



Aknowledgements

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01 Introduction & Summary of Process

Introduction & Summary of Process

PROCESS

Every urban park space has its own unique character and challenges. This is especially true for the La Vista Civic Center Park. In 2010, the Vision 84 Plan established an image of a revitalized 84th Street corridor. A key part of this vision was the redevelopment of the La Vista Falls Golf Course into a community park that would benefit all La Vista residents and draw visitors from across the metro area. The repurposing of a community space this large must identify and balance establishing a distinct character with providing the amenities desired by residents. At the same time, a strong relationship between a great park and surrounding investment must also be established, especially in these challenging economic times.





The mission of this process was to develop a master plan for the La Vista Civic Center Park that builds on community principles to create a space that is ecologically sensitive and treats natural systems as assets, while creating a community destination that attracts investment to adjacent areas. The birth of the Civic Center Park can be an essential catalyst in transforming the image of the 84th Street corridor.

The creation of this type of space must come from the vision of stakeholders and users. To achieve this, the design process included:

- A Site Tour: The design team, city staff, and representatives from NDEQ and PMNRD toured the entire golf course and City Park. During the tour issues and opportunities were discussed and the study area was documented.
- A Working Group: A Working Group was established that represented a wide range of stakeholders, including local residents. Their job was to guide the design process and provide direction on alternatives. The Working Group met three times:

Meeting 1: Group members were guided through a visual listening exercise to identify preferred characteristics of the future park.

Meeting 2: A workshop was held in which group members worked in teams to identify physical attributes of the park based on results of the visual listening

exercise conducted with both the Working Group and community at large.

Meeting 3: Following the first Community Meeting and initial Working Group meetings the design team developed four alternative scenarios for the park design. The Working Group reviewed these designs to identify preferred alternatives.



Introduction & Summary of Process

COMMUNITY MEETINGS

Two community meetings were held during the process. At the first meeting residents were asked to share their favorite park or open space and were invited to participate in a visual listening exercise. This exercise was very important in the development of alternative scenarios for the park.

The following ranked strongly among participants:

- Illuminated pathways
- Interactive water
- Amphitheater with flexible seating
- Large open lawn

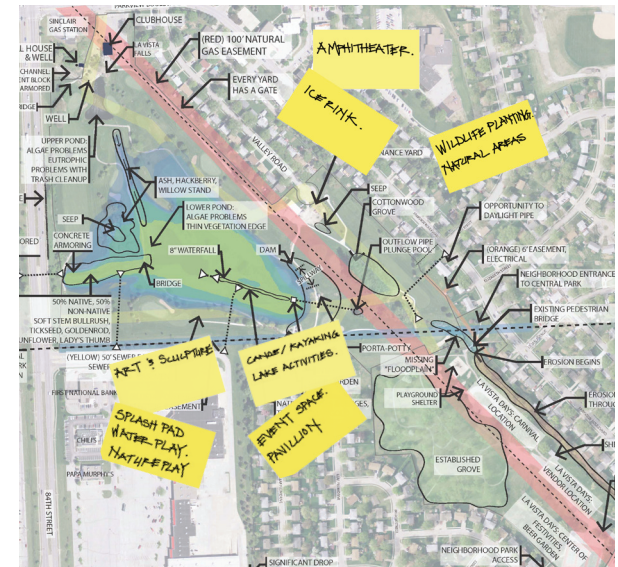
Community members were not as supportive of:

- Large modern iconic art
- Large open air pavilion
- A broad natural edge to the lake
- Chipping green

At the second Community Meeting, two alternatives were presented to residents. A portion of the meeting was given to the residents to review and comment on the concepts and share those thoughts with all attendees. The meeting was well attended with over 60 community members. Overall, community members were supportive of the concepts.

Council Workshop

In March 2012 the Council reviewed the preferred alternative that had developed out of the Community and Working Group meetings.





Park Pavilion: large, holds 200–300 people (4–6 rooms, one huge space, full kitchen)

- 20% 1. Love It
- 20% 2. Like It
- 20% 3. Neutral
- 20% 4. Dislike It
- 20% 5. Hate It



Waterfall: natural stone boulders



Seasonal ice rink



Naturalized areas

Introduction & Summary of Process

SITE OVERVIEW & ANALYSIS

The existing site for the Civic Center Park offered a number of challenges and opportunities. The design team created and used the site analysis diagram to the right to help catalog and evaluate the positives and negatives across the site.

The most significant and influential site constraints are the various easements and utilities that crisscross the site. In the analysis map to the right, these easements are identified by red, yellow, orange, and blue shaded lines.

The red line, running northwest to southeast, is a 100' wide petroleum pipeline easement. This easement demands minimal grade changes and no large root masses (trees and large shrubs) in the red-shaded area. The blue line, running east/west through the center of the site, is a 40' wide easement for an overhead electric line. This easement isn't as stringent as the petroleum line; the overhead line can be direct-buried where needed and some minimal park development can occur underneath the line.



The yellow lines crossing the site are the rough location of a sanitary sewer easement. This easement too can be altered if necessary; the sewer line can be re-routed to miss or connect to newly constructed amenities. The small orange line, which parallels Park View Boulevard near Flagpole Park, is a small 6' electrical easement. This too is easily altered.

The other primary constraint on the site is the dam and its subsequent flooding rates. The yellow to blue shapes in the center of the site represent flood levels depending on the rain event severity. The interior yellow shape shows the limits of a typical two-year storm. The outside of the darkest blue shows the limits of a 100-year storm with the spillways of the dam clogged or otherwise closed. These limits informed the design team of the current flood levels and the ideal elevation of proposed park structures.

Environmentally, the existing golf course has small pockets of ecological interest. The drainage channel running east of 84th Street toward the larger lake contained the most species diversity on the site. Similarly, the seep just north of that drainageway contains a fine variety of native wetland plants and trees. In Central Park, the existing woodland on the southwest slope offers a number of mature and healthy trees, perfect for a shady picnic in the park.

On the opposite end of the spectrum, the two ponds on the site had visibly poor water quality due to the thin vegetative edge, predominance of turf around their perimeter, and lack of upstream water treatment systems. Similarly, the stream – especially south of Flagpole Park – is environmentally precarious and continuing to get worse. Lack of flood space

and increased impervious pavements in the watershed have caused very large quantities and high velocities of water in even the smallest of rain events. This has caused Thompson Creek to have significant erosion problems, including several areas where the stream ravine is ten to fifteen feet deep.

However, the existing site offers space to turn those site negatives into positives. The design team built upon the analysis diagram and came up with several concepts to address the problem areas while highlighting the sites unique features.



Introduction & Summary of Process



NATURAL RESOURCE INVENTORY AND ASSESSMENT:

As part of the comprehensive approach to the master plan design process, Applied Ecological Services (AES) took a detailed look at the existing natural resource data of the park area and developed a Natural Resource Inventory and Assessment. This document, which can be found in the Appendix of this report, summarizes existing natural resource data, conveys AES' field findings, and provides preliminary recommendations for environmentally sensitive park development.

In short, the proposed Civic Center Park site sits within an ecologically diverse region. The site is primarily made up of wind-blown loess soil, which is fertile and has moderately high drainage rates. There are a number of clay-rich soils around the site as well, which lead to the creation of seeps and small wet depressions. Historically, the golf course site was most likely covered in tallgrass prairie and savanna, with forested areas sporadically occurring along the creek.

Thompson Creek flows through the proposed park site and consistently feeds the larger of the two ponds in the golf course. Both ponds have manicured edges, which limits the quantity and quality of runoff treatment, especially compared to natural edge ponds. Algae was abundant in both ponds, which is a symptom of high nutrient loads coming from the surrounding neighborhoods. Similarly, floating trash was evident, denoting the connection between the ponds and the nearby city streets.

The flood control structure in the golf course controls and slows the quantity of water that enters Central Park. To control that flow, the water quantity behind the flood control structure regularly fluctuates several feet in height, even in small rain events. This is primarily due to the prevalence of impervious surfaces in the surrounding watershed.



The predominant vegetation on site is turf grass. Turf sheds water quickly, especially compared to deep-rooted native vegetation, which tends to cause rapid water rise in water bodies and targeted areas of erosion where flow paths converge. Along Thompson Creek are riparian corridors, which are stable primarily due to man-made stream armoring. However, they are not as biologically diverse as would be considered ideal.

To improve the environmental health of the Thompson Creek watershed, AES recommends installing sustainable stormwater management practices both in the developed park and the surrounding neighborhoods within the

watershed. Limiting the water quantity and improving the water quality that comes off the community's rooftops and driveways will vastly increase the health of the park's water bodies and will decrease erosion rates. AES also recommends installing customized stormwater treatment trains which will treat the water that cannot be infiltrated in the surrounding community. These constructed natural systems will reduce nutrient loads, increase water infiltration, and increase biodiversity within the park.

Finally, AES recommends stabilizing and restoring the banks of Thompson Creek. If left unchecked, the stream will continue to erode further into the banks which will cause bank failures and an even larger safety risk. Instead, the stream should be re-engineered with gently sloping banks filled with native plants which will hold the soil in place. The stream would also be designed to meander back and forth, similar to how streams naturally form. This will help slow the water down as it passes through the channel and provide ideal habitats for a wide range of plants and animals.

For more information regarding AES' Natural Resource Inventory & Assessment, please see the appendix of this document.



Introduction & Summary of Process

URBAN LAYOUT CONCEPT

The Urban Layout concept focuses on creating a urban park for the citizens of La Vista. The focus is on multiple programmed spaces that have a high connectivity to the surrounding neighborhoods and high visibility from 84th Street.

On the north end of the site are two formal walkways – each with parallel sidewalks containing formal gardens. With a celebratory entrance at the corner of 84th Street and Park View Boulevard, park visitors are instantly treated with an iconic view of the park. Where these two walkways meet is one of two iconic towers in the park.

Between the walkways is a new rental Pavilion with a two-story view of the park on the south side. Surrounded by formal gardens, this 200-300 person pavilion is ideal for weddings, celebrations, and community gatherings. South of the Pavilion is an ellipse-shaped formal lawn.

The lake in this concept has a highly irregular edge, intended to provide numerous smaller lake edge spaces. The center of the lake includes an iconic bridge, which bisects the lake and adds visual interest to the center of the site. On

another peninsula of the lake is a small park shelter, offering lake-side views of the park. Directly to the southeast is a boathouse offering rentals for the lake.

South of the lake is a small amphitheater and a second iconic tower, which connect the lake with the expanded development that enters into the site. With two large office buildings, these provide architectural interest and a dedicated daily source of park patrons which will help activate the park. Between the buildings is a fountain and pool area, which doubles as an ice rink in the winter time.

For the southern development, the Urban Layout proposes a development program focused on a central lawn, which terminates at a new town square space. The rest of the development intentionally fronts 84th Street and pushes parking to the inside and rear of the site. This pedestrian and view-focused development helps highlight the businesses and lets the pedestrian control the flow of traffic, not the vehicles.

Under 84th Street is an underpass, which connects the park with the swimming pool, ball fields, and neighborhoods to the west. This underpass includes a smaller sidewalk and a larger trail, with Thompson Creek in the middle. This unique double-trail layout increases access to the creek and ensures that the underpass is wide and safe.

Valley Road is extended south through the site, offering additional spaces for the La Vista Daze carnival rides and vendors. The road connects with 78th Street at Park View Boulevard, utilizing the existing right-of-way through the residential lots.

Central Park remains primarily the same, leaving the existing spaces for La Vista Daze.

CONCEPT BENEFITS

Celebratory entrances from 84th Street

Well organized spaces

Numerous iconic features spread sculpture throughout the site

Connection to City Hall

Lake edge

ELEMENTS NOT INCLUDED IN CONCEPT

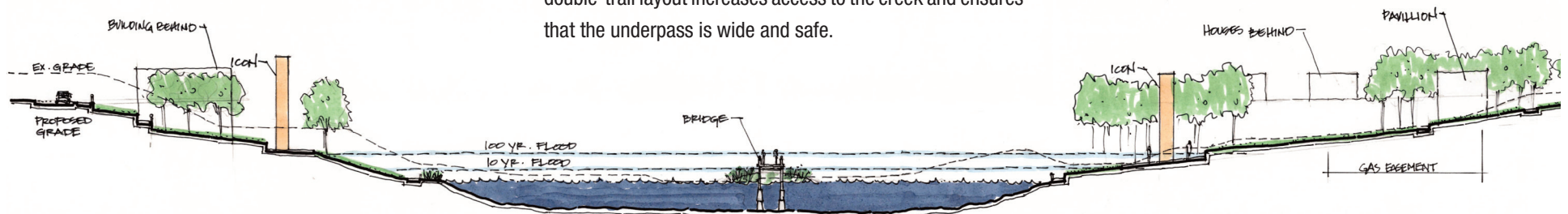
Not enough space dedicated to La Vista Daze

Commercial development in the park reduces park size

Central Park needs more development

Amphitheater too small

Want bigger bridges





1. New fire station
2. Reconfigured parking
3. Ceremonial Entrance
4. Formal Gardens
5. Pavillion
6. Tower / Icon
7. Formal Lawn
8. Nature education
9. Bike trails / La Vista Daze Vendors
10. La Vista Daze Carnival
11. Bridge
12. Shelter
13. Amphitheater
14. Parking
15. Nature Play
16. Native Plantings
17. Ice Rink
18. Existing Playground
19. Mixed Use Development
20. Restored Stream
21. Arboretum
22. Two Trails Under Bridge
23. Celebratory Entrance
24. Existing Tennis Courts
25. New Town Square
26. New Connection to Neighborhood.

Introduction & Summary of Process

NATURAL LAYOUT CONCEPT PLAN

The Natural Layout focuses on connecting the people of La Vista with the natural processes, plants, and animals that were once in the area. The organizational feature is a 'Y' shaped trail network which unites the spaces and provides easy and fluid access through the site.

The primary feature is a prominent curved rental pavilion located at the north side of the site. Parking and primary access is located north of the two story building. Both stories are able to be rented and offer full views of the park. On the south side of the building is a large formal garden.

On the north edge of the lake is an amphitheater space that is designed for numerous uses. This amphitheater doesn't have formal seating of any sort, just a gently sloped lawn perfect for picnic blankets and lawn chairs. Nearby is a small boat rental facility.

On the east side of the lake is another open lawn. The dam is covered in native prairie grasses, which add low-maintenance beauty and ecological benefits to the site. On top of the dam, the main trail splits, going east and west.

To the west is a new development building inserted into the park. By adding the building to the park, it provides a prominent space which would be highly desirable to potential developers. On the north side of this building is a wooden boardwalk, which provides ample views to the lake and surrounding parklands. On either side of the new development are naturalistic trails which zig-zag down the slope, providing ADA access between the southern development and the lake.

Under 84th Street is an underpass, which connects the park with the swimming pool, ball fields, and neighborhoods to the west. This underpass includes a single sidewalk which parallels Thompson Creek as it tumbles down the slope toward the park.

For La Vista Daze, a new open lawn has been created at the end of Valley Road for carnival rides to be brought to the site. For vendors, the new trail going through Central Park is designed to be lined with tents for the event. The parallel roadway provides alternate access for pedestrians and emergency vehicles.

In Central Park, a new vehicular access road crosses the site and connects to Park View Boulevard through Flagpole Park.

This will add multiple access points to Central Park, greatly increasing permeability and access to the park.

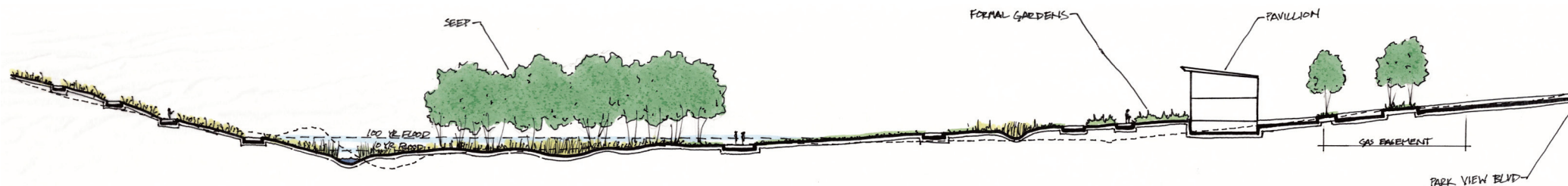
The new widened trail crosses the expanded Thompson Creek in numerous spots to keep the public engaged in their watershed systems. A new natural playground is added near Flagpole Park, where stream access is provided for up-close exploration.

CONCEPT BENEFITS

- Centralized and prominent rental pavilion and formal gardens
- Southern boardwalk
- No additional properties are acquired
- Multiple connections to surrounding neighborhoods
- Vehicular connections to Park View Boulevard

ELEMENTS NOT INCLUDED IN CONCEPT

- Solar direction in the amphitheater
- No desire for development to take up park space
- Smaller lake size
- Acquisition of the Sinclair site
- Concept may be too boring, nothing that will draw you back time and again





1. Connection to City Hall
2. Reconfigured Parking
3. Wide Trail
4. Pavillion w/Green Roof
5. Formal Gardens
6. Amphitheater
7. Boat House & Dock
8. Existing maintenance building
9. La Vista Daze Carnival
10. Open Lawn
11. Water Pools
12. Underpass
13. Water Access
14. Open Water
15. Natural Gardens / Winding Paths
16. New Development Built into Hillside
17. Native Plantings
18. Nature Play
19. Pedestrian / Vehicular Bridge
20. New Road / Parking
21. Arboretum
22. Trail Across Stream
23. Existing Tennis Courts

Introduction & Summary of Process

ACTIVE LAYOUT CONCEPT

The Active Layout focuses on highly programmed spaces which are connected by a series of walking trails. The lake ties the various spaces together by a central walking loop which also includes two decorative bridges.

On that loop is the primary rental building: the boathouse. The lower floor houses the boat storage and boat rental facilities. The upper floor is a 200-300 person rental facility designed for weddings, meetings, and community gatherings. To serve this boathouse, the existing maintenance shop is relocated to the east and a new parking lot is provided.

In the southwest corner is a 200-seat amphitheater. The stage for the amphitheater has a minimal backdrop and has electrical hookups for small performances. The seats for the amphitheater are minimal as well – limestone blocks built into the hillside – so seating remains flexible for a wide variety of performances.

The north half of the site includes an enlarged upper pond, which will help clean runoff coming on to the site. A wide ceremonial walkway, with a lake-side belvedere, provides an iconic entrance into the park. A new walkway, heading to the northeast, connects to a reconfigured City Hall complex. This new complex has a focus on pedestrian connectivity to the park.

On the northeast section of the lake are three smaller spaces: a natural play space, formal gardens, and a sculpture garden. The natural play space will focus on native materials and biological processes to entertain and educate kids. The formal gardens have a central focus point near the lake edge, which help organize the space. The sculpture garden includes several art pieces and a water wall feature to help enliven the space.

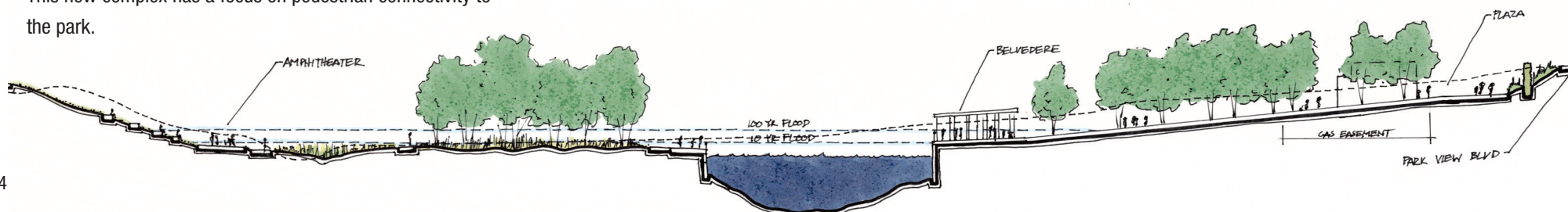
Central Park is reserved as a neighborhood park, with plenty of passive recreation space. The primary new feature is the widened Thompson Creek. Designed with natural meanders, the stream is designed to slow and clean off-site runoff. While the existing tennis courts are kept, the playground is moved and enlarged to provide more play space for the surrounding neighborhoods.

Vehicular access for this layout focuses on new access points into the site. Valley Road is extended through the park and exits at the existing 78th Street intersection. At Flagpole Park, a new vehicular access point is added through Central Park, eliminating the existing single access road into the Park. This will require a vehicular bridge crossing Thompson Creek, but adding two pedestrian lanes to the bridge will make sure that the bridge has numerous uses.

Under 84th Street is an underpass, which connects the park with the swimming pool, ball fields, and neighborhoods to the west. This underpass includes a single sidewalk which parallels Thompson Creek as it tumbles down the slope toward the park.

For La Vista Daze, the center of activities will still be Central Park. However a new vendor loop trail has been specifically added which wraps around Thompson Creek north of the new vehicular bridge. The new parking lot at the end of Valley Road has ample room to house carnival rides. The expanded play spaces in Central Park offer numerous spaces for additional La Vista Daze activities.

The Active concept also provides a conceptual layout of the development space south of Civic Center Park. The focus of this development layout is a central public pedestrian space that houses a long linear canal. This feature unites various different uses and solidly connects the development to the park. Mixed use commercial/residential buildings make up the northeast third of the development site. In the middle are multi-family residential units, and on the south end are office buildings. The existing businesses still reside in the northwest corner of the development, with new pad sites to the south.





CONCEPT BENEFITS

Highly programmed spaces
 Connections to City Hall and to southern development
 Options for parking inside the park
 Multiple vehicular access points
 Two bodies of water, rather than one
 Amphitheater location

ELEMENTS NOT INCLUDED IN CONCEPT

Visual connections from 84th Street
 Handicap access to the rental facility
 Additional programming in Central Park
 The need for an ice rink
 Not enough parking

1. New Fire Station
2. Reconfigured Drive & Parking
3. Plaza
4. New Parking
5. Retain Existing Club House
6. Formal Walk
7. Belvedere
8. Playground
9. Open Lawn
10. Formal Gardens
11. Sculpture Gardens
12. New Park Entrance
13. Nature Education
14. Bridge
15. Boat House Pavillion
16. Concessions
17. Amphitheater
18. Overlook
19. Water Feature / Stairs
20. New Parking
21. La Vista Daze Carnival
22. New Maintenance Building
23. Formal Spill Pool
24. La Vista daze Vendor Loop
25. New Roundabout
26. Vehicular / Pedestrian Bridge
27. New Playground
28. Shelter
29. Restored Stream
30. Existing Tennis Courts
31. Boardwalk
32. Central Canal

Introduction & Summary of Process

OPEN LAYOUT CONCEPT

The Open Layout concept focuses on large passive recreation spaces that will easily accommodate any event. It utilizes numerous formal spaces and walkways to organize the site and provide iconic sight lines.

The north edge of the site utilizes the existing Sinclair Station to expand parking and provide a formal entrance to the park. At the south end of the parking lots are a series of stepped and planted terraces, with a centralized formal shelter making up the slope. A formal pool and water play areas are located just to the south of the shelter.

The central part of the site is focused on a long lake, which has an iconic walkway along its northern edge. To the northwest of the lake is a wetland area, which provides visual interest and wildlife connection, as well as helping clean and treat the runoff entering into the site.

South of the lake is a large plaza, which is also the focal point of a formal amphitheater. The plaza is bisected by Thompson Creek, which is celebrated and highlighted as it crosses the large plaza. The ellipse shaped amphitheater has formal walkways surrounding it, which connect the lower part of the park to the southern development space.

Under 84th Street is an underpass, which connects the park with the swimming pool, ball fields, and neighborhoods to the west. This underpass includes a single sidewalk which parallels Thompson Creek as it tumbles down the slope toward the park.

On either side of the amphitheater are two development buildings, which enter into the site to help blend the boundary of the park with the southern development. The western of these two buildings include a large glass-enclosed elevator tower, which will help with ADA access to the amphitheater space and to help provide an iconic tower to the site.

Vehicular access for the Open Layout includes an extension of Valley Road, which connects with Park View Boulevard through Flagpole Park. This roadway will help provide new access into the park and will house the carnival rides for La Vista Daze. A new parking area will be added across from the relocated and expanded maintenance facility.

A new pedestrian entrance and formal gardens are added in Flagpole Park, marking a new celebratory entrance into both Civic Center Park and Central Park. Behind the gardens are a new natural play area, which provide access to Thompson Creek for education exploration.

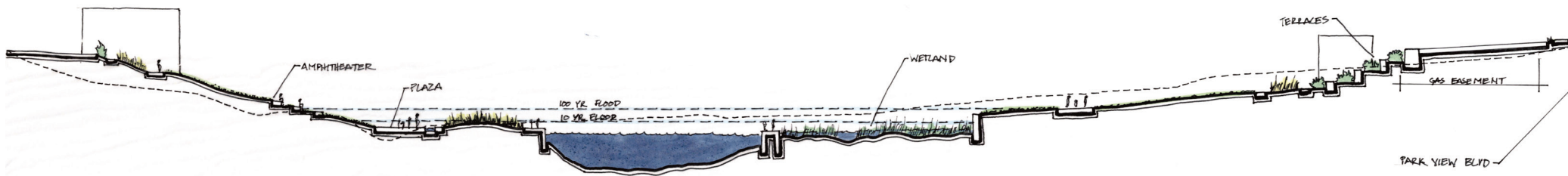
At the southern end of Central Park is a relocated and simplified entrance drive, with a formal cul-de-sac at the end. New parking provides additional space for La Vista Daze.

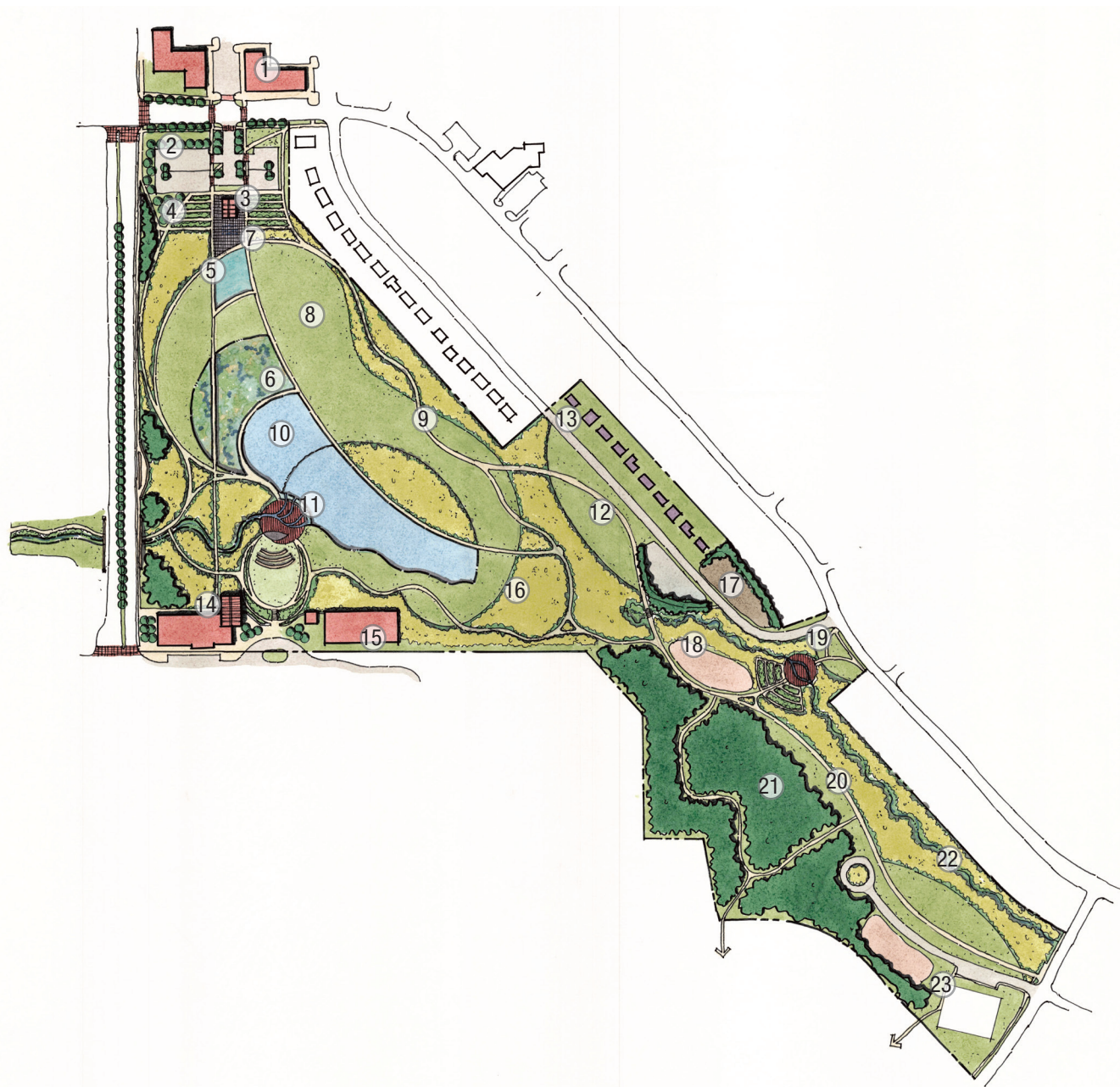
CONCEPT BENEFITS

- Open plan for passive recreation
- Iconic elements which create a formal park aesthetic
- Easy access to Thompson Creek
- Formal water features
- Numerous walking loops
- Lots of native plantings

ELEMENTS NOT INCLUDED IN CONCEPT

- Lack of programming may cause ambiguity
- Single-entry vehicular access into Central Park
- Development in the park means less park space
- Small rental pavilion
- No boat rental
- Plaza at base of amphitheater could be distracting
- Not enough parking near amphitheater
- Not enough water





1. New Retail Development
2. Parking
3. Formal Shelter
4. Vegetated Terraces
5. Pool / Ice Skating
6. Formal Wetland
7. Water Play
8. Formal Lawn
9. La Vista Daze Carnival Vendors
10. Open Water
11. Plaza
12. La Vista Daze Carnival
13. Valley Road Extension
14. Tower / Restaurant
15. New Development
16. Native Plantings
17. Maintenance Area
18. Nature Play
19. Formal Entrance Plaza & Gardens
20. Bike Trail
21. Arboretum
22. Restored Stream
23. Existing Tennis Courts



02 Park Concept Plan

Concept Plan

COMBINED LAYOUT CONCEPT

The combined preferred plan, which was accepted by the Working Group as the Master Plan for the park, combines the four concept plans into one. From the urban concept comes the ceremonial entrances and the formal walkways and gardens. From the Natural Concept the winding walkways, vehicular and pedestrian circulations systems were included. The Active Concept provides the well defined programming and lake shape. Finally the Open Concept provides the planting and open space relationships.

When combined the conceptual plans created in concert several new items: A new formal pool with stepping stones, fountains in front of the Pavilion, new pedestrian relationship with City Hall, and new entrance icons at every park entry.

PROGRAM ELEMENTS - CONCEPT OVERVIEW

La Vista Civic Center Park sits on a 56 acre site adjacent to 84th street and connects with existing Central City Park. The development of an array of programming elements for Civic Center Park will enhance not only the identity of the park, but also become an iconic park for the community of La Vista and surrounding cities. Civic Center Park will become an excellent place to visit time after time.

The opportunity for a diverse range of activities within this park is feasible due to the size of the park and its proximity to community resources. This park will act as the front lawn and image-making space for the City of La Vista. The connections from the redeveloped commercial center to the park are critical and diversify the amenities in the surrounding area. La Vista is able to create a park that will enhance the natural resources within the park, improve water quality and habitat, as well as provide additional event spaces for La Vista Daze and other private and community functions. The programming of this park will promote a diversity of compatible uses and will be accomplished by the following goals:

1. Creating a sense of nature. Develop a space with amenities that allow residents to interact, educate, and grow through nature.
2. Improve the relationship of each area of the park to the surrounding community.
3. Create new habitats with the existing lakes and provide opportunities for additional activities on the water.
4. Create a park that will incorporate the La Vista Daze activities and create opportunities for additional activities in Civic Center Park.

La Vista is embracing local events and destinations and this park would provide many types of spaces to meet the needs of current and future residents. The park will be a showpiece to the community, with both traditional and contemporary park elements, various types of trails, water activities, formal gardens, event spaces, community pavilion, natural play and much more. Areas of the lake edge will be transformed to a natural oasis for both learning and habitat development. The park will be beautiful and scenic, and provide opportunities for both activities and reflection.



La Vista Civic Center Park: Combined Preferred Plan

March 13, 2012



SCALE: 1" = 100'

RDg...
PLANNING • DESIGN

Concept Plan

PROGRAM ELEMENTS

CEREMONIAL ENTRANCE

A ceremonial entrance will create a focal point from 84th Street and Park View boulevard. The iconic marker, sculpture or fountain will draw new and repeat users into civic Center Park. The entrance will be defined by an iconic focal point with height and timeless materials. The area will be defined by concrete pavers and contain site furniture consistent with the park and new plantings.

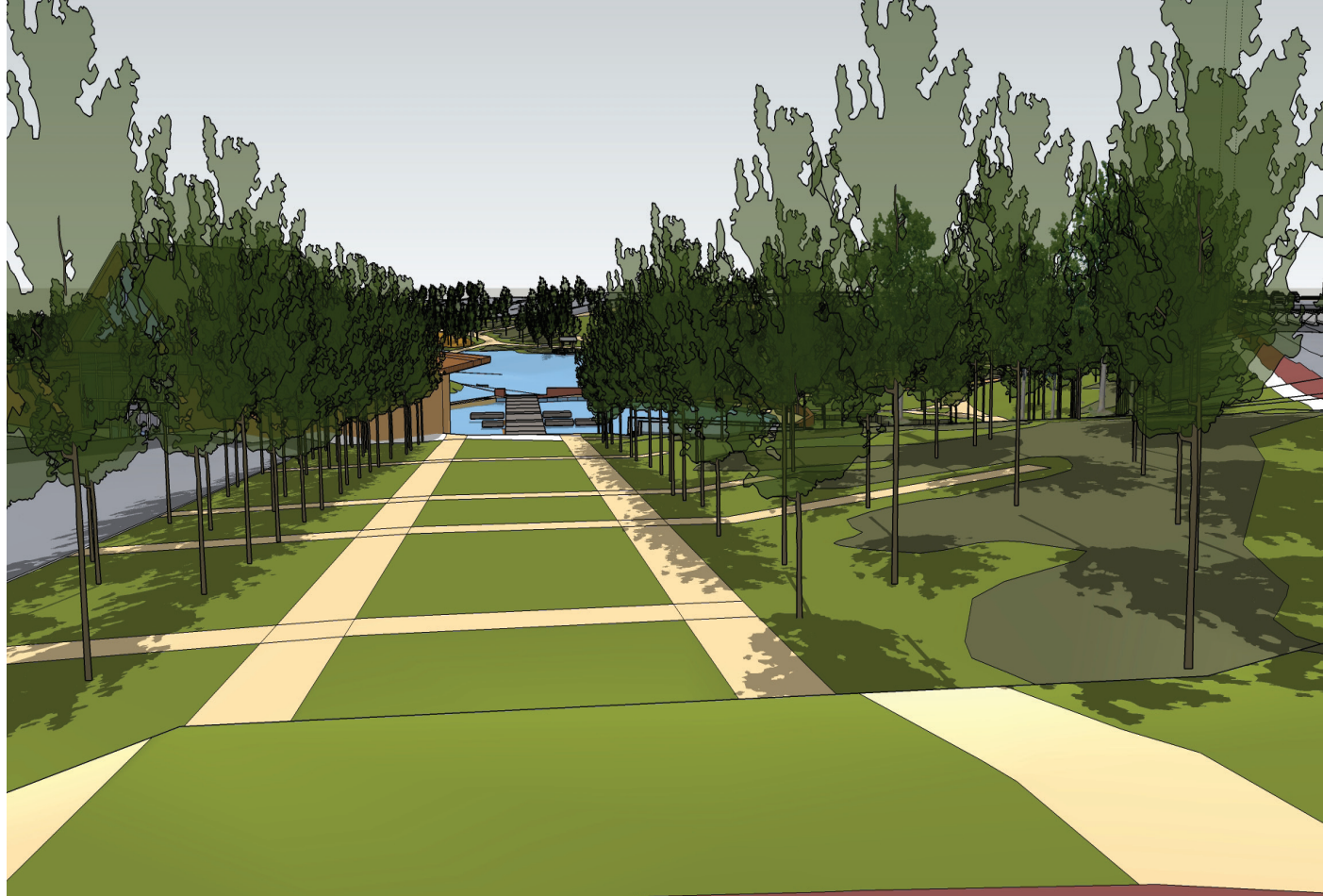
FORMAL WALKS AND GARDENS

Stemming from the new ceremonial entrance plaza will be an expansive formal garden area with 10' walks, allee of trees, specimen plantings and 20' wide open lawn between formal garden plantings. Memorials or sculptures may adorn these areas showing off the traditional garden features. Gardens will be irrigated to reduce maintenance costs and keep the garden spaces in pristine condition.

PARKING

An expanded parking lot is added to provide on-site parking for the park and Pavilion. For large events, additional parking provided across the street in the City Hall lots.





Concept Plan

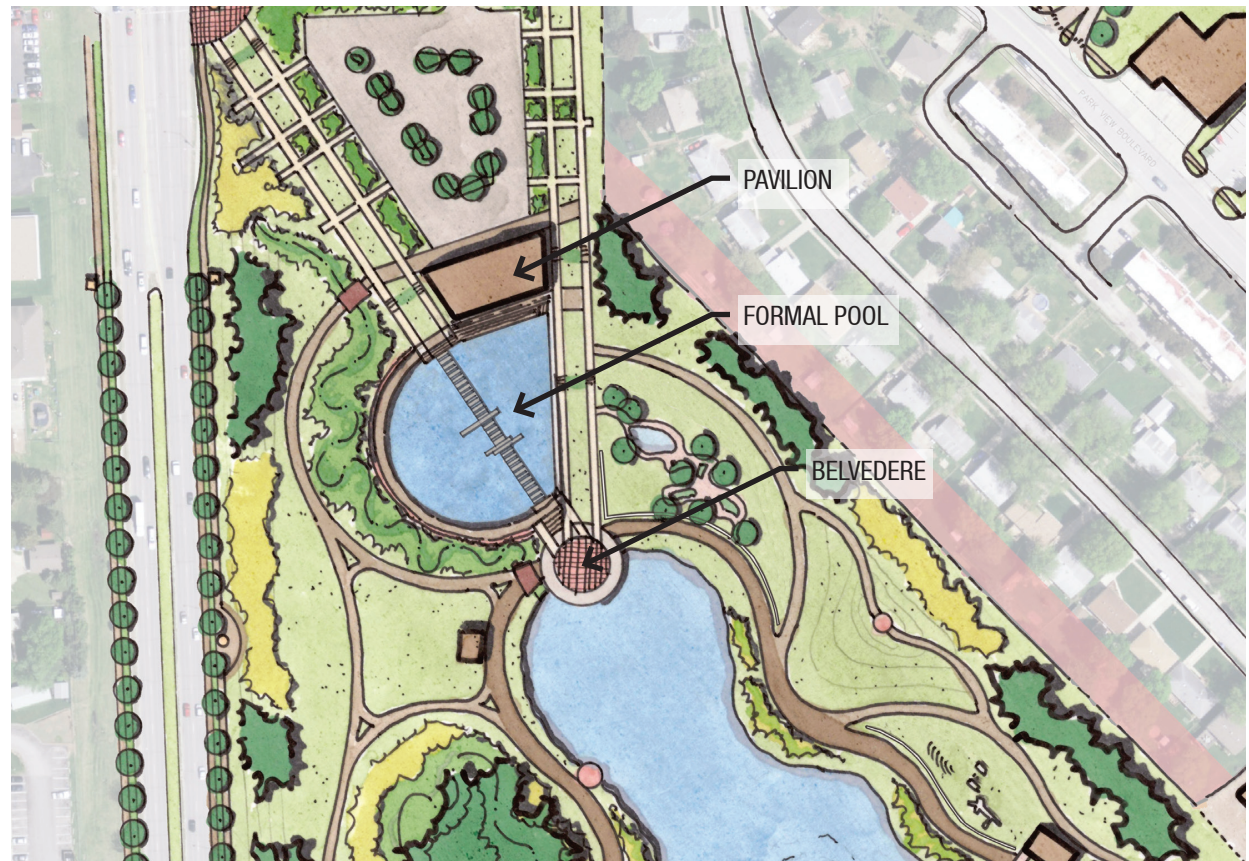
PROGRAM ELEMENTS

PAVILION

The new Pavilion will be a multi-level building with 15' ceilings and 6,400 SF per floor. The 12,800 SF building will have space available for a 250-300 person seated event, reception, conference, or City activity. A variety of rental spaces will be available to accommodate multiple groups, with the option for a balcony to overlook the formal pool. The Pavilion will house a full kitchen and restrooms to cater large or small events and a walk-out basement leads to a terrace adjacent to the formal pool. The Pavilion will have a rugged yet contemporary architectural style and showcase limestone, timber framing, clean lines and large open spaces, functional for many uses. This space will be an anchor to Civic Center Park and an opportunity for rental use.

FORMAL POOL

A formal pool defines the area just to the south of the new Pavilion. This pool is man-made and 1-2' in depth. The change in grade on site demands the pool be inset into the landscape creating an opportunity for a large curving wall showcasing the pools circular edge and creates opportunities for a multi-level water experience. The walls will be constructed out of decorative cast-in-place concrete or stone with corten wrapping the exterior of the walls creating a dramatic display of water cascading over the edge of the pool and up-lit in the evening. The pool will feature large "floating" stepping stones and a dynamic "moving" fountain. An eight-foot-wide walk encompasses the pool and leads to the lower level lake and park trails.



BELVEDERE

The large circular landing that connects the formal pool to the lake will create a central focal point in the park. The placement of a large sculpture or art piece park users can interact with will create the impact needed in this space. The belvedere's minimal contemporary railing will fade into the landscape.





Crossie



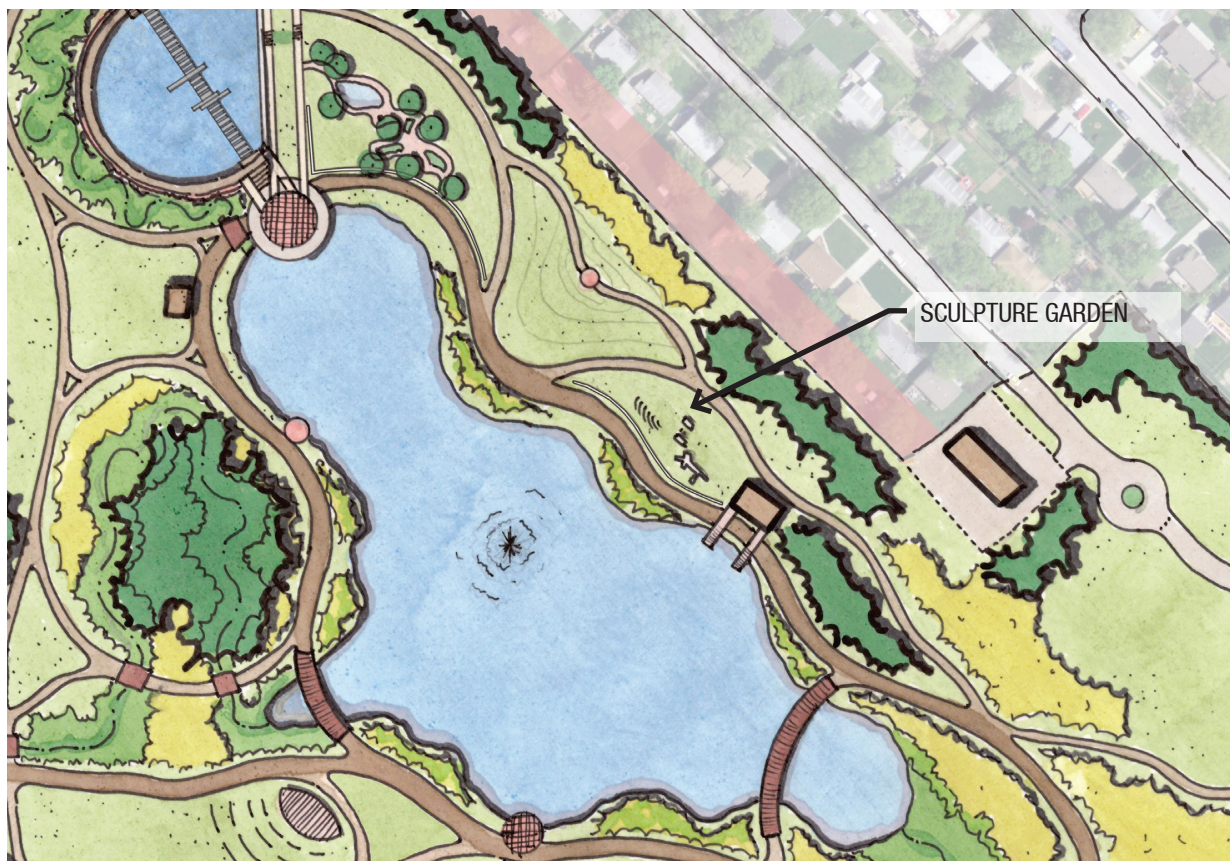


PROGRAM ELEMENTS

NATURE PLAYGROUND

A nature playground will be one of a kind in this region. Civic Center Park offers ample space for a large range of natural programs, imaginative play and large motor skill development in this concept. The playground is elevated above the flood zone by a limestone retaining wall and creates a separation from the nearby lake. Featuring decomposed granite pathways, boulders and logs for climbing, controlled water play, bubbler rocks, shallow pools, sand and dirt play areas, and a recirculating stream, this playground will be a hit for years to come.





PROGRAM ELEMENTS

SCULPTURE GARDEN

The opportunity to tell many stories and engage the minds of all age groups is present in the creation of a sculpture garden. The sculptures may be selected by the city or local art groups and could be on permanent display or rotated out based on a yearly or bi-yearly cycle if opportunities allow. This garden allows for multiple sizes and interaction types with the art and will keep visitors coming back for more. Sculptures are located in the viewshed of the pavilion, boathouse, and shelters. The proximity to amenities in the park will entice park users to visit the sculptures and explore the world of art. This garden is located above the ten-year flood level.

Concept Plan

PROGRAM ELEMENTS

AMPHITHEATER

Performances at Civic Center Park may occur in an amphitheater designed primarily for small musical concerts, movie nights, or small performances, generally up to 200-300 people. The stage will be within the ten-year flood zone and will be designed to withstand semi-frequent flood events. The amphitheater stage will allow for easy hook-ups to sound and electrical service. Grading for the amphitheater will be in a concave bowl shape, with the direction of the audience facing the lake and bridge. Limestone seats / benches are built into the hillside allowing for tiered seating near the stage as well as open adjacent lawn area for additional grass seating. Accessible seating will be provided in the first row for easy access and optimum interaction with the performance.





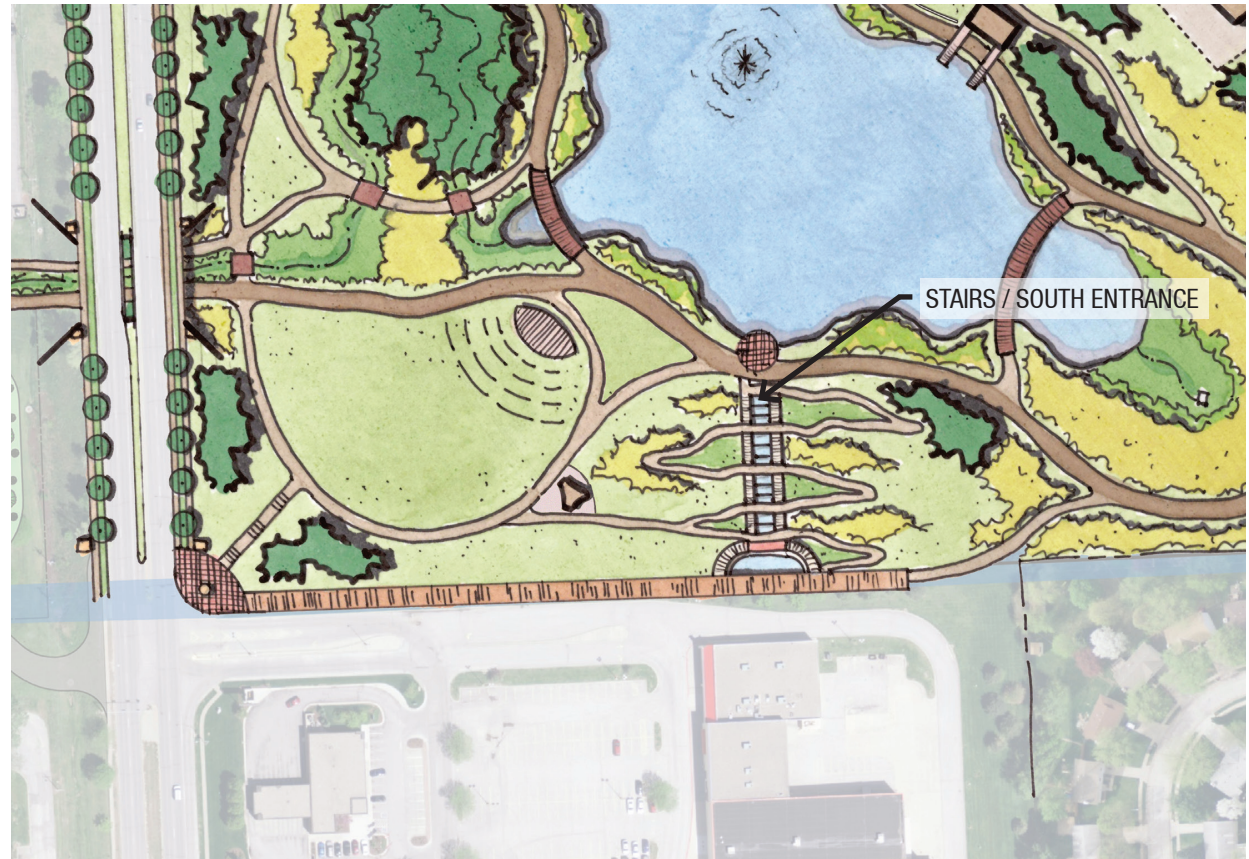
Concept Plan

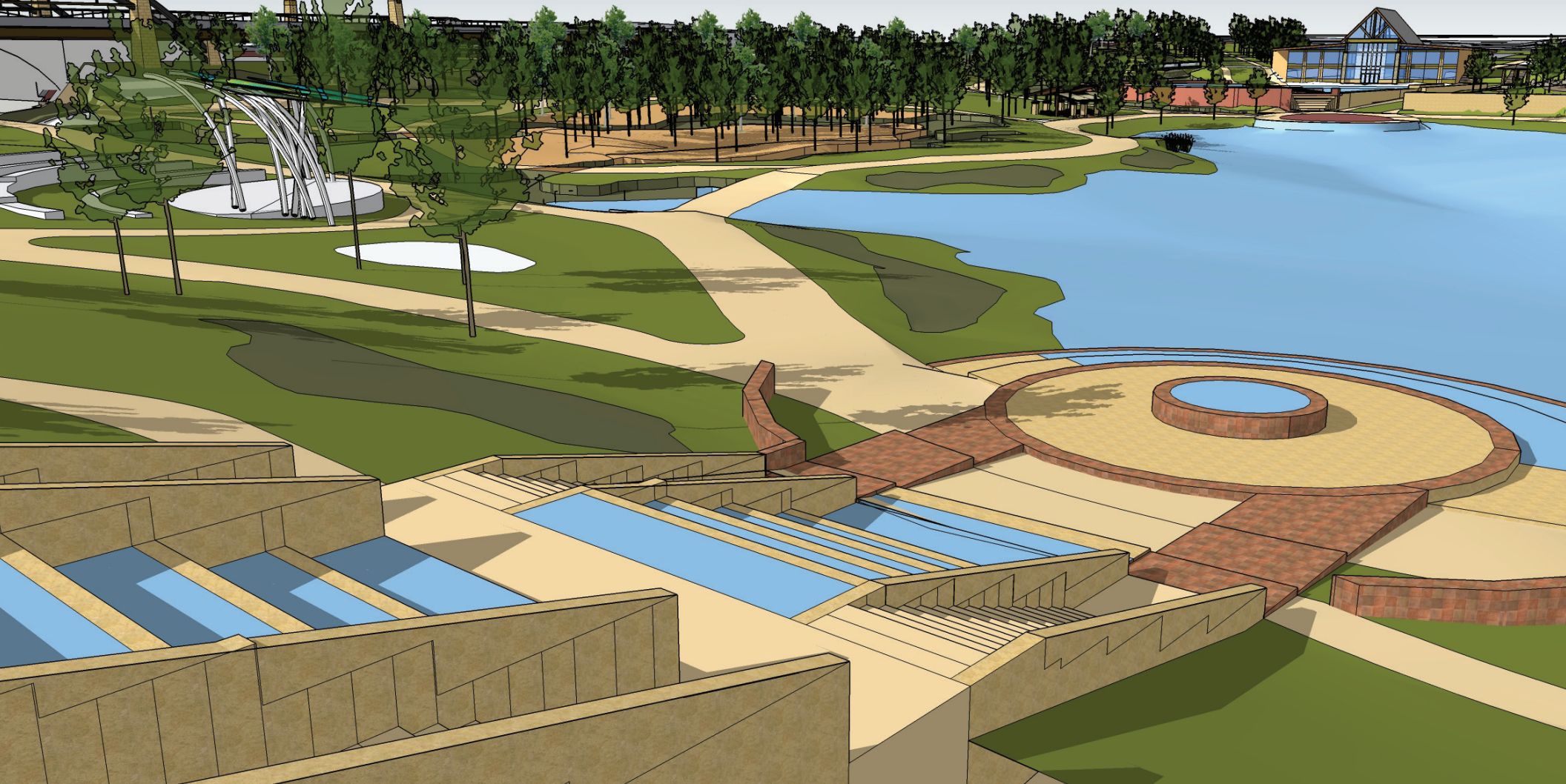
PROGRAM ELEMENTS

STAIRS / SOUTH ENTRANCE

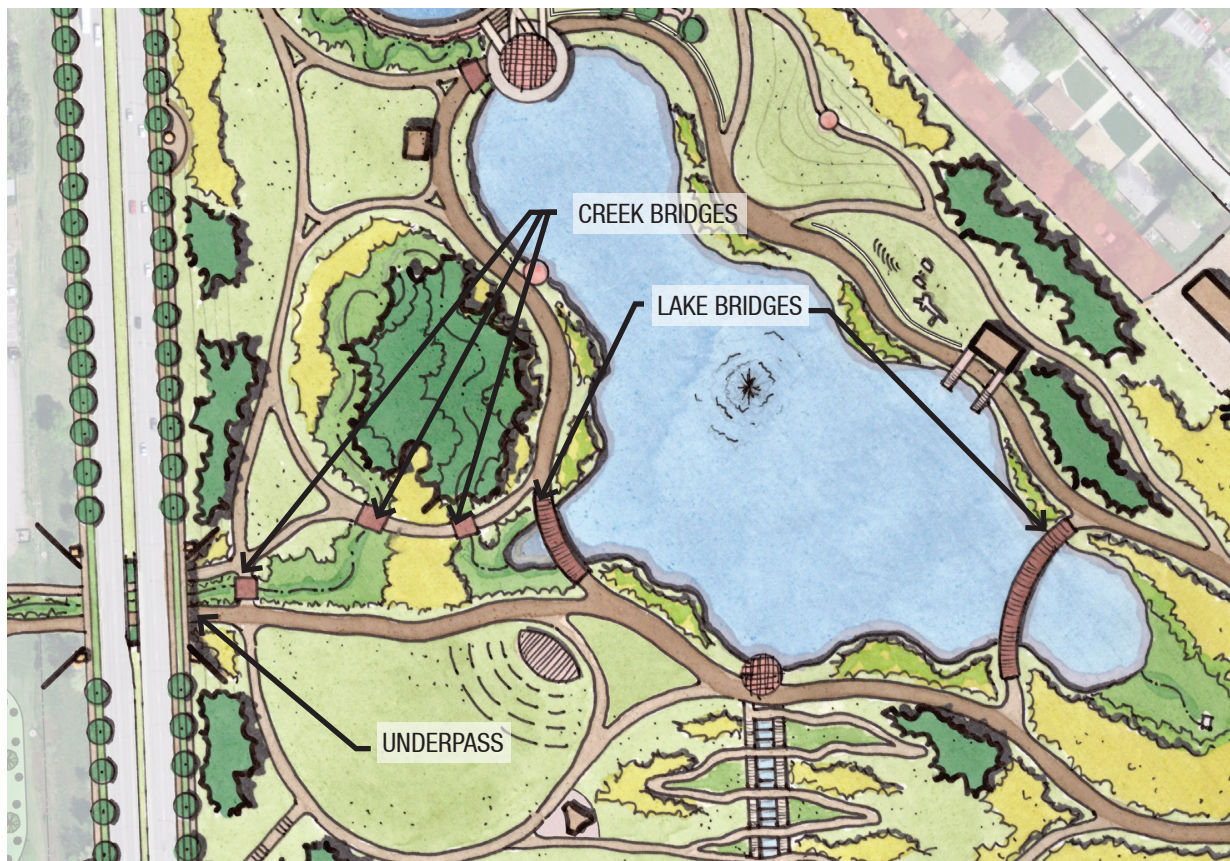
Creating a connection from the new development to the south of Civic Center Park creates many challenges due to the change in grade. The combination of stairs, winding pathways and cascading water is the perfect solution to create a grand entrance on the south side of the park. The stairs and water feature utilize cast-in-place concrete or similar material and will recirculate water to preserve resources. The cascading walls of water will appear to flow directly into the lake creating a relaxing sound of water spilling into the pool. The ADA accessible walkways interact and intersect the primary water feature to ensure that the paths offer the same water connection as the primary staircases.

Note: Due to the fact that this south entrance is highly dependant on the design and use of the adjacent property, this phase will be funded, designed, and constructed in concert with the redevelopment project.









PROGRAM ELEMENTS

LAKE BRIDGES

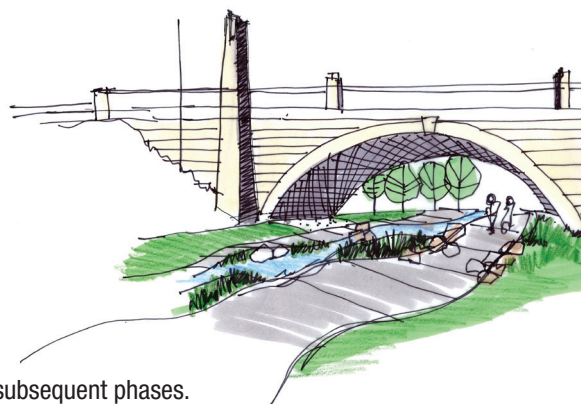
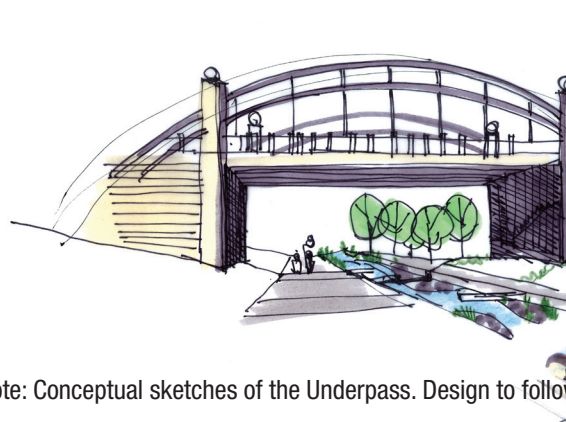
Two bridges are added around the lake to provide access to the water. A smaller bridge on the west side of the lake is approximately 100' in length, while the east bridge is approximately 180' feet in length. The bridges will be twenty feet wide and have railings with artistic lighting to add interest at night.

CREEK BRIDGES

The bridges crossing the creek will emulate the larger bridges and display similar material choices, and have a 10' width.

UNDERPASS

The underpass is a key feature in the connection of the park to adjacent neighborhoods to the west of Civic Center Park. The underpass may be constructed from a pre-cast concrete bridge system, such as Contech's Bebo Arch system, an arch keystone bridge style. The bridge may also showcase a rectangular underpass exposing the structural members of the bridge and creating a larger underpass space. The bridge is anticipated to be clad in decorative stone to match the other stone used in Civic Center Park.



Note: Conceptual sketches of the Underpass. Design to follow in subsequent phases.

Concept Plan

PROGRAM ELEMENTS

STRUCTURES

BOAT HOUSE

A two-story building situated in the eastern slope of the lake will house storage for rental boats and boating equipment. The upper level of the boat house is an open shelter and acts as a viewing platform for the lake. An enclosed ticketing booth and rest rooms would be constructed within this shelter. The ground floor is within the 10-year flood level. Adjacent to the boat house are docks for 8-12 boats, constructed from recycled plastic decking.

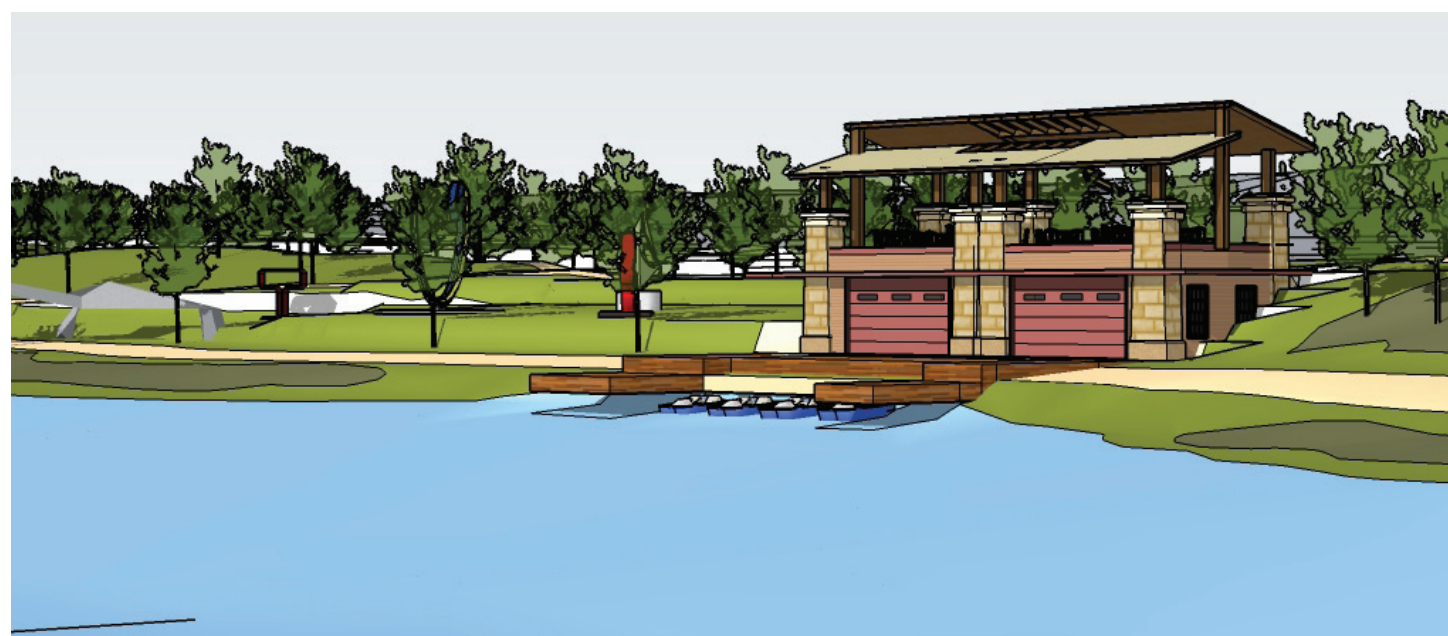
PARK SHELTERS

Several park shelters are located around the site to provide shade, seating, and picnic areas. The shelters may range in size based on their programmatic use. Site amenities near the shelters include picnic tables, grills, litter receptacles, and additional seating. Electrical access may be an additional feature to include in the park shelter. The aesthetics of the structures will match those of the pavilion and boathouse: rugged contemporary.

CONCESSION STAND

A small enclosed building with electrical power will offer concessions and rest room facilities for many of Civic Center Park's events. The structure is located beyond the ten-year flood zone. The use of tables, chairs, vegetated planters and litter receptacles will be placed near the concession stand for use in the summertime.





Concept Plan

PROGRAM ELEMENTS

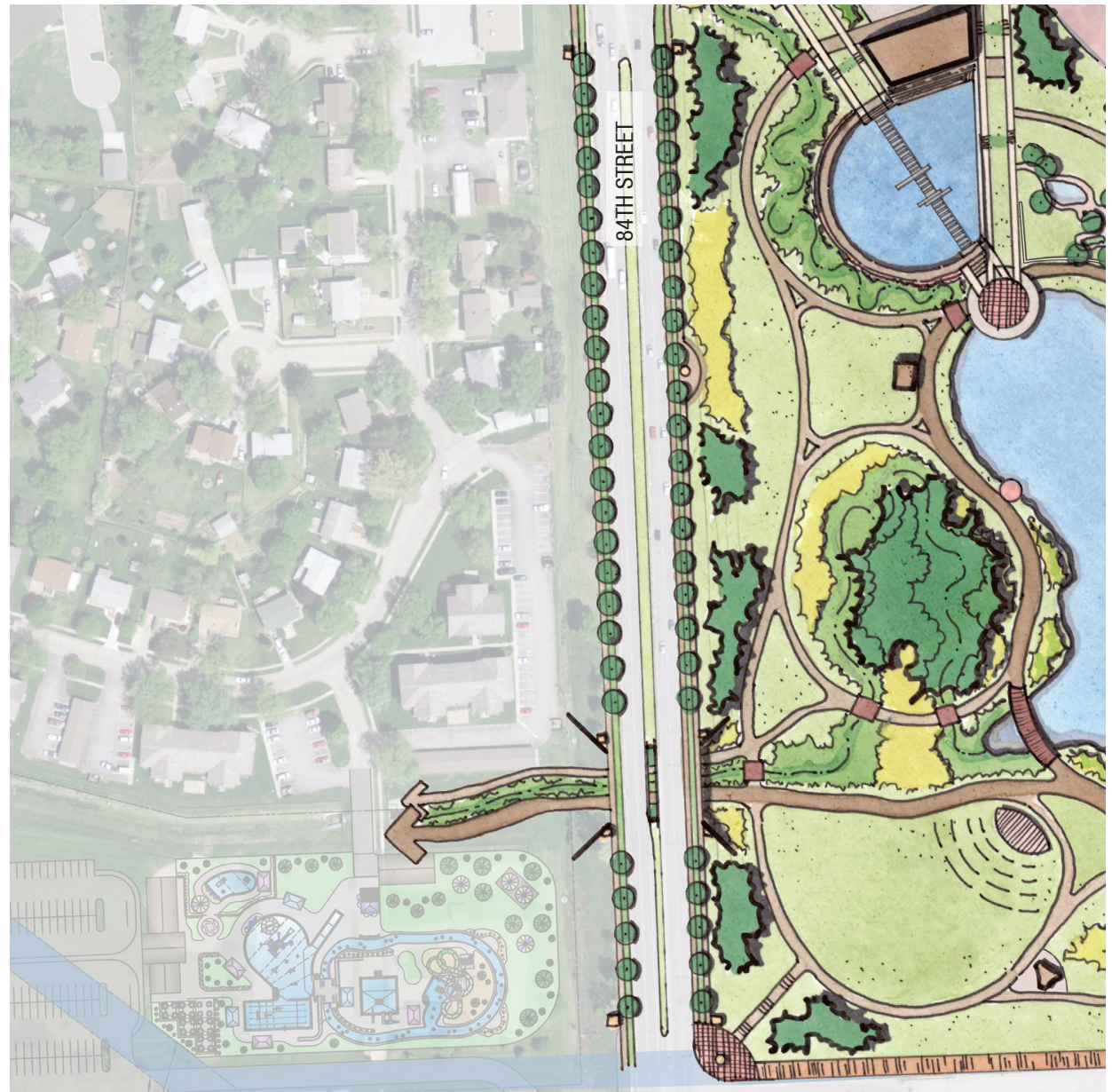
84TH STREET IMPROVEMENTS

Creating an improved street section near Civic Center Park will not only enhance the area, but create additional interest and excitement for 84th Street users. A small overlook located near the center of the park will provide a vantage point from the 84th Street walkway. Within this space a small structure, interpretive signage, or an icon may be present for interaction with the park. The typical sidewalk section includes:

- A 6-8' cobblestone buffer on the back of curb
- A 4-6' turf zone with trees planted at a regular interval
- A 6-8' concrete sidewalk
- A decorative railing

TRAILS

Primary walkways will be an 18' wide concrete trail. The primary walkways will feature a one-foot concrete paver band dissecting the trail into a 6' wide bike lane and 11' pedestrian trail. Periodic signage will help enforce the separated use within one trail. Secondary concrete walkways will be 10' in width and serve as a shared multipurpose trail.





Concept Plan

PROGRAM ELEMENTS

CENTRAL PARK ROADWAY

The roadway in Central Park connects the existing entrance to Park View Blvd in Flagpole Park. The 24' concrete roadway includes off-road parking bays to provide more efficient parking in key areas. The roadway will be graded to allow for shoulder parking if needed. A new pedestrian and vehicular bridge will improve the circulation into Central Park and over Thompson Creek. The roadway in Central Park connects the existing entrance to Park View Blvd in Flagpole Park.

LA VISTA DAZE FESTIVAL LAWN

The yearly celebration occurs within Central Park and has outgrown its current space. The creation of a new drive between the right-of-way on 78th Street to Valley Road will provide truck access to the park for La Vista Daze. Each end of the drive is closed off with removable bollards to control vehicular access into the site. The cul-de-sac at the end of Valley Road is moved into the park to allow vehicles to actually see the park and to provide additional vendor space for the yearly celebration. The berm constructed near the property line is expanded to allow for larger flat spaces for carnival rides.





Concept Plan

PROGRAM ELEMENTS

THE LAKE

The proposed lake edge is roughly 2,500 linear feet long, around the roughly 5 acre lake. The lake depth will be between eight and twelve feet in order to provide enough depth for proper fish habitat. The lake edge will include a range of edge treatments:

- Hard/man-made edges will be utilized where pedestrian access to the water is paramount, specifically along the water overlooks and belvedere. In these areas, the water depth at the lake edge will be deeper than three feet in order to keep down unwanted plant material.
- Transition zones with a narrow band of native plant material will be the most common lake edge. These zones are designed to treat the surface runoff coming into the lake from the surrounding park and will help to reduce the quantity of Canada geese which tend to inhabit similar parks.
- Natural edges will be used on the southeast corner, close to the flood control structure. These are areas where there is limited or no pedestrian access to the lake and the native vegetation could help in water treatment.

STREAM RESTORATION

The stream will be rehabilitated to bring back stream health, viability, plant and animal habitat, and reduce erosion. Where space is available, the stream will have a pool – riffle – pool – riffle configuration to help foster the best possible habitat for stream plants and animals. The design distance between pools is roughly 120' – a number defined by analyzing the original Thompson Creek stream before development.

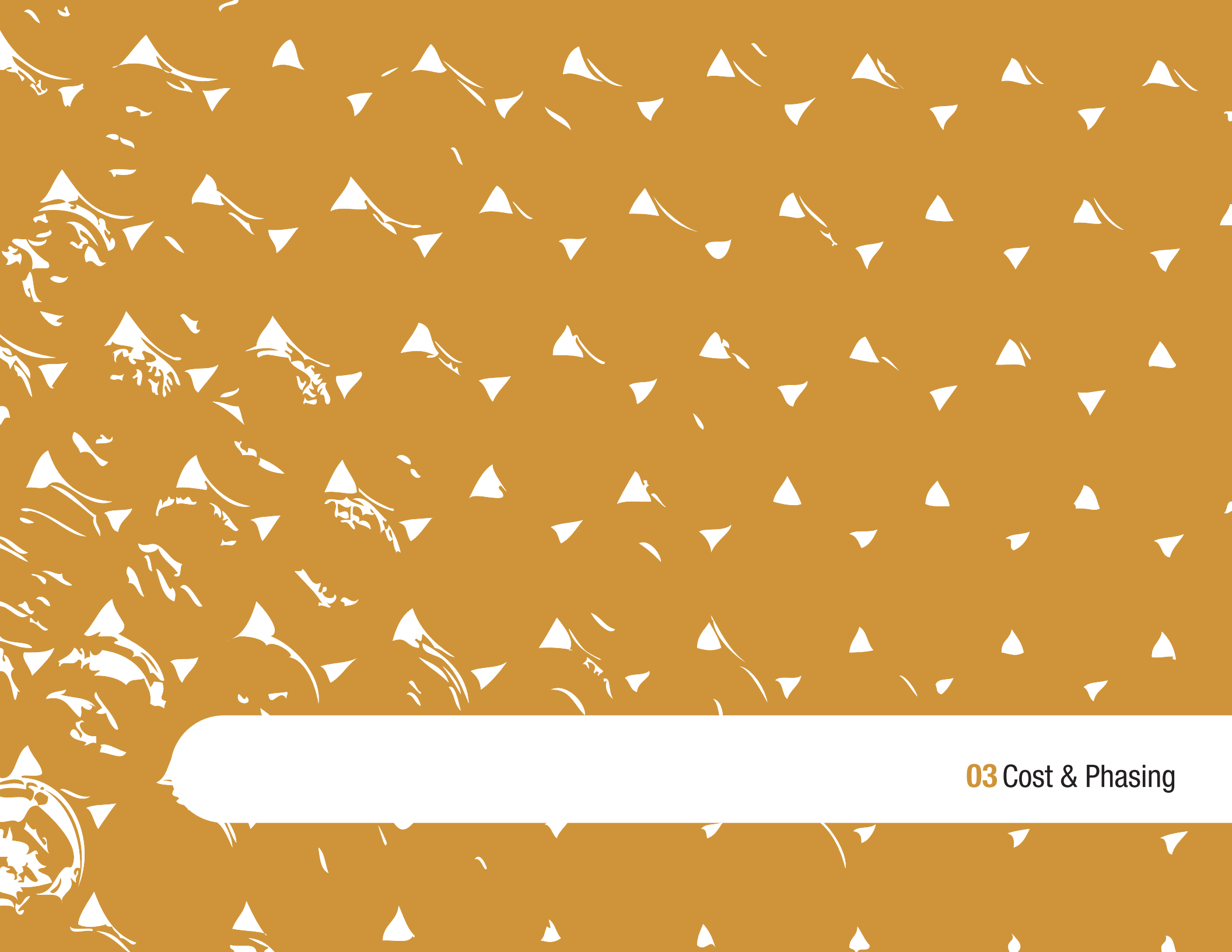


On either side of the creek, a series of wide shelves will be built into the banks to help stabilize the slope and provide additional room for trails. The slope for the banks is targeted at 4:1 (one foot of vertical rise in four feet of horizontal run), where space was available. Along the north sides, where the stream abuts private residences, that slope must not exceed a 3:1 slope, without engineered slopes.

The biggest limiting factor in the width of the creek and its shelves is the private residences on the northeast side and the petroleum easement on the southwest.

Most of the existing creek that runs through Central Park is actually in the backyards of the private residences. Temporary construction easements will be necessary to pull the stream back into the park (where it was historically) and to rebuild the backyards of the residences. Grading on the petroleum easement must be minimal at best, and cutting into the easement will not be possible.





03 Cost & Phasing

TIMING

The recommended improvements identified in this plan are anticipated to be implemented over time. Some recommendations require more detailed planning and design which would extend their implementation. Projects that require less planning and design and can be done with limited funds may be completed earlier.

PRIORITIES

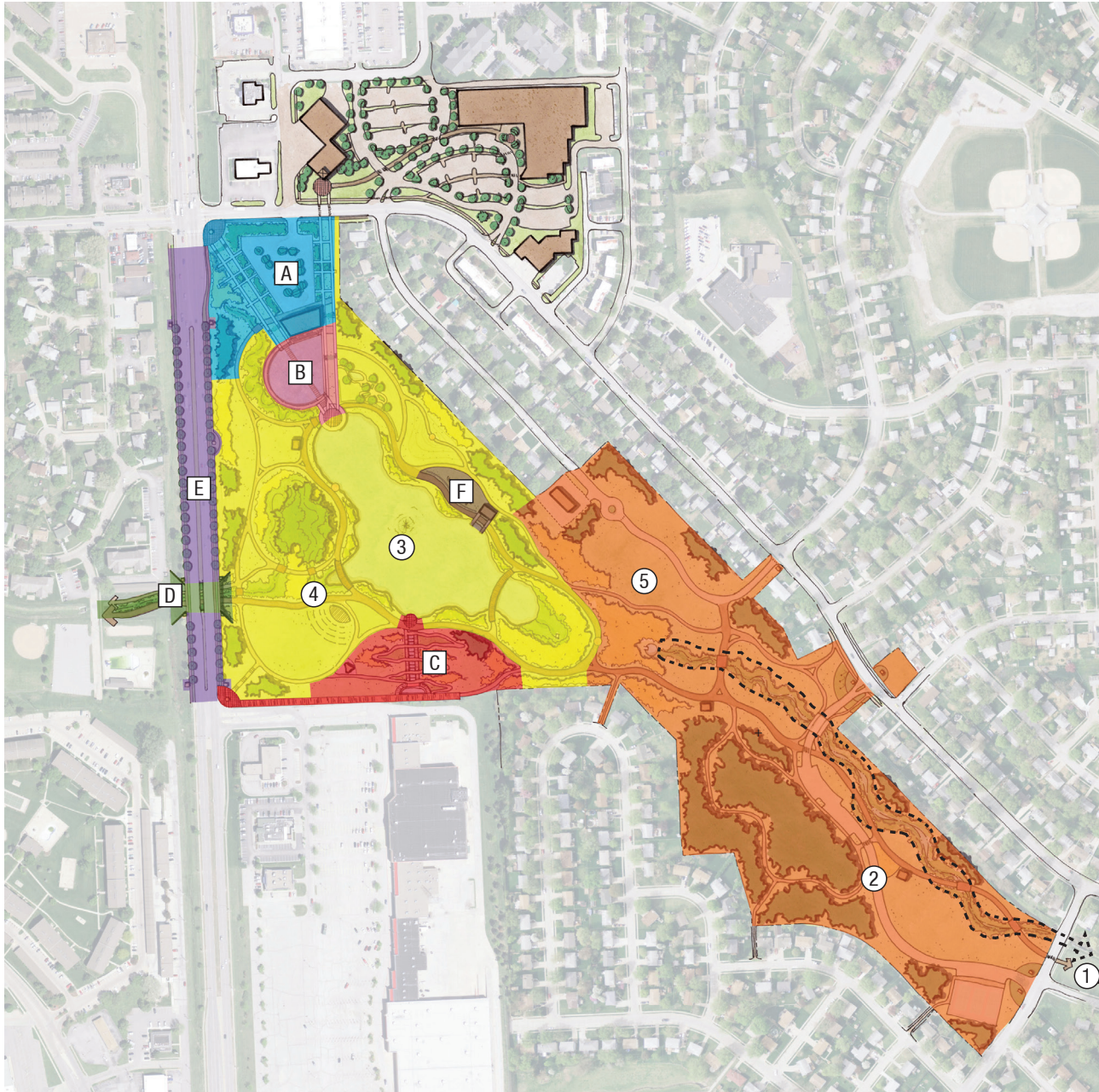
Higher priorities are assigned to those recommendations that are more responsive to the goals of the plan. Projects related to stream restoration have a higher priority. Additionally, those projects that improve park accessibility and generate increased revenues are considered a higher priority.

COST ESTIMATES

Cost estimates have been developed for each recommendation within this plan. These estimates are intended for budget planning efforts only and will be updated over time. Project design and contract administration costs are included in these estimates. The following cost estimates are summarized by category. Projected costs for implementing this plan range from \$600,000 - 7.5 million per project phase. These estimates are current year costs and do not reflect future year inflation. Projects completed in-house may result in cost savings. Annual operations and maintenance costs associated with the existing facilities are not included in these estimates. More detailed cost estimates will be developed when planning and design is completed on individual projects and as funding becomes available.

Note:

The redesigned City Hall Complex & South Redevelopment area are not included in the phasing or cost estimates. These projects are shown in this document as potential master plan improvements but are not integral to the park's success.



CIVIC CENTER PARK PHASING OPTIONS

Stream Restoration

PLANNED PHASES

- ① Stream Amenities – Edgewood Blvd to 72nd Street
- ② Central Park – Basic Park Replacements
- ③ Civic Center Park – Lake Construction, Grading & Utilities
- ④ Civic Center Park – Shelters, Amphitheater & Playgrounds
- ⑤ Central Park – Replacements & Enhancements

FUTURE PHASES

- A Northwest Entry & Pavilion
- B Formal Pool & Belvedere Memorial
- C Connection to Southern Redevelopment
- D Underpass Improvements
- E 84th Street Streetscape Adjacent to Civic Center Park
- F Boathouse & Sculpture Garden



Project Number: 2011.519.00
April 22, 2013

Costs & Phasing

PHASING STRATEGY

Description		
PHASING STRATEGY		
CURRENT PHASE		
Stream Restoration - Central Park to 72nd Street		
PLANNED PHASES		
1: Stream Amenities - Edgewood Blvd to 72nd Street		
2: Central Park - Basic Park Replacements		
3: Civic Center Park - Lake Construction, Grading & Utilities		
4: Civic Center Park - Shelters, Amphitheater & Playgrounds		
5: Central Park - Replacements & Enhancements		
FUTURE PHASES		
A: Northwest Entry & Pavilion		
B: Formal Pool & Belvedere Memorial		
C: Connection to Southern Redevelopment		
D: Underpass Improvements		
E: 84th Street Streetscape Adjacent to Civic Center Park		
F: Boathouse & Sculpture Garden		

1: STREAM AMENITIES - EDGEWOOD BLVD TO 72ND STREET

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal	Restoration Funds
STREAM AMENITIES - EDGEWOOD BLVD TO 72ND STREET					
MOBILIZATION & DEMOLITION					
Mobilization (5% of the Phase Total)	1	LS	\$25,000	\$25,000	
	SUBTOTAL			\$25,000	
STREAM RESTORATION					
Stream Restoration	3,000	LF	\$464		\$1,392,000
	SUBTOTAL				\$1,392,000
HARDSCAPE					
10' wide trail	3,000	LF	\$54	\$162,000	
Limestone Access Points	3	EA	\$3,000	\$9,000	
	SUBTOTAL			\$171,000	
SITE AMENITIES					
Lighted Bollards	3,000	LF	\$42	\$126,000	
Interpretive Lighted Bollards	16	EA	\$6,000		\$96,000
Trail Signage	1	LS	\$24,000	\$24,000	
Site Furniture	1	LS	\$40,000	\$40,000	
	SUBTOTAL			\$190,000	\$96,000
LANDSCAPE					
Plantings (In addition to habitat restoration)	1	LS	\$60,000	\$60,000	
	SUBTOTAL			\$60,000	\$0
PHASE SUBTOTAL				\$446,000	\$1,488,000
STANDARD SOFT COSTS *				\$111,500	
CURRENT PHASE COST				\$557,500	\$1,488,000

NOTE:

All costs are in 2013 U.S. Dollars

Standard Soft Costs include design, construction service fees, administrative fees, and contingency

Cost includes all items necessary to restore stream: grading, engineered structures, and plantings

Phasing & Costs

2: CENTRAL PARK - BASIC PARK REPLACEMENTS

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
CENTRAL PARK - BASIC PARK REPLACEMENTS				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$95,000	\$95,000
Structures	1	LS	\$100,000	\$100,000
Pavements and Utilities	1	LS	\$175,000	\$175,000
			SUBTOTAL	\$370,000
HARDSCAPE				
Impervious Trails	5,400	SY	\$40	\$216,000
Pervious Trails	2,000	SY	\$80	\$160,000
Trail Bridges	3	EA	\$30,000	\$90,000
			SUBTOTAL	\$466,000
UTILITIES & GRADING				
Utilities to Restroom	1	LS	\$50,000	\$50,000
Sanitary Sewer Relocating	1,466	LF	\$45	\$65,970
Sanitary Sewer Manhole Construction	5	EA	\$3,000	\$15,000
Site Grading: moving dirt on site	15,000	CY	\$2.50	\$37,500
			SUBTOTAL	\$168,500
SITE IMPROVEMENTS				
Roadway & Parking	7,900	SY	\$60	\$474,000
Culvert Bridge over Creek	1	ALLOW	\$150,000	\$150,000
New Restroom Building	1,000	SF	\$270	\$270,000
Prairie Planting	4	AC	\$5,000	\$20,000
Turf Seeding	7	AC	\$1,500	\$10,500
			SUBTOTAL	\$924,500
PHASE SUBTOTAL				\$1,929,000
STANDARD SOFT COSTS *				\$482,300
CURRENT PHASE COST				\$2,411,300

NOTE:

All costs are in 2013 U.S. Dollars

Standard Soft Costs include design, construction service fees, administrative fees, and contingency

3: CIVIC CENTER PARK - LAKE CONSTRUCTION, GRADING & UTILITIES

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
CIVIC CENTER PARK - LAKE CONSTRUCTION, GRADING & UTILITIES				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$100,000	\$100,000
Structures (Restroom & Shelters)	1	ALLOW	\$50,000	\$50,000
Pavements and Utilities	157,500	SF	\$2	\$236,250
		SUBTOTAL		\$386,300
UTILITIES & GRADING				
Outflow Structure	1	ALLOW	\$30,000	\$30,000
Site Grading: moving dirt on site	126,000	CY	\$2.50	\$315,000
Haul Off Excess Cut**	73,200	CY	\$6	\$439,200
		SUBTOTAL		\$784,200
SITE IMPROVEMENTS				
Shoreline Treatment	2,500	LF	\$30	\$75,000
Water Supply Modifications	1	ALLOW	\$90,000	\$90,000
Extend Existing Storm Sewer & Bioretention	4,000	LF	\$50	\$200,000
Impervious Loop Trail around Lake	5,530	SY	\$40	\$221,200
Lighting around Loop Trail	2,742	LF	\$42	\$115,200
Prairie Planting	22	AC	\$5,000	\$110,000
Turf Seeding	13	AC	\$1,500	\$19,500
Lake Aerator	1	ALLOW	\$75,000	\$75,000
Fountain in Lake	1	ALLOW	\$50,000	\$50,000
		SUBTOTAL		\$955,900
PHASE SUBTOTAL				\$2,126,400
STANDARD SOFT COSTS *				\$531,600
CURRENT PHASE COST				\$2,658,000

NOTE:

All costs are in 2013 U.S. Dollars

Standard Soft Costs include design, construction service fees, administrative fees, and contingency

** Potential for cost reduction due to local projects that may need additional soil

Costs & Phasing

4: CIVIC CENTER PARK - SHELTERS, AMPHITHEATER & PLAYGROUNDS

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
CIVIC CENTER PARK - SHELTERS, AMPHITHEATER & PLAYGROUNDS				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$275,000	\$275,000
Pavements and Utilities	1	LS	\$50,000	\$50,000
			SUBTOTAL	\$325,000
UTILITIES & GRADING				
Site Lighting	16	AC	\$30,000	\$465,000
Electrical System Improvements	1	ALLOW	\$100,000	\$100,000
Site Grading	1	LS	\$250,000	\$250,000
Seasonal Lighting	1	ALLOW	\$120,000	\$120,000
			SUBTOTAL	\$935,000
HARDSCAPE				
Impervious Trails	5,000	SY	\$40	\$200,000
Pervious Trails	3,000	SY	\$80	\$240,000
Access to SW Corner & 84th Street	1	LS	\$50,000	\$50,000
Short Lake Bridge - 100' long, 18' wide	1,800	SF	\$250	\$450,000
Long Lake Bridge - 180' long, 10' wide	1,800	SF	\$200	\$360,000
Trail Bridges - 10' wide x 25' long	3	EA	\$30,000	\$90,000
			SUBTOTAL	\$1,390,000
AMPHITHEATER				
Stage & Canopy	2,250	SF	\$150	\$337,500
Electrical Service	666	LF	\$39	\$25,974
Water Service	666	LF	\$58	\$38,628
Sanitary Sewer Service	666	LF	\$88	\$58,608
Pavers	150	SY	\$60	\$9,000
Concession Building (restrooms & maintenance)	1,800	SF	\$310	\$558,000
Site Furniture around Concession Building	1	ALLOW	\$30,000	\$30,000
Amphitheater Terracing	519	LF	\$200	\$103,800
Electrical and Sound System	1	ALLOW	\$100,000	\$100,000
			SUBTOTAL	\$1,261,600
NATURE PLAYGROUND				
Retaining Walls - Precast Unit	2,400	SFF	\$30	\$72,000
Nature Playground	1	ALLOW	\$490,000	\$490,000
			SUBTOTAL	\$562,000

4: CIVIC CENTER PARK - SHELTERS, AMPHITHEATER & PLAYGROUNDS - CONTINUED

Preliminary Opinion of Probable Construction Costs

SITE AMENITIES				
40 x 60' Park Shelter	1	ALLOW	\$250,000	\$250,000
20 x 30' Park Shelter	2	EA	\$60,000	\$120,000
Site Furniture	1	ALLOW	\$250,000	\$250,000
	SUBTOTAL			\$620,000
LANDSCAPE				
Irrigation System	1	ALLOW	\$300,000	\$300,000
Deciduous Shade Trees	350	EA	\$535	\$187,250
Landscaping	1	ALLOW	\$230,000	\$230,000
Turf Seeding	7	AC	\$1,500	\$10,200
	SUBTOTAL			\$727,500
PHASE SUBTOTAL				\$5,821,100
STANDARD SOFT COSTS *				\$1,455,300
CURRENT PHASE COST				\$7,276,400

NOTE:

All costs are in 2013 U.S. Dollars

Standard Soft Costs include design, construction service fees, administrative fees, and contingency

Costs & Phasing

5: CENTRAL PARK - REPLACEMENTS & ENHANCEMENTS

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
CENTRAL PARK - REPLACEMENTS & ENHANCEMENTS				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$75,000	\$75,000
Pavements and Utilities	1	LS	\$50,000	\$50,000
			SUBTOTAL	\$125,000
UTILITIES & GRADING				
Site Lighting	1	ALLOW	\$225,000	\$225,000
Site Grading	1	LS	\$50,000	\$50,000
La Vista Daze Electric Distribution	1	ALLOW	\$50,000	\$50,000
Seasonal Lighting Distribution	1	ALLOW	\$45,000	\$45,000
			SUBTOTAL	\$370,000
SITE AMENITIES				
20 x 30' Park Shelter	2	EA	\$60,000	\$120,000
Entrance Markers	6	EA	\$40,000	\$240,000
Site Furniture	1	ALLOW	\$50,000	\$50,000
Playground	1	ALLOW	\$90,000	\$90,000
Discovery Playground (in creek)	1	ALLOW	\$50,000	\$50,000
Spillway Enhancements	1	ALLOW	\$75,000	\$75,000
Flagpoles	3	EA	\$5,000	\$15,000
Maintenance Building Renovation	1	ALLOW	\$80,000	\$80,000
Tennis Court Rehabilitation	1	ALLOW	\$25,000	\$25,000
			SUBTOTAL	\$745,000
LANDSCAPE				
Irrigation System for Lawn Areas	120,000	SF	\$1	\$120,000
Deciduous Shade Trees	150	EA	\$535	\$80,250
Landscaping North of Park View Blvd Entry	1	ALLOW	\$20,000	\$20,000
Landscaping	1	ALLOW	\$110,000	\$110,000
Turf Seeding	9	AC	\$1,500	\$13,050
			SUBTOTAL	\$343,300
PHASE SUBTOTAL				\$1,583,300
STANDARD SOFT COSTS *				\$395,900
CURRENT PHASE COST				\$1,979,200

NOTE:

All costs are in 2013 U.S. Dollars

Standard Soft Costs include design, construction service fees, administrative fees, and contingency

Description	Quantity	Unit	Unit Cost	Subtotal
NORTHWESET ENTRY & PAVILION				
MOBILIZATION & DEMOLITION				
Property Acquisition	1	ALLOW	\$650,000	\$650,000
			SUBTOTAL	\$650,000
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$285,000	\$285,000
Pavements and Utilities	1	LS	\$15,000	\$15,000
Demolition (Clubhouse)	1	LS	\$50,000	\$50,000
			SUBTOTAL	\$350,000
UTILITIES & GRADING				
Site Lighting	1	ALLOW	\$220,000	\$220,000
Electrical Service to Pavilion	345	LF	\$39	\$13,455
Water Service to Pavilion	345	LF	\$58	\$20,010
Sanitary Sewer to Pavilion	345	LF	\$88	\$30,360
Site Grading: moving dirt on site	8,000	CY	\$2.50	\$20,000
Haul Off Excess Cut **	7,000	CY	\$6	\$42,000
Stormwater System for Parking Lot	1	ALLOW	\$175,000	\$175,000
Seasonal Lighting Distribution	1	ALLOW	\$55,000	\$55,000
			SUBTOTAL	\$575,900
HARDSCAPE				
Parking Lot Pavement	4,750	SY	\$50	\$237,500
Impervious Trails	3,000	SY	\$40	\$120,000
Pervious Trails	1,000	SY	\$80	\$80,000
Stairs	1,600	LFN	\$50	\$80,000
Trail Bridges	2	EA	\$30,000	\$60,000
			SUBTOTAL	\$577,500
PAVILION				
13,000 SF Building	13,000	SF	\$250	\$3,250,000
Patio and Stairs	2,600	SF	\$60	\$156,000
			SUBTOTAL	\$3,406,000
NW ENTRANCE				
Conc. Pavers	450	SY	\$60	\$27,000
			SUBTOTAL	\$27,000
LANDSCAPE				
Irrigation System	90,000	SF	\$1	\$90,000
Deciduous Shade Trees	150	EA	\$535	\$80,250
Landscaping	1	ALLOW	\$170,000	\$170,000
Turf Seeding	3	AC	\$1,500	\$4,500
			SUBTOTAL	\$344,800

A: NORTHWEST ENTRY & PAVILION

Preliminary Opinion of Probable Construction Costs

Costs & Phasing

A: NORTHWEST ENTRY & PAVILION - CONTINUED

Preliminary Opinion of Probable Construction Costs

PHASE SUBTOTAL		\$5,931,200
STANDARD SOFT COSTS *		\$1,482,800
CURRENT PHASE COST		\$7,414,000

NOTE:

All costs are in 2013 U.S. Dollars

Standard Soft Costs include design, construction service fees, administrative fees, and contingency

** Potential for cost reduction due to local projects that may need additional soil.

B: FORMAL POOL & BELVEDERE MEMORIAL

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
FORMAL POOL & BELVEDERE MEMORIAL				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$165,000	\$165,000
Pavements and Utilities	1	LS	\$15,000	\$15,000
			SUBTOTAL	\$180,000
FORMAL POOL				
Site Grading	1	ALLOW	\$25,000	\$25,000
Retaining Walls	460	LF	\$600	\$276,000
Sidewalks	390	SY	\$40	\$15,600
Lighting	1	ALLOW	\$50,000	\$50,000
Stairs	640	LFN	\$50	\$32,000
Water Walk	3,000	SF	\$20	\$60,000
Pool Construction	31,500	SF	\$50	\$1,575,000
Pool Feature, waterfall, etc.	1	ALLOW	\$750,000	\$750,000
			SUBTOTAL	\$2,783,600
BELVEDERE				
Conc. Pavers	294	SY	\$60	\$17,640
Conc. Pavement	290	SY	\$60	\$17,400
Flagpole	1	ALLOW	\$5,000	\$5,000
Donor Recognition	1	ALLOW	\$7,000	\$7,000
Site Furniture	1	ALLOW	\$75,000	\$75,000
Lighting	1	ALLOW	\$150,000	\$150,000
Central Focal Element (art, fountain, memorial)	1	ALLOW	\$200,000	\$200,000
			SUBTOTAL	\$472,100
PHASE SUBTOTAL				\$3,435,700
STANDARD SOFT COSTS *				\$859,000
CURRENT PHASE COST				\$4,294,700

NOTE:

All costs are in 2013 U.S. Dollars

Standard Soft Costs include design, construction service fees, administrative fees, and contingency

Costs & Phasing

Description	Quantity	Unit	Unit Cost	Subtotal
CONNECTION TO REDEVELOPMENT PROJECT				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$115,000	\$115,000
Pavements and Utilities	1	LS	\$15,000	\$15,000
			SUBTOTAL	\$130,000
UTILITIES & GRADING				
Burying Transmission Lines	1	ALLOW	\$750,000	\$750,000
Site Lighting	1	LS	\$75,000	\$75,000
Site Grading	1	LS	\$50,000	\$50,000
Electric Distribution Line	1	ALLOW	\$100,000	\$100,000
Seasonal Lighting	1	ALLOW	\$20,000	\$20,000
			SUBTOTAL	\$995,000
HARDSCAPE				
Boardwalk	1,620	SY	\$60	\$97,200
Impervious Trails	150	SY	\$40	\$6,000
Pervious Trails	600	SY	\$80	\$48,000
Conc. Pavers	540	SY	\$60	\$32,400
			SUBTOTAL	\$183,600
WATER CASCADE				
Retaining Walls	150	LF	\$300	\$45,000
Sidewalks	390	SY	\$40	\$15,600
Stairs	1	LS	\$120,000	\$120,000
Concrete Pools	1	ALLOW	\$675,000	\$675,000
Cascade Pump System	1	LS	\$100,000	\$100,000
			SUBTOTAL	\$955,600
LANDSCAPE				
Irrigation System	10,000	SF	\$1	\$10,000
Deciduous Shade Trees	20	EA	\$535	\$10,700
Landscaping	1	ALLOW	\$50,000	\$50,000
Turf	1	AC	\$1,500	\$1,500
			SUBTOTAL	\$72,200
PHASE SUBTOTAL				\$2,336,400
STANDARD SOFT COSTS *				\$584,100
CURRENT PHASE COST **				\$2,920,500

C: CONNECTION TO REDEVELOPMENT PROJECT **

Preliminary Opinion of Probable Construction Costs

NOTE:

All costs are in 2013 U.S. Dollars.

Standard Soft Costs include design, construction service fees, administrative fees, and contingency.

** This phase is funded, designed, and constructed with the redevelopment project.

D: UNDERPASS IMPROVEMENTS

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
UNDERPASS IMPROVEMENTS				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$240,000	\$240,000
Pavements and Utilities	1	LS	\$150,000	\$150,000
			SUBTOTAL	\$390,000
UTILITIES & GRADING				
Utility Replacement	1	ALLOW	\$400,000	\$400,000
Site Grading	35,000	CY	\$15	\$525,000
Haul Off Excess Cut **	12,500	CY	\$6	\$75,000
Seasonal Lighting	1	ALLOW	\$20,000	\$20,000
			SUBTOTAL	\$1,020,000
HARDSCAPE				
Replace Street Pavement	1,620	SY	\$90	\$145,800
Underpass Structure	1	ALLOW	\$2,500,000	\$2,500,000
Impervious Trails	1,000	SY	\$40	\$40,000
Pervious Trails	400	SY	\$80	\$32,000
Custom Railings	300	LF	\$250	\$75,000
Bridge Icons and Aesthetic Improvements	1	ALLOW	\$500,000	\$500,000
			SUBTOTAL	\$3,292,800
UNDER BRIDGE AESTHETICS				
Stream Aesthetics & Restoration	250	LF	\$1,200	\$300,000
			SUBTOTAL	\$300,000
LANDSCAPE				
Landscape Allowance	1	ALLOW	\$25,000	\$25,000
			SUBTOTAL	\$25,000
PHASE SUBTOTAL				\$5,027,800
STANDARD SOFT COSTS *				\$1,257,000
CURRENT PHASE COST				\$6,284,800

NOTE:

All costs are in 2013 U.S. Dollars.

Standard Soft Costs include design, construction service fees, administrative fees, and contingency.

** Potential for cost reduction due to local projects that may need additional soil.

Costs & Phasing

E: 84TH STREET STREETScape ADJACENT TO PARK

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
84TH STREET STREETScape ADJACENT TO CIVIC CENTER PARK				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$160,000	\$160,000
Pavement Removals	20,000	SF	\$2	\$30,000
Utility Relocation (as needed)	1	ALLOW	\$50,000	\$50,000
		SUBTOTAL		\$240,000
UTILITIES & GRADING				
Site Grading	15,000	CY	\$15.00	\$225,000
Decorative, Energy Efficient Street Lights	32	EA	\$14,000	\$448,000
Seasonal Lighting Distribution	32	EA	\$800	\$25,600
		SUBTOTAL		\$698,600
HARDSCAPE				
Cobblestone Band	1,500	SY	\$60	\$90,000
Impervious Sidewalks	2,500	SY	\$40	\$100,000
Streetscape Icons	4	ALLOW	\$150,000	\$600,000
Railings	2,600	LF	\$90	\$234,000
Reinforced Slopes	35,000	SFF	\$25	\$875,000
Retaining Walls - Overlook	1,000	SFF	\$80	\$80,000
		SUBTOTAL		\$1,979,000
LANDSCAPE				
Irrigation System for Trees & Turf	32,500	SF	\$1	\$32,500
Street Trees - 30' O.C.	185	EA	\$535	\$98,975
Median Landscaping	13,200	SF	\$18	\$237,600
Turf Sod	19,300	SF	\$1	\$19,300
Native Grass Seeding on Slopes	2	AC	\$5,000	\$9,000
		SUBTOTAL		\$397,400
PHASE SUBTOTAL				\$3,315,000
STANDARD SOFT COSTS *				\$828,800
CURRENT PHASE COST				\$4,143,800

NOTE:

All costs are in 2013 U.S. Dollars.

Standard Soft Costs include design, construction service fees, administrative fees, and contingency.

F: BOATHOUSE & SCULPTURE GARDEN

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
BOATHOUSE & SCULPTURE GARDEN				
MOBILIZATION & DEMOLITION				
Mobilization (5% of the Phase Total)	1	LS	\$70,000	\$70,000
Pavements and Utilities	1	LS	\$50,000	\$50,000
			SUBTOTAL	\$120,000
BOATHOUSE				
2,750 SF Building	2,750	SF	\$200	\$550,000
Docks with Lights	1	ALLOW	\$75,000	\$75,000
Boats	1	ALLOW	\$25,000	\$25,000
			SUBTOTAL	\$650,000
SCULPTURE GARDEN				
Retaining Walls - Precast Unit	2,100	SFF	\$30	\$63,000
Site Sculpture Development Cost	12,500	SF	\$50	\$625,000
			SUBTOTAL	\$688,000
PHASE SUBTOTAL				\$1,458,000
STANDARD SOFT COSTS *				\$364,500
CURRENT PHASE COST				\$1,822,500

NOTE:

All costs are in 2013 U.S. Dollars.

Standard Soft Costs include design, construction service fees, administrative fees, and contingency.

Costs & Phasing

ART PIECES BY PHASE

Preliminary Opinion of Probable Construction Costs

Description	Quantity	Unit	Unit Cost	Subtotal
ART PIECES				
A: Northwest Entry & Pavilion				
Entrance Art Piece/Sculpture	1	ALLOW	TBD	TBD
B: Formal Pool & Belvedere Memorial				
Integrated Art	1	ALLOW	TBD	TBD
C: Connection to Redevelopment Project **				
Entrance Art Piece/Sculpture	1	ALLOW	TBD	TBD
E: 84th Street Streetscape Adjacent to Civic Center Park				
Overlook Art Piece/Sculpture	1	ALLOW	TBD	TBD
F: Boathouse & Sculpture Garden				
Art Pieces	1	ALLOW	TBD	TBD
PHASE SUBTOTAL				
STANDARD SOFT COSTS *				
CURRENT PHASE COST				To Be Determined



Costs & Phasing

CIVIC CENTER PARK - COST ESTIMATE SUMMARY

Preliminary Opinion of Probable Construction Costs

La Vista Civic Center Park: Phasing Strategy

March 20, 2013

Current Phase

Stream Restoration – Central Park to 72nd Street City Responsibility: **\$322,700**

Planned Phases

1. Stream Amenities – Edgewood Boulevard to 72nd Street \$557,500
 - This phase will complete the stream restoration project with trails, site furniture, lighting, and supplemental landscaping from Edgewood Boulevard to 72nd Street.
2. Central Park – Basic Park Replacements \$2,411,300
 - After the stream is restored in Central Park, this phase is designed to bring Central Park back into use. It will replace and upgrade roads, trails, and bridges and construct a new restroom building.
3. Civic Center Park – Lake Construction, Grading & Utilities \$2,658,000
 - This phase focuses on grading Civic Center Park: at the end of construction the lake will be in place and utilities will be moved to prepare for future phases. Around the lake, a new loop trail with site lighting will be constructed for the public's use.
4. Civic Center Park – Shelters, Amphitheater & Playgrounds \$7,276,400
 - After the park is graded, the necessary elements of the park can be added: amphitheater, concession stand/restroom, nature playground, park shelters, decorative bridges, site lighting, and site furniture.
5. Central Park – Replacements & Enhancements \$1,979,200
 - This phase replaces and upgrades a few amenities such as the park shelter and playground. Further, new features will enhance the park: entrance markers, landscaping, site lighting, and customized La Vista Daze electric distribution.

Planned Phase Totals:..... \$14,882,400

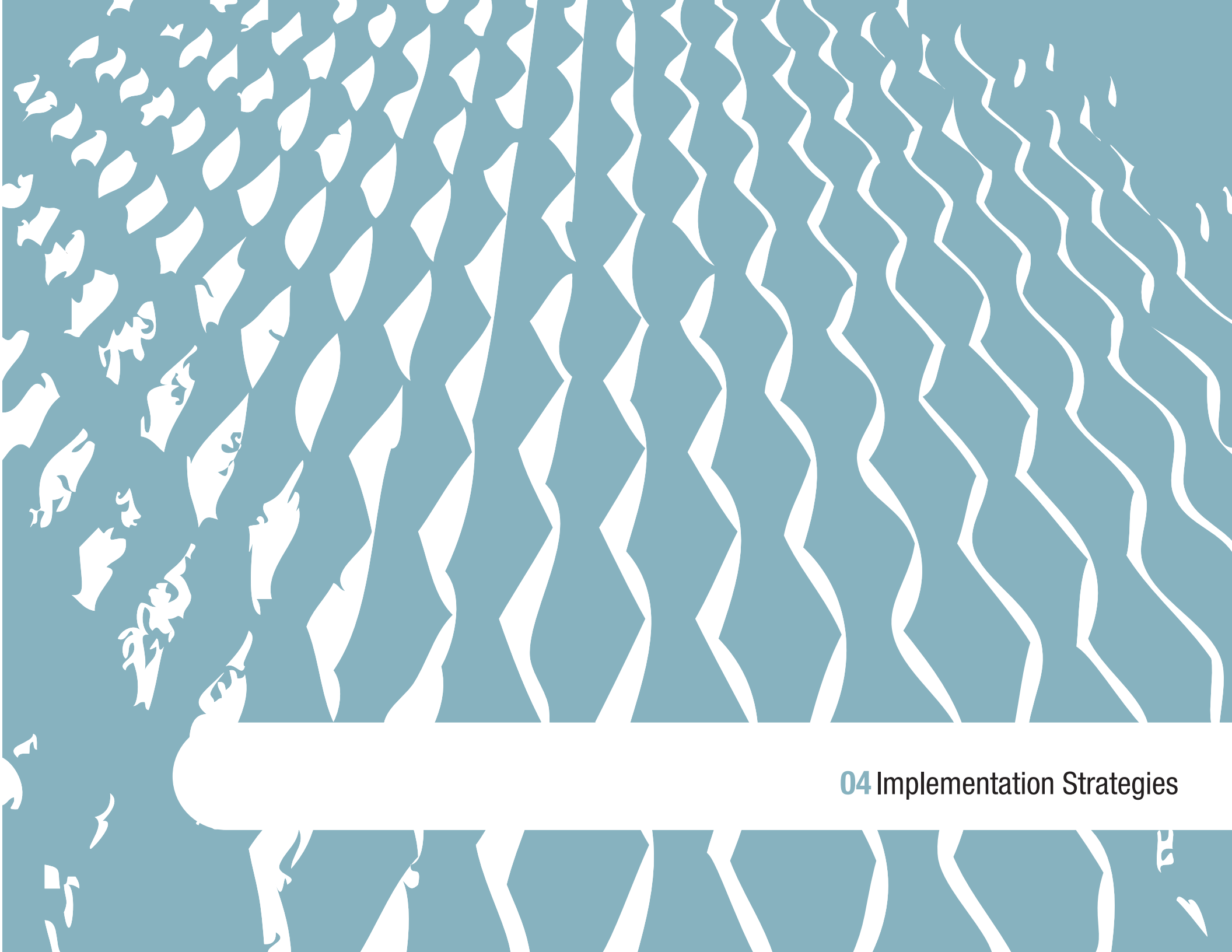
Future Phases

A. Northwest Entry & Pavilion	\$7,414,000
This phase constructs a new 13,000 SF rentable pavilion and expanded parking lot, but will require the acquisition and remediation of the gas station property. After acquisition, two new pedestrian entrances and a major celebratory plaza on 84th Street can be constructed. This phase has an option for entrance art pieces (not included in cost estimate).	
B. Formal Pool & Belvedere Memorial	\$4,294,700
This construction phase adds the formal pool and belvedere memorial at the lake edge. These two elements offer several opportunities for memorials and fund raising recognition, as well as the option for integrated art (not included in cost estimate).	
C. Connection to Southern Redevelopment	\$2,920,500
This project connects the lake to the future southern redevelopment. This phase will be designed, funded, and constructed in concert with the redevelopment project. It also offers the opportunity for entrance art pieces (not included in cost estimates).	
D. Underpass Improvements	\$6,284,800
This phase adds the western connection under 84th Street. Furthermore, the underpass includes bridge icons along 84th Street to help bring attention to the park.	
E. 84 th Street Streetscape Adjacent to Civic Center Park	\$4,413,800
This project improves the streetscape along 84th Street along the park with widened sidewalks, new trees, new streetlights, and a new overlook. The overlook provides space for an optional art piece (not included in cost estimate).	
F. Boathouse & Sculpture Garden.....	\$1,822,500
This phase constructs the boathouse (with second floor shelter), docks, and adjacent sculpture garden. Costs for sculptures are not included in cost estimate.	

Future Phase Totals \$26,800,300

Project Total \$42,085,400*

* All costs are in 2013 dollars, include soft costs, but do not include costs for art pieces.

The background of the slide features a complex, abstract pattern of interlocking, wavy shapes in teal and white. These shapes create a sense of movement and depth. A solid white horizontal bar spans the width of the slide, positioned in the lower third. The section header is located within this bar, on the right side.

04 Implementation Strategies

FUNDING STRATEGY OPTIONS

The proposed improvements within this plan for La Vista Civic Center Park must be integrated into the overall budget/program needs of the City of La Vista. As master plans are completed for other parks within the City system, the proposed improvements will be considered comprehensively across the entire system. Additionally, the needs associated with maintaining the existing facilities within the park system will be considered along with the proposed improvements.

Some recommendations may be completed through the annual program of work as part of the continuing operations and maintenance of La Vista Parks and Recreation Department.

Potential funding sources include annual appropriations, grants, partnerships and long-term public financing.

Budget Year Summary

Column A	Column B	Column C	Column D	Column E	Column F
1. Source of Funds ►	Nebraska Environmental Trust (NET)	Federal 319 (h) Grant	Papio-Missouri Natural Resources District (NRD)	City of La Vista	TOTALS ▼
2. Budget Category ▼					
3. Task 1.1 Education/Outreach	\$35,000	\$10,000		\$5,000	\$50,000
4. Task 1.2 - Cost-share/Demonstration Projects	\$17,000	\$15,000		\$3,000	\$35,000
5. Task 1.3 & 1.4 Reconstruct Thompson Creek – Pre-Construction Monitoring		\$50,000			\$50,000
6. Task 1.3 & 1.4 Reconstruct Thompson Creek – Design, Construction Engineering & Management	\$130,000	\$55,000	\$58,050	\$30,950	\$274,000
7. Task 1.3 & 1.4 Reconstruct Thompson Creek – Construction Costs	\$595,000	\$420,000	\$417,000	\$283,750	\$1,715,750
8. Task 1.3 & 1.4 – Reconstruct Thompson Creek – Post-Construction Monitoring (3 years)	\$20,000	\$20,000			\$40,000
9. Task 2.1 Continued Education/Outreach	\$10,000	\$5,000			\$15,000
10. Task 2.2 Additional Cost-share/ Demonstration Projects	\$100,000	\$50,000			\$150,000
11. Task 3.1 Continued Education/Outreach	\$15,000	\$15,000			\$30,000
12. Task 3.2 Additional Cost-share/ Demonstration Projects	\$190,000	\$140,000			\$330,000
13. TOTALS ►	\$1,112,000	\$780,000	\$475,050	\$322,700	\$2,689,750

STREAM RESTORATION

The Budget Year Summary to the left was created for the Thompson Creek stream restoration project. To date, grant funds have been awarded to the project from both the NET and Federal 319 Grant programs.

There is the potential some of these same sources listed could be used for environmentally-based improvements in the park itself. Further investigation will be needed before each phase is initiated to see whether these funds can be utilized.

Natural Resource Inventory & Analysis

INTRODUCTION

Applied Ecological Services, Inc. (AES) was retained by RDG Planning & Design (RDG) to provide professional ecological consulting services to assist with the development of the Civic Center Park Master Plan. The future Civic Center Park, located in La Vista, Nebraska, consists of approximately 34 acres dominated by an existing golf course. On September 16, 2011, Kim Chapman (AES Principal Ecologist) conducted a rapid field review of the existing Golf Course. Other parties present were members of the RDG team, City staff, Golf Course staff, and Nebraska Dept. of Environmental Quality, and staff of the consulting firm TD2.

AES' field observations over several hours and the existing natural resource data for the area were used to prepare this rapid Natural Resource Inventory and Assessment (NRIA). This NRIA summarizes existing natural resource data, conveys AES' field findings, and provides our preliminary recommendations for the park. It is not an intensive study of the ecological and biological features of the park.

SUMMARY OF EXISTING DATA

REGIONAL CONTEXT

The future Civic Center Park is in the City of La Vista, Sarpy County, Nebraska near the eastern border of the state, just south of Omaha. The park is surrounded by residential development, commercial development, other parks, and a major roadway (84th Street) on the park's western boundary. The Missouri River lies approximately 5.5 miles to the east, and the Platte River lies approximately 8 miles south of the park.

ECOREGIONS, LANDFORMS, SOILS

The park is located in the Western Corn Belt Plains ecoregion (Chapman et al. 2001). This region's fertile soils and warm/moist climate make this one of the most productive corn/soybean areas in the world. Within the Corn Belt Plains, the park is located in the Nebraska/Kansas Loess Hills ecoregion (Chapman et al. 2001). This ecoregion is typified by significant relief and hills covered in a deep layer of loess, or wind-blown dust.

The park's topography is rolling to hilly. The major physiographic feature of the park is a broad valley running east-west, flanked by hillslopes rising several dozen feet in elevation. The valley begins in the neighborhood west of the park and continues east into Central Park.

The digital soil survey of Sarpy County (SSURGO) maps the slopes of the park as Urban Land-Pohocco Complex, with slopes up to 16%. In a natural state, these soils are silt loams (with a silty clay loam surface) and derived from wind-blown loess. They have moderately high internal drainage rates (0.6-2.0 inches/hour). Soils of the valley bottom are mapped as Urban Land-Judson Complex. These are silty clay soils also derived from loess. Although their infiltration rate is slower than on the slopes, the valley soils also have moderately high infiltration rates of 0.2-0.6 inches/hour.

HYDROLOGY

Thompson Creek and its impoundments are among the park's most striking features. The creek's headwaters lie in the neighborhood west of 84th Street, but flow is underground until it emerges at the municipal pool, where it then flows through a concrete channel and then beneath 84th Street. The stream falls 6-7 feet from west of 84th Street to the channel inside the park. An earthen berm in the eastern section of the park creates a pond and flood control structure in the center of the park. A tributary enters the park from neighborhoods at the Pro Shop. Both branches of the creek above the pond have channels lined with concrete blocks.

Leaving the golf course, Thompson Creek flows east into Central Park and then in a narrow greenway through neighborhoods until it reaches Big Papillion Creek. Big Papillion flows southeast to the Missouri River. Big Papillion Creek is listed as an impaired water due to excessive *E. coli* concentrations, and the Missouri River has a fish consumption advisory (NDEQ 2010).

Due to the earthen berm and the design of its culverts, Thompson Creek floods significant portions of the park after 2-year events and larger (Figure 2). The flood extent for 2-, 10-, 25- and 100-year storm events was modeled by TD2 Engineering & Surveying. The highest flood elevation assumes a 100-year storm event with obstruction of the principal floodway.

Figure 1. Thompson Creek watershed



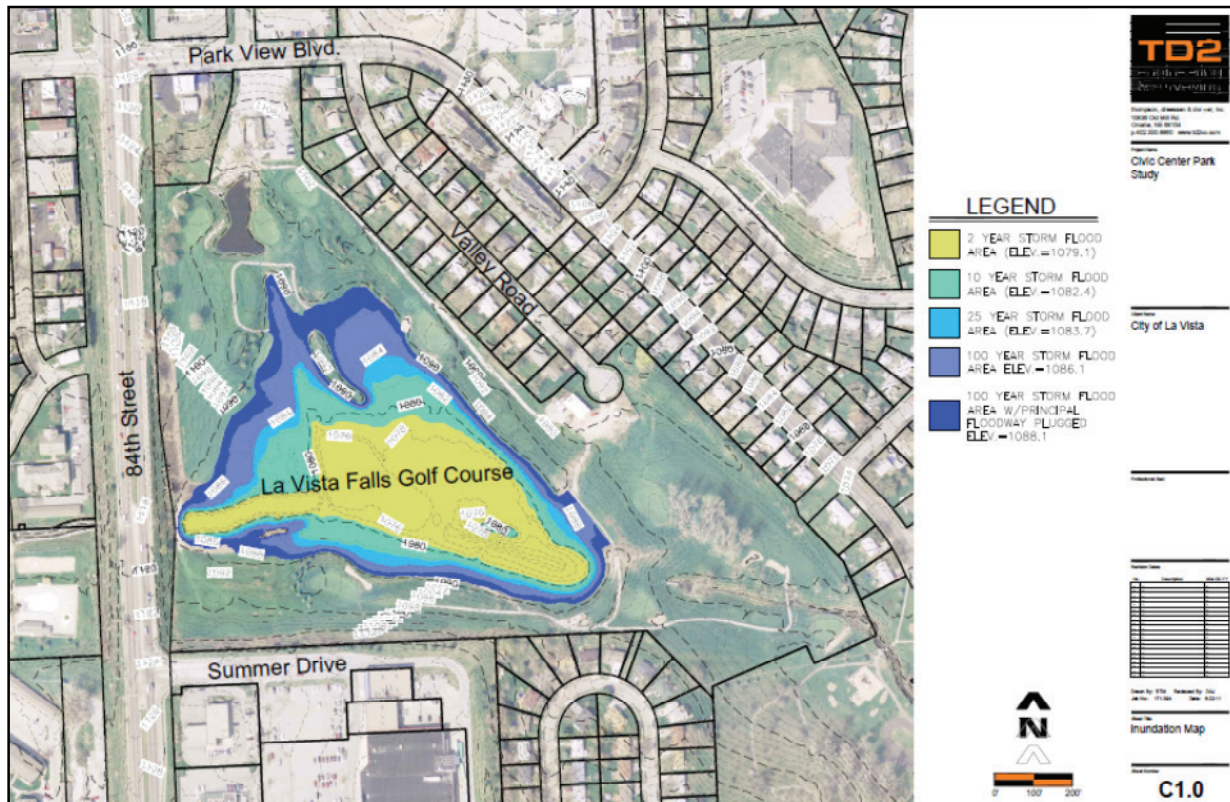
HISTORICAL VEGETATION

Prior to European settlement, this part of Nebraska supported tallgrass prairie and savanna in the uplands and scattered oak-hickory forests along stream valleys (Chapman et al. 2001). The prairies and savannas were frequently burned by Native Americans, while valleys and areas in the vicinity of water tended to be sheltered from the fires and supported forests. Central Park may have supported vegetation resembling forest, whereas La Vista Falls Golf Course may have supported vegetation more like prairie and savanna.

Studies elsewhere in the Midwest and eastern Great Plains suggest that headwater streams, like those at La Vista, had a barely discernible channel, if any. Instead, water flowed in a broad swath through wet prairies and marshes, becoming a noticeable channel only when enough water had accumulated, such as by the time a stream was of a second or third order.

Natural Resource Inventory & Analysis

Figure 2 Existing Inundation map of La Vista Falls Golf Course (TD2 2011)



RARE NATURAL FEATURES

Endangered, threatened, and other protected plant and animal species, such as Bald Eagle, exist in the region but are not known to occur in the park. Of the species listed as endangered and threatened in the Omaha region, it is unlikely that any records occur within 1 mile of the park due to lack of suitable habitat (AGC 2007). AES recommends that

a formal data request be submitted to the Nebraska Natural Heritage Program to determine if rare natural features are officially reported on or within 1 mile of the park.

FIELD ASSESSMENT SUMMARY

EXISTING LAND COVER

The current use of the future Civic Center Park is an existing golf course. About 85% of land cover in the park is occupied by fairways, greens and rough areas (Table 1). Naturalized land cover and open water occupies some 10% of the park. Field observations suggest that wet spots occur in some turf areas and an area of standing water exists in a wooded area in the west-central portion of the park (Figure 3). These observations suggest there may be a groundwater source that emerges in limited areas at the valley bottom.

Developed. The park's developed areas include the golf course clubhouse, in the northwestern corner of the park, and a maintenance area near the Valley Road cul-de-sac. A network of golf cart paths and bridges exist throughout the park, but these are not mapped. The clubhouse, maintenance area, parking lots and trails have impervious and semi-impervious surfaces that shed water quickly to adjacent vegetation and storm sewer drains.

Figure 3. Existing land cover within La Vista Falls Golf Course



Golf Course. The area designated as Golf Course contains grassed fairways, greens, and rough areas, as well as scattered trees. Grasses consist of non-native species used routinely for golf course turf. Wet places exist in some areas of the course, suggested the possibility of a groundwater source in limited areas of the park.



Turf sheds water more quickly than natural vegetation (Figure 4). This increases the volatility of streams and the instability of stream banks and beds. It also can create small areas of erosion where flow paths from large expanses of turf converge.

Mesic Forest. The park has a small patch of mesic forest, a type of forest that characteristically has moist soils throughout the years. Eastern cottonwood (*Populus deltoides*) is the primarily species of the mesic forest.

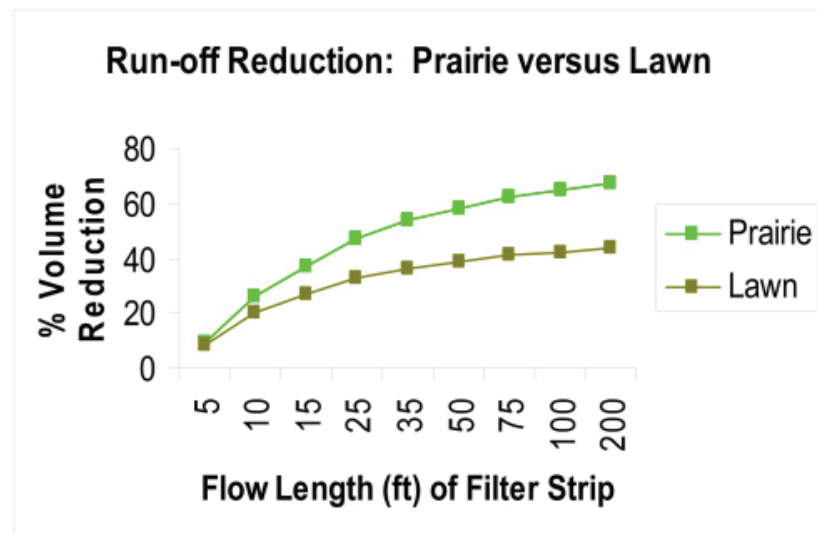
Natural Resource Inventory & Analysis

Table 1. Land cover types within La Vista Falls Golf Course

Generalized Land Cover Type	Acres	Percent of Park
Developed (impervious surfaces, etc.)	1.4	4.0%
Golf Course (mowed grassland and parkland)	29.3	85.8%
Mesic Forest	0.8	2.3%
Wet Forest	0.7	2.0%
Riparian Corridor	0.9	2.6%
Open Water (ponds)	1.1	3.3%
Total	34.2	100.0%

Wet Forest. The park has a small patch of wet forest in the west-central part of the course which appears to be maintained by springs. The trees are primarily green ash (*Fraxinus pensylvanica*), common hackberry (*Celtis occidentalis*), and silver maple (*Acer saccharinum*).

Figure 4. Water infiltration rates in lawn versus prairie vegetation



Riparian Corridor. Thompson Creek, and its tributary from the northwest, flow through riparian corridors of the park. These corridors contain natural, unmanaged vegetation. Several segments of these drainageways are routed below ground in culverts. In some locations the streambed is armored with concrete blocks.

Native vegetation in the riparian corridors includes green ash, common hackberry, Eastern cottonwood, black willow (*Salix nigra*), silver maple, sandbar willow (*Salix exigua*), Canada goldenrod (*Solidago canadensis*), lady's thumb (*Polygonum* sp), beggars-ticks (*Bidens* sp), annual sunflower (*Helianthus annuus*), and softstem bulrush (*Schoenoplectus tabernaemontani*). Non-native/invasive plants along the riparian corridors include reed canary grass (*Phalaris arundinacea*) and hybrid cattail (*Typha x glauca*).



Overall the streams in the park appeared stable. Cement cross-vanes had been placed to control bank erosion between 84th Street and the large pond. The two ponds help to manage flow downstream and overall are maintaining stable bank conditions. However, a shift in stream condition occurs just east of the maintenance facility at the east edge of the park. A culvert from residential areas to the north enters at this point and sediment deposition and erosion are evident. Just below the green at this location the creek gradient steepens, the stream passes beneath a pedestrian bridge as it enters Central Park, and bank erosion becomes quite severe downstream of that point.

While overall the streams appear stable, they are not as biologically rich as they could be. Aquatic insect life—for example, dragonflies, damselflies, caddisflies—which is a part of ecological food chain in the riparian corridor, is limited by concrete stream beds.

Open Water. Two ponds exist in the park. Pond edges are manicured close to the water line, but native sedges were seen growing in the unmowed strip near the water. At the time of the fall visit water quality had improved over conditions seen at an earlier visit. During the earlier visit, the growth of algae the ponds was evident and more abundant than is typical of a high quality water body. Floatable trash was present in the pond near the clubhouse, indicating the direct connection of city streets to the waters of the site.

WILDLIFE

A wildlife assessment was not conducted as part of the NRA. Incidental observations include muskrat, red-winged blackbird, common grackle, and great blue heron. It is likely that other urban-tolerant wildlife utilize the golf course, including raccoons, mallard, Canada goose and songbirds during their spring and fall migration periods.



Natural Resource Inventory & Analysis

CONSERVATION ISSUES & OPPORTUNITIES

IMPROVEMENT AND PROTECTION OF SURFACE WATER AND GROUNDWATER

Park development is an opportunity to address stormwater and erosion issues in Thompson Creek. The integrity of streambanks, ponds and riparian corridors can be improved by changing how stormwater runoff is managed in the Thompson Creek watershed.

Problems in Thompson Creek are primarily due to lack of stormwater management outside of the park. For that reason, the following best management practices are listed first by practices that will manage stormwater entering the park, and then by practices that will manage stormwater inside the park:

Low-Impact Development (LID). LID development focuses on installing sustainable stormwater management practices in developed areas of the park and contributing watershed. Many stormwater inlets carry large quantities of polluted runoff from rooftops, parking lots and streets directly into the park. There are ample opportunities in the Thompson Creek watershed to deal with stormwater runoff, including:

- Use LID principles in the design of stormwater management practices at the aquatic center;
- Redirect rooftop downspouts from driveways and sidewalks of neighborhoods onto lawns and into rain gardens;
- Install boulevard planters upstream of storm drains in neighborhood streets to capture and treat runoff before release into the storm drain;
- During redevelopment of malls and large parking areas, install bioswales, infiltration basins and other best practices.

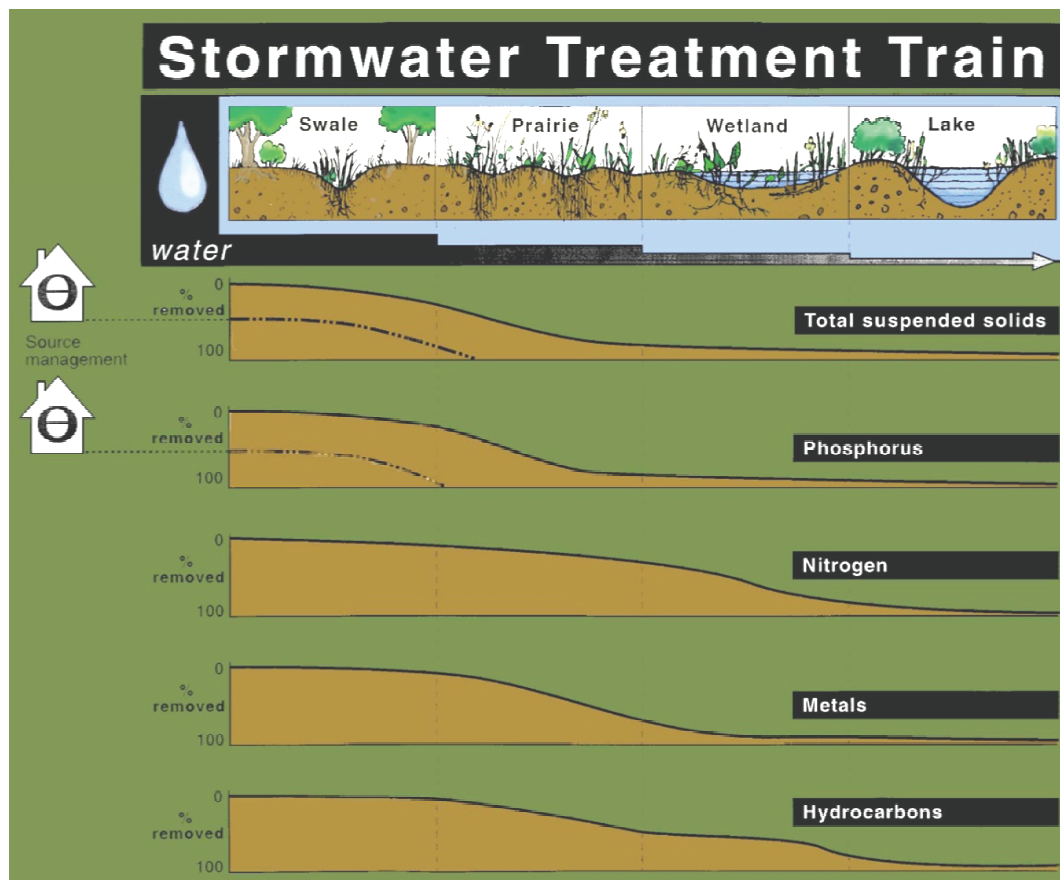
Conservation Design. Conservation design responds to the natural features of the land, preserves and restores the ecological functions of the land, and uses ecosystem services to regulate stormwater runoff and improve water quality. Conservation design principles are well documented and have been implemented at many developments and parks around the country. Using these principles at Civic Center Park would improve stormwater management, natural resources and wildlife habitat. A central feature of conservation design is the use of **Stormwater Treatment Trains**. This is a sequence of treatment areas that mimics the treatment provided by natural landscapes. For example, rainfall may flow from a rooftop to a rain garden (source reduction), then enter a bioswale. From there it may be directed into a wet prairie and then into a created wetland. Clean water would leave the wetland and enter streams and ponds. Water volume is also controlled, resulting in less volatility and instability in the streams and ponds.

Filter Strips. Filter strips are bands of vegetation between a water body and adjacent impervious surfaces, turf and cropland. Typically native perennial plantings are used to filter stormwater runoff before it enters streams and ponds.

Stabilize and Restore Banks. While erosion is not severe along Thompson Creek and the ponds in the park, there is some erosion and bank failure. Bioengineering and other appropriate techniques can stabilize eroding soils, ensure long-term stability and create habitat for dragonflies, damselflies, turtles, frogs, and fish.

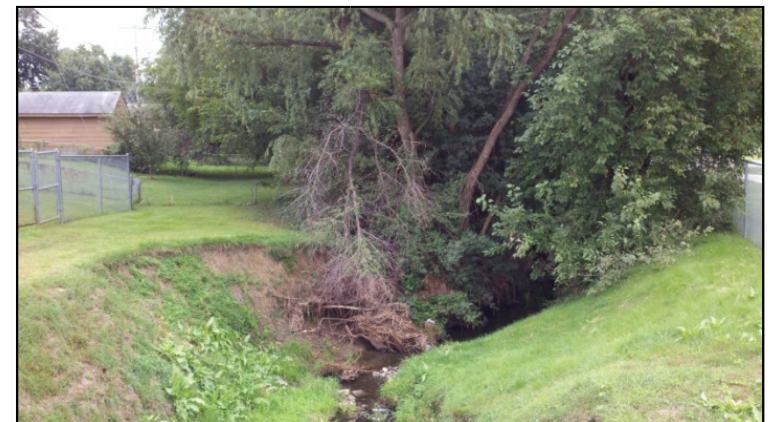
Erosion Control in Uplands. The area's steep slopes and fine-textured soils are easily eroded with uncontrolled runoff. Ecologically-based design can result in good runoff management and protect flow paths through turf or across and along trails. The goal is to minimize erosion from steeper slopes and from concentrated runoff off of trails and roads.

Figure 5. Stormwater Treatment Train



Provide Downstream Erosion Relief. Impoundments and grade control protect the park's waterways. In and below Central Park, however, Thompson Creek is deep, incised and eroding channel. As recently as the 1960s Thompson Creek was a shallow, grassy depression in the landscape. There is space in Civic Center Park to install control structures to protect both the park and reduce runoff volumes downstream of the park. In addition, a watershed plan

could identify opportunities upstream of the park where stormwater management could begin. This would involve identifying best practices and locations for those practices which are cost-effective in reducing runoff volume before it reaches Thompson Creek. Water quality improvements are always a component of these best practices. This would reduce algae growth in the park's ponds. Within and below Central Park there are additional opportunities to reduce runoff volume and improve water quality in the surrounding developed areas and in public open space. A watershed plan would describe the approach, best practices, locations, and costs of improving Thompson Creek and the park's ponds.



Maintain Groundwater Upwellings. It appears that the valley bottom in the park may have groundwater upwellings, but more investigation is needed to confirm. In the meantime, however, there are locations which are nearly always wet or inundated, such as the wet forest. These locations can support uncommon plants and animals, such as marsh marigold, turtles, frogs and salamanders. Wet conditions are probably maintained by shallow groundwater that receives recharge from infiltration in the surrounding watershed.

Natural Resource Inventory & Analysis

Eliminate or Minimize Groundwater Pumping. The golf course uses three wells and pumps as part of the turf irrigation system. Groundwater pumping can have a cumulative effect that is detrimental to aquatic ecosystems. The main consequence is reduced baseflow to streams and other ponds. Baseflow is the constant groundwater discharge to a stream that maintains water levels during dry periods. Without baseflow, streams dry up. Xeriscaping is an additional way to reduce groundwater pumping. This approach uses drought-tolerant native plants in portions of the park to reduce the need for irrigation during park operations. The northwest pond near the clubhouse may need to be redesigned if a drier hydrologic regime is created as part of the stormwater management system for the park.

WETLANDS

The ponds and riparian corridor support wetlands. The exact location of wetland edges is determined by a wetland delineation. Avoiding impacts to existing wetlands would avoid issues related to wetland regulations. If impacts cannot be avoided, a permit should be obtained. Mitigation may be required for wetland impacts.

CORE HABITATS AND CONNECTIVITY

The park's condition is in an urban setting with little natural vegetation. No large blocks of native habitat exist and the park's developed setting creates challenges for achieving meaningful ecological connectivity. Despite these constraints, ecological restoration and long term greenway planning can produce a more diverse, functional and sustainable park with a greater variety of passive recreational opportunities than presently. The opportunities would center on walking, using the ponds and streams, nature study, and quiet contemplation.

If implementing a measure of natural resource conservation in the park is a goal of the City, several items may be pursued:

- Manage stormwater runoff to reduce volatility and erosion in streams and ponds;
- Stabilize and restore eroding streambanks and water flow paths in uplands;
- Protect, connect and buffer existing habitats, streams and ponds;
- Improve the quality of degraded habitats, such as riparian corridors, streams and ponds;
- Restore native plant communities and wildlife habitat, such as wet meadow and prairie, in the proper locations;
- Reduce the abundance of invasive plant species;
- Create meaningful ecological connections for wildlife movement.

Ecological Restoration. Historically appropriate native plant communities to plant include tallgrass prairie, wet meadow, oak savanna and forest. Restoration should focus on improving, widening and connecting the riparian corridors and forests. The park will probably never support wildlife that need large territories, special habitats, or isolation from people. However, many species that could use natural habitat in the park are uncommon in the region and would benefit from improved habitat.

Buffers. Where feasible, buffer areas should be established next to conservation areas by using easements and other ways to promote uses of the land that maintain the natural environment. Buffers protect natural areas by reducing biological edge effects, dumping of lawn clippings and leaves, and uncontrolled trespass into conservation areas. Nearby landowners can receive technical assistance and cost-sharing for establishing ecological buffers, native landscaping and screening on their properties.

Education. Educational programs could inform nearby residents of the park's conservation goals and what they could do to improve the park's natural resources. For example, this may include constructing rain gardens upstream of the park, installing native landscaping next to the park, and keeping pet cats indoors so that they do not kill songbirds in the park.

INVASIVE SPECIES

Invasive vegetation exists in some of the park's natural areas, chiefly reed canary-grass and hybrid cattail. These and other invasive species thrive in disturbed habitats. They often dominate or outcompete native plants, resulting in low habitat diversity and a lower resilience in the face of environmental change and natural disturbances. Managing invasive plants is an important restoration and management goal. Especially during ecological restoration work, controlling invasive species reduces long term maintenance costs. Restoration and management practices should follow guidelines to minimize the introduction or movement of invasive species at the park. Park managers should also be aware of the potential of invasion by garlic mustard, Canada thistle, leafy spurge, spotted knapweed and purple loosestrife.

OTHER CONSERVATION OPPORTUNITIES

These are lower priority ways to improve the natural resources in Civic Center Park and its vicinity.

Teaching and Learning. Replicate large prairies and savannas on the park's steep slopes, and install interpretive signage conveying the history of the park, its natural resources, and restoration activities. As part of this, access to Thompson Creek should be provided that is safe for people and not injurious to streambanks and vegetation.

Citizen Science. Involve La Vista residents in exploring and learning about the natural resources in the park. Host a bioblitz, which is a field inventory of all living things in the future Civic Center Park and Central Park. The challenge is to complete the inventory in 24 hours, including sampling the aquatic insects and fish in the stream, the birds nesting on the property, and the butterflies, dragonflies, damselflies, wildflowers, and small mammals inhabiting the parks. Bioblitzes are becoming very popular because so much new information is gathered, and they are fun. A baseline could be established to measure future progress if a bioblitz were completed before the park was constructed. After construction, a bioblitz would show how much improvement has occurred.

Community Support. Explore creating a Friends-of-the-Park group. Such a group can provide volunteers to help with specific and safe tasks, or to assist in education activities, such as leafleting, or to help raise funds for park activities.

Perpetual Stewardship Fund. Develop a funding source to ensure sustainable stewardship of the park.

Implement a Park Restoration and Management Plan. This plan ensures that appropriate actions are taken to preserve and enhance the park's natural areas. This would include restoration and enhancement zones, methods, materials, a schedule, and monitoring. During and after implementation of the plan, use adaptive management so that adjustments can be made based on the park's response.

Rare Species Management. Identify rare plants and animals in the region and design park restoration activities to benefit these species. For example, Bald Eagle may benefit from a nesting platform in the park. This can also help create a unique park identity.

Natural Resource Inventory & Analysis

Make Larger Ecological Connections. It is easy to connect to Central Park and follow Thompson Creek to Papillion Creek. The challenge is to make this a meaningful ecological connection. A bike and walking route can be constructed as part of creating the ecological connection. If other parkland and recreation land can be connected to the Thompson Creek spine, that would further enlarge the ecological and recreational network.

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