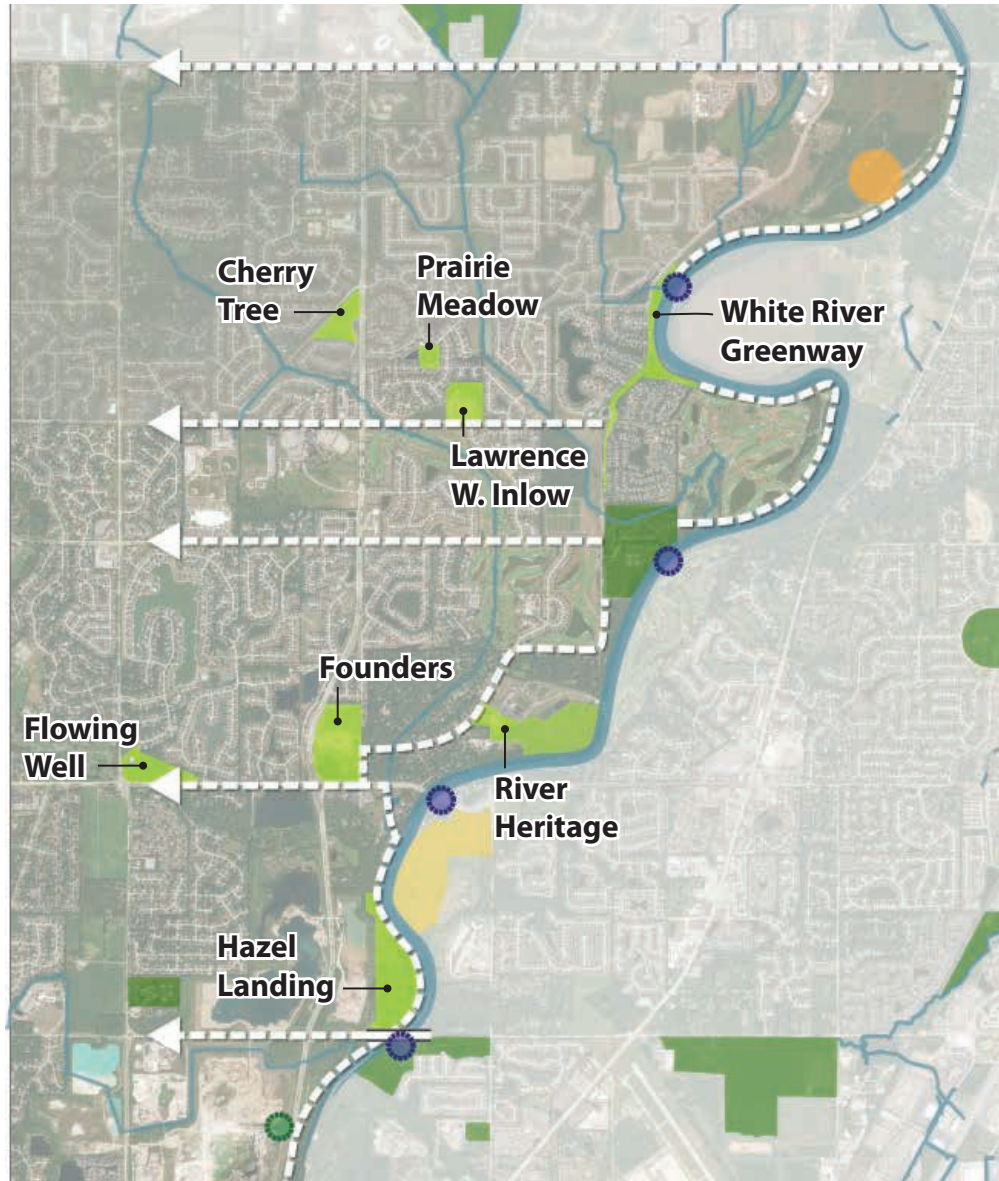
OPPORTUNITIES

- Improve wayfinding signage to and along the White River Greenway trail.
- Create a northern White River Greenway Trailhead with a canoe launch and parking.
- Establish a system of trails along the entire White River and east Carmel. Linked parks would include Hazel Landing, River Heritage, Flowing Well, and Founders.



CARMEL CLAY PARKS

EAST REGIONAL CONNECTIVITY DIAGRAM



CCPR, Noblesville, Fishers and Hamilton County offer a large network of park and trail amenities for residents to enjoy along the White River. These are supplemented by the Conner Prairie history park. CCPR is currently participating and providing comment to the White River Vision Plan, a joint effort undertaken by the City of Indianapolis and Hamilton County Tourism.

In advance of the Vision Plan findings, the plan at left diagrams opportunities identified during the life-cycle inventory assessment to use the White River to enhance north-south connectivity between parks and provide increased recreational access. Linking the parks collectively creates a large regional park serving east Carmel.

LEGEND

- Hamilton County Parks
- Carmel Clay Parks
- Noblesville Parks
- Future White River Community Center
- Future Bike Pump Park
- Kayak / Boat Launch
- Proposed Trail Connection
- White River
- Drainageways

SITE INVENTORY DATABASE TOOL

LIFE-CYCLE ASSET MANAGEMENT



SITE INVENTORY DATABASE TOOL

DETAILS AND ASSUMPTIONS

The information gathered during the site inventory and analysis process was compiled into a user-friendly, working Microsoft Excel spreadsheet. The spreadsheet is organized by park, and provides master-plan level unit costs for all site features and structures. Projected replacement time lines include escalation factors and soft costs.

The spreadsheet can be searched and sorted in a variety of ways to evaluate the condition of existing site and building amenities, and to identify required outlays for potential system-wide capital improvement projects such as playground or bench upgrades. Unit costs and park features are easy to update within the tool, allowing CCPR to track the impact of future park expansion and improvement projects on projected capital replacement budgets.

The total value of all park assets in 2018 is listed in the table on the following page. Note, values are for capital improvements only and thus do not include the value of the land. Overall, system-wide capital improvements are valued at over \$160M, which is projected to increase to over \$300M by 2030.

Assumptions built into the asset management tool include the following:

1. The tool predicts order-of-magnitude budgets using master planning level opinion of probable construction cost.
2. Unit costs are in 2018 dollars. Soft costs are estimated at 35% based on CCPR experience. Escalation is estimated at 3% per year.
3. Cost data include major repairs forecasted for buildings (i.e. roof replacements) but not typical annual maintenance (i.e. painting).
4. Updated master plans are recommended for specific parks. Future improvements recommended by master plans may vary in cost from that necessary to replace current assets. Budgets based on asset replacement alone may be low for parks that are completely reconstructed per master plan, due to changes in program or replacement of features that are coded in good condition but are within the reconstructed area.
5. Budgets and value of assets are based on the best data available. (i.e. Repair costs for trail bridges are known from City structural evaluation, but total value of bridges within the trail system are not.)
6. Utilities such as storm, sanitary, water, and electrical service were not given a rating as their condition could not be determined by the methods used in the inventory.



STUDY RESULTS

TOTAL ASSET VALUE BY PARK

Total Asset Value by Park					
Regional	2018 Current Value	2018 Current Value with Soft Costs	Escalation 2018-2020	Escalation 2021-2025	Escalation 2026-2030
Central Park	\$ 110,483,300	\$ 149,152,400	\$ 158,235,800	\$ 183,438,700	\$ 212,655,700
West Park	\$ 15,734,600	\$ 20,651,500	\$ 21,909,100	\$ 25,398,700	\$ 29,444,100
SUBTOTAL	\$ 126,217,900	\$ 169,803,900	\$ 180,144,900	\$ 208,837,400	\$ 242,099,800
Community					
Founders Park	\$ 10,799,900	\$ 14,579,800	\$ 15,467,800	\$ 17,931,400	\$ 20,787,400
Lawrence W. Inlow Park	\$ 3,521,400	\$ 4,753,900	\$ 5,043,400	\$ 5,846,600	\$ 6,777,900
Meadowlark Park	\$ 2,736,900	\$ 3,594,400	\$ 3,509,000	\$ 4,067,800	\$ 4,715,700
River Heritage Park	\$ 3,391,300	\$ 4,578,200	\$ 4,857,000	\$ 5,630,600	\$ 6,527,500
SUBTOTAL	\$ 20,449,500	\$ 27,506,300	\$ 28,877,200	\$ 33,476,400	\$ 38,808,500
Neighborhood					
Carey Grove Park	\$ 1,549,200	\$ 2,091,400	\$ 2,218,800	\$ 2,572,200	\$ 2,981,900
SUBTOTAL	\$ 1,549,200	\$ 2,091,400	\$ 2,218,800	\$ 2,572,200	\$ 2,981,900
Nature Preserves / Open Space					
Cherry Tree	\$ 282,600	\$ 381,500	\$ 404,800	\$ 469,300	\$ 544,000
Flowing Well	\$ 1,464,600	\$ 1,977,200	\$ 2,097,700	\$ 2,431,800	\$ 2,819,100
Hazel Landing	\$ 1,328,300	\$ 1,793,200	\$ 1,902,400	\$ 2,205,400	\$ 2,556,700
Prairie Meadow	\$ 229,700	\$ 310,100	\$ 329,000	\$ 381,400	\$ 442,100
Vera J. Hinshaw	\$ 195,000	\$ 263,300	\$ 279,300	\$ 323,800	\$ 375,300
SUBTOTAL	\$ 3,500,200	\$ 4,725,300	\$ 5,013,200	\$ 5,811,700	\$ 6,737,200
Greenways / Trails					
Greyhound Trail***	\$ 362,600	\$ 489,400	\$ 519,200	\$ 602,000	\$ 697,800
Hagan-Burke Trail***	\$ 1,119,600	\$ 1,511,500	\$ 1,603,500	\$ 1,858,900	\$ 2,155,000
Lenape Trace	\$ 391,100	\$ 528,000	\$ 560,200	\$ 649,400	\$ 752,800
Monon Greenway***	\$ 5,078,300	\$ 6,855,600	\$ 7,273,100	\$ 8,431,600	\$ 9,774,500
Monon Greenway North Trailhead	\$ 327,600	\$ 442,300	\$ 469,200	\$ 544,000	\$ 630,600
Monon Greenway South Trailhead	\$ 303,700	\$ 409,900	\$ 434,900	\$ 504,200	\$ 584,500
White River Greenway	\$ 932,500	\$ 1,258,800	\$ 1,335,500	\$ 1,548,200	\$ 1,794,800
SUBTOTAL	\$ 8,515,400	\$ 11,495,500	\$ 12,195,600	\$ 14,138,300	\$ 16,390,000
TOTAL	\$ 160,232,200	\$ 215,622,400	\$ 228,449,700	\$ 264,836,000	\$ 307,017,400

*** Trail assets do not include unknown value of bridge structures.

STUDY RESULTS

PROJECTED CAPITAL REPLACEMENT BUDGETS BY PARK

Based on the condition ratings, the following table shows the projected capital replacement budgets by park, including escalation and soft costs. It should be noted that several parks were recommended for updated master plans, which may provide a different opinion of probable construction cost based on programmatic changes or new features.

Regional	Current Total Value with Soft Costs	2018 - 2020 Replacement (Rating = 1)	2021 - 2025 Replacement (Rating = 2)	2026 - 2030 Replacement (Rating = 3)
Central Park	\$ 149,152,400	\$ 1,516,000	\$ 17,005,700	\$ 25,262,700
West Park *	\$ 20,651,500		\$ 9,287,700	\$ 3,227,100
SUBTOTAL	\$ 169,803,900	\$ 1,516,000	\$ 26,293,400	\$ 28,489,800
Community				
Founders Park	\$ 14,579,800	\$ 401,000	\$ 641,000	\$ 219,700
Lawrence W. Inlow Park	\$ 4,753,900	\$ 2,148,300	\$ 251,000	\$ 2,777,400
Meadowlark Park **	\$ 3,594,400	\$ 288,600	\$ 3,182,800	\$ 92,700
River Heritage Park **	\$ 4,578,200	\$ 186,200	\$ 3,782,000	\$ 1,657,300
SUBTOTAL	\$ 27,506,300	\$ 3,024,100	\$ 7,856,800	\$ 4,747,100
Neighborhood				
Carey Grove Park **	\$ 2,091,400	\$ 91,100	\$ 1,883,700	\$ 362,900
SUBTOTAL	\$ 2,091,400	\$ 91,100	\$ 1,883,700	\$ 362,900

* Replacement cost for West Park is based on current asset value only. If 2016 Master Plan is implemented, projected cost will range from \$12.2M to \$27.8M.

** Updated master plan for park required. Future improvement costs per plan may vary from replacement cost based on current assets.

CARMEL CLAY PARKS

PROJECTED CAPITAL REPLACEMENT PROJECTS BY PARK

Nature Preserves / Open Space	Current Total Value with Soft Costs	2018 - 2020 Replacement (Rating = 1)	2021 - 2025 Replacement (Rating = 2)	2026 - 2030 Replacement (Rating = 3)
Cherry Tree	\$ 381,500			
Flowing Well	\$ 1,977,200	\$ 401,000	\$ 641,000	\$ 219,700
Hazel Landing **	\$ 1,793,200	\$ 83,900	\$ 158,700	\$ 764,800
Prairie Meadow	\$ 310,100		\$ 227,600	
Vera J. Hinshaw	\$ 263,300			
SUBTOTAL	\$ 4,725,300	\$ 484,900	\$ 1,027,300	\$ 984,500
Greenways / Trails				
Greyhound Trail	\$ 489,400	\$ 14,300		\$ 85,600
Hagan-Burke Trail	\$ 1,511,500	\$ 7,200		\$ 2,155,000
Lenape Trace	\$ 528,000		\$ 111,400	\$ 445,200
Monon Greenway	\$ 6,855,600	\$ 653,000	\$ 34,000	\$ 9,774,500
Monon Greenway North Trailhead	\$ 442,300		\$ 9,300	\$ 243,900
Monon Greenway South Trailhead	\$ 409,900	\$ 42,300	\$ 29,100	\$ 188,900
White River Greenway	\$ 1,258,800		\$ 3,300	\$ 974,400
SUBTOTAL	\$ 11,495,500	\$ 716,800	\$ 187,100	\$ 13,867,500
TOTAL	\$ 215,622,400	\$ 5,832,900	\$ 37,248,300	\$ 48,451,800

CASE STUDY

ASSET MANAGEMENT TOOL - SORTING ABILITY

The below snapshot is an example screen clip of the summary tab of the asset management spreadsheet. The columns for Park, Feature, and Rating can be sorted to provide budget estimates specific to park, time of projected replacement, or specific facilities as described in the case studies on the following pages.

	A	B	C	D	E	F	G	H	I	J	K
1	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Total Feature Cost	Soft Cost	Escalation 2018-2020	Escalation 2020-2025
2	Carey Grove Park		Walk / Trail	0	0.29	\$ -	Miles	\$ -	\$ -	\$ -	\$ -
3	Carey Grove Park		Walk / Trail - Asphalt	2	14400	\$ 9.50	SF	\$ 136,800.00	\$ 47,880.00	\$ 195,927.01	\$ 227,133.11
4	Carey Grove Park		Walk / Trail - Concrete	2	5800	\$ 12.00	SF	\$ 69,600.00	\$ 24,360.00	\$ 99,682.16	\$ 115,558.95
5	Carey Grove Park		Parking Lot - Asphalt	3	6750	\$ 12.50	SF	\$ 84,375.00	\$ 29,531.25	\$ 120,843.14	\$ 140,090.32
6	Carey Grove Park		Entrance Signage - Community Park	2	1	\$ 15,000.00	EA	\$ 15,000.00	\$ 5,250.00	\$ 21,483.23	\$ 24,904.95
7	Carey Grove Park		Other Signage	3	1	\$ 3,300.00	EA	\$ 3,300.00	\$ 1,155.00	\$ 4,726.31	\$ 5,479.09
8	Carey Grove Park		Bench	2	5	\$ 2,150.00	EA	\$ 10,750.00	\$ 3,762.50	\$ 15,396.31	\$ 17,848.54
9	Carey Grove Park		Picnic Table	3	3	\$ 2,800.00	EA	\$ 8,400.00	\$ 2,940.00	\$ 12,030.61	\$ 13,946.77
10	Carey Grove Park		Bicycle Rack	2	1	\$ 800.00	EA	\$ 800.00	\$ 280.00	\$ 1,145.77	\$ 1,328.26
11	Carey Grove Park		Playground - Neighborhood Park	2	1	\$ 750,000.00	EA	\$ 750,000.00	\$ 262,500.00		
12	Carey Grove Park		Swings	2	1	\$ 12,500.00	EA	\$ 12,500.00	\$ 4,375.00		
13	Carey Grove Park		Grill	2	1	\$ 1,600.00	EA	\$ 1,600.00	\$ 560.00		
14	Carey Grove Park		Waste Receptacle / Recycle Bin	3	3	\$ 2,000.00	EA	\$ 6,000.00	\$ 2,100.00		
15	Carey Grove Park		Dog Waste Station	2	1	\$ 1,000.00	EA	\$ 1,000.00	\$ 350.00		
16	Carey Grove Park		Drinking Fountain	2	1	\$ 4,500.00	EA	\$ 4,500.00	\$ 1,575.00		
17	Carey Grove Park		Baseball / Softball Backstop	1	1	\$ 15,500.00	EA	\$ 15,500.00	\$ 5,425.00		
18	Carey Grove Park		Basketball Court	2	2500	\$ 17.00	SF	\$ 42,500.00	\$ 14,875.00		
19	Carey Grove Park		Lighting - Roadway	2	1	\$ 9,500.00	EA	\$ 9,500.00	\$ 3,325.00		
20	Carey Grove Park		Utility Service - Electric	0	1	\$ 7,500.00	LS	\$ 7,500.00	\$ 2,625.00		
21	Carey Grove Park		Utility Service - Water	0	1	\$ 5,000.00	LS	\$ 5,000.00	\$ 1,750.00		
22	Carey Grove Park		Utility Service - Sanitary	0	1	\$ 5,000.00	LS	\$ 5,000.00	\$ 1,750.00		
23	Carey Grove Park		Utility Service - Storm	0	1	\$ 30,000.00	LS	\$ 30,000.00	\$ 10,500.00		
24	Carey Grove Park		Shelter	4	575	\$ 200.00	SF	\$ 115,000.00	\$ 40,250.00		
25	Carey Grove Park		Lawn	3	24700	\$ 3.50	SY	\$ 86,450.00	\$ 30,257.50		
26	Carey Grove Park		Manicured Planting Bed	1	3850	\$ 12.50	SF	\$ 48,125.00	\$ 16,843.75		
27	Carey Grove Park		Tree	2	100	\$ 800.00	EA	\$ 80,000.00	\$ 28,000.00		
28	Central Park		Walk / Trail	0	7.3	\$ -	Miles	\$ -	\$ -		
29	Central Park		Walk / Trail - Crushed Stone	3	25900	\$ 7.00	SF	\$ 181,300.00	\$ 63,455.00		
30	Central Park		Walk / Trail - Asphalt	3	286500	\$ 9.50	SF	\$ 2,721,750.00	\$ 952,612.50		
31	Central Park		Walk / Trail - Asphalt	1	2000	\$ 100.00	SF	\$ 200,000.00	\$ 70,000.00		
32	Central Park		Walk / Trail - Boardwalk (East Woods)	3	18900	\$ 100.00	SF	\$ 1,890,000.00	\$ 661,500.00		
33	Central Park		Walk / Trail - Boardwalk (Lagoon)	2	14000	\$ 150.00	SF	\$ 2,100,000.00	\$ 735,000.00		
34	Central Park		Walk / Trail - Pavers	1	12550	\$ 22.00	SF	\$ 276,100.00	\$ 96,635.00		
35	Central Park		Walk / Trail - Concrete	3	97200	\$ 12.00	SF	\$ 1,166,400.00	\$ 408,240.00		
36	Central Park		Walk / Trail - Natural Surface	4	8350	\$ 3.00	SF	\$ 25,050.00	\$ 8,767.50		
37	Central Park		Parking Lot - Asphalt	3	297300	\$ 12.50	SF	\$ 3,716,250.00	\$ 1,300,687.50		
38	Central Park		Parking Lot - Pervious Pavers	4	12850	\$ 26.50	SF	\$ 340,525.00	\$ 119,183.75		
39	Central Park		Entrance Road - Asphalt	4	46000	\$ 12.50	SF	\$ 575,000.00	\$ 201,250.00		
40	Central Park		Entrance Road - Specialty Pavement	4	9900	\$ 22.00	SF	\$ 217,800.00	\$ 76,230.00		
41	Central Park		Entrance Road - Asphalt	2	97500	\$ 12.50	SF	\$ 1,218,750.00	\$ 426,562.50		
42	Central Park		Entrance Road - Asphalt	2	61000	\$ 12.50	SF	\$ 762,500.00	\$ 266,875.00		

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Park"
Filter by Color
Text Filters
Search
 (Select All)
 Carey Grove Park
 Central Park
 Cherry Tree Park
 Flowing Well Park
 Founders Park
 Greyhound Trail
 Hagan Burke Trail
 Hazel Landing Park
 Inlow Park
 Lenape Trace Park
 Meadowlark Park
 Monon Greenway North Trailhead
 Monon Greenway South Trailhead
 Prairie Meadow Park
 ...
 OK Cancel

CASE STUDY

CENTRAL PARK

As the largest regional park, Central Park has a current total value of almost \$150M. A summary of forecasted capital replacement budgets over the next 12 years is shown by the table below. As an example to illustrate how the asset management spreadsheet can be sorted to project budgets by condition rating, the following pages provide the specific details for updates to site features and major building projects at Central Park within this time frame.

Regional	Current Total Value with Soft Costs	2018 - 2020 Replacement (Rating = 1)	2021 - 2025 Replacement (Rating = 2)	2026 - 2030 Replacement (Rating = 3)
Central Park	\$ 149,152,400	\$ 1,516,000	\$ 17,005,700	\$ 25,262,700
West Park *	\$ 20,651,500		\$ 9,287,700	\$ 3,227,100
SUBTOTAL	\$ 169,803,900	\$ 1,516,000	\$ 26,293,400	\$ 28,489,800



CASE STUDY

CENTRAL PARK

2018-2020 Projected Replacement Projects - SITE

	A	B	C	D	E	F	G	J
1	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Escalation 2018-2020
31	Central Park		Walk / Trail - Asphalt		1	2000 \$	100.00 SF	\$ 286,443.00
34	Central Park		Walk / Trail - Pavers		1	12550 \$	22.00 SF	\$ 395,434.56
52	Central Park		Bicycle Rack		1	18 \$	800.00 EA	\$ 20,623.90
459	Total					14568.00		\$ 702,501



CASE STUDY

CENTRAL PARK

2018-2020 Projected Replacement Projects - ARCHITECTURAL

	A	B	C	D	E	F	G	J
1	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Escalation 2018-2020
102	Central Park		Monon Center - Childcare Finish Replacement	1	1	\$ 200,000.00	LS	\$ 286,443.00
103	Central Park		Monon Center - Flooring Replacement Allowan	1	1	\$ 30,000.00	LS	\$ 42,966.45
104	Central Park		Monon Center - Garage Duct Insulation Repair	1	1	\$ 3,000.00	LS	\$ 4,296.65
108	Central Park		Monon Center - Aquatics Mechanical Structure	1	1	\$ 60,000.00	LS	\$ 85,932.90
109	Central Park		Monon Center - Aquatics Mechanical Systems	1	1	\$ 75,000.00	LS	\$ 107,416.13
112	Central Park		The WaterPark - Filtration Building Sanitation I	1	1	\$ 200,000.00	LS	\$ 286,443.00
459	Total				6.00			\$ 813,498



CASE STUDY

CENTRAL PARK

2021-2025 Replacement Projects - SITE

1	A	B	C	D	E	F	G	K
	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Escalation 2020-2025
33	Central Park		Walk / Trail - Boardwalk (Lagoon)	2	14000	\$ 150.00	SF	\$ 3,486,692.41
41	Central Park		Entrance Road - Asphalt	2	97500	\$ 12.50	SF	\$ 2,023,526.84
42	Central Park		Entrance Road - Asphalt	2	61000	\$ 12.50	SF	\$ 1,266,001.41
43	Central Park		Entrance Road - Specialty Pavement	2	9700	\$ 22.00	SF	\$ 354,314.36
49	Central Park		Spherical Bollard	2	33	\$ 1,900.00	EA	\$ 104,102.67
67	Central Park		Wood Railing	2	150	\$ 100.00	LF	\$ 24,904.95
459	Total				182383.00			\$ 7,259,543

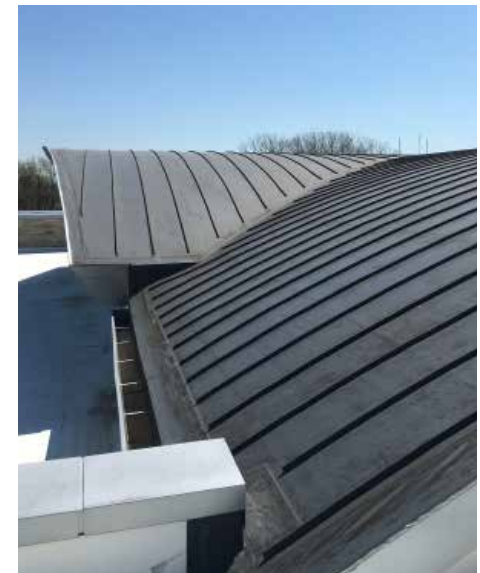


CASE STUDY

CENTRAL PARK

2021-2025 Replacement Projects - ARCHITECTURAL

	A	B	C	D	E	F	G	K
1	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Escalation 2020-2025
100	Central Park		Monon Center - Roof Replacement	2	110000	\$ 22.00	SF	\$ 4,017,997.92
101	Central Park		Monon Center - Holistic Mechanical Rooftop U	2	146000	\$ 20.00	SF	\$ 4,848,162.78
107	Central Park		Monon Center - Slide Tower Repair Allowance	2	1	\$ 20,000.00	LS	\$ 33,206.59
114	Central Park		The WaterPark - Entry Control Building Conce	2	1	\$ 150,000.00	LS	\$ 249,049.46
115	Central Park		The WaterPark - Leisure Pool Play Feature All	2	1	\$ 250,000.00	LS	\$ 415,082.43
116	Central Park		The WaterPark - Lap Pool Structure Repair All	2	1	\$ 50,000.00	LS	\$ 83,016.49
117	Central Park		The WaterPark - Flow Rider Filtration Repair A	2	1	\$ 50,000.00	LS	\$ 83,016.49
131	Central Park		North Campus - Dog Park Shelter Cleaning All	2	1	\$ 5,000.00	LS	\$ 8,301.65
132	Central Park		North Campus - Dog Park Shelter Roofing Rep	2	1	\$ 5,000.00	LS	\$ 8,301.65
459	Total				256007.00			\$ 9,746,135



CASE STUDY

CENTRAL PARK

2026-2030 Replacement Projects - SITE

	A	B	C	D	E	F	G	L
1	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Escalation 2025-2030
29	Central Park		Walk / Trail - Crushed Stone	3	25900	\$ 7.00	SF	\$ 348,962.11
30	Central Park		Walk / Trail - Asphalt	3	286500	\$ 9.50	SF	\$ 5,238,762.34
32	Central Park		Walk / Trail - Boardwalk (East Woods)	3	18900	\$ 100.00	SF	\$ 3,637,828.90
35	Central Park		Walk / Trail - Concrete	3	97200	\$ 12.00	SF	\$ 2,245,060.12
37	Central Park		Parking Lot - Asphalt	3	297300	\$ 12.50	SF	\$ 7,152,953.26
45	Central Park		Entrance Signage - Regional Park	3	5	\$ 44,000.00	EA	\$ 423,450.98
46	Central Park		Entrance Signage - Community Park	3	11	\$ 15,000.00	EA	\$ 317,588.24
48	Central Park		Metal Bollard	3	11	\$ 1,600.00	EA	\$ 33,876.08
50	Central Park		Bench	3	40	\$ 2,150.00	EA	\$ 165,530.84
51	Central Park		Picnic Table	3	20	\$ 2,800.00	EA	\$ 107,787.52
57	Central Park		Grill	3	13	\$ 1,600.00	EA	\$ 40,035.37
58	Central Park		Waste Receptacle / Recycle Bin	3	52	\$ 2,000.00	EA	\$ 200,176.83
59	Central Park		Dog Waste Station	3	10	\$ 1,000.00	EA	\$ 19,247.77
65	Central Park		Wood Vehicular Guardrail	3	1675	\$ 90.00	LF	\$ 290,160.16
66	Central Park		Lighted Stone Pilaster	3	24	\$ 4,000.00	0	\$ 184,778.61
68	Central Park		Wood Railing	3	45	\$ 100.00	LF	\$ 8,661.50
69	Central Park		Wood Railing	3	30	\$ 100.00	LF	\$ 5,774.33
72	Central Park		Bridge	3	1	\$ 1,200,000.00	EA	\$ 2,309,732.64
74	Central Park		Skate Park	3	9200	\$ 90.00	SF	\$ 1,593,715.52
79	Central Park		Lighting - Roadway	3	6	\$ 9,500.00	EA	\$ 109,712.30
83	Central Park		Lighting - Bollard	3	11	\$ 5,000.00	EA	\$ 105,862.75
459	Total				736954.00			\$ 24,539,658.16



CASE STUDY

CENTRAL PARK

2026-2030 Replacement Projects - ARCHITECTURAL

	A	B	C	D	E	F	G	L
1	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Escalation 2025-2030
105	Central Park		Monon Center - Filtration Replacement Allowa	3	1	\$ 100,000.00	LS	\$ 192,477.72
106	Central Park		Monon Center - Pool Heater Replacement Allo	3	1	\$ 60,000.00	LS	\$ 115,486.63
111	Central Park		The WaterPark - Filtration Building Roof Repla	3	3060	\$ 20.00	SF	\$ 117,796.36
113	Central Park		The WaterPark - Entry Control Buildings Roof	3	3785	\$ 20.00	SF	\$ 145,705.63
125	Central Park		East Picnic Grove - Shelters Roof Replacemen	3	875	\$ 35.00	SF	\$ 58,946.30
127	Central Park		East Picnic Grove - Exterior Restroom Roof Re	3	500	\$ 35.00	SF	\$ 33,683.60
459	Total				8222.00			\$ 664,096.25



CASE STUDY

SYSTEM-WIDE REPLACEMENTS

In addition to sorting by park, the asset management database tool can be used to look at system-wide condition and projected replacement costs for specific types of facilities. In the example below, the spreadsheet was sorted for all playgrounds in the park system, with projected costs for replacement within the initial two year period. This provides CCPR with the ability to plan for upgrades to current standards for particular features across all parks.

	A	B	C	D	E	F	G	H	I	J
1	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Total Feature Cost	Soft Cost	Escalation 2018-2020
11	Carey Grove Park		Playground - Neighborhood Park	2	1	\$ 750,000.00	EA	\$ 750,000.00	\$ 262,500.00	\$ 1,074,161.25
55	Central Park		Playground - Destination Park	4	1	\$ 2,200,000.00	EA	\$ 2,200,000.00	\$ 770,000.00	\$ 3,150,873.00
247	Lawrence W. Inlow Park		Playground - Community Park	1	1	\$ 1,500,000.00	EA	\$ 1,500,000.00	\$ 525,000.00	\$ 2,148,322.50
295	Meadowlark Park		Playground - Community Park	2	1	\$ 1,500,000.00	EA	\$ 1,500,000.00	\$ 525,000.00	\$ 2,148,322.50
391	River Heritage Park		Playground - Community Park	2	1	\$ 1,500,000.00	EA	\$ 1,500,000.00	\$ 525,000.00	\$ 2,148,322.50
427	West Park		Playground - Destination Park	2	1	\$ 2,200,000.00	SF	\$ 2,200,000.00	\$ 770,000.00	\$ 3,150,873.00
459	Total				6.00			\$ 9,650,000	\$ 3,377,500	\$ 13,820,875



CASE STUDY

SYSTEM-WIDE REPLACEMENTS

Bridge repairs comprise a large portion of the forecasted capital replacement projects prior to 2020. A significant number of these repairs are for bridges on the Monon, Greyhound, and Hagan Burke Trails, as noted in the 2018 *Structure Inventory and Appraisal Reports* issued by the City of Carmel Department of Engineering. This report did not provide overall asset values for all bridge structures, only repair costs recommended before 2021. The asset management spreadsheet includes the repair costs noted by the study, including the full replacement of the Monon Greenway bridge over Little Cool Creek. However, given that the total cost to replace the remaining bridges is unknown at this time, the spreadsheet does not include full values for these structures.



	A	B	C	D	E	F	G	H	I	J
1	Park	ID	Feature	Rating	Qty	Unit Cost	Unit	Total Feature Cost	Soft Cost	Escalation 2018-2020
72	Central Park		Bridge		3	1 \$ 1,200,000.00	EA	\$ 1,200,000.00	\$ 420,000.00	\$ 1,718,658.00
73	Central Park		Bridge		4	3 \$ 21,000.00	EA	\$ 63,000.00	\$ 22,050.00	\$ 90,229.55
156	Flowing Well Park		Bridge		4	2 \$ 125,000.00	EA	\$ 250,000.00	\$ 87,500.00	\$ 358,053.75
184	Founders Park		Bridge		4	2 \$ 125,000.00	EA	\$ 250,000.00	\$ 87,500.00	\$ 358,053.75
203	Greyhound Trail		Bridge - Greyhound Trail over Cool Creek (Str.		1	1 \$ 10,000.00	LS	\$ 10,000.00	\$ 3,500.00	\$ 14,322.15
213	Hagan Burke Trail		Bridge - Hagan Burke Trail over Cool Creek (St		1	1 \$ 5,000.00	LS	\$ 5,000.00	\$ 1,750.00	\$ 7,161.08
214	Hagan Burke Trail		Bridge - Hagan Burke Trail over Cool Creek (St		4	1 \$ -	LS	\$ -	\$ -	\$ -
301	Meadowlark Park		Bridge		1	2 \$ 50,000.00	EA	\$ 100,000.00	\$ 35,000.00	\$ 143,221.50
315	Monon Greenway		Bridge - Monon Trail over Carmel Creek (Str. #		1	1 \$ 30,000.00	LS	\$ 30,000.00	\$ 10,500.00	\$ 42,966.45
316	Monon Greenway		Bridge - Monon Trail over UNT Carmel Creek (1	1 \$ 5,000.00	LS	\$ 5,000.00	\$ 1,750.00	\$ 7,161.08
317	Monon Greenway		Bridge - City Center Blvd over Monon Trail (St		1	1 \$ 15,000.00	LS	\$ 15,000.00	\$ 5,250.00	\$ 21,483.23
318	Monon Greenway		Bridge - Monon Trail over Carmel Drive (Str. #		1	1 \$ 1,000.00	LS	\$ 1,000.00	\$ 350.00	\$ 1,432.22
319	Monon Greenway		Bridge - 116th Street over Monon Trail (Str. #1		1	1 \$ 5,000.00	LS	\$ 5,000.00	\$ 1,750.00	\$ 7,161.08
320	Monon Greenway		Bridge - Monon Trail over UNT Little Cool Cree		1	1 \$ 35,000.00	LS	\$ 35,000.00	\$ 12,250.00	\$ 50,127.53
321	Monon Greenway		Bridge - Monon Trail over Little Cool Creek (St		1	1 \$ 350,000.00	LS	\$ 350,000.00	\$ 122,500.00	\$ 501,275.25
322	Monon Greenway		Bridge - Monon Trail over UNT Carmel Creek (1	1 \$ 10,000.00	LS	\$ 10,000.00	\$ 3,500.00	\$ 14,322.15
323	Monon Greenway		Bridge - Monon Trail over UNT to Monon Lake		2	1 \$ 500.00	LS	\$ 500.00	\$ 175.00	\$ 716.11
324	Monon Greenway		Bridge - Monon Trail over Ream Creek (Str. #:		2	1 \$ 20,000.00	LS	\$ 20,000.00	\$ 7,000.00	\$ 28,644.30
325	Monon Greenway		Bridge - Monon Trail over Highway Run (Str. #		1	1 \$ 5,000.00	LS	\$ 5,000.00	\$ 1,750.00	\$ 7,161.08
459	Total				24.00			\$ 2,354,500	\$ 824,075	\$ 3,372,150

CONCLUSIONS

LIFE-CYCLE ASSET MANAGEMENT



CARMEL CLAY PARKS

OVERALL SYSTEM RECOMMENDATIONS

OVERALL OBSERVATIONS

The Carmel Clay parks are generally in good repair, and the majority of park structures meet or exceed expectations for condition. Overall system recommendations include:

1. Asphalt trails throughout the park system need repair. Pavement resurfaced in 2018 along the Monon Greenway and Central Park are in good condition, but trails within smaller parks such as Carey Grove, Meadowlark, and Prairie Meadow have significant cracking.
2. Update all park lighting to the contemporary LED standard. Central Park lighting updated in spring 2018 demonstrates the current standard.
3. Update park amenities such as entrance signage, benches, and trash bins to current standards as other facilities within the parks are improved.
4. For major trails, establish a consistent wayfinding scheme between maps and signage. For example, all site amenities and trail

signage for the Monon Greenway are red, but the wayfinding maps show the trail as green.

5. Increase sustainable design and maintenance practices throughout the park system.
 - Provide permeable parking and/or trail surfacing in suitable locations
 - Utilize infiltration basins and bioswales
 - Increase native planting areas
 - Decrease amount of mown lawn
 - Improve maintenance efficiency by evaluating maintenance routes and facility locations.
6. Several parks have been identified as in need of a master plan:
 - Carey Grove
 - Cherry Tree
 - Flowing Well
 - Hazel Landing
 - Meadowlark
 - River Heritage



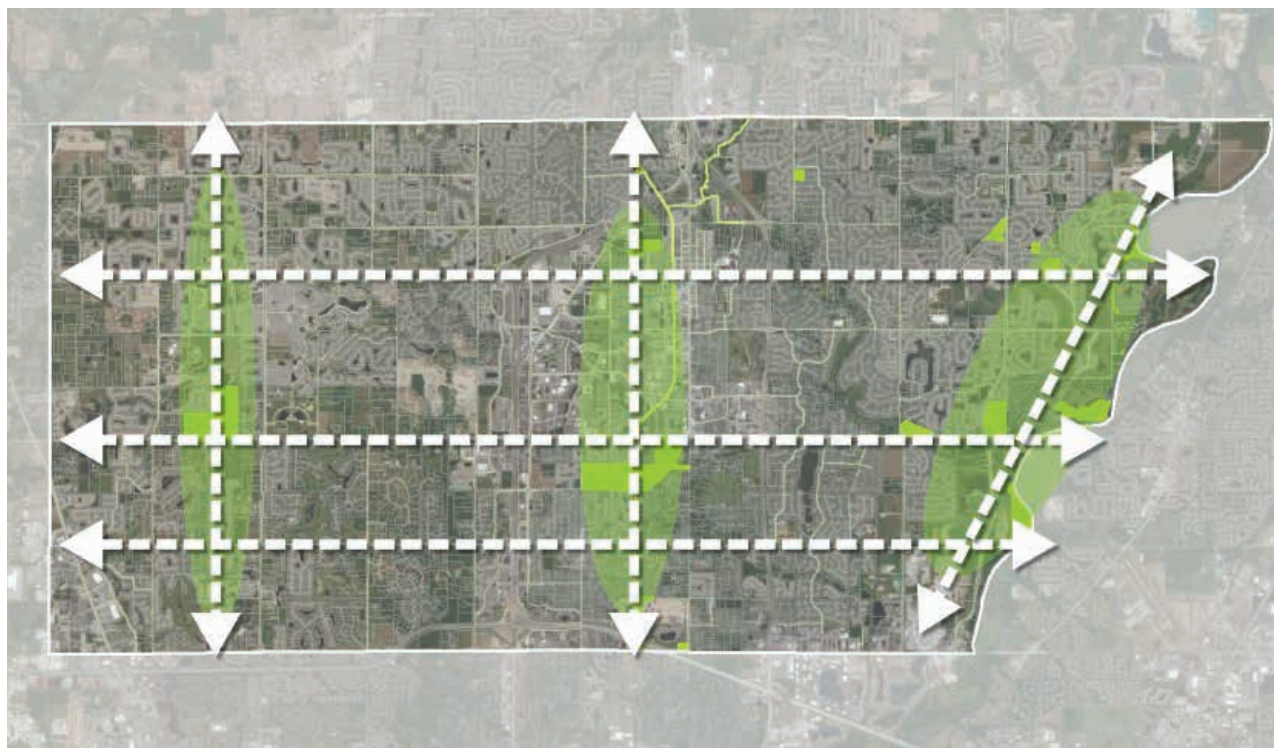
CARMEL CLAY PARKS

OVERALL SYSTEM RECOMMENDATIONS

In addition to looking at opportunities at individual parks, open spaces and trails, the project team considered overall connectivity throughout the community. The team identified three potential regional green infrastructure corridors:

- The West Corridor supported by West Park and adjacent compatible activities
- The Central Corridor comprised of Central Park and the Monon Greenway
- The River Corridor consisting of a series of parks and open spaces connected by the White River

These three corridors are linked by several east-west streets including 131st Street/Main Street, 116th Street and 106th Street. As the Carmel Clay park system matures, these corridors could provide opportunities for future green infrastructure investment. As a near term goal, the East Regional Connectivity Diagram shown on Page 71 capitalizes on existing park infrastructure as linked by the White River to essentially create an east regional park that complements the services provided by West Park and Central Park.



CARMEL CLAY PARKS

ASSET MANAGEMENT PLAN CONCLUSIONS

Life-cycle asset management planning allows CCPR to forecast future, order-of-magnitude capital expenditures necessary to maintain existing park facilities in the condition expected by the community. The spreadsheet tool created by this study is a working document that can be updated annually by CCPR staff to track completed facility upgrades as well as to prioritize future improvements based on condition assessments, current unit cost information, and replacement timelines.

Overall, the park system facilities (excluding land) are currently valued at over \$160M, which is projected to increase to over \$300M by 2030 through escalation. Projected capital expenditures for replacement projects were forecasted through 2030, broken into near term (2018-2020), mid-range (2021-2025), and long-range (2026-2030) facility replacements. In summary, approximately \$92M in capital investments will be needed by 2030 to maintain these existing facilities at CCPR standards, providing for continued delivery of park services to the community. This figure does not include construction of new facilities that may be required for master plan implementation at individual parks, which is to be separately budgeted.





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