



FOREST PRESERVE DISTRICT OF DUPAGE COUNTY

WATERFALL GLEN

MASTER PLAN

APRIL 2023

Adopted on April 18, 2023

ACKNOWLEDGMENTS

Forest Preserve District Of DuPage County

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Prepared for:



Forest Preserve District
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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Forest Preserve District of DuPage County (District) was established in June of 1915 and is governed by a seven member Board of Commissioners. Six Commissioners are elected from individual districts, and the President is elected at large by the voters within DuPage County. The purpose of the Forest Preserve District of DuPage County, as stated in the 2014 Strategic Plan, is;

"...to acquire, preserve, protect, and restore the natural resources of DuPage County while providing opportunities for people to connect with nature"

Each year millions of people visit the preserves to hike, bike, picnic, fish, boat, camp, golf, and attend naturalist and ranger-led programs.

In 2019, the District completed an overall master plan for all of its land holdings, which includes 26,000 acres over 60 different preserves. This plan was formulated by incorporating public outreach, survey efforts and reviews of research, national trends, and state and regional priorities. It was determined that the Forest Preserve District should invest in improving existing natural resources and

mission-aligned facilities and experiences. One of the recommendations to come out of the 2019 plan was to prepare master plan for key, specific preserves that are both large in scale and receive the greatest number of visitors each year. The preserves selected for this effort include Blackwell, Greene Valley and Waterfall Glen. The planning process was split into two (2) work efforts. The first is the Discovery & Analysis stage of work, which included gathering background data, site visits, stakeholder engagement, a market & demographic study and site analysis. The Discovery and Analysis report was completed in October of 2021.

This report document includes work completed during the second planning stage and includes idea generation, refinement and final recommendations that have been vetted with District staff and the Commissioners. This master plan serves as a plan of action or 'road map' for future development at Waterfall Glen and is directly tied to the mission of the Forest Preserve District.

The plan is responsive to the surrounding environment, current and future needs, and interests of the public. Each plan establishes mission-aligned goals and objectives based on demographic and economic trends, physical

and natural resources, and specific information gathered during the stakeholder engagement process. The plans emphasize each preserve's natural and physical resources and unique character.

The plans evaluate how each preserve fits into the larger open space network and evaluates site access, circulation, recreational resources and use, agreements and easements and linkages as well as conservation, ecological restoration and education initiatives.

Waterfall Glen

Waterfall Glen Forest Preserve, located in Darien, is 2,503 acres and surrounds Argonne National Laboratory. It is one of the most ecologically rich parcels in DuPage County and northern Illinois and contains prairies, savannas, oak-maple woodland, pine groves, ravines, bluffs and riparian areas along the river. It is a highly popular destination with over 11 miles of trails for hiking, biking, running, walking, horseback riding and cross-country skiing over gently rolling terrain. People come from all over the region to see the Rocky Glen Waterfall, Sawmill Creek bluff overlook and to enjoy its 10-mile loop trail. It also provides opportunities for fishing, an orienteering course, a model airplane field and youth campground.

Major recommendations of the plan include the expansion of the Trailhead Lot off of Northgate Road, additional off-street parking at Cass Avenue & Bluff Road and at Lemont Road, the conversion of old latrines to flush restrooms, additional water stations and trail improvements to reduce conflicts between different types of trail use and between trail users and vehicles. Additional opportunities analyzed include the relocation of natural resource management program support infrastructure, the rehabilitation of trails and waterfall at the Rocky Glen area, and continued ecological restoration through the removal of invasive species and unused infrastructure.

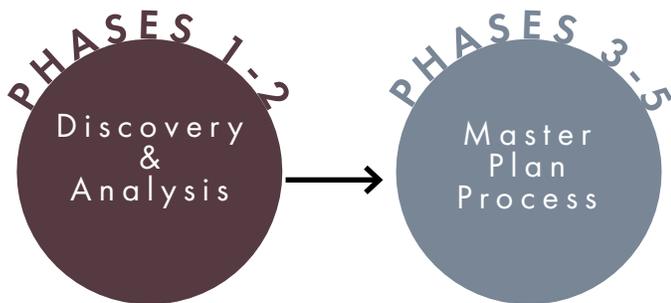
At the time of the second stage of this three-preserve study, the District began a Clean Energy, Resiliency & Sustainability Plan. While this work is being completed separately, many of the recommendations of that report will need to be considered when implementing the recommendations for the preserve.

BACKGROUND & PROCESS

PLAN APPROACH

This plan is a part of a five-phase planning and design process for the Forest Preserve District of DuPage County. The purpose of the process is to create a comprehensive master plan and vision for the Waterfall Glen Forest Preserve that provides clear direction for future improvements and initiatives.

This document is a summary of Phase 3 - Ideas, Phase 4 - Refinement, and Phase 5 - Delivery. During these phases, the project team developed a conceptual framework plan based on identified opportunities, refined the framework plan and selected high priority areas to study in more detail, facilitated a meaningful public engagement process and delivered an implementation plan. For more information on Phase 1 and 2, see the



appendix.

PHASES 3 - 5

Ideas, Refinement and Delivery

Stantec worked closely with FPDDC staff to develop ideas for improvement at Waterfall Glen. Collaboration and communication was critical, and

the staff at the Forest Preserve District were able to provide Stantec with guidance to positively impact the future of the preserve.

Using the Discovery and Analysis findings, Stantec began assessing opportunities and constraints within the preserve and developed ideas and preliminary recommendations vetted by District staff and the public.

Stakeholder Engagement

Using a Public Participation Plan created by Stantec and FPDDC Staff, the team conducted six additional public engagement sessions during this stage of the project. These sessions included focus group meetings, staff, department, and public engagement sessions. The goal was to provide users of the preserves and key stakeholders options to provide their input, some of the sessions were held virtually. In addition to the sessions, a virtual StoryMap (project website) detailing the planning process was available to those interested in finding out more, and a survey was open to the public for response. With over 100 survey responses, more than 3,000 StoryMap views, and nearly 15 attendees at the in person engagement sessions, the project team was able to collect valuable input and important observations and preferences for the Framework Plans. For a more detailed summary of the engagement process, see Chapter 3.

Schedule

See Phases 3-5 Schedule graphic which shows the three final phases of work and some of the key tasks associated with the work.

PHASES 1-2
(Completed
October 2021)

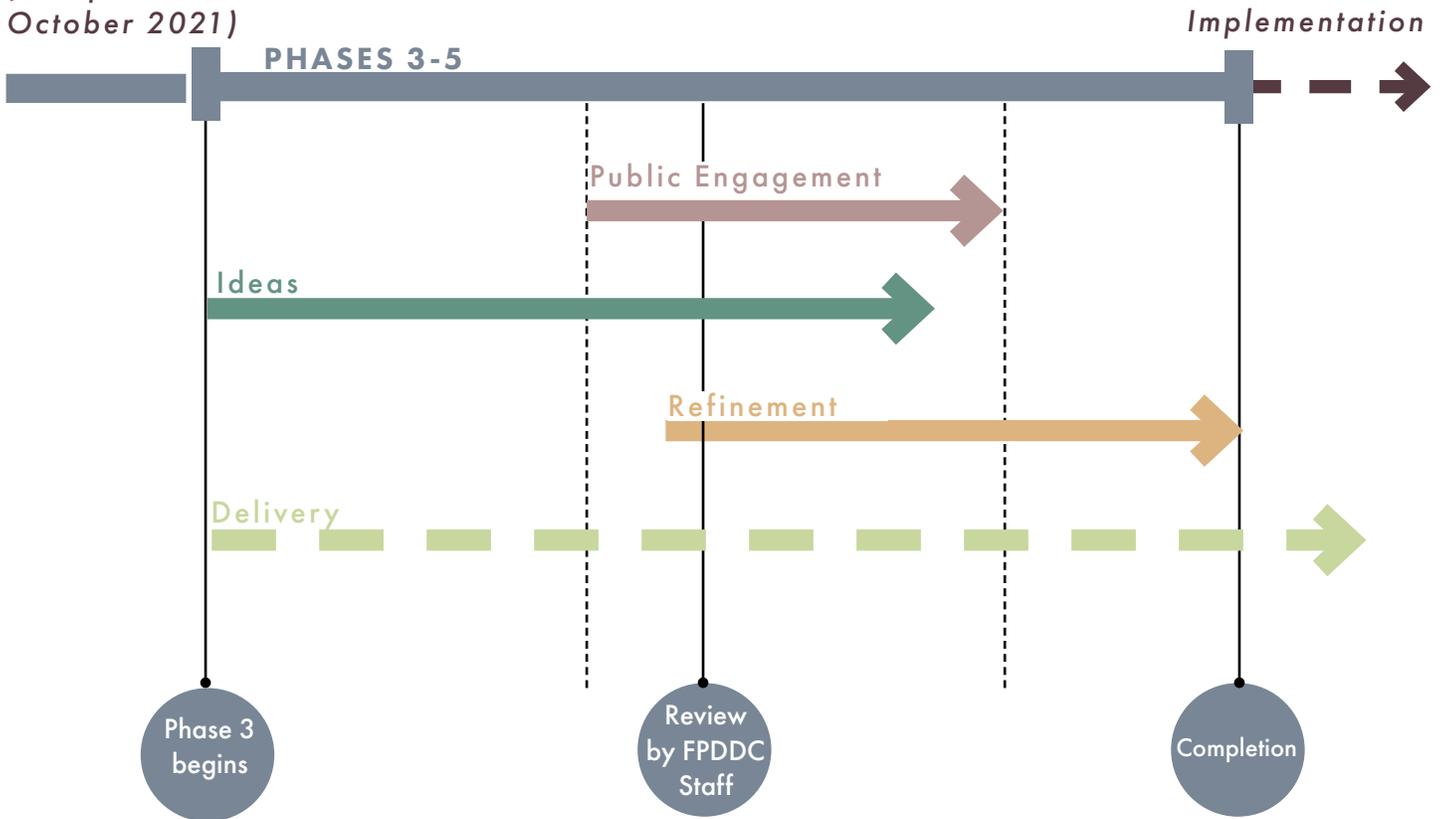


Illustration of Phases 3-5 Schedule

VISION AND GOALS

Parks and Forest Preserves

There are key differences between the purpose, mission, funding, and jurisdictional management of parks and forest preserves.

Parks are typically managed by municipal parks departments or park districts, whereas forest preserves are usually larger tracts of land typically managed by State or County entities, each with different laws, regulations, and funding mechanisms.

Many parks provide active recreation including ball fields, walking paths, water parks and playgrounds, while forest preserves provide resource-based outdoor recreation such as hiking, biking, wildlife watching, camping, off-leash dog areas, picnicking, fishing, and boating.

Forest Preserves are also managed and maintained to protect and preserve natural areas; manage watersheds to provide flood control and enhance water quality; and provide habitat for endangered, threatened, and common native plant and animal species.

VISION STATEMENT

Waterfall Glen is one of the county's most ecologically diverse preserves and is also a top regional destination for residents of DuPage County and beyond who come to experience its unique landforms, natural areas and extensive loop trail system. Visitors can experience scenic beauty and engage in unstructured nature exploration at the Rocky Glen Waterfall and other hidden gems. Connections to regional trails and thoughtful vehicular accommodations make the preserve accessible while preserving its natural character.

”

GOALS

NATURAL

1

Manage natural areas to increase habitat quality and value.

2

Maintain and improve wildlife and insect diversity and quality.

3

Reduce impacts and disturbance to natural resources.

PHYSICAL

1

Improve vehicular access, circulation and parking.

2

Improve infrastructure to reduce impacts of high use and congestion.

3

Improve functionality, efficiency and connectivity of trails.

4

Improve the user experience at existing recreational areas.

5

Provide resource-based recreational opportunities.

6

Reduce structures with no identified District use.

CULTURAL

1

Recognize significant cultural elements of the preserve.

2

Cultivate awareness and appreciation for native ecosystems and natural resource management efforts at the preserve.

STAKEHOLDER ENGAGEMENT

Phase 1 and 2 Summary

Using a Public Participation Plan created by Stantec and FPDDC Staff, the team conducted 16 public engagement sessions. These sessions included focus group meetings, staff department engagement sessions, public engagement sessions, and two by two interviews with commissioners. The goal was to provide users of the preserves and key stakeholders COVID safe options to provide their input, so many of the sessions were held virtually. In addition to the sessions, a virtual StoryMap detailing the planning process was available to those interested in finding out more, and a survey was open to the public for response. With over 600 survey responses, more than 2,000 StoryMap views, and nearly 200 attendees in the engagement sessions, the project team was able to collect valuable input and important observations about the three preserves. For a more detailed summary of the engagement process, see Discovery and Analysis Report.

Phase 3, 4, and 5 Summary In-Person Engagement

An in-person engagement event was held at Waterfall Glen on June 11, 2022 from 9:00-11:00 pm. Stantec prepared boards with graphics and text showing the proposed improvements to help facilitate the event. About 35 preserve users participated and shared comments for different focus areas using post it notes. In addition, Stantec staff walked around key locations of the preserve to

distribute postcards with a QR code that directed people to the StoryMap. The StoryMap included the conceptual framework plans with a survey.

The top 4 issues users expressed were the following:

- Most users would like more off-street parking allocated at various points around the perimeter of the preserve.
- Additional flush restrooms, drinking fountains, seating and way-finding signs are desired.
- Additional, smaller loop trails and as much separation of bike & pedestrian traffic as possible are desired.
- Most users would like to see the waterfall and dam area restored and have better access.

Virtual Engagement

A virtual engagement was hosted through Zoom on October 13, 2022. The session provided information to the preserve users and to the public about the Preferred Conceptual Framework Plan. Preserve users and the public indicated their preferences and comments live at the end of the meeting. A survey was also created and posted on the StoryMap to receive comments on the proposed improvements.

Engagement results from this event indicated that users are in support of the Preferred Framework Plan.



Images from the In-Person Engagement on July 11, 2022

WATERFALL
GLEN
FOREST
PRESERVE

Framework
Plans



FRAMEWORK PLANS

INTRODUCTION

FRAMEWORK PLANS

Introduction

The Waterfall Glen Forest Preserve framework plans were created to guide future improvements in the preserve. These plans address preserve improvements generated from stakeholder and staff input. In addition, the plan identifies potential locations for proposed improvements. While the framework plans are conceptual, they provide a long-term vision for FPDDC staff and help inform the implementation plan.

Initial Conceptual Framework Plan Options

Based on the previous analysis and stakeholder engagement discussions (Stage 1 and 2), Stantec worked with District staff to create a list of desired programmatic amenities and improvements for Waterfall Glen. The refined list helped inform the initial conceptual framework plan options, which indicate the recommended locations of the improvements. Preserve staff and the public then had an opportunity to review and comment on the conceptual framework plans.

Preferred Framework Plan Options

Based on feedback from the framework plan review meeting with District staff and the in-person public engagement session, Stantec completed preferred conceptual framework plans for Waterfall Glen. These include proposed restoration areas and trail network framework plans. Through a series of refinements, the framework plan reflects the natural, physical and cultural goals.

Proposed Restoration Areas

The restoration framework plan prioritizes habitat areas most critical and in need of restoration. Restoration efforts include removing invasive plants and establishing native plant communities. The goal is to create a diverse habitat to support wildlife, especially those threatened or endangered.

Proposed Trail Network

Proposed Trail Network map includes existing trails, proposed trails, and removed trails. The plan proposes key trail connections enhance connectivity within the preserve. Some of the key trail improvements are adding a new sidepath along edge of 91st Street and reducing the width of existing road south of 91st Street and converting it to trail. Additional trail modifications reflect the desire of preserve users to have greater access and fewer conflicts throughout the preserve.

Focus Areas

Conceptual framework plans were created for eight focus areas and these areas were selected due to high use or high importance to the preserve. The focus area plans include more detailed recommendations like proposed structures, site reconfigurations, other facility improvements, and additional future studies.

These focus areas are the following:

1. Trailhead Parking Lot
2. 91st Street Marsh, Old Glen Woods
3. Cass Avenue and Bluff Road, Youth Campground, Bluff and Cass Parking
4. Sawmill Creek, Rocky Glen Waterfall
5. Lemont Road Parking, Southern DuPage Regional Trail
6. Model Airfield
7. Poverty Prairie, Bluff Savanna
8. Former trout farm, Bluff Savanna

Detail Area Plans

Following the completion of the Focus Area plans, District staff identified five priority sites within the preserve to explore more detailed design. The detail areas include the following:

1. Trailhead Parking Lot
2. Trail Loop
3. Rocky Glen Waterfall
4. Lemont Road Parking and Trailhead
5. Trail Meander

Projects and Recommendations

All restoration areas, trail improvements, and focus areas are split up into projects with more detailed recommendations.



View of Rocky Glen Waterfall

FRAMEWORK PLANS

PROPOSED RESTORATION AREAS

RESTORATION RECOMMENDATIONS

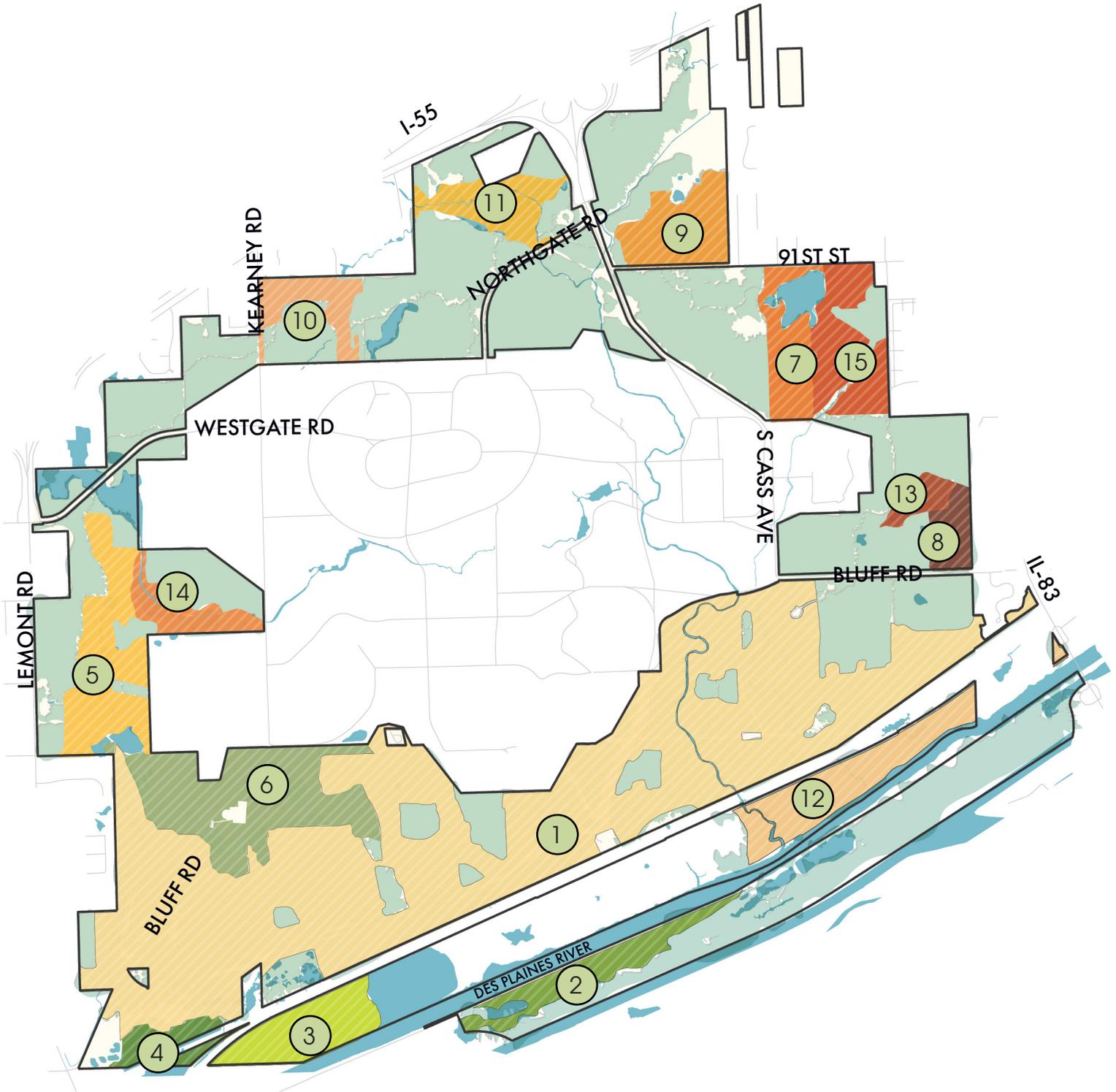
- | | | | |
|--|---------------------------------|--|--|
|  | <i>Bluff Savanna</i> |  | <i>Trailhead Marsh</i> |
|  | <i>Des Plaines Marsh</i> |  | <i>Sawmill Swamp</i> |
|  | <i>Dolomite Prairie</i> |  | <i>Big Cottonwood Swamp</i> |
|  | <i>Emerald Marsh</i> |  | <i>Sawmill Creek West Marsh</i> |
|  | <i>Kettle Woods</i> |  | <i>Pine Plantation</i> |
|  | <i>Poverty Prairie</i> | | |
|  | <i>Old Glen Woods</i> | | |
|  | <i>Tulip Woods</i> | | |
|  | <i>Northeast Woods</i> | | |
|  | <i>Kearny Road Woods</i> | | |

GENERAL RECOMMENDATIONS

Continue ecological restoration and identify areas to replace turf grass with native prairie plants

LEGEND

-  PRESERVE BOUNDARY
-  SHRUB MEADOW
-  WATER BODY
-  EXISTING BUILDING



NOTE: OVERALL MAP DOES NOT ILLUSTRATE ALL RECOMMENDATIONS.
SEE FOCUS AREAS FOR DETAILED PROPOSED IMPROVEMENTS.

FRAMEWORK PLANS

PROPOSED TRAIL NETWORK

TRAIL PROJECTS AND RECOMMENDATIONS

Sawmill Creek Bridge Replacement

- 1 Replace Sawmill Creek bridge.

Cass Avenue Trail Crossing Improvements

- 2 Coordinate trail crossing at Cass Avenue and Northgate Road as the DuPage County Division of Transportation intersection plans develop and reconfigure the trail as necessary.
- 3 Reconfigure trail connection from Trailhead Parking lot to the Main Trail.

Trail Alignment and Crossing Improvements on 91st Street

- 4 Coordinate trail crossing at 91st Street and Cass Avenue as the DuPage County Division of Transportation intersection plans develop and reconfigure the trail as necessary.
- 5 Realign trail to be smoother turn for cyclists, design pull off area for people to gather and alleviate conflicts between pedestrians and cyclists.

Shop Structure Removal South of 91st Street and Reconfiguration of Access Road Into a Trail

- 6 Remove dilapidated structures and reduce width of existing drive and access road and convert to trail.

Rocky Glen Area Improvements

- 7 Rehabilitate Rocky Glen Waterfall and improve access.
- 9 Remove old steps and trail stub.

Bluff Savanna Trail Improvements

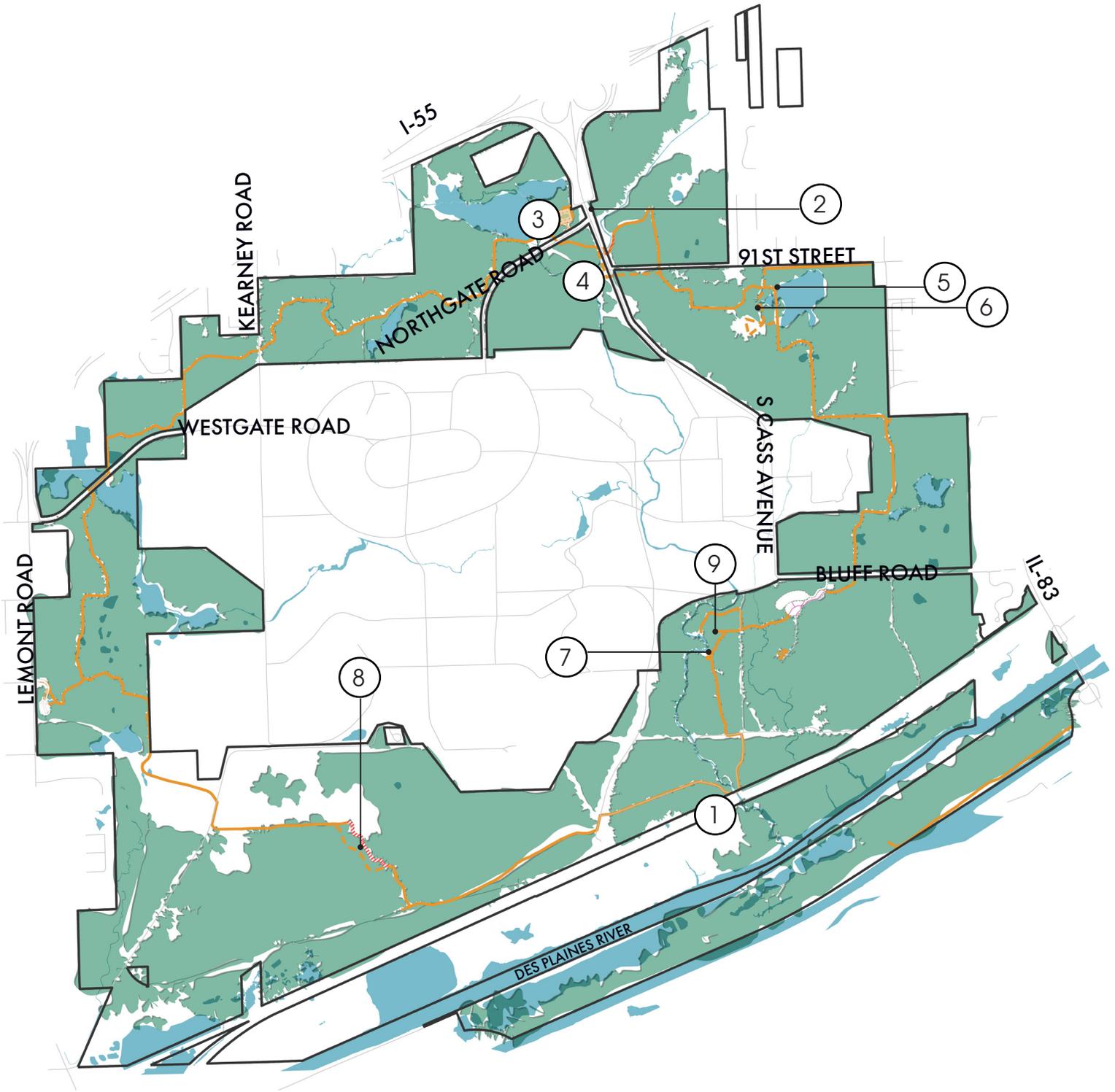
- 8 Reconfigure trail to reduce sharp turns, speed and visibility issues.

GENERAL RECOMMENDATIONS

See signage plans for directional, identification, regulatory, and interpretative sign recommendations and proposed locations.

LEGEND

	PRESERVE BOUNDARY		LIMESTONE TRAIL
	SHRUB MEADOW		TURF TRAIL
	WATER BODY		PROPOSED TURF TRAIL
	EXISTING BUILDING		PROPOSED LIMESTONE TRAIL
	PROPOSED IMPROVEMENT		UNMAINTAINED TRAIL
	REMOVAL		PLANNED TRAIL BY OTHERS



NOTE: OVERALL MAP DOES NOT ILLUSTRATE ALL RECOMMENDATIONS.
SEE FOCUS AREAS FOR DETAILED PROPOSED IMPROVEMENTS.

FRAMEWORK PLANS

PROPOSED FRAMEWORK SUMMARY

1 Focus Area 1: Main Parking Lot

- Trailhead Parking Lot Reconfiguration and Expansion and Frontage Road Parking Lot Removal
- Trailhead Parking Lot Flush Restrooms and Drinking Fountain
- Cass Avenue Trail Crossing Improvements

5 Focus Area 5: Lemont Road Parking, Southern DuPage Regional Trail

- Lemont Parking Lot Expansion
- Lemont Parking Lot Restroom Improvements and Drinking Fountain

2 Focus Area 2: 91st Street Marsh, Old Glen Woods

- 91st Street Marsh Trail Realignment
- Shop Structure Removal South Of 91st Street and Reconfiguration Of Access Road Into a Trail

6 Focus Area 6: Model Airfield

7 Focus Area 7: Poverty Prairie, Bluff Savanna

- Bluff Savanna Overlook Improvements

3 Focus Area 3: Cass Avenue & Bluff Road, Youth Campground, Bluff and Cass Parking

- Trailhead Amenities
- Bluff and Cass Avenue Parking Lot Flush Restroom

8 Focus Area 8: Former Trout Farm, Bluff Savanna

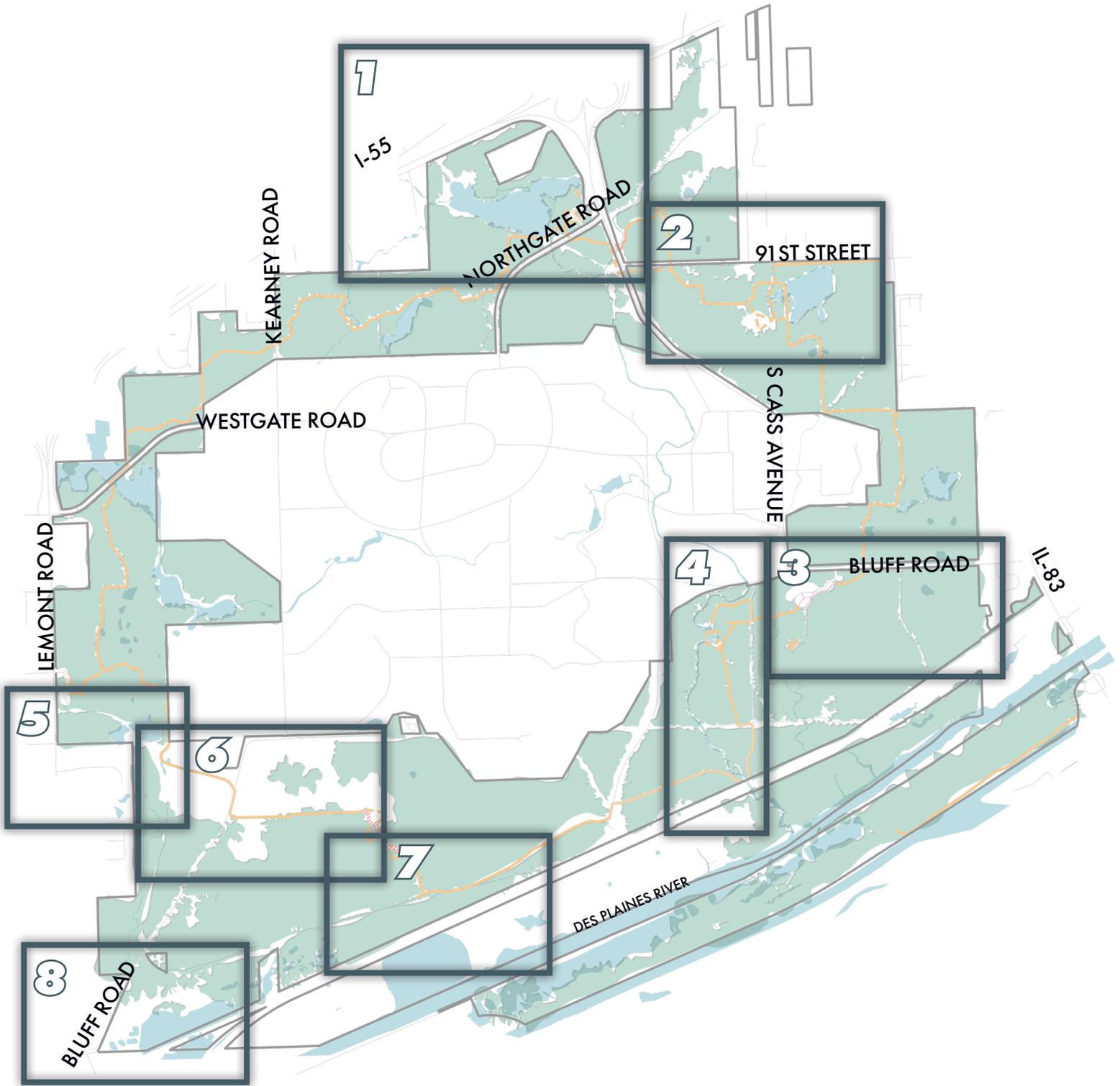
- Former Trout Farm Infrastructure Removal
- Bluff Road Gate Relocation

4 Focus Area 4: Sawmill Creek, Rocky Glen Waterfall

- Rocky Glen Waterfall Rehabilitation
- Rocky Glen Area Improvements
- Sawmill Creek Bridge Replacement

LEGEND

	PRESERVE BOUNDARY		LIMESTONE TRAIL
	SHRUB MEADOW		TURF TRAIL
	WATER BODY		PROPOSED TURF TRAIL
	EXISTING BUILDING		PROPOSED LIMESTONE TRAIL
	PROPOSED IMPROVEMENT		UNMAINTAINED TRAIL
	REMOVAL		PLANNED TRAIL BY OTHERS



NOTE: OVERALL MAP DOES NOT ILLUSTRATE ALL RECOMMENDATIONS.
SEE FOCUS AREAS FOR DETAILED PROPOSED IMPROVEMENTS.

FRAMEWORK PLANS

FOCUS AREAS

1 Trailhead Parking Area and Trailhead



0 500 Feet



PROJECTS AND RECOMMENDATIONS

Trailhead Parking Lot Reconfiguration and Expansion and Frontage Road Parking Lot Removal

- 1 Update parking lot to be more efficient. Reconfiguration should preserve existing trees to the extent possible. Provide additional bike parking.
- 4 Remove existing frontage parking lot off of S Cass Avenue.
- 5 Relocate existing trail connection and mid block crossing.

Trailhead Parking Lot Flush Restrooms and Drinking Fountain

- 2 Upgrade latrines to flush restroom facilities and add new drinking fountain.

Cass Avenue Trail Crossing Improvements

- 3 Work with DuPage County to optimize intersection and trail crossings.
- 6 Coordinate trail crossing at Cass Avenue and Northgate Road as the DuPage County Division of Transportation intersection plans develop and reconfigure the trail as necessary. Explore installing a trail crossing beacon as appropriate.

RESTORATION RECOMMENDATIONS

- 1 Trailhead Marsh
- 2 Northeast woods

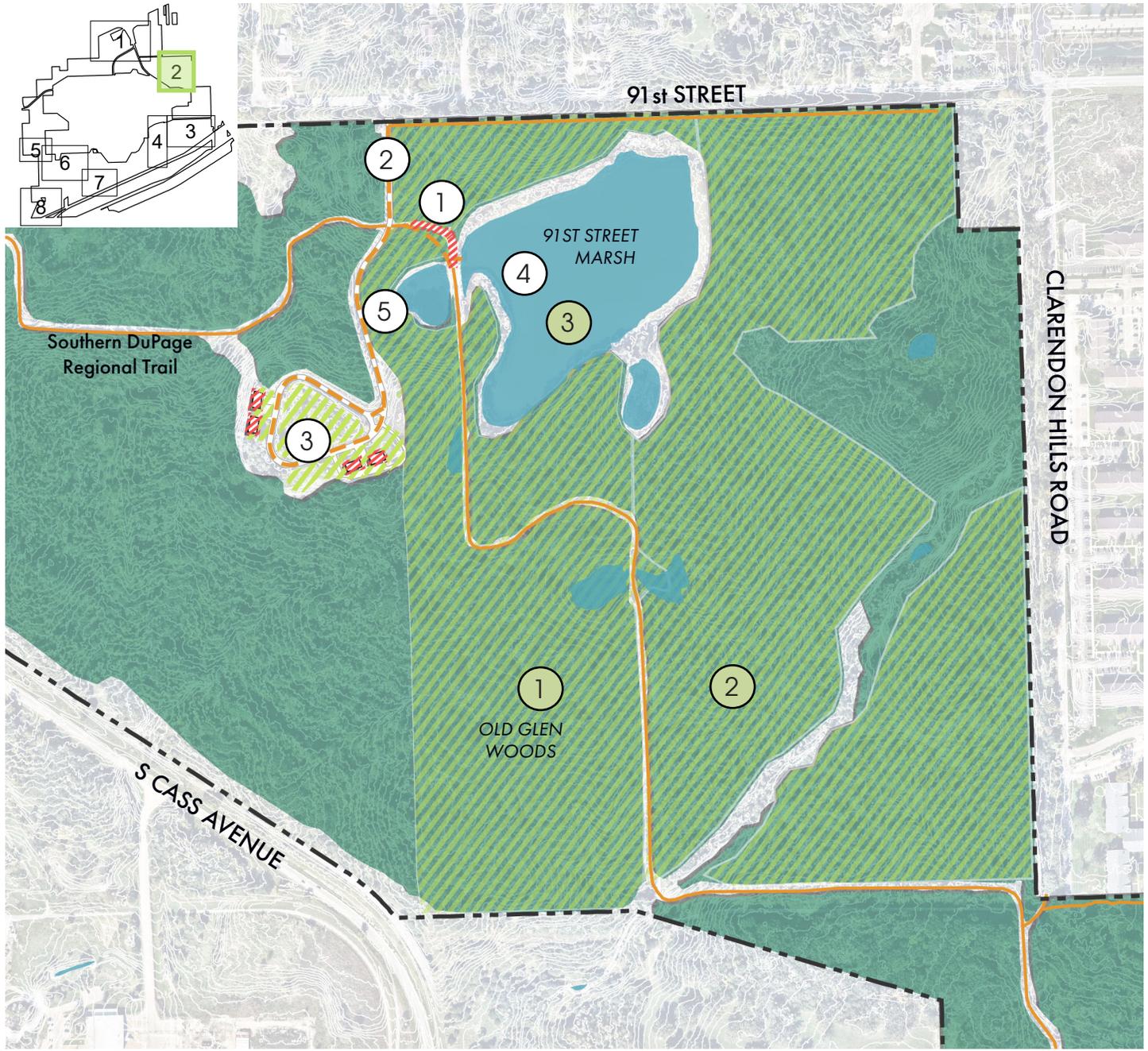
LEGEND

 PRESERVE BOUNDARY	 PROPOSED IMPROVEMENT	 LIMESTONE TRAIL
 SHRUB MEADOW	 PLANNED IMPROVEMENT	 TURF TRAIL
 WATER BODY	 PROPOSED RESTORATION	 PROPOSED LIMESTONE TRAIL
 EXISTING BUILDING	 REMOVAL	 PROPOSED TURF TRAIL
 PROPOSED STRUCTURE	 PROPOSED FENCE	 RAILROAD TRACKS
		 PLANNED TRAIL BY OTHERS

FRAMEWORK PLANS

FOCUS AREAS

2 91st Street Marsh, Old Glen Woods



0 500 Feet



PROJECTS AND RECOMMENDATIONS

91st Street Marsh Trail Alignment

- 1 Realign trail to provide a pull off area for people to get off the trail and alleviate conflicts between pedestrians and cyclists.

Shop Structure Removal South Of 91st Street and Reconfiguration of Access Road Into a Trail

- 2 Reduce width of existing drive and access road and convert to trail.
- 3 Remove existing Natural Resources Management buildings and restore to prairie.

91st Street Marsh Drainage Improvements

- 4 Restore marsh to it's normal level (Reduce high water level).
- 5 Restore drainage and unclog drain tiles at 91st Street Marsh.

RESTORATION RECOMMENDATIONS

- 1 Old Glen Woods

- 2 Pine Plantation

- 3 91st Street Marsh

LEGEND

	PRESERVE BOUNDARY		PROPOSED IMPROVEMENT		LIMESTONE TRAIL
	SHRUB MEADOW		PLANNED IMPROVEMENT		TURF TRAIL
	WATER BODY		PROPOSED RESTORATION		PROPOSED LIMESTONE TRAIL
	EXISTING BUILDING		REMOVAL		PROPOSED TURF TRAIL
	PROPOSED STRUCTURE		PROPOSED FENCE		RAILROAD TRACKS
					PLANNED TRAIL BY OTHERS

FRAMEWORK PLANS

FOCUS AREAS

3 Cass Avenue & Bluff Road, Youth Campground, Waterfall Parking



0 600 Feet



PROJECTS AND RECOMMENDATIONS

Trailhead Amenities

- 1 Add seating at trail heads.

Bluff and Cass Avenue Parking Lot Flush Restroom

- 2 Construct flush restroom and drinking fountain.

RESTORATION RECOMMENDATIONS

- 1 Bluff Savanna

LEGEND

	PRESERVE BOUNDARY		PROPOSED IMPROVEMENT		LIMESTONE TRAIL
	SHRUB MEADOW		PLANNED IMPROVEMENT		TURF TRAIL
	WATER BODY		PROPOSED RESTORATION		PROPOSED LIMESTONE TRAIL
	EXISTING BUILDING		REMOVAL		PROPOSED TURF TRAIL
	PROPOSED STRUCTURE		PROPOSED FENCE		RAILROAD TRACKS
					PLANNED TRAIL BY OTHERS

FRAMEWORK PLANS

FOCUS AREAS

4 Sawmill Creek, Rocky Glen Waterfall



0 500 Feet



PROJECTS AND RECOMMENDATIONS

Rocky Glen Waterfall Rehabilitation

- 1 Complete a watershed study to understand flooding issues to restore Sawmill Creek and stabilize the eroding shoreline.
- 2 Improve area at Rocky Glen waterfall; restore waterfall, improve surfacing at the landing near the waterfall, add seating, restore adjacent vegetation, restore and stabilize shoreline.
- 3 Evaluate conditions of the dam.

Rocky Glen Area Improvements

- 4 Add seating and provide gathering space at overlook.
- 6 Remove old steps, trail stub, and restore vegetation.

Sawmill Creek Bridge Replacement

- 5 Replace Sawmill Creek bridge.

RESTORATION RECOMMENDATIONS

- 1 Bluff Savanna

LEGEND

	PRESERVE BOUNDARY		PROPOSED IMPROVEMENT		LIMESTONE TRAIL
	SHRUB MEADOW		PLANNED IMPROVEMENT		TURF TRAIL
	WATER BODY		PROPOSED RESTORATION		PROPOSED LIMESTONE TRAIL
	EXISTING BUILDING		REMOVAL		PROPOSED TURF TRAIL
	PROPOSED STRUCTURE		PROPOSED FENCE		RAILROAD TRACKS
					PLANNED TRAIL BY OTHERS

FRAMEWORK PLANS

FOCUS AREAS

5 Lemont Rd Parking, Southern DuPage Regional Trail



0 400 Feet



PROJECTS AND RECOMMENDATIONS

Lemont Parking Lot Expansion

- ① Expand existing parking lot.

Lemont Parking Lot Restrooms and Drinking Fountain

- ② Add a drinking fountain.
- ③ Improve restroom facilities.

RESTORATION RECOMMENDATIONS

- ① Kettle Woods
- ② Poverty Prairie
- ③ Bluff Savanna

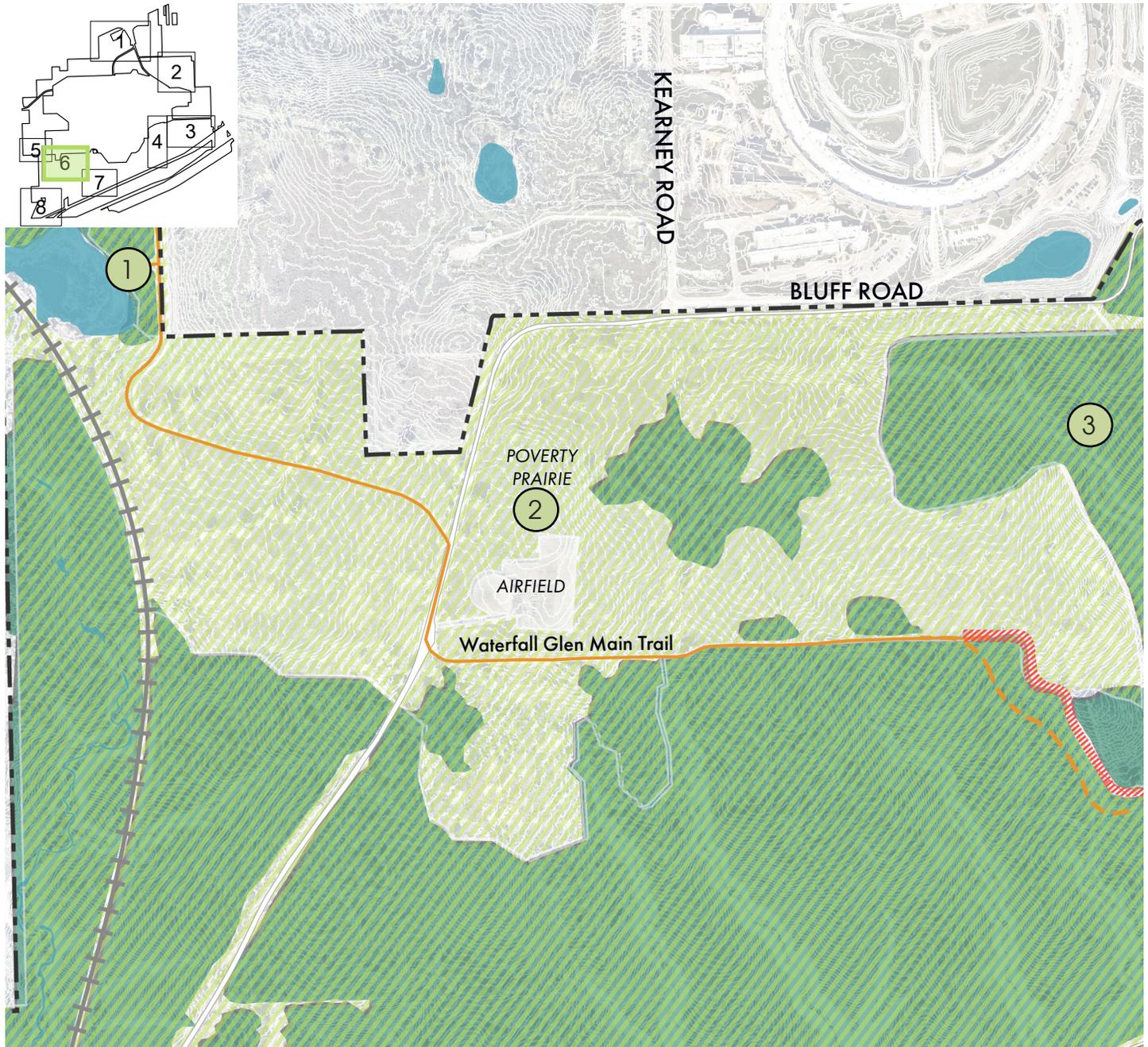
LEGEND

	PRESERVE BOUNDARY		PROPOSED IMPROVEMENT		LIMESTONE TRAIL
	SHRUB MEADOW		PLANNED IMPROVEMENT		TURF TRAIL
	WATER BODY		PROPOSED RESTORATION		PROPOSED LIMESTONE TRAIL
	EXISTING BUILDING		REMOVAL		PROPOSED TURF TRAIL
	PROPOSED STRUCTURE		PROPOSED FENCE		RAILROAD TRACKS
					PLANNED TRAIL BY OTHERS

FRAMEWORK PLANS

FOCUS AREAS

6 Model Airfield, Poverty Prairie



0 600 Feet



RESTORATION RECOMMENDATIONS

- 1 Kettle Woods
- 2 Poverty Prairie
- 3 Bluff Savanna

LEGEND

	PRESERVE BOUNDARY		PROPOSED IMPROVEMENT		LIMESTONE TRAIL
	SHRUB MEADOW		PLANNED IMPROVEMENT		TURF TRAIL
	WATER BODY		PROPOSED RESTORATION		PROPOSED LIMESTONE TRAIL
	EXISTING BUILDING		REMOVAL		PROPOSED TURF TRAIL
	PROPOSED STRUCTURE		PROPOSED FENCE		RAILROAD TRACKS
					PLANNED TRAIL BY OTHERS

FRAMEWORK PLANS

FOCUS AREAS

7 Poverty Prairie, Bluff Savanna



0 500 Feet



PROJECTS AND RECOMMENDATIONS

Bluff Savanna Trail Improvements

- 1 Remove and reconfigure trail to reduce sharp turns, speed and visibility issues.
- 2 Place trail etiquette and safety signage.*

Bluff Savanna Overlook Improvements

- 3 Improve overlook by adding more seating opportunities.

*See signage plans for directional, identification, regulatory, and interpretative sign recommendations and proposed locations.



RESTORATION RECOMMENDATIONS

- 1 Poverty Prairie
- 2 Bluff Savanna

LEGEND

	PRESERVE BOUNDARY		PROPOSED IMPROVEMENT		LIMESTONE TRAIL
	SHRUB MEADOW		PLANNED IMPROVEMENT		TURF TRAIL
	WATER BODY		PROPOSED RESTORATION		PROPOSED LIMESTONE TRAIL
	EXISTING BUILDING		REMOVAL		PROPOSED TURF TRAIL
	PROPOSED STRUCTURE		PROPOSED FENCE		RAILROAD TRACKS
					PLANNED TRAIL BY OTHERS

FRAMEWORK PLANS

FOCUS AREAS

8 Former Trout Farm, Bluff Savanna



0 600 Feet



PROJECTS AND RECOMMENDATIONS

Former Trout Farm Infrastructure Removal

- 1 Remove manmade infrastructure and restore ecosystems.
- 2 Maintain existing garage for program support.

Bluff Road Gate Relocation

- 3 Relocate existing gate near railroad tracks farther south near the maintenance garage.

RESTORATION RECOMMENDATIONS

- 1 Bluff Savanna
- 2 Emerald Marsh
- 3 Dolomite Prairie

LEGEND

	PRESERVE BOUNDARY		PROPOSED IMPROVEMENT		LIMESTONE TRAIL
	SHRUB MEADOW		PLANNED IMPROVEMENT		TURF TRAIL
	WATER BODY		PROPOSED RESTORATION		PROPOSED LIMESTONE TRAIL
	EXISTING BUILDING		REMOVAL		PROPOSED TURF TRAIL
	PROPOSED STRUCTURE		PROPOSED FENCE		RAILROAD TRACKS
					PLANNED TRAIL BY OTHERS

WATERFALL
GLEN
FOREST
PRESERVE

Detail
Area Plans



DETAIL AREA PLANS

Introduction

Detail Area Plans

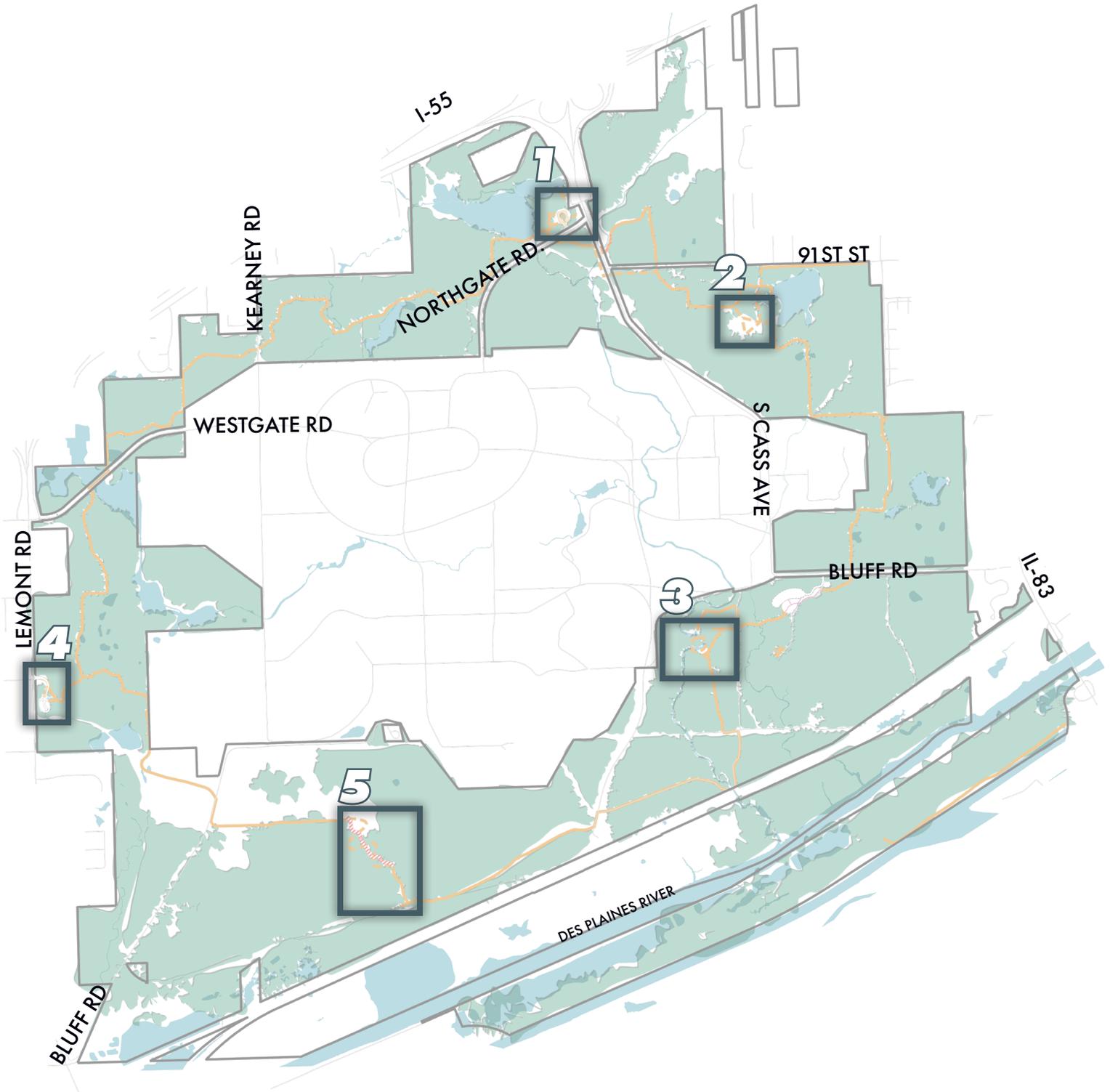
Based on the feedback received from Stage 3, Stantec worked with FPDDC staff to finalize and prioritize the improvement program for Stage 4. The priority project list informed the enlargement areas which show detailed area site plans for Waterfall Glen. These detailed area plans further detail recommendations identified in the framework plans, providing greater specificity to unique site conditions.

Detail Areas

-  Trailhead Parking Lot
-  Trail Loop
-  Rocky Glen Waterfall
-  Lemont Road Parking and Trailhead
-  Trail Meander

LEGEND

- | | |
|--|--|
|  PRESERVE BOUNDARY |  LIMESTONE TRAIL |
|  WOODED PRAIRIE |  TURF TRAIL |
|  WATER BODY |  PROPOSED LIMESTONE TRAIL |
|  EXISTING BUILDING |  UNMAINTAINED TRAIL |
|  PROPOSED IMPROVEMENT |  PLANNED TRAIL BY OTHERS |
|  REMOVAL | |



DETAIL AREA PLANS

TRAILHEAD PARKING LOT

PROJECTS AND RECOMMENDATIONS

Trailhead Parking Lot Reconfiguration and Expansion and Frontage Road Parking Lot Removal

- ① Update parking lot to be more efficient to provide more parking spaces. Preserve existing trees to the maximum extent possible.
- ② Provide additional bike parking.
- ③ Reduce horse trailer parking to match current demand and relocate to east side of lot.
- ④ Remove existing frontage parking lot off of S Cass Avenue and consolidate spaces into the Trailhead Lot.

Trailhead Parking Lot Flush Restrooms

- ⑤ Upgrade latrines to flush restroom facilities.

Cass Avenue Trail Crossing Improvements

- ⑥ Coordinate with DuPage County Division of Transportation on the Cass Avenue/I-55 interchange improvements to improve trail crossings and maximize benefits for preserve users. Update master plan recommendations as the study develops.

Trailhead Parking Lot Drinking Fountain

- ⑦ Provide new drinking fountain.



Bioswale



Restoration



Restroom and Bike Parking

DETAIL AREA PLANS

TRAILHEAD PARKING LOT

Parking Lot Reconfiguration

The Trailhead Parking lot is one of the primary access points for the preserve. The current layout was developed years ago when there was a higher equestrian use and provides numerous horse trailer parking spaces. The equestrian use at the preserve is now minimal and the number of horse trailer parking spaces are no longer needed. The proposed parking lot gains efficiencies by using a geometry that can more efficiently park more cars and by reducing the number of horse trailer parking spaces.

The parking lot reconfiguration offers the opportunity to incorporate sustainable and best management practices like bioswales and restoration while preserving as many existing trees as possible.

Restroom and Trailhead Amenities

The proposed trailhead amenities will enhance the experience of preserve users by providing upgraded flush restrooms, seating, bike parking, drinking fountains and trash receptacles. The trailhead area can host groups of people and can also be enjoyed by hikers, runners, bicyclists, cross-country skiers and horseback riders.

Existing Conditions



Existing photo of Main Gate parking lot

Proposed Enhancements



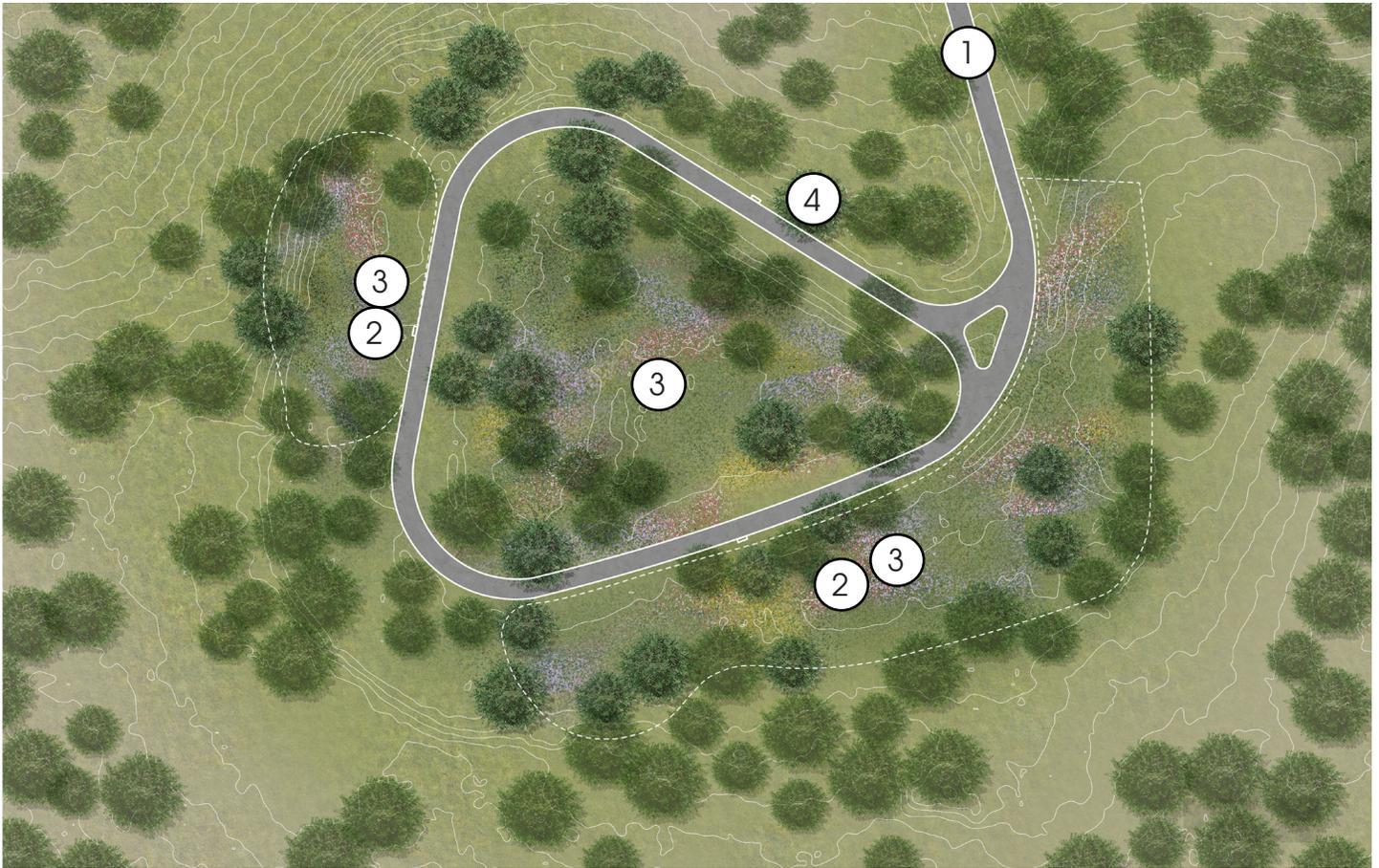
DETAIL AREA PLANS

TRAIL LOOP

PROJECTS AND RECOMMENDATIONS

Shop Structure Removal South Of 91st Street and Reconfiguration of Access Road Into a Trail

- ① Reduce width of existing drive and access road and convert to trail.
- ② Remove existing Natural Resources Management buildings.
- ③ Restore area.
- ④ Install bench seating.



Restoration



ADA Trail Access



Seating

DETAIL AREA PLANS

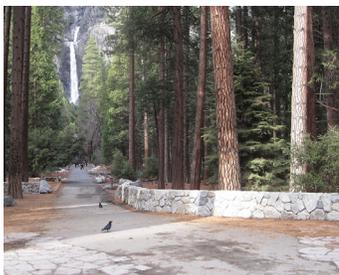
ROCKY GLEN WATERFALL

PROJECTS AND RECOMMENDATIONS

Rocky Glen Waterfall Rehabilitation

- ① Complete a watershed study to understand flooding issues to restore Sawmill Creek, provide fish passage and stabilize the eroding shoreline.
- ② Evaluate conditions of the dam.
- ③ Rehabilitate Rocky Glen Waterfall.
- ④ Improve trail access down to waterfall.
- ⑤ Install seat wall, large stone or bench seating.
- ⑥ Update interpretive sign (See signage plan).
- ⑦ Install crushed stone aggregate with binder.
- ⑧ Border areas with flagstone.
- ⑨ Restore creek edge outcropping.
- ⑩ Remove existing stairs leading to the waterfall and Provide stepped stone access to river.
- ⑪ Restore adjacent vegetation.
- ⑫ Relocated donor bench.
- ⑬ Remove old steps and trail stub, and restore vegetation.

Character Images



Crushed Stone Aggregate with Binder and Flagstone Boarder



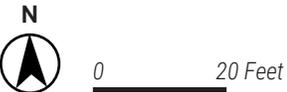
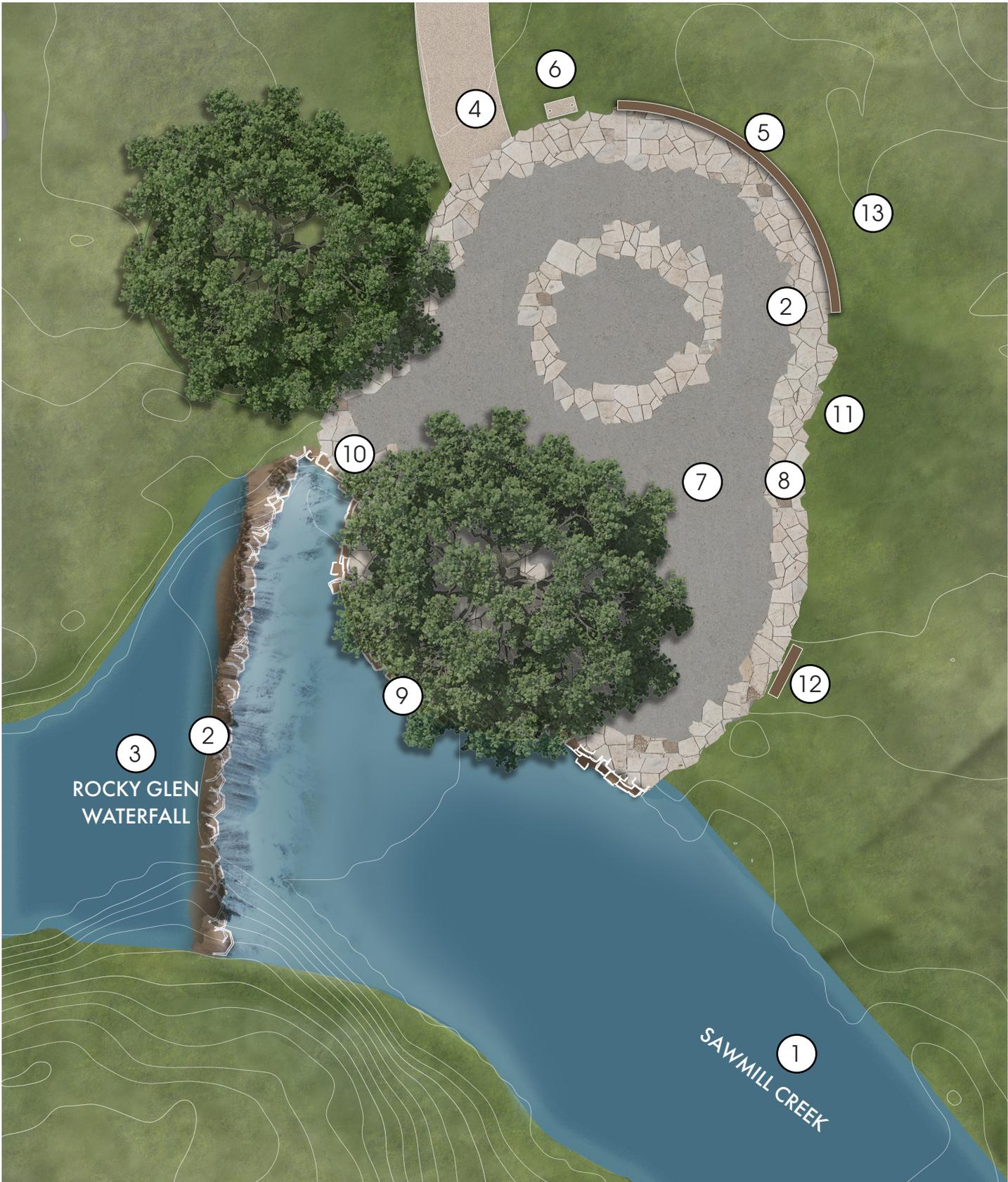
Outcropping Shoreline Edge



Stepped Stone Access to River



Seat Wall



DETAIL AREA PLANS

ROCKY GLEN WATERFALL

Rocky Glen Waterfall

The Rocky Glen area is one of the main attractions for many users of the preserve. It features the Rocky Glen waterfall which was constructed in the 1930's by the Civilian Conservation Corps. While the Rocky Glen area has been enjoyed by many since then, the increase in visits in recent years has impacted the surrounding landscape. Additionally, some stones from the original CCC waterfall construction have become displaced over time.

Rocky Glen Waterfall Rehabilitation

Resurfacing the waterfall gathering area using crushed stone aggregate with binder and bordering areas with flagstone will mitigate erosion and stone displacement issues. Bordering the shoreline with outcropping will also help stabilize the shoreline. It also provides seating for users and allows people to interact with water.

Furthermore, a study of the watershed and the dam needs to be completed to understand flooding issues in order to restore the creek, provide fish passage and stabilize the eroding shoreline.

Existing Conditions



Existing photo of Rocky Glen Waterfall

Proposed Enhancements



DETAIL AREA PLANS

LEMONT ROAD PARKING AND TRAILHEAD

PROJECTS AND RECOMMENDATIONS

Lemont Parking Lot Expansion

- 1 Expand existing parking lot.
- 2 Study the feasibility of installing an island at the entrance drive to discourage semi-truck traffic in the parking lot.

Lemont Parking Lot Restroom Improvements and Drinking Fountain

- 3 Add a drinking fountain.
- 4 Add permanent restrooms.

Entry Drive and Parking Lot Adjustments

The existing access drive off Lemont Road to the parking lot is currently wide enough for unauthorized semi-trucks to enter the parking lot. However, the parking lot was not designed for those large vehicles which has led to damage. Adding an island or median to the entry drive could limit access to preserve users only thereby reducing damage to the lot.

The parking lot adjustments increase parking lot capacity and offers the opportunity to incorporate sustainable and best management practices like bioswales and restoration.

Character Images



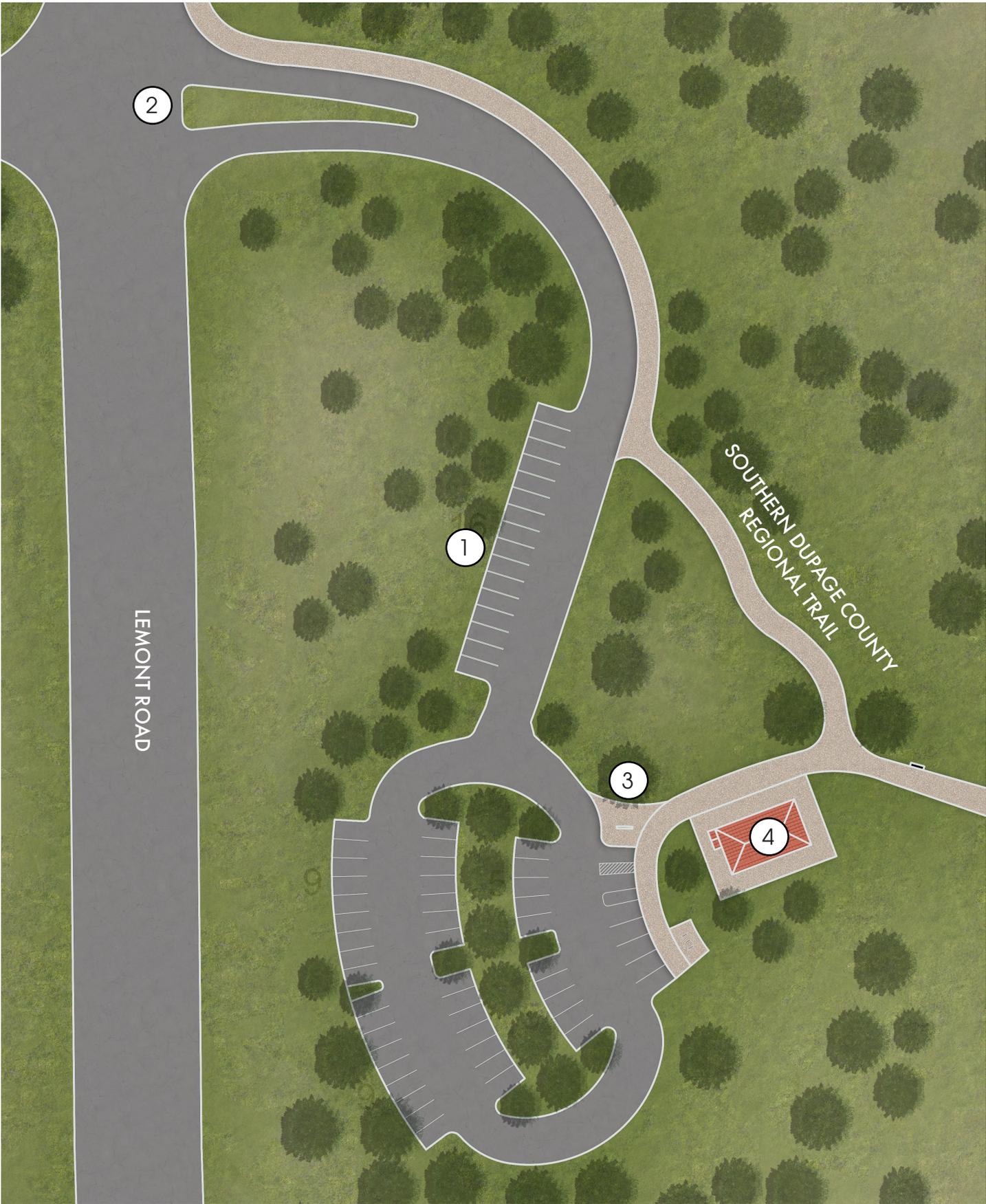
Modern Pit Latrines



Drinking Fountain



Entry Drive Island



DETAIL AREA PLANS

TRAIL MEANDER

PROJECTS AND RECOMMENDATIONS

Bluff Savanna Trail Improvements

- ① Remove and reconfigure trail to reduce sharp turns, speed and visibility issues.
- ② Place trail etiquette signage (See Signage Plan).

Bluff Savanna Overlook Improvements

- ③ Improve overlook by adding more seating opportunities.

Character Images



Limestone Trail



Trail Etiquette Sign



Seating at overlook



Restoration



WATERFALL
GLEN
FOREST
PRESERVE

Implementation
Plan



IMPLEMENTATION PLAN



INTRODUCTION

To advance the District’s vision at Waterfall Glen Forest Preserve, the FPDDC must have an action plan in place to guide work plans, budget allocations, infrastructure planning, maintenance and operations.

The project team created framework plans, detailed focus area plans, enlargement area plans, and an Implementation Plan to support the FPDDC Mission and the Vision for the future of Waterfall Glen.

The plans represent high-level recommendations to guide the preserve development and implementation of various elements over time. Recommendations are nested under three overarching categories, Capital Improvements, Operational and Maintenance Improvements, and Policy Improvements.

Detailed budgeting, additional planning, and funding exploration are highly recommended to support the implementation of the improvement projects proposed in the Master Plan. Grant funding can be an effective way to subsidize improvement projects. The FPDDC may wish to engage design and engineering consultants as needed to assist with some of the large improvements to better expedite the process.

The 2019 Master Plan Identified four goals with a number of objectives. Applicable goals that align with the master plan and provide measurable impact are referenced under the “Impact & Master Plan Alignment Column,” the goals are as follows:

- **Goal 1:** Preserve, protect and restore open spaces.
- **Goal 2:** Help people to cultivate a lifelong enthusiasm for nature by offering meaningful, first-rate outdoor recreation and learning experiences.
- **Goal 3:** Improve preserves to increase access, use, efficiency and productivity
- **Goal 4:** Refocus resources by reducing infrastructure and task not related to the mission.
- **Goal 5:** Foster community engagement and increase awareness of the Forest Preserve District.
- **Goal 6:** Use effective and innovative methods to execute the master plan while continuing on sound financial footing.



PHASING

Proposed improvements in the Waterfall Glen Master Plan are projected to be implemented in phases over the course of many years. Priorities and funding opportunities may shift, providing opportunities for some improvements to move up the priority list and others to

fall further down. It is anticipated that the District will remain flexible, adapting to changes over time in order to implement the elements of the master plan.



CAPITAL IMPROVEMENTS

Proposed improvement projects are listed in geographic order as identified in the Framework Plan. FPDDC should review and update this list annually. Staff should update the list by:

- Removing completed, no longer viable / relevant or desired projects
- Shift the priority order of projects as things change
- Modify projects and/or add new projects as things change and opportunities present themselves.

Most of these projects will follow a 3-phase process that starts with preliminary design / engineering (Phase I), advances to final design engineering (Phase II), and concludes with construction and construction administration (Phase III). Additional site investigations such as site surveying or geotechnical studies are essential for most projects.

Customarily, the cost of Phases I and II design services are approximately 12-20% of the total project construction value, with buildings typically yielding a higher percentage. For more complex projects, project leaders should initiate Phase I consulting services well in

advance of the targeted construction date to accommodate sometimes lengthy outreach, design, engineering, procurement and permitting timelines.

Projects that are publicly-bid typically see the greater number of bidders if in late winter or early spring. Bidding projects within this time frame can provide cost savings, get the projects in the contractor's calendar to begin construction in early spring and allow project competition prior to start of winter.

Construction administration is needed to make sure that the project vision, design intent and construction details are being implemented properly by the contractor. Depending on the scope of project, construction administration can cost approximately 20-30% of the construction value of the project and should be considered when preparing a project budget.

OPERATIONAL AND MAINTENANCE IMPROVEMENTS



Ongoing maintenance is an important factor when it comes to the success of the Master Plan for Waterfall Glen, and the experience it creates for staff, and visitors. It is recommended that FPDDC continuously strive to identify alternatives to reduce maintenance.

Suggestions for operational improvements include but are not limited to:

IMPLEMENTATION PLAN

- Expand on current maintenance practices for existing facilities and explore high-efficiency options
- Identify opportunities for low-maintenance design in structures and other improvement projects
- Consider volunteers to take on routine maintenance efforts, such as students and parents, master gardeners, Illinois residents looking for community service hours
- Establish after school clubs for curriculum-focused natural area management maintenance
- Create incentives for students, residents, and outside user groups (Scouts, University Extension Programs etc.) that offer maintenance support
- Remove unnecessary structures from the landscape to reduce operational burden.

Staffing

Additional staff to maintain and operate improvements may be warranted. It is recommended that FPDDC consider the addition of positions as maintenance demands increase. There may also be a need for additional seasonal staff to assist with operating preserve programs and rentals at the preserve.



POLICY IMPROVEMENTS

FPDDC should evaluate maintenance and operational policies that could potentially limit the implementation of any of the proposed plan improvements.

The Illinois Department of Natural Resources should be contacted to discuss the feasibility and permitting of proposed improvements along Sawmill Creek.

Implementation of new facilities and improvements may require new policies be instated.



OTHER PLANNING CONSIDERATIONS

Clean Energy, Resiliency and Sustainability

To optimize sustainability and resilience, consider using a biophyllic approach and/or sustainability ratings such as LEED and Sustainable SITES when implementing proposed improvements. The SITES rating system aims to provide “a comprehensive framework for designing, developing and managing sustainable and resilient landscapes and other outdoor spaces” (Sustainable Sites Initiative). Using sustainability rating systems will help the FPDDC help conserve, restore, and create social and economical benefits by establishing thriving ecosystems.

The Clean Energy, Resiliency and Sustainability Plan includes the following opportunities:

- Explore EV charging stations at highly used parking lots.
- Explore the use of ground mounted solar panels at parking lots or currently mowed areas to offset building energy use or to power EV charging stations.
- Make connections to and fill gaps in the regional trail network to increase the use of active transportation by preserve users.

Other Relevant Planning Studies and Coordination

There are several studies currently underway within or adjacent to the Waterfall Glen Preserve that may warrant further coordination or require updates preliminary designs of the focus area and detail area plans within this master plan.

DuPage County Division of Transportation (DOT)- Cass Avenue Corridor Study

The DuPage County Divisions of Transportation is currently studying the Cass Avenue Corridor. Multiple scenarios are being studied that could impact the existing frontage parking lot. The FPDDC will need to coordinate closely with the DOT on these improvements and may need to make adjustments to preliminary plans to accommodate the preferred scenario.

Canal Bank Road/Centennial Trail Phase I Engineering

The Village of Lemont engaged a consultant to complete civil engineering associated with the design and preparation of a Phase I Project Report for the relocation of Canal Bank Road. Improvements to Canal Bank Road could provide opportunities for connect Waterfall Glen to the Centennial Trail. The FPDDC should advocate and coordinate with the Village on future Canal Bank Road improvements.

Argonne National Laboratory Electrical Capacity and Distribution Capability Project

According to the Office of National Environmental Policy Act "Argonne's scientific advancements require a strong foundation that supports reliable, redundant, maintainable, and flexible utility systems. A key component of Argonne National Laboratory's utility system portfolio is the high voltage electrical distribution system."

Argonne is currently evaluating this system and it's future demand growth and operational requirements. The base scope of the project is to "...install two 138-kilovolt transmission lines connecting Argonne's 551 substation with a new ComEd substation south of the Argonne site."

IMPLEMENTATION PLAN



PARTNERSHIP & FUNDING

Partnerships and Coordination

In the case of this master planning effort, volunteerism should be viewed as both a unique and valuable partnership between Waterfall Glen and its surrounding community, as it is a critical support piece for the preserve. Volunteers are vital to deliver Waterfall Glen's programming, assist with maintenance, and promote community outreach.

The District should also focus on the growth and development of existing partnerships, and together with the others, identify any potential new partnerships. Cost-sharing opportunities should be discussed for any applicable recommendations, along with the implementation of any new programming elements related to the educational components of the plan.

Potential Funding Sources

Funding is a critical piece in the successful implementation of any master plan. In order to complete all of the recommendations in this master plan the FPDDC may need to identify funding sources outside of their annual budget. Grants have become a critical tool for implementation. The District should continue to identify potential eligible federal, state and local grant funding opportunities for projects identified in the master plan including:

- Federal Land and Water Conservation Program
- Federal Transportation Alternatives Set-Aside Program
- Surface Transportation Program (STP)
- Transportation Alternatives Program (TAP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Recreational Trails Grants
- Walden Foundation
- Illinois Department of revenue Commerce & Economic Opportunity (DCEO)
- Illinois DNR Natural Areas Stewardship Grant Program
- Illinois DNR Grant Programs
- Recreational Trails Grant (RTP)
- Open Space Lands Acquisition and Development Grant (OSLAD)
- Boat Access Area Development Program (BAAD)
- The Illinois Office of Tourism Grant

Potential Forest Preserve District Funding Sources

Natural Resources:

- General Fund
- Wetland & Riparian Fund
- Environmental Fund
- Landfill Interest Earnings
- Referendum and Non-referendum Bond funds

Capital Improvement/Building Renewal:

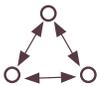
- Construction & Development Fund
- Building Renewal Fund
- Landfill Interest Earnings
- Referendum and Non-referendum Bond funds



FINANCING

The board should establish a budget that aligns with the proposed implementation and phasing of the master plan, appropriate to annual expenditures over a 10 to 15-year time horizon. The budget should include the following:

- Maintenance of existing and proposed improvements
- Expanded operations
- Acquisition of adjacent property if opportunity and budget align
- Design, engineering, permitting, and construction of all proposed improvements



NEXT STEPS

Now that the Master Plan is complete, improvements have been identified and prioritized the FPDDC will need to begin to weigh the proposed improvements at Blackwell against all preserve improvement needs, schedules and budgets.

The FPDDC should select high and medium priority projects that may be eligible to take advantage of state, local and federal funding opportunities and create a timeline for implementation of

the proposed improvements based on the FPDDC needs district-wide.

It is recommended that the implementation list be updated at least once per year in order to account for new opportunities and evolving circumstances. Leaders should remain committed to a systematic and incremental approach to implementation of proposed improvements.

How to Use the Implementation Table

The Implementation Table is organized by geography of the preserve moving from preserve-wide recommendations (General: Restoration Areas, Trail Network and Signage) to the top (5) Focus Areas and finally (5) Detail Plan Areas. At each scale the recommendations become more specific and the plans more detailed.

For each recommendation, the following columns can be found from left to right: **Priority Ranking** (low, medium or high), the **Improvement** (recommendation found in the Framework, Focus Area and Detail Plan Areas), **Project Cost Range** (rough order of magnitude cost estimate for budgeting purposes), **Impact & Master Plan Alignment** (this reflects how the improvement aligns with the goals in the FPFFC 2019 Master Plan) and **Funding & Partnerships**, which provide a list of potential grant funding sources and partnerships that can be explored in the pursuit of implementing the proposed improvements.

IMPLEMENTATION PLAN

IMPLEMENTATION TABLE

WATERFALL GLEN IMPLEMENTATION TABLE				
Capital Improvements				
Priority Ranking	Improvement	Project Cost Range	Impact & Master Plan Alignment	Funding & Partnerships
	GENERAL			
	Restoration Areas			
High	Bluff Savanna - In progress	\$2,000,000	Goals 1-4	Federal Land and Water Conservation Program & Illinois DNR Natural Areas Stewardship Grant Program, General Fund, Wetland & Riparian Fund, Environmental Fund, Landfill Interest Earnings, Referendum, Non-referendum Bond funds, FEMA programs (STORM, Flood Mitigation Assistance, Hazard Mitigation Assistance), and EPA Section 319
Medium	Des Plaines Marsh	\$300,000		
Medium	Dolomite Prairie	\$100,000		
Medium	Emerald Marsh	\$55,000		
Medium	Kettle Woods	\$235,000		
Medium	Poverty Prairie - In progress	\$240,000		
Medium	Old Glen Woods	\$115,000		
Medium	Tulip Woods	\$225,000		
Low	Northeast Woods	\$175,000		
Low	Kearny Road Woods	\$100,000		
Low	Trailhead Marsh	\$100,000		
Low	Sawmill Swamp	\$235,000		
Low	Big Cottonwood Swamp	\$40,000		
Low	Sawmill Creek West Marsh	\$70,000		
Low	Pine Plantation	\$185,000		
	Trail Network			
High	Sawmill Creek Bridge Replacement	\$630,000	Goals 2 & 3	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, and Park and Recreational Facility Construction Act
	<i>Replace Sawmill Creek Bridge.</i>			
High	Cass Avenue Trail Crossing Improvements (includes crossing beacon)	\$93,000 - \$126,500	Goals 2 & 3	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, and Landfill Interest Earnings
	<i>Coordinate trail crossing at Cass Avenue and Northgate Road as the DuPage County Division of Transportation intersection plans develop and reconfigure the trail as necessary.</i>			
	<i>Reconfigure trail connection from Trailhead Parking lot to the Main Trail.</i>			

IMPLEMENTATION TABLE

Priority Ranking	Improvement	Project Cost Range	Impact & Master Plan Alignment	Funding & Partnerships
High	Trail Alignment and Crossing Improvements at 91st Street	\$71,000 - \$96,000	Goals 2 & 3	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, and Landfill Interest Earnings
	<i>Coordinate trail crossing at 91st Street and Cass Avenue as the DuPage County Division of Transportation intersection plans develop and reconfigure the trail as necessary.</i>			
	<i>Realign trail to be smoother turn for cyclists, design pull off area for people to gather and alleviate conflicts between pedestrian and cyclist.</i>			
High	Shop Structure Removal South of 91st Street and Reconfiguration of Access Road Into a Trail	\$360,500 - \$190,000	Goals 2-4	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, Building Renewal Fund and, Park and Recreational Facility Construction Act
	<i>Remove dilapidated structures and reduce width of existing drive and access road and convert to trail.</i>			
Medium	Rocky Glen Area Improvements	\$50,000 - \$68,000	Goals 1-4	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, FEMA programs (STORM, Flood Mitigation Assistance, Hazard Mitigation Assistance), and EPA Section 319
	<i>Rehabilitate Rocky Glen Waterfall and improve access.</i>			
	<i>Remove old steps and trail stub.</i>			
Medium	Bluff Savanna Trail Improvements (includes trail etiquette signs)	\$81,000 - \$109,500	Goals 2 & 3	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, and Landfill Interest Earnings
	<i>Remove and reconfigure trail to reduce sharp turns, speed, and visibility issues.</i>			
	<i>See signage plans for directional, identification, regulatory and interpretive sign recommendations and proposed locations</i>			

IMPLEMENTATION PLAN

IMPLEMENTATION TABLE

Priority Ranking	Improvement	Project Cost Range	Impact & Master Plan Alignment	Funding & Partnerships
Low	Signage	\$435,000 - \$589,000		
	Add roadway wayfinding recreation site sign that directs users to trailhead parking lot and Bluff & Cass parking lot.	\$8,500 - \$11,500	Goals 2 & 3	Federal Land and Water Conservation Program, Illinois DNR Natural Areas Stewardship Grant Program, Recreational Trails Grants, Illinois DNR Trails Grant Programs, , Construction and Development Fund, Referendum and Non-referendum Bond funds, and Landfill Interest Earnings
	Improve Wayfinding signage at mid block crossings on both Westgate Road and 91st Street.	\$17,000 - \$23,000		
	Interpretive Sign for Native Plants/ special planting areas	\$34,000 - \$46,000		
	Update the format of the existing sign "Centennial - Nope that's not why".	\$8,500 - \$11,500		
	Add banner infrastructure along main parking lot and entrances	\$17,000 - \$23,000		
	Remove visitor information at frontage parking lot.	\$500 - \$1,000		
	Relocate visitor information to align with proposed trail realignment as in the framework plan.	\$8,500 - \$11,500		
	Explore kiosk design with printed sign with QR codes rather than current design with paper flyers.	\$67,500 - \$91,500		
	Remove signs with removal of parking lot.	\$2,500 - \$3,500		
	Relocate signs as necessary to align with proposed parking lot modifications.	\$110,000 - \$148,500		
	Provide permanent trail etiquette signage at locations of known current and ongoing issues.	\$25,500 - \$34,500		
	Replace existing trail crossing beacons with push button activated beacons.	\$17,000 - \$23,000		
	Add trail advance warning signs (stop ahead, curve ahead etc.)	\$8,500 - \$11,500		
	Improve unsignalized mid block crossing signage and striping (at both Westgate and 91st). Add "cross traffic does not stop" on the existing stop signs.	\$101,500 - \$137,500		
	Update regulatory signs that do not conform to District standards.	\$8,500 - \$11,500		
	FOCUS AREA			
	Focus Area 1: Main Gate Parking Area and Trailhead			
High	Trailhead Parking Lot Reconfiguration and Expansion and Frontage Road Parking Lot Removal	See Trail Network - Trailhead Parking Lot Reconfiguration and Expansion and Frontage Road Parking Lot Removal		
	Update parking lot to be more efficient. Reconfiguration should preserve existing trees to the extent possible. Provide additional bike parking.			
	Remove existing frontage parking lot off of S Cass Avenue and restore to prairie.			
	Remove existing trail connection and mid block crossing.			

IMPLEMENTATION TABLE

Priority Ranking	Improvement	Project Cost Range	Impact & Master Plan Alignment	Funding & Partnerships
High	Trailhead Parking Lot Flush Restrooms and Drinking Fountain	\$565,500 - \$740,500	Goals 2 & 3	Illinois DNR Trails Grant Programs, , Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, Building Renewal Fund, and Park and Recreational Facility Construction Act
	<i>Upgrade latrines to flush restroom facilities and add new drinking fountain.</i>			
High	Cass Avenue Trail Crossing Improvements			<i>See Trail Network - Cass Avenue Trail Crossing Improvements</i>
	<i>Work with DuPage County to optimize intersection and trail crossings.</i>			
	<i>Coordinate trail crossing at Cass Avenue and Northgate Road as the DuPage County Division of Transportation intersection plans develop and reconfigure the trail as necessary. Explore installing a trail crossing beacon as appropriate.</i>			
	Focus Area 2: 91st Street Marsh, Old Glen Woods			
Medium	91st Street Marsh Trail Realignment			<i>See Trail Network - 91st Street Marsh Trail Realignment</i>
	<i>Realign trail to be smoother turn for cyclists, design pull off area for people to gather and alleviate conflicts between pedestrian and cyclist.</i>			
High	Shop Structure Removal South of 91st Street And Reconfiguration Of Access Road Into A Trail			<i>See Trail Network - Shop Structure Removal South of 91st Street And Reconfiguration Of Access Road Into A Trail</i>
	<i>Reduce width of existing drive and access road and convert to trail.</i>			
	<i>Remove existing Natural Resources Management buildings and restore to prairie.</i>			
Medium	91st Street Marsh Trail Realignment	\$253,500 - \$343,000	Goals 1 & 4	Illinois DNR Natural Areas Stewardship Grant Program, , Construction and Development Fund, Referendum and Non-referendum Bond funds, and Landfill Interest Earnings
	<i>Restore marsh to it's normal level (Reduce high water level).</i>			
	<i>Restore drainage and unclog drain tiles at 91st Street Marsh.</i>			

IMPLEMENTATION PLAN

IMPLEMENTATION TABLE

Priority Ranking	Improvement	Project Cost Range	Impact & Master Plan Alignment	Funding & Partnerships
Focus Area 3: Cass Avenue & Bluff Road, Youth Campground, Waterfall Parking				
Medium	Trailhead Improvements	\$5,500 - \$7,500	Goals 2 & 3	Illinois DNR Trails Grant Programs, , Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, Building Renewal Fund, and Park and Recreational Facility Construction Act
	<i>Add seating at trail heads.</i>			
Medium	Bluff and Cass Avenue Parking Lot Flush Restroom	\$308,500 - \$416,500	Goals 2 & 3	Illinois DNR Trails Grant Programs, , Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, Building Renewal Fund, and Park and Recreational Facility Construction Act
	<i>Construct flush restroom and drinking fountain.</i>			
Focus Area 4: Sawmill Creek, Rocky Glen Waterfall				
Medium	Rocky Glen Waterfall Rehabilitation	\$235,500 - \$484,500	Goals 1-4	Illinois DNR Natural Areas Stewardship Grant Program, Recreational Trails Grants, Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, Park and Recreational Facility Construction Act, FEMA programs (STORM, Flood Mitigation Assistance, Hazard Mitigation Assistance), and EPA Section 319
	<i>Complete a watershed study to understand flooding issues to restore Sawmill Creek and stabilize the eroding shoreline.</i>			
	<i>Improve area at Rocky Glen waterfall; restore waterfall, improve surfacing at the landing near the waterfall, add seating, restore adjacent vegetation, restore and stabilize shoreline.</i>			
	<i>Evaluate conditions of the dam.</i>			
Medium	Rocky Glen Area Improvements			See Trail Network - Rocky Glen Area Improvements
	<i>Add seating and provide gathering space at overlook.</i>			
	<i>Remove old steps, trail stub, and restore vegetation.</i>			
High	Sawmill Creek Bridge Replacement			See Trail Network - Sawmill Creek Bridge Replacement
	<i>Replace Sawmill Creek bridge.</i>			

IMPLEMENTATION TABLE

Priority Ranking	Improvement	Project Cost Range	Impact & Master Plan Alignment	Funding & Partnerships
Focus Area 5: Lemont Rd Parking, Southern DuPage County Trail				
High	Lemont Parking Lot Expansion	\$50,000 - \$67,500	Goals 2 & 3	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, and Park and Recreational Facility Construction Act
	<i>Expand existing parking lot.</i>			
High	Lemont Parking Lot Restroom Improvements and Drinking Fountain	\$309,000 - \$417,500	Goal 2	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, and Landfill Interest Earnings
	<i>Add a drinking fountain.</i>			
	<i>Improve restroom facilities.</i>			
Focus Area 6: Model Airfield, Poverty Prairie				
Focus Area 7: Poverty Prairie, Bluff Savanna				
Low	Bluff Savanna Trail Improvements	<i>See Trail Network - Bluff Savanna Trail Improvements</i>		
	<i>Remove and reconfigure trail to reduce sharp turns, speed and visibility issues.</i>			
	<i>Place trail etiquette and safety signage.</i>			
Low	Bluff Savanna Overlook Improvements	\$49,000 - \$66,500	Goals 2 & 3	Illinois DNR Trails Grant Programs, Construction and Development Fund, Referendum and Non-referendum Bond funds, and Landfill Interest Earnings
	<i>Improve overlook by adding more seating opportunities.</i>			

IMPLEMENTATION PLAN

IMPLEMENTATION TABLE

Priority Ranking	Improvement	Project Cost Range	Impact & Master Plan Alignment	Funding & Partnerships
	Focus Area 8: Fisheries, Bluff Savanna			
Low	Former Trout Farm Infrastructure Removal	\$2,025,000 - \$2,734,000	Goals 1 & 4	Illinois DNR Natural Areas Stewardship Grant Program, Construction and Development Fund, Referendum and Non-referendum Bond funds, Landfill Interest Earnings, Building Renewal Fund, and Park and Recreational Facility Construction Act
	<i>Remove manmade infrastructure and restore ecosystems.</i>			
	<i>Maintain existing garage for program support.</i>			
High	Bluff Road Gate Relocation	\$2,000 - \$3,000	Goal 4	
	<i>Relocate existing gate near railroad tracks farther south near the maintenance garage.</i>			
	DETAIL AREA PLANS			
	Main Gate Parking Lot			
	Trailhead Parking Lot Reconfiguration and Expansion and Frontage Road Parking Lot Removal			See Trail Network - Trailhead Parking Lot Reconfiguration and Expansion and Frontage Road Parking Lot Removal
	<i>Update parking lot to be more efficient. Reconfiguration should preserve existing trees to the extent possible.</i>			
	<i>Provide additional bike parking.</i>			
	<i>Reduce horse trailer parking to match current demand and relocate to east side of lot.</i>			
	<i>Remove existing frontage parking lot off of S Cass Avenue and consolidate spaces into the Trailhead Lot.</i>			
	Trailhead Parking Lot Flush Restrooms			See Focus Area 1 - Trailhead Parking Lot Flush Restrooms
	<i>Upgrade latrines to flush restroom facilities.</i>			
	Cass Avenue Trail Crossing Improvements			See Focus Area 1 - Cass Avenue Trail Crossing Improvements
	<i>Coordinate with DuPage County Division of Transportation on the Cass Avenue/I-55 interchange improvements to improve trail crossings and maximize benefits for preserve users. Update master plan recommendations as the study develops.</i>			
	Trailhead Parking Lot Drinking Fountain	\$17,000 - \$23,000		
	<i>Provide new drinking fountain.</i>			

Priority Ranking	Improvement	Project Cost Range	Impact & Master Plan Alignment	Funding & Partnerships
	Trail Loop			
	Shop Structure Removal South of 91st Street and Reconfiguration of Access Road Into a Trail			See Focus Area 2 - Shop Structure Removal South of 91st Street and Reconfiguration of Access Road Into a Trail
	Reduce width of existing drive and access road and convert to trail.			
	Remove existing Natural Resources Management buildings.			
	Restore Area.			
	Install bench seating.			
	Rocky Glen Waterfall			
	Rocky Glen Waterfall Rehabilitation			See Focus Area 2 - Rocky Glen Waterfall Rehabilitation
	Complete a watershed study to understand flooding issues to restore Sawmill Creek, provide fish passage and stabilize the eroding shoreline.			
	Evaluate conditions of the dam.			
	Rehabilitate Rocky Glen Waterfall.			
	Improve trail access down to waterfall.			
	Install seat wall, large stone or bench seating.			
	Update interpretive sign (See signage plan).			
	Install crushed stone aggregate with binder.			
	Border areas with flagstone.			
	Restore creek edge outcropping.			
	Remove existing stairs leading to the waterfall and Provide stepped stone access to river.			
	Restore adjacent vegetation.			
	Relocated donor bench.			
	Remove old steps and trail stub, and restore vegetation.			
	Lemont Road Parking and Trailhead			
	Lemont Parking Lot Expansion			See Focus Area 5 - Lemont Parking Lot Expansion
	Expand existing parking lot.			
	Study the feasibility of installing islands in the entrance drive to discourage semi-truck traffic in the parking lot.			
	Lemont Parking Lot Restroom Improvements and Drinking Fountain			See Focus Area 5 - Lemont Parking Lot Restroom Improvements and Drinking Fountain
	Add a drinking fountain.			
	Add permanent restrooms.			
	Trail Meander			
	Bluff Savanna Trail Improvements (includes trail etiquette signs)			See Trail Network - Bluff Savanna Trail Improvements (includes trail etiquette signs)
	Remove and reconfigure trail to reduce sharp turns, speed, and visibility issues.			
	Place trail etiquette signage.			
	Bluff Savanna Overlook Improvements			See Focus Area 7 - Bluff Savanna Overlook Improvements
	Improve overlook by adding more seating opportunities.			

***Assumptions**

- Cost estimates are for budgetary use only.
- Cost estimates were prepared late 2022/early 2023 and do not account for future inflation.
- Cost estimates were prepared using 2022 bid tabs from similar Midwest projects.
- Costs estimates include construction costs, design and engineering and construction administration.

