CROW-HASSAN PARK RESERVE’S resilient ecological systems, planned regional trail integration, and rustic quality make it a unique environmental and recreational destination within the Twin Cities Metropolitan Area and Three Rivers Park District. Community engagement and stakeholder visioning supported the continued ecological focus of the park while thoughtfully integrating light-touch education opportunities, expanded accessibility, and improved wayfinding. This master plan identifies ways to improve park user support and infrastructure that highlight the unique ecological park features while minimizing overall park development.

The plan’s guiding principles are:

- Preserve the unique natural resources
- Celebrate the Crow River
- Introduce people to nature & outdoor recreation

Key elements of the plan include continued protection and expansion of natural areas, simplified trail system, improved wayfinding, universal ADA accessible park trail routes, relocated non-motorized boat launch, nature-play loop, ecological system touch-points, expanded camping options, and an integrated Crow River Regional Trail route. In addition, increased educational programming is proposed which reflects public input and offers opportunities to extend park awareness beyond its current user base, including underrepresented populations.

As a park reserve, development for recreation must be limited to under 20 percent of total acreage of upland while at least 80 percent of the park reserve be retained or restored to a natural state. During the master plan visioning, users, stakeholders and Park District staff
strongly recommended that ecological features of the park be prioritized and that recreation associated development be kept to a minimum and below the 20 percent requirement. The Park District’s recreation opportunity spectrum (ROS) provides a system-wide framework which provides development guidance for each Park District park and trail. Crow-Hassan is identified as a natural park that anticipates minimal development to allow for an immersive natural experience. As such, the Park District seeks to limit Crow-Hassan development to 10 percent. As of spring 2019, the park reserve had 11.5 percent development, which slightly exceeds the ROS development goal. Any additional development requires thoughtful consideration of existing and planned facilities and their long-term relevancy.

This plan seeks to maintain the rustic, ecological focus of the park but does include the development of additional park features including expanded equestrian parking, picnic area, relocated non-motorized boat launch and ADA accessible trails. To minimize overall development area and the associated potential ecological impacts, the proposed features have been centralized around the existing development areas and, where possible, fit within existing development footprints. At time of implementation, all additional park features should be designed to limit overall impact and be minimal in scale.

To further reduce development impacts, specifically in the center of the park and adjacent to ecologically sensitive areas, the plan identifies redundant trails for closure. These trails should be transitioned into natural space consistent with the areas adjacent to the current trail routes. The closures have the added benefit of clarifying the trail system and improving wayfinding for park visitors.

**RECREATIONAL DEVELOPMENT PLAN | PARK-WIDE**

Crow-Hassan Park Reserve’s managed prairie, wetland and forest landscapes offer visitors a truly unique opportunity to experience a diverse set of ecological systems in one park visit. However, being an ecologically focused park with sensitive, rare habitats, it is imperative that access to these spaces is minimized to reduce the overall system stress or user impact. This plan highlights a variety of park elements that create an intentional visitor experience. By doing so, it also ensures that the visitor is aware that they belong at Crow-Hassan. Visitor experience elements include, but are not limited to, Crow River view sheds and adjacent landscapes. These overlook areas require some minimal routine clearing of trees and brush along the river bank within the view shed sight lines. The overlooks should be designed to support small groups – under eight visitors - at one time. Additional opportunities to view the Crow River and adjacent landscapes could include a vertical element, either physical or virtual, that would provide visitors with a better understanding of river and upland contextual relationships.

**Crow River Overlooks**

To highlight visitor connection to the Crow River, the plan identifies five overlook points along the western unpaved trails adjacent to the river that provide Crow River view sheds and adjacent landscapes. These overlook areas require some minimal routine clearing of trees and brush along the river bank within the view shed sight lines. The overlooks should be designed to support small groups – under eight visitors - at one time. Additional opportunities to view the Crow River and adjacent landscapes could include a vertical element, either physical or virtual, that would provide visitors with a better understanding of river and upland contextual relationships.

**Gathering Spaces**

While the existing unpaved trail system has long supported an excellent park experience for individual users, areas for group gathering are limited. Primary social areas occur at the dog off-leash area, camping areas and a small picnic area near the main trailhead entrance. The group camping areas offer a unique opportunity for larger community overnight gatherings but are limited to those users who have reservations and economic means to visit. The community engagement and stakeholder visioning identified the need for more developed gathering spaces - such as improved picnic areas, trailheads and seating areas - while being sensitive to overall development footprints.

This plan seeks to increase areas for group gathering while being sensitive to the ecological footprint that these spaces create and existing circulation patterns. Group gathering areas have been identified in three primary areas that are currently categorized...
as developed land: the main trailhead entrance, the District nursery and a new northern parking area. Proposed amenities include a picnic shelter, a centralized gathering service area adjacent to the equestrian parking lot and a Crow River overlook. At the point of implementation, the gathering areas identified will be designed to complement the existing park programming while remaining flexible enough to support a multitude of future programming needs.

Areas for spontaneous interaction could occur at any point along the trail network. To encourage interaction among visitors as well as with the surrounding ecological systems, small observation areas have been identified along the trail routes. These areas should be scaled appropriately to allow for groups of five to eight people to access the area simultaneously. A nature play circuit allows children and adults opportunities of playful interaction along the primary trail route.

The social benefits of community spaces are heightened when there is a shared user interest or activity. The Park District’s existing sponsored programming include seed collection, social hiking and the dog off-leash area. These provide an excellent base for social interaction and park use. Thoughtfully designed infrastructure that better support these activities can bolster the community experience. This plan identifies a group picnic area that could also be used for park education programs including but not limited to seed collection and butterfly tagging. A gathering area adjacent to the new equestrian parking lot can also support equestrian user interaction. Details regarding several of these gathering spaces are further defined within this chapter.

**Ecological Touch-Points**

To allow users to experience and learn about the park’s ecology while simultaneously protecting sensitive areas and minimizing the overall user footprint, this plan identified key locations (touch-points) along existing trails where visitors can visually access each of the specific ecological features present in the park. Light touch amenities such as trailside bird blinds and a small viewing area barrier are identified to create specific habitat viewing areas, heighten the user experience and limit the user footprint to a few key areas (Image 1). Specific trail loops have been identified to guide visitors to these locations and include segments of varying lengths and difficulty to meet the needs of diverse user groups.

**Expanded Camping Options**

Camping has been a primary feature at Crow-Hassan since its original master plan in 1972. The park currently supports two group camping areas, Bluestem on the west-central edge of the park and Riverbend in the north. Both group camp areas are heavily used and provide a unique camping experience in the Park District. There is currently a drop-in site located adjacent to the main trailhead entrance that is not heavily used and its high level of exposure and general design received negative feedback from visitors in the public engagement user survey. There was a large request by both current and potential park users to expand camping options in the park to include individual reservable sites for hikers, equestrian users, and/or river paddlers. Details regarding expanded individual reservable sites are further defined within the development plan for Riverbend and the equestrian parking area.

Currently, all existing and proposed camp sites fit the standard MNDNR and the Park District guidelines for tent camping. This include a tent footprint, protected fire pit, potable water access, and restroom facilities. These rustic sites are low impact and low cost. In recent years, there has been an increase in popularity of camping structures – yurts and camper cabins – in camping areas throughout the state. These structures have the benefit of extending the campsites to full four-season use, reducing the equipment requirement for visitors, and potentially serving a wider audience of users with a less rustic camping option (Appendix C). These structures also have the potential to limit the overall user footprint in a camping area to the contained structures. Each camping area currently could be host to 3-5 yurts/cabins with the existing water service and bathroom facilities. While this plan does not explicitly include yurts/cabin development, they could be added at future date as emerging camp trends further solidify.
Curated Trail Loops
Many of the main unpaved trail routes were established upon preexisting road development. Additional trails arose over time through repeated use and maintenance practices. This has created a system of trails with redundancies that can be difficult for users to directionally navigate and increased overall ecological impact within the park. This master plan simplifies the overall trail system by closing redundant trail routes and selecting routes that allow greater protection of ecologically sensitive areas. To minimize any additional ecological damage and preserve existing circulation patterns, existing trail paths were maintained wherever possible.

To assist in developing improved wayfinding and to better curate the user experience, three trail routes of varying lengths were developed to highlight key features of the park at specific locations. The purpose of this directed user experience is to maximize the educational and experiential features of the park while reducing overall user footprints and ecological effects.

The curated trail loops include:
- Ecological Education Loop
- Crow River and Wetland Access Loop
- Resource Interpretation Loop

The trail routes will follow current Park District trail design standards. For all maintained trails, special attention is required to the adjacent natural resources to ensure ongoing protection of any nesting areas, diversity of edge plant populations and sensitive plant communities.
Ecological Education Loop (1.75, 3.5 or 5 miles)
Visitors have the opportunity to explore Crow-Hassan on three ecological education trail loops of differing lengths depending on interest and time constraints. Educational delivery methods may include digital technology and/or physical signage. Opportunities to learn along the Ecological Education Loop include:

1. Picnic shelter & main trailhead
2. Wetland touch-point
3. Mature prairie touch-point
4. Developing prairie touch-point
5. Crow River overlook
6. Maple-Basswood forest touch-point
7. District nursery educational area

Crow River & Wetland Access Loop (8 miles)
This advanced loop was designed for visitors interested in exploring park elements which provide opportunity to view and touch water. Educational delivery methods may include digital technology and/or physical signage. Opportunities to learn along the Crow River and Wetland Access Loop include:

1. Crow River overlook
2. Crow River overlook
3. Wetland touch-point
4. Crow River at-grade touch-point
5. Crow River overlook rest and picnic area
6. Wetland touch-point
Resource Interpretation Loop (5 miles)

To showcase important pieces of the park’s resources, a self-guided interpretive walking/horseback riding trail loop is proposed. This trail conveys Crow-Hassan’s cultural and natural history to park visitors by connecting significant resources. Educational delivery methods include physical signage (with digital technology as-needed) - most likely large interpretive panels with space to explore each site’s story in greater depth. The Resource Interpretation Loop visits the following sites:

1. **Riverbend Barn**
   The barn highlights the agricultural settlement history of the area.

2. **Platted Hassan Town Site**
   This stop describes early Euro-American settlement patterns and the proposed town of “Hassan” that was platted, but never built (Image 2).

3. **Crow River Overlook**
   The overlook demonstrates how human inhabitants, including indigenous peoples and Euro-Americans, depended on the Crow River.

4. **Four-Corners Prairie Overlook**
   This overlook shows one of small pockets of original prairie (pre Euro-American settlement) in the park, one of the only examples within the Park District.

5. **St. Peter Road / Old School**
   The St. Peter Road / Old School location exemplifies how Euro-American communities formed and how they maintained their social connections.

6. **Becker Farmstead Site**
   The former location of the Becker farmstead site highlights the history of the area’s agricultural settlement (Image 3).

7. **Big Woods Vista**
   Situated near a forested wetland overlook, this site tells visitors about the Big Woods landscape ecosystem that existed before Euro-American settlement.
Accessibility Improvements
Crow-Hassan’s ecological preservation and rustic nature has unintentionally limited park accessibility for those with disabilities, varying mobility levels and family user groups.

The most successful forms of accessible design occur when accessibility is considered from the onset. Particularly as new educational opportunities are introduced into the park, it is vital that these are designed and built to accommodate a wide audience of various abilities. Wherever and whenever possible, future renovations to existing elements or any proposed buildings or site features should adhere to accessibility guidelines from the very beginning.

The Crow-Hassan Master Plan introduces a number of new accessible features that grant novel experiences to park users while balancing the needs of the natural environment:

**General-Use.** Parking areas and trailhead amenities, including restrooms, water access and wayfinding features, will be designed to accommodate individuals with disabilities and developed in accordance with Americans with Disabilities Act (ADA) standards and guidelines. This includes but is not limited to: approved surfacing, even pathways, required number of accessible parking stalls and seating.

**Camping.** Riverbend is identified as the primary accessible camping area for Crow-Hassan Park Reserve. The existing group camping area and at least one of the proposed individual reservable sites are to be renovated to ensure compliance with ADA standards and guidelines. The guidelines include, but are not limited to: level surfacing, accessible restrooms, adjacency to parking and universally accessible picnic tables.

**Trails.** With over 18 miles of natural, unpaved trails, the current Crow-Hassan trail network allows for a low degree of maintenance, rustic quality and limited environmental impact. This plan identifies a two levels of trail accessibility improvements: easy routes and ADA routes.

Easy routes will be made more manageable for users than the existing conditions currently permit, although they will not fully meet ADA accessible guidelines. This will include ensuring all trails are cleared of debris, have even surfacing, maintain a minimum 10’ trail width and have limited grade variation. These trails increase accessibility to a more diverse user base.

The northern easy route includes a connection to the planned Crow River Regional Trail, a wetland overlook point, view of mature prairie, and mature forest touch-point. The southern easy route connects the District nursery to a Crow River overlook and picnic area. This route has the potential for public programming and community events based out of the nursery.
To adhere to the limitations in park development, two select trail routes that maximize the user experience and provide accessibility to major park features have been selected as universal ADA accessible trail routes. These ADA accessible routes will follow standard ADA compaction requirements to create a firm and stable surfacing with natural materials. This could include compacted crushed stone and/or gravel.

**ADA Route 1**  
**Main Trailhead Loop (0.5 miles)**  
A fully ADA accessible half mile trail loop will start and end from the main trailhead and highlight some major features of the park. The loop includes mature forest and prairie touch-points, various historical and culturally significant sites and a nature play circuit.

The nature play circuit is a series of small-scale trailside spaces that are composed of natural elements - such as boulders or downed logs - that visitors can interact with (Image 4). These sites encourage visitors to learn about natural materials and their own physical abilities through interaction with their natural surroundings.

**ADA Route 2**  
**Northern River Segment (2.5 miles)**  
Beginning at the northern parking area and running through the Riverbend camping area, the northern river trail segment is a 1.25-mile route in and 1.25-mile route back which is fully ADA accessible. This trail includes a scenic Crow River overlook and a view shed of the mature prairie.
Wayfinding Suite
Wayfinding measures, usually in the form of signage and markers, help users locate themselves in the park. This maximizes the visitor experience and improves their ability to navigate confidently throughout the park. This assists in park safety and provides easier access in and out of Crow-Hassan Park Reserve. Additionally, making the trails easy to navigate helps keep users on the paths, which protects the park’s valuable natural resources and ecosystems.

The Crow-Hassan Master Plan recognizes the need for improvements to current wayfinding. Improved wayfinding throughout the park, from park entrance to trailside markers was a top request during the community engagement. The master plan seeks to introduce and reinforce wayfinding elements suited to the park’s rustic aesthetics. To achieve this aim, the plan establishes levels of wayfinding in the park.

Placement of wayfinding elements should be coordinated to minimize any ecological impacts, ensure compliance with maintenance practices, ensure branding guidelines and maintain sensitivity to any habitat/nesting site needs.

Monument Sign
To indicate substance and importance, the monument sign is used at main park entrances throughout the Park District (Image 6). This sign includes the park’s official name, address number, significant points of interest and is placed on a field stone base. This type of sign is proposed at the intersection of Park Drive and the entrance road to the main trailhead area - which will replace the smaller entrance sign that is currently located there.

Entrance Sign
Entrance signs, which are typically located on wooden posts, indicate secondary park entrances or specific park sites. These signs are currently located at the dog off-leash area, Riverbend group camp and nursery entrance. A modified version should be created for Riverbend when proposed changes are implemented, including the relocated non-motorized boat launch and northern access parking lot.

Shed Kiosk | Level A
Designed to promote and orient regional trail users, the shed kiosks have become a recognizable symbol for the Park District (Image 5). There will be one of these kiosk configurations located at the main trailhead, which is also the park’s nexus point for the Crow River Regional Trail. The two shed structures should include a map of the full Park District park and trail system, a map of Crow-Hassan, a description of park and trail highlights - including the Crow River Regional Trail route and a map of the entire amenities and services nearby.

Shed Kiosk | Level B
A smaller modified version of the Level A, the Level B includes the small shed kiosk and one directional pole. Level B locations are recommended at the dog off-leash area and at the southern park entrance at the intersection of County Road 19/109th Avenue N. The kiosk should include a Crow-Hassan map (with regional trails highlighted), recommended internal trail routes with distances, description of trail highlights, park rules, and distances to major park features.

Trail Directional Marker
The trail directional markers consist of a post structure depicting the direction, the trail name, and the distance to major destinations on the trail (Image 7 example). These will be located at major trail intersections and park landmarks and should be branded and designed as part of the wayfinding suite.

Trail Intersection Marker
The trail intersection makers are small, simple signs that identify the trail at trail intersections or along the trail pathways (Image 8 example). These should be located throughout the park trail system, particularly at minor trail intersections. As with the other signage, these should be branded and designed as part of the wayfinding suite.

Other Signage
All other signage that is needed for routine operations should be branded and designed as part of the wayfinding suite, in coordination with current marketing and communications branding guidelines.
FIGURE 16 | PROPOSED RECREATIONAL DEVELOPMENT PLAN SITE SPECIFIC  Source: Three Rivers Park District
1. [Proposed] Crow River Regional Trail
   An alignment has been established for the paved, multiuse Crow River Regional Trail that is respectful of existing natural resources and park user groups. A buffer of no less than 50' is recommended where the regional trail comes into proximity of an existing unpaved trail. If there are critical/sensitive natural resources areas, this may be reduced to 20’ for short segments.

2. [Proposed] Crow River Regional Trail | River Overlook Picnic & Rest Area
   A trailside clearing with picnic tables and seating affords trail users a resting area within the core of the park and an overlook of the Crow River.

3. [Proposed] Main Trailhead Improvements
   In conjunction with the Crow River Regional Trail, this entrance area is the front door to the park reserve. To highlight its visitor experience importance the following is proposed: enhanced parking, trailhead system kiosk/signage (including park and trail information), restrooms, water access, bicycle maintenance station and designated seating.

4. [Proposed] Picnic Shelter
   A modest, non-reservable, open-sided shelter is proposed which could be used for general use, outdoor group/gathering area and/or educational programming.

5. [Proposed] Relocated non-motorized boat launch
   Adjacent to proposed northern park access, the relocated boat launch supports overnight paddling trips for individuals or groups. The launch is primarily for take-outs due to the next take-out proximity, which is at the confluence of the Crow/Mississippi Rivers.

6. [Proposed] Archery Range
   An entry level facility is proposed with opportunity to internally program and partner with outside organizations. This could be expanded to include intermediate and advance opportunities should the demand warrant.

7. [Enhanced] Nursery Innovation
   The nursery will continue to lead by example in areas of energy and water consumption reduction - and in collection, propagation and planting techniques and technology. The nursery will act as a leader in adapting its practices to address climate change and effects on plants within Park District parks.

8. [Enhanced] Dog Off-Leash Area
   Existing dog off-leash area is maintained in its current arrangement. Future proposed improvements include erosion control measures along Crow River edge, parking lot lighting and fencing between the dog off-leash area and the future Crow River Regional Trail.

9. [Proposed] ADA Accessible Trail
   An unpaved 1.25 mile ADA trail segment connects ADA camping to river overlook, historical interpretive site and mature prairie viewsheds.

10. [Proposed] ADA Accessible Trail Loop with Nature Play Circuit
    An unpaved 0.5 mile ADA trail loop connects main trailhead to park highlights, including forested area, mature prairie and historical site. In addition, nature play elements are proposed along the loop, encouraging the user to continue exploration.

11. [Proposed] Southern Trail Loop
    An unpaved 1.25 mile hiking and equestrian loop. No winter access.

12. [Proposed] Prairie Lake Wetland Observation Area
    A small clearing adjacent to the main trail allows visitors direct views of Prairie Lake, wetlands, and the associated wetland wildlife. A small defined gathering area prevents visitors from entering ecologically sensitive areas.

    A small clearing along an existing park trail and a short spur from the regional trail allows visitors direct views of mature wetland and wide park vistas. A small defined gathering area prevents visitors from entering ecologically sensitive areas.

14. [Proposed] Crow River Overlook
    Small unpaved trail spur leads to the Crow River’s edge for users to experience the edge condition. No canoe/kayak access.

15. [Enhanced] Riverbend Camping Area
    Range of improvements include, but are not limited to; ADA enhancements and individual, reservable, drop-in sites (general use, Crow River State Water Trail river paddlers, equestrian). If future need necessitates, yurts and/or camper cabins may be considered. The Riverbend barn is maintained in its current capacity.

16. [Enhanced] Bluestem Camping Area
    Range of improvements include, but are not limited to; ADA enhancements and individual, reservable sites - general use (hike-in), Crow River State Water Trail river paddlers and equestrian. If future need necessitates, yurts and/or camper cabins may be considered. The Bluestem barn is recommended for removal.

17. [Enhanced] Four Corners Rest Area
    Centrally located, trail users are provided wayfinding orientation and historical interpretation.

18. [Proposed] Equestrian Parking Lot
    A new parking area with 15 stalls for trailer parking, loading and unloading, 4 camping stalls, high lines for horses and centralized gathering space for socialization. This parking lot will be gravel.

19. [Reconstructed] General-Use Parking Lot
    The former equestrian and general use parking lot will be reconfigured to accommodate 90 standard and 4 ADA stalls and is for general park use (no equestrian trailer parking). This parking lot will be gravel.

20. [Proposed] Small Parking Lot
    Northern park access for Riverbend camping area, Crow River non-motorized boat launch access, river overlook, new ADA trail segment and existing unpaved trail network. It will contain 23 standard and 2 ADA stalls and is for general park use (no equestrian trailer parking). This parking lot will be gravel.

21. [Proposed] Park Inholding | Boundary Expansion Area
    Through ongoing coordination with Metropolitan Council Environmental Services (MCES) and City of Rogers, this property has been identified as a new Crow-Hassan Park Reserve inholding. Acquisition will be explored as MCES formalizes their plans for the future regional Crow River wastewater treatment plant.

22. [Proposed] Park Inholding | Surplus Property
    Through ongoing coordination with Metropolitan Council Environmental Services (MCES), this property has been identified as Crow-Hassan Park Reserve surplus property. Potential acquisition by MCES will be explored as they formalize their plans for the future regional Crow River wastewater treatment plant.

23. [Proposed] Park Inholding | Boundary Expansion Area (NEW)
    Per Rogers 2040 Comprehensive Plan, these parcels have been identified as new Crow-Hassan Park Reserve inholdings in the proposed land use plan. Willing-seller acquisition will be explored as opportunities arise.

24. [Proposed] Future Recreation Development
    Park District will consider additional recreation development to meet recreation demand once inholdings are acquired. Thoughtful selection of recreation offerings and design will be required due to the expansive floodplain and park’s overall developments goals.
RECREATIONAL DEVELOPMENT PLAN | SITE SPECIFIC

To minimize overall development impacts, and associated potential ecological impacts, proposed park features have been further explored in six areas: Crow River Regional Trail, main trailhead, Riverbend, dog-off-leash area, Bluestem and District nursery. Site specific park features are visualized within the development plan graphic (Figure 16, preceding pages).

Crow River Regional Trail
Consistent with the Crow River Regional Trail Master Plan, an eight-mile trail segment is planned through Crow-Hassan Park Reserve. The regional trail will adhere to Crow River Regional Trail design guidelines which specifies a 10’ paved trail. After thoughtful assessment of the current natural systems, local trail connections and topography, a route was selected to run from the southeast corner of the park, to a Crow River overlook north of the District nursery, through the main trailhead, north to the dog off-leash area and exiting the park to the northeast. In order to minimize potential conflicts between regional trail users (bicyclists, hikers, dogs on-leash) and unpaved trail users (mainly equestrians and hikers), the unpaved trails and regional trail will maintain a minimum 50’ separation with a vegetative buffer screen. Regional trail signage will also be added along the trail per Park District guidelines. Additional signage will be added to both the park and regional trails within 100’ of a trail intersection to indicate trail crossings.

Main Trailhead
The park entrance is the users’ first experience of the park and connection point to the park’s surroundings. As such, a thoughtful and coherent design, clear circulation and wayfinding features are fundamental to receiving visitors to the park and orienting them to their surroundings (Image 9). Main trailhead features including; easily accessible trail system maps, restrooms, water availability, and seating is planned to support visitors’ basic needs. While most of these features are present in the current main trailhead area, their disparate placement and unmarked locations make it difficult for new users to easily navigate the trailhead and locate the available resources.

IMAGE 9 | Main Trailhead and Equestrian Parking Lots. Perkins + Will

THREE RIVERS PARK DISTRICT
This plan recommends that the main park entrance be renovated to improve the park visitor experience for seasoned and new park visitors alike. This includes improved and use-separated visitor parking, systems and park map wayfinding features, user infrastructure supports (i.e. restrooms, resting areas etc.), clear trail entrance points and developed group gathering areas.

**General-Use Parking Area.** There is currently one main gravel 300’ x 150’ parking area at the main entrance for all user groups. During community engagement, users communicated a strong interest in parking improvements. There was particular concern about ongoing parking conflicts between equestrian and general park user groups created by a lack of parking lot organization and space delineation. This plan recommends separation of equestrian and general park user parking. The primary lot will be renovated to improve the parking experience and accessibility needs of all users.

The primary lot is redesigned to accommodate 90 standard parking spaces, including a minimum of 4 ADA spaces. The lot includes a drive-through lane with appropriate turn radii adjacent to a drop-off zone to accommodate emergency vehicles and buses. The current dimensions of the parking area are sufficient for these needs if organized appropriately. However, this parking area could be expanded to the east if needed.

To reduce the overall impact in the area, the general-use parking area will be unpaved. To ensure parking efficiency, individual parking bays must be marked. This can be accomplished through various methods that could work with gravel parking surfaces. Examples include parking bumpers, rope fencing, contrasting gravel colors, embedded raised concrete strips or regular paint striping for certain surfacing materials.

**Equestrian Parking and Camping Area.** Crow-Hassan is one of the leading parks for horseback riding in the Twin Cities Metropolitan Area and equestrian users are the third largest user group in the park behind hikers and dog off-leash area visitors. A
separate parking area strictly for equestrian users has been identified to better support the equestrian users and reduce potential conflicts with other user groups (Image 9, preceding page). This equestrian parking area could accommodate a minimum of 20 equestrian parking spaces for trailers up to 35’ long. This parking area should also include a centralized gathering space with high lines, a corral, water service and seating to encourage equestrian users to rest and socialize in an area that supports their unique needs.

For those users that would like the additional camping experience, four reservable equestrian camp sites flank the edge of the equestrian parking area. They are set back away from the main general-use trail to limit potential conflicting user activities including bicycle traffic and hikers with dogs.

**Picnic Shelter**
A non-reservable group picnic shelter is planned on the site that is currently used as a drop-in camping adjacent to the main parking area. The picnic shelter is planned to accommodate up to 60 people and includes movable picnic tables, trash receptacles, grills and a water service. Its location adjacent to the main parking area overlooking the mature prairie and away from the sensitive ecological features makes it an excellent gathering area for educational programs and group events. This picnic shelter will be a resource for general park visitors and Park District educational and community programs. It can accommodate large groups at a central location and directly adjacent to essential visitor amenities. More informally, this picnic shelter can also act as a protected staging area for various user groups as they begin or end their park visits. This is particularly valuable for those users needing additional support such as family groups, users with limited mobility or those with recreation equipment.

There is a small enclosed structure at the main trailhead area, named Joe’s Place, that was used for recreational staging and currently for natural resource staging. When the picnic shelter is constructed, this building has been identified for removal. The new picnic shelter should incorporate current staff staging needs.

**Riverbend**

**Northern Access Parking Area**
To accommodate the demand for a safe, northern park access point, a small gravel parking lot is proposed with capacity to serve 23 standard and 2 ADA accessible stalls. Users will have access to the relocated non-motorized boat launch, Riverbend camping options, Crow River overlook and unpaved trail network - without having to cross Territorial Road from the current dog off-leash parking area.

**Relocated Non-Motorized Boat Launch**
This plan relocates the non-motorized boat launch to an area south of Territorial Road and adjacent to the newly proposed northern parking area, secondary entrance, Crow River Regional Trail route, and Riverbend camping area. This location improves visibility of the boat launch, general park wayfinding, and accessibility. The adjacency to the Crow River Regional Trail allows for better trail connections and allows for potential programming extension for paddle to pedal trips. Additionally, it allows paddlers increased accessibility to the Riverbend camping area, especially important for those with ADA accessibility needs and improves the opportunity for overnight paddling excursions.

**Riverbend Camping Area**
The Riverbend camping area is a highly-used equestrian group camp adjacent to a vintage barn. The group camp is to be maintained for group camping and updated to meet ADA accessibility improvements. This plan recommends that the Riverbend group camp occupancy be reduced from 50 to 40 people.

To accommodate individual camping requests while maintaining minimal development patterns, the plan identifies three individual reservable sites to be added to the Riverbend camping area. Adding the individual campsites to this location improves camping opportunities for equestrian users, general tent campers, Crow River paddlers and Crow River Regional Trail cyclists. The current water service and restrooms are sufficient to meet the needs of the additional camp sites.
Dog Off-Leash Area

The dog off-leash area is used by the highest proportion of park users and is a destination for local residents. Community engagement and stakeholder visioning identified the dog off-leash area as highly successful. This plan maintains the dog off-leash area in its current configuration and to the same level of development. There were requests for fencing around the dog off-leash area. This plan recommends fencing between the dog off-leash area and the planned Crow River Regional Trail when constructed. Berming and vegetative plantings are also recommended in conjunction with fencing to reduce user conflicts. Erosion control measures are needed along the Crow River edge due to flooding events which create unsafe conditions for dog off-leash users.

The existing dog off-leash parking area with a capacity of 93 vehicles should be maintained in its current arrangement. While there is significant use of the dog off-leash area, the current sizing is appropriate for the current visitors and can accommodate additional parking needs for Crow River Regional Trail users. Parking lot lighting should be reviewed at the time of parking lot renovation as appropriate.

Bluestem Camping Area

Like the Riverbend camping area, the Bluestem camping area is a unique group camping destination in the Park District system. The camping area is to remain at its current 80 visitor capacity with proposed ADA enhancements. Individual, hike-in, reserveable camp sites are also recommended in this general vicinity. The barn adjacent to the camping area was identified to have no cultural significance and is determined to be obsolete. To avoid continued maintenance costs, the barn should be removed. Materials from the barn can be salvaged and used for the new picnic shelter, benches or other new park additions.

District Nursery

The nursery has the potential to reduce energy consumption through the transition of existing energy and water infrastructure to sustainable options. In addition to saving resources long-term for the Park District, the new sustainability features can serve as an education feature. Options include photo-voltaic energy generation (solar), water harvesting & biogas production (Appendix D).

In partnership with school districts and/or universities/higher education, an educational consortium which expounds upon current Park District natural resource outreach is proposed. While allowing the Park District nursery to continue operations, the resiliency education partnership could offer an opportunity to expand natural resource research in conjunction with youth and adult programming. The programming focus centers around research and education of the park’s unique ecological systems and continued restoration.

The Park District nursery currently accommodates 32 vehicles in a gravel lot west of the primary nursery building. It is closed to the public and only accessible to Park District staff. This plan identifies occasional public programming for specific events. Once programming plans are identified, expansion of the parking capacity may be required.
NATURAL RESOURCE PLAN

A primary objective of this master plan is to ensure continued growth and support of Crow-Hassan’s natural features and habitat. To this end, specific ecologies within the park have been identified for specific protection designations. In addition, Park District natural resource staff utilize MLCCS mapping data to provide a park-wide plant communities vision to manage towards (Figure 18, facing page).

Natural Area Classifications

Natural resource land-based designations have been assigned in Crow-Hassan to provide additional development and recreation restrictions guidance (Figure 17).

Key Environmental Components are specific natural features that have been identified as significant resources and in need of protection from degradation. Natural features include prime examples of historic regional landscapes, aquatic systems, plant communities, other unique features, or combinations of these features. To ensure ongoing protection of these areas, recreational development is not allowed to compromise the integrity of the key environmental components. Recreational development opportunities are possible as long as the recreational activity and physical development are compatible with the preservation of the natural resources within the key environmental components.

Crow-Hassan’s lakes, prairies, and maple-basswood forests have been identified as key environmental components. The only recreation feature in these areas is limited to existing hiking trails.

Wildlife Preservation Areas are sensitive ecological areas that are closed to the public during certain times of the year (primarily spring and summer) to ensure that habitats for sensitive wildlife species are protected from disturbance during critical times in their life cycles (mating, nesting, rearing of young). While trails may be allowed in wildlife preservation areas, they may be closed seasonally. Year-round recreational activities and facilities are not allowed in areas under this classification. The large prairie complex, centrally located within Crow-Hassan, has been designated as a wildlife preservation area.

Sanctuaries are areas designed to protect significant plant communities and associated wildlife from the impacts of human activity. Development is not permitted, and natural resources management is specialized to address specific plant community and/or wildlife needs. Visitation by people is permitted only on a very limited basis for scientific investigation, educational instruction, or management requirements. Three areas have been designated as sanctuary areas within Crow-Hassan which include; Prairie Lake, Prairie Lake (adjacent woodland) and Central Maple Woods.

Temporary Protection Zones are areas that function like wildlife preservation areas, but are intermittent. This could be to protect a raptor or crane nest along a trail, concentration of animals, or to keep people away from a rare flowering plant. Areas that become regular annual closings should be upgraded to wildlife preservation areas.
FIGURE 18 | PLANT COMMUNITIES CONCEPT PLAN (BASED ON MLCCS)
Source: Three Rivers Park District.

- Disturbed with impervious surfaces
- Planted/Cultivated
- Oak Wood and Forest
- Maple Basswood
- Other Woods and Forest
- Shrubland
- Prairie
- Oldfield
- Wetland Sedge
- Wetland Cattail
- Open Water

NORTH

0.5/8 miles/kilometers
PARK BOUNDARY ADJUSTMENTS

The Park District maintains a list of identified properties (inholdings) for future park boundary inclusion (Table 3 and Figure 19). These are parcels currently not owned by the Park District, but would be considered for acquisition on a willing-seller basis. All previously identified inholdings have been included as part of this plan.

The northeast corner of Crow-Hassan has been identified as an area where potential park expansion could occur. Following the direction of the City of Rogers’ 2040 Comprehensive Plan, the Park District has included several new inholding properties east of the dog off-leash area, thus expanding the current Crow-Hassan park boundary. At time of acquisition and recreation development, the Park District, in coordination with the Rogers and Met Council, should discuss whether it is appropriate to dedicate this additional acreage as a new regional park, separate from Crow-Hassan to accommodate future urban expansion and regional recreation trends.

The proposed new inholdings are predominately located within the Crow-River floodplain. As a result, development within this area is limited to park features that can withstand future flood events. Typical active recreation may include paved trails and picnicking with reservable areas. An archery range is to be developed in this area with the opportunity to internally program and

A series of land exchanges between MCES and the Park

TABLE 3 | INHOLDING SUMMARY
Source: Three Rivers Park District

District are required to as part of the wastewater treatment project. To date, the Park District, MCES and the City of Rogers have expressed support for the proposed land exchanges that will result in a boundary change for Crow-Hassan Park Reserve. Appraisals and compensation negotiations will be required as this project moves from planning to implementation.
FIGURE 19 | CROW-HASSAN INHOLDINGS AND PARK BOUNDARY ADJUSTMENTS
Source: Three Rivers Park District
OPERATIONS AND PROGRAMMING at Crow-Hassan is based on the mission to introduce people to nature and outdoor recreation while protecting and maintaining the unique natural resources of the park. The Park District operates Crow-Hassan Park Reserve using a wide variety of professional staff and in accordance with the Park District’s policies, guidelines and ordinances. The ordinances provide for the safe and peaceful use of the parks and corresponding facilities; for the educational and recreational benefits and enjoyment of the public; for the protection and preservation of the property, facilities and natural resources; and for the safety and general welfare of the public. The park is operated year-round and provides a variety of self-directed and the occasional staff-led outdoor recreation and natural resource education opportunities. The main recreation areas identified in the park concept’s development areas serve as a hub of activity and programming and see the greatest investment in programming and maintenance. Investment in the majority of the park land will be related to natural resource restoration and management. Park staffing levels will fluctuate to account for the desired level of activity and programming in the various park areas as well as seasonal use patterns, maintenance requirements, resource goals and available funding.

BASIC OPERATION SERVICES
The rustic quality and minimal development of Crow-Hassan as well as the light-touch approach taken in this master plan limits any need for expansion of current park operations. The park will remain open year-round for public use and is envisioned to maintain the current hours of operation, 5am -10pm.
Currently there are no staffed locations at Crow-Hassan Park Reserve outside of the District nursery and standard park patrolling. The primary operations cost associated with this park comes from park patrol and oversight from Park Operations. These activities are estimated to be $15,000 annually (2018 dollars).

The master plan maintains the current operation level of the park and as such there are no staffing changes anticipated at this time. The expansion of the camping options and estimated increase in annual user counts are anticipated to minimally increase to the operations oversight of the park. This changes will increase overall maintenance (see further maintenance details).

**EDUCATIONAL PROGRAMMING**

This park is an excellent destination for users to fully appreciate unique natural habitats. Through increased educational programming with interpretive naturalists and historical interpreters, the mysteries of the early people of the area, the Crow River, the restored prairie and the Big Woods remnant habitat will come to life. Staff from Eastman Nature Center and The Landing will provide programs with professional interpreters.

In addition, expanded self-guided educational programming is planned. This master plan identifies a series of trail routes – using the current trail system - to maximize the user experience and highlight the ecological features with minimal additional infrastructure or services. The touch-point approach allows users to have an immersive educational experience and increases connectivity between the user and the surrounding natural landscape. Highlights of these routes include immature prairie growth, Crow River overlooks and wetland viewing areas. The plan also identifies an interpretative trail to tell the transformation story of Crow-Hassan from Big Woods to agricultural land to the landscape currently in existence today. The interpretative trail includes trailside interpretative panels providing an overview of a specific historically important features. As these routes are self-guided, there is no additional staffing costs incurred with their inclusion.

The master plan also identifies expanded ecological adult programming. These existing and additional future educational programming may include, but are not limited to:

- Wood Cock Walks
- Bird Hikes
- Bioblitzes
- Monarch tagging
- Wagon Rides
- Coyote Howls
- Full Moon Hikes/Walks
- Crow River Canoe Trips
- Beginner Camping Programs
- Wildflower Rambles
- Prairie Picnics
- Prairie Seed Collecting
- Butterfly Count
- Telemetry/Turtles
- Wellness Hike in the Prairie

The expanded educational programs will include a focus on promoting Crow-Hassan Park Reserve’s resilient ecological design as a educational resource for the region. Many of these offerings are envisioned to fund themselves, as such, no new or additional programming expenses are envisioned.

**IMAGE 11 |** Monarch butterfly tagging.
Source: Three Rivers Park District
MAINTENANCE
The Park District will maintain the park in a safe, clean and usable manner. Maintenance is as important as basic services operation and education programming in respect to providing high quality customer service and meeting park user’s expectations. Crow-Hassan’s ecological features – including the mature prairie and recent reforestation - introduce unique maintenance needs to this park.

Maintenance Plan
The maintenance plan for Crow-Hassan calls for maintaining it consistently with other park reserves. This generally includes a combination of routine maintenance, seasonal condition assessments and inspections and specialized maintenance related to the park’s features. The annual maintenance cost for Crow-Hassan is currently estimated to be roughly $168,500 (2018 dollars).

The major functions of the current maintenance plan include, but not limited to:

• Mowing & trimming trails, trailheads, and reservation group camps
• Trail surface maintenance, brush trimming
• Sign maintenance
• Building maintenance & cleaning
• Roads & parking lot maintenance
• Dog off-leash area maintenance
• Firewood hauling
• Hazard tree removals and storm clean-ups
• Erosion control
• Snow plowing
• Trash/recycle/litter pick-up
• Reservation site clean-up and preparations
• Well maintenance

As all current programming and primary park features are retained in the master plan, all previously listed maintenance practices remain applicable.

To account for the additional park features, this master plan expands the existing maintenance plan to include:

• Winter trail maintenance for the planned eight mile segment of the paved Crow River Regional Trail route
• Maintenance of Crow River Regional Trail trailhead amenities include bicycle maintenance station and water access
• Picnic shelter maintenance
• Nature play circuit maintenance
• Trail surfacing maintenance for the three miles of ADA accessible trail
• Expanded parking lot maintenance
• Individual and equestrian camping expansion

These additional maintenance responsibilities are expected to add $65,960 in annual maintenance costs. This would also require the addition of one full time staff and three seasonal staff at a cost $92,940. Thus, the total cost of increased maintenance would be $158,900 for a total annual maintenance cost of $327,400 (2018 dollars).

Prairie Management & Maintenance
The Wildlife and Forestry Sections conduct a number of management activities in the prairies, woodlands, and wetlands. The Water Quality Section conducts water monitoring and well testing in the park. The activities have an annual cost of approximately $175,000 per year (2018 dollars). These activities include:

• Prairie burns – approx. 300 acres per year
• Invasive species control – chemical and mechanical – prairies and woodlands
• Seed collecting
• Over seeding
• Tree planting
• Vegetation surveys
• Animal surveys
• Water sampling
• Deer management
• Wetland water level control
Future projects may include additional tree planting and at the south end of the park and additional savanna work in the north. The master plan maintains these current projects. There is no expected increase to the annual cost.

**SUSTAINABILITY**

The updated Park District 2016 Sustainability Plan guides Park District efforts toward achieving established sustainability goals and targets by outlining broad strategies for organizational implementation. The following goals provide guidance and intent to Park District’s sustainability efforts in respect to regional parks:

- Manage and operate park lands and facilities in a manner that ensures the ecologic, financial and social integrity of the park system in perpetuity.
- Reduce dependence on fossil fuels to minimize greenhouse gas emissions and reduce public expenditures.
- Reduce the amount of waste sent to the incinerator and landfill to minimize costs and reduce Greenhouse Gas emissions.
- Preserve groundwater and surface water resources to ensure current and future water needs can be met.
- Reduce Park District environmental impacts to demonstrate or model Park District’s commitment to sustainable environmental stewardship.
- Provide opportunities for public education and involvement in Park District sustainability initiatives.
- Design and plan park facilities, amenities and trails to maximize the public ability to use non-motorized transportation and to meet the Park District’s goal of sustainable environmental stewardship.

The Park District strives to utilize appropriate sustainable best management practices and guidelines such as the Minnesota Sustainable Building Guidelines (B3 Project) and Leadership in
Energy and Environmental Development (LEED) Rating System on construction projects. For park reserves, best management practices may include utilizing porous pavement, rain gardens, recycled construction materials, using native plant materials, smart and responsible water consumption, connectivity to the regional trail system as well as mass transit and using sustainable building techniques. In addition, the Park District has an active solid waste management plan geared toward reducing waste and increasing recycling and compost. Garbage and waste will be collected and disposed of in accordance with best management practices and all applicable laws. Garbage and recycling bins will be located throughout the park to make participation convenient and easy.

Additionally, this master plan identifies the nursery facilities as a key location for sustainability innovation. The current facility uses well water and natural gas as it its main water and heating needs. Consistent with the 2016 Sustainability Plan, this master plan identifies several sustainable water, electrical, and heating sources that could replace or supplement the existing sources (Appendix D). Some of these include rain water catchment, passive irrigation, and solar panels. In addition to reducing energy consumption, the nursery facility could stand as a national example of how to transition existing nursery facilities to a net-zero model.

PUBLIC SAFETY
The Park District provides a safe environment for park users, protects the park’s resources and educates park guests on park rules and expectations.

Public Safety Plan
Public safety officers utilize a variety of specialized patrol methods to ensure ongoing safety in Park District parks. In addition to routine patrol, Park District public safety officers may be dispatched through the Hennepin County Dispatch System to respond to incidences as they occur. Public safety officers will be supported by volunteer trail patrollers which assist with patrol and incident response.

While the Park District will assume the lead role in providing public safety services to Crow-Hassan Park Reserve, a statewide mutual aid program assists to facilitate assistance and sharing public safety resources from surrounding police agencies in times of emergency or other unusual conditions. Under this program and as part of the broader envisioned partnership between the Park District and the City of Rogers, City of Rogers Police will also play a key role in responding to incidents and providing support for large events. This is an essential partnership as City of Rogers Police may be better positioned to provide quick routine patrols and timely response in emergency situations simply due to the close proximity of their officers to the park compared to Park District public safety officers. In addition, Hennepin County Water Patrol will provide patrol and emergency services for any water related event that may occur on or in the Crow River. There is no expected increase to the annual cost.

PUBLIC AWARENESS
The Marketing & Community Engagement Department manages a centralized marketing communications function that oversees the Park District’s website, public relations, marketing, media relations, social media, brand management, event planning and promotion. A number of effective marketing and outreach tools are used to promote the Park District, including but not limited to, events calendars, maps, digital and social media, direct mail, press releases, a centralized reservation system, brochures, advertising and on-site promotion. Promotional pieces will highlight how to get to the park via foot, bike, transit and car. The Park District collaborates with a wide array of community, business and government organizations to promote its facilities, programs and services, and to educate the public about its resources. The Park District also works with the Metropolitan Council Regional Parks System, the State Office of Tourism and other partners to leverage shared opportunities for creating awareness and visibility. Additionally, a focus is placed on developing partnerships and programming opportunities that allow the Park District to better serve all residents of Suburban Hennepin County, especially those with less access to its facilities and programs.
THE CROW-HASSAN MASTER PLAN takes a very light approach to future development and park planning with a focus on supporting the ecological systems and existing natural conditions of the park. To this end, additional developed park features were minimized and those additional features are limited in size and scope. The additional features of the park can be implemented over time as funding becomes available and planned renovations are completed. As a result there is minimal change in overall maintenance costs for the park.

This chapter lays out the estimated costs and funding plan for this master plan (Table 4). The capital improvements have an estimated cost of $2.795 million with an estimated annual operation and maintenance cost of $517,400 (which includes both existing and planned infrastructure costs). This chapter lays out the associated responsibilities for the Park District, as well as estimated costs and funding plan.

ACQUISITION
Identified inholdings will be considered on a willing-seller basis and dependent on available Land Acquisition Development Betterment Funds and external acquisition funds administrated by Met Council. Acquisition costs for all identified inholding properties is estimated to be $2.84 million (2019 market values).*

A series of land exchanges between MCES and the Park District are required as part of the Crow River wastewater treatment project. To date, the Park District, MCES and the City of Rogers have expressed support for the proposed land exchanges that will result in a boundary change for Crow-Hassan Park Reserve. Appraisals and compensation negotiations will be required as this project moves from planning to implementation.

*Estimated $1 million for MCES partial property acquisition.
CAPITAL IMPROVEMENTS & FUNDING PLAN
This plan envisions continued resource restoration and minimal development. The majority of the park’s infrastructure is to be maintained in its current condition. The costs outlined are for projects only (picnic shelter, Crow River Regional Trail construction, etc.) and do not include the costs associated with maintaining or operating these investments. While there is interest by the Park District to move forward with implementing the master plan, there are not dedicated funds to do so immediately. The Park District will work to secure funding for this park through grants, fundraising and partnerships.

Implementation Timing
The main trailhead parking improvements with separate equestrian parking is a priority. The monument sign should also be prioritized to elevate the visitor experience. Ancillary capital improvements to this area may be phased, as the Crow River Regional Trail and additional education programming is implementation. Other capital improvements are at the discretion of available funding and as demand warrants.

Implementation Partners
This plan includes amenities and opportunities at the regional scale and state scale. The Park District will explore partnership opportunities which support implementation of the master plan. Potential partners could include the Minnesota Department of Natural Resources; the Metropolitan Council; Hennepin County; local school districts; regional colleges and universities; municipalities; non-profits; community groups; businesses and other partners.

OPERATIONS & MAINTENANCE
Operations and maintenance costs for Crow-Hassan Park Reserve will continue to be covered through the Park District’s Operating Budget. The Operating Budget’s primary source of funds are property taxes with some revenue from the State of Minnesota as part of the Operations and Maintenance Fund allocations from the Metropolitan Council. A detailed operations and maintenance summary is available in Chapter 6.

**TABLE 4 | CAPITAL IMPROVEMENT COST SUMMARY**

| Source: Three Rivers Park District |

### PARK-WIDE | RECREATION DEVELOPMENT

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow River Overlooks</td>
<td>Vegetative clearing, minor earthwork, seating and/or picnic accommodations (approximately 5 locations)</td>
</tr>
<tr>
<td>Ecological Touch-Points</td>
<td>Wildlife viewing facilities/infrastructure and/or trail pull-offs with minor earthwork (approximately 7 locations)</td>
</tr>
<tr>
<td>Curated Trail Loops</td>
<td>Destination specific support facilities including wayfinding and seating where appropriate (approx 20 locations)</td>
</tr>
<tr>
<td>Accessibility Improvements</td>
<td>Easy Routes Even surfacing, limited grade variation, 10’ wide</td>
</tr>
<tr>
<td></td>
<td>ADA Route 1 - Main Trailhead Loop ADA accessible, 0.5 miles with Nature Play Circuit</td>
</tr>
<tr>
<td></td>
<td>ADA Route 2 - Northern River Segment ADA accessible, 2.5 miles (there and back)</td>
</tr>
<tr>
<td>Wayfinding Suite*</td>
<td>Monument sign</td>
</tr>
<tr>
<td></td>
<td>Modified Riverbend entrance, various trail directional, trail intersection and other signage</td>
</tr>
</tbody>
</table>

### SITE-SPECIFIC | RECREATION DEVELOPMENT*

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Trailhead</td>
<td>General-use parking area Gravel, 90 vehicle parking spaces, 4 ADA parking spaces with user enhancements (i.e. signage, concrete work, CXT, restroom, seating)</td>
</tr>
<tr>
<td></td>
<td>Equestrian parking &amp; camping area Gravel, 20 trailer parking spaces, 4 equestrian camp sites, high lines, corral, water service, seating, fire pits</td>
</tr>
<tr>
<td></td>
<td>Picnic shelter 6 picnic tables, grills, trash receptacles, water service, with capacity of 60 persons</td>
</tr>
<tr>
<td>Riverbend</td>
<td>Northern access parking area Gravel, 23 vehicle parking spaces, 2 ADA parking spaces</td>
</tr>
<tr>
<td></td>
<td>Relocated non-motorized boat launch ADA accessible</td>
</tr>
<tr>
<td></td>
<td>Riverbend camping ADA enhancements, individual reserveable sites</td>
</tr>
<tr>
<td>Dog off-leash area</td>
<td>Erosion control measures along Crow River</td>
</tr>
<tr>
<td></td>
<td>Parking lot lighting</td>
</tr>
<tr>
<td>Archery range</td>
<td>Entry level facility with option to expand to intermediate and/or advanced</td>
</tr>
<tr>
<td>Bluestem camping</td>
<td>ADA enhancements, individual reserveable sites</td>
</tr>
<tr>
<td>District Nursery Innovation</td>
<td>Solar roof installation</td>
</tr>
<tr>
<td></td>
<td>Other: i.e. biogas production, solar, wind, water harvesting etc. (App. D) TBD</td>
</tr>
<tr>
<td>Southern Trail Loop (1.25 miles) unpaved, multi-use</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** | $2,795,000 |

*Stand-alone 8-mile, Crow River Regional Trail project (not included in Crow-Hassan Park Reserve Master Plan) includes: $4,000,000 pavement, (1) Level A $55,000, and (2) Level B $60,000
APPENDIX A

RESOLUTIONS OF SUPPORT
TO BE UPDATED
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APPENDIX B

SERVICE AREA DEMOGRAPHICS
TO BE UPDATED
EXISTING CONDITIONS

Bluestem and Riverbend group camps at Crow-Hassan are highly sought-after resources for recreating guests and are regularly used. However, both group camps have existing design limitations that restrict overall accessibility and limit use to larger groups who can financially support this activity.

The current Crow-Hassan ‘drop-in’ site for individual use, adjacent to the main trailhead parking lot, offers a high degree of exposure (limited privacy) and is under-utilized.

COMMUNITY ENGAGEMENT

Individual camping was the top request from the user survey.

Respondents provided robust feedback to the question, “What activities and/or amenities would you like to see at Crow-Hassan Park Reserve if they were available?” (942 responders - could select more than one option)

- Individual, drop-in, horse use camping sites (359 responses),
- Individual, reserveable, horse use camping site (351 responses),
- Individual, drop-in, general use camping sites (203 responses),
- Individual, reserveable, general use camping sites (206 responses).

There was also a significant number of requests for expanded four-season camping options (camper cabins, yurts or similar).

PRECEDECDNT STUDY | WHITETAIL WOODS REGIONAL PARK, DAKOTA COUNTY

Bluestem Group Camp
Capacity: 80 people
Occupancy Rates*
Memorial Day – Labor Day (peak)
- 89 Days (subtracted 1.5 weeks due to maintenance): 28%
- Weekends/Holidays: 83%
- Non-Peak (weekends only): 61%

Riverbend Group Camp
Capacity: 50 people
Occupancy Rates*
Memorial Day – Labor Day (peak)
- 89 Days (subtracted 1.5 weeks due to maintenance): 35%
- Weekends/Holidays: 79%
- Non-Peak (weekends only): 67%

*2018 Data

Background
- Currently 3 cabins - expanding to 5 in 2019/2020.
- Open year-round with a 2 week closure in November for maintenance.
- 88% occupancy rate (2018)
- No major security concerns but the park is regularly patrolled.
- No ecological footprint concerns.
- Coded locks.
GROUP CAMPING

Maintain Group Camps (PROS)
- Maintains existing high occupancy rates
- Maintains existing operations & maintenance
- Provides unique camping option in Twin Cities metro for groups (ex. horse use, scouts, etc)
- Large footprint for versatile and flexible use

Maintain Group Camps (CONS)
- Noise and level of activity
- Limits potential users to groups (cost and patterning)
- Limits existing programming and occupancy patterns

INDIVIDUAL CAMPING

Provide Expanded Individual Camp Sites (PROS)
- Higher accessibility for more users (general use, horse)
- Cost effective (design and users)
- Allows for better integration into adjacent programming (paddlers, cyclists)
- Highly flexible design options

Provide Expanded Individual Camp Sites (CONS)
- Potential larger user footprint (multiple sites)
- Potential user conflicts
- Concern for managing transient communities/safety
- Limited seasonal use
- Operation and maintenance

CAMPER CABINS | YURTS

Provide Camper Cabins | Yurts (PROS)
- Reduces user footprint (defined camp boundaries)
- Four-season use
- Unique option – potential to reach broader user base
- Ability to control access to facilities
- Allows for better integration into adjacent programming (river paddlers, cyclists)
- Revenue potential
- High popularity and demand in the Twin Cities metro

Provide Camper Cabins | Yurts (CONS)
- Higher cost to users
- Potential higher cost of maintenance
- Potential conflict compatibility with the Park District’s ROS (Recreation Opportunity Spectrum)
APPENDIX D

DISTRICT NURSERY
RESILIENCY ASSESSMENT
Established in 1977, the Park District’s plan production nursery is located with Crow-Hassan Park Reserve. The nursery currently relies on adjacent well water and natural gas for the primary heating and water needs. Both of these sources are limited in terms of long-term sustainability and ongoing incurring costs. Alternative energy and water sources to replace or supplement the nursery’s operations were examined as part of this master plan.

### Biogas Production (Standard Biodigester)

- **Feedstock**: Grass Silage w/ Some Manure
- **40 Acres Harvested Once Annually**: 3 Tons Per Acre
- **50% Dry Matter**
- **Output (Potential Biogas - Natural Gas Equivalent)**: 850,000 Therms / Yr
- **Demand (Natural Gas)**: 765,000 Therms / Yr

### Photovoltaic Electricity Generation

- **Land Area w/ PV (Ground Mount - Full Sun)**: 3,500 SF
- **Output (Potential Electricity)**: 62,000 kWh
- **Demand (Electricity)**: 62,000 kWh

### Wind Turbine Electricity Generation

- **20 kW Turbine (10 Meter Rotor Diameter)**: 10 M or 32.8 Ft Rotor Dia
- **Output (Potential Electricity)**: 30,000 kWh
- **Demand (Electricity)**: 62,000 kWh

### Water Harvesting (Greenhouse + Garden)

- **Water Harvested from Roofs (May Through September)**
  - Greenhouse
  - Greenhouse HeadHouse
  - West Shed
  - NorthWest Shed
  - North Building
- **Total Roof Area**: 28,500 SF
- **Output (Potential Rainwater Harvest)**: 280,000 Gal / Yr
- **Demand (Potential Irrigation Water)**: 245,000 Gal / Yr
  - Greenhouses: 146,000 Gal
  - Vegetable Garden (6,000 SF - 10,000 lb / Yr Production): 100,000 Gal

### Water Harvesting* (Tree Nursery)

- **Annual Average Water Demand**: 4,808,000 Gal
  - Deduct Building Demand (10 Full Time People - 250 Days / Yr): 30,000 Gal
  - Deduct Greenhouses: 146,000 Gal
- **Annual Open Tree Nursery Demand (Annual)**: 4,632,000 Gal
- **Demand (1 Month) Open Nursery (5 Month Average)**: 123,850 CuFt
  - **Field Area (1-0* Deep Irrigation Area - 1 Month of Demand)**: 2.8 Acre
  - **Pond Area (1-0* Deep Irrigation Area - 2 Month of Demand)**: 5.7 Acre

*Assumes Irrigation from May through September

**All Calculations are Order of Magnitude Calibrated. They are intended only to demonstrate potential and facilitate decisions about further exploration + validation**