



REIMAGINE

THE INTERSECTION OF NATURE, RECREATION, &
ECONOMIC DEVELOPMENT



ACKNOWLEDGEMENT

This vision is the result of community dreams and desires. This plan represents over 18-months of technical work completed alongside engagement and public outreach. Feedback, analysis, and significant collaboration have gone into the renderings and aspirational vision of Lake Springfield included on the following pages.

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C O N T E N T S

01

EXECUTIVE SUMMARY

PAGE 1

02

THE VISION

PAGE 15

03

CREATING THE PLAN

PAGE 65

04

TECHNICAL REPORT

PAGE 122 - Hydraulics & Water Quality

PAGE 132 - Transportation

PAGE 154 - Land Use & Programming

PAGE 177 - Economic Development

05

IMPLEMENTATION

PAGE 241

06

APPENDICES

PAGE 256

EXECUTIVE SUMMARY





TO CHANGE THE FUTURE, WE
NEED TO TAKE AN **ACTIVE ROLE**
IN TURNING IDEAS INTO REALITY.

DOING NOTHING IS NOT
AN OPTION.

REIMAGINE THE LAKE

The Lake Springfield subarea is a key natural asset to the Springfield community and the surrounding region. While it currently offers a variety of recreational amenities, such as trails, fishing docks, and boat access, there is significant opportunity to enhance the area into the recreational focal point of the region. A natural oasis within the Springfield Community, the envisioning of this area presents a once-in-a-lifetime opportunity for City Utilities, the City, and the larger region. Through expanded outdoor active and passive recreation opportunities, a commitment to design with nature when planning for economic development, and enhanced access and connectivity, the reimagining of Lake Springfield is a forward-thinking vision.

This future looking vision projects the needs for tomorrow, accounting for ways to attract tourism and events, while seeking to retain and attract residents to the community through sustainable job growth. The plan represents an opportunity to offer state-of-the-art features, not found elsewhere in the region, and serve as a national draw. Additionally, Adaptive Reuse of the James River Power Station, and an overall site repurposing are key components to this final vision.

Opportunity awaits and the vision is just getting started.



HISTORY

In 2019, the City of Springfield started the process of updating their Comprehensive Plan, now adopted, known as ForwardSGF. The result is a Comprehensive Plan that identifies a vision for the Springfield community as an attractive, safe, and inclusive place for everyone to live, work and thrive into the future. ForwardSGF includes 10 initiatives that are based on community feedback and which map the priorities of the city. In addition to these 10 initiatives, such as Place Based Approach and Connecting to Nature, Forward SGF identifies five (5) subareas for further investigation. One such subarea is the Lake Springfield Subarea. This plan focuses on enhancing the lake area as a key asset to the community, where people can feel proud of a space that is accessible to all.

This work is also in line with the mission of City Utilities. As the landowner, City Utilities is acting as good stewards of the land to re-imagine this space for the community.

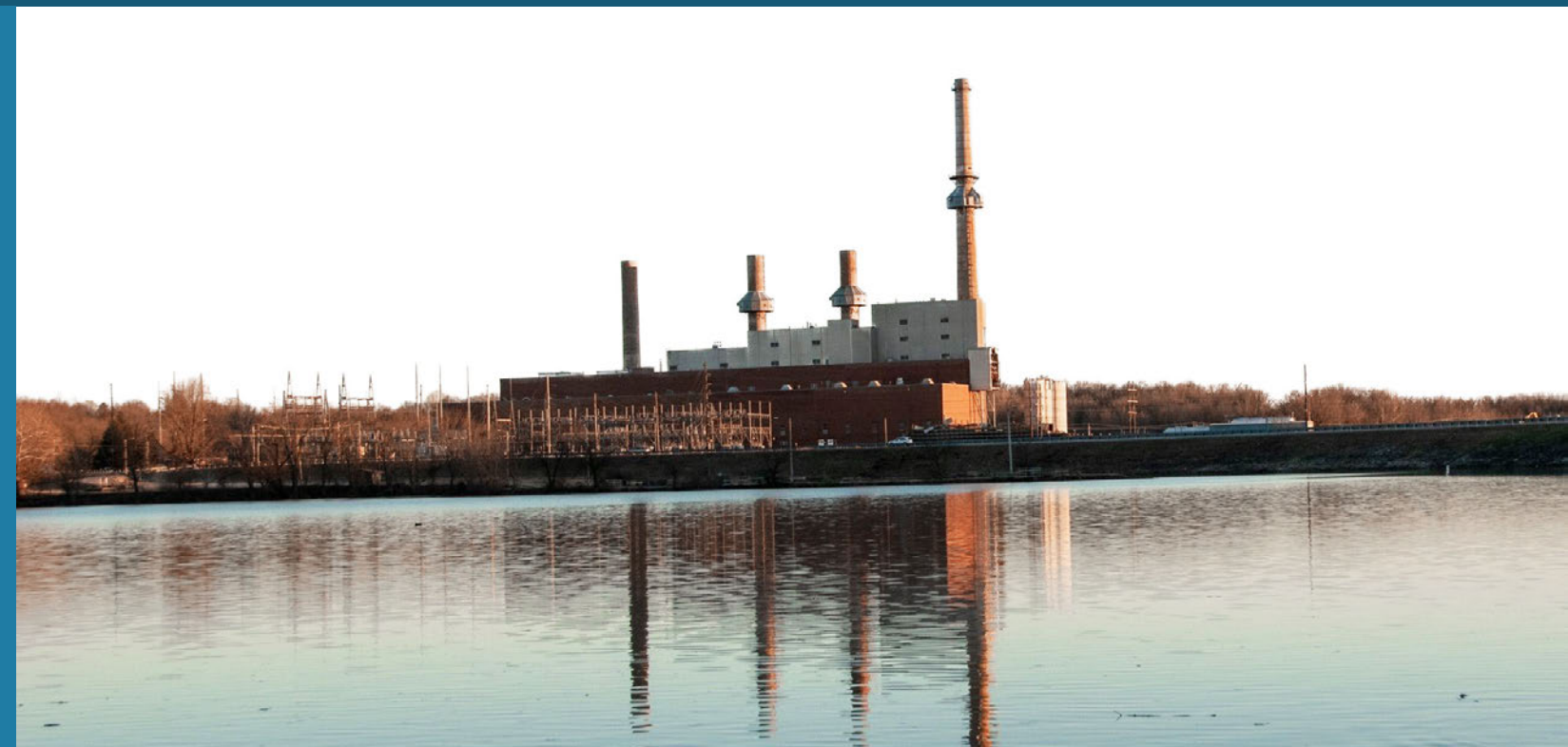
The lake previously served as a cooling waterbody for the James River Power Station, which limited the utilization of the Lake Springfield area to opportunities to connect beyond the natural environment. In recent years, the James River Power Station coal-fired units were officially retired. In February 2022, City Utilities, the owner of the 1,000-acre Lake Springfield Planning area, imploded the unit stacks, representing forward progress toward the future vision of the area and this opportunity.

This Lake Springfield Plan presents a once-in-a-lifetime opportunity for the city and the community to focus on adaptive reuse of this facility, as well as an overall repurposing of the planning area. The outcome has the potential to make a lasting impact in the City of Springfield, the Springfield Region, and the James River Power Basin.



TO **ADVANCE QUALITY OF LIFE** IN OUR COMMUNITY THROUGH **INNOVATION, ENGAGEMENT, AND STEWARDSHIP.**

-City Utilities Mission Statement



PLANNING GOALS

The City of Springfield applied for, and was successfully awarded, an Economic Development Administration Grant in 2022 to develop a strategic plan for the Lake Springfield area. The purposes of this grant application are to focus on economic development of the area and to create lasting growth and development within the Springfield Region.

The outcome of this process is to boost job creation and growth, with a focus on resiliency and sustainability. Key partners in the successful EDA grant process were:

- City of Springfield, MO
- City Utilities of Springfield
- Springfield-Greene County Park Board
- The Hatch Foundation

The Lake Springfield Subarea presents a significant opportunity for re-investment and a renewed focus on connection to nature, within the 1,000-acre study area. In its current form, the Lake Springfield area offers a variety of recreational amenities that are underutilized by both City of Springfield residents, as well as the greater Springfield region. Additionally, access challenges, vehicular, public transit, and bike connectivity contribute to the difficulty in fully utilizing the Lake Springfield Area as an opportunity to connect with nature.



THE SIX GOALS OUTLINED AS KEY COMPONENTS OF THE STRATEGIC PLAN INCLUDE:



THE VISION

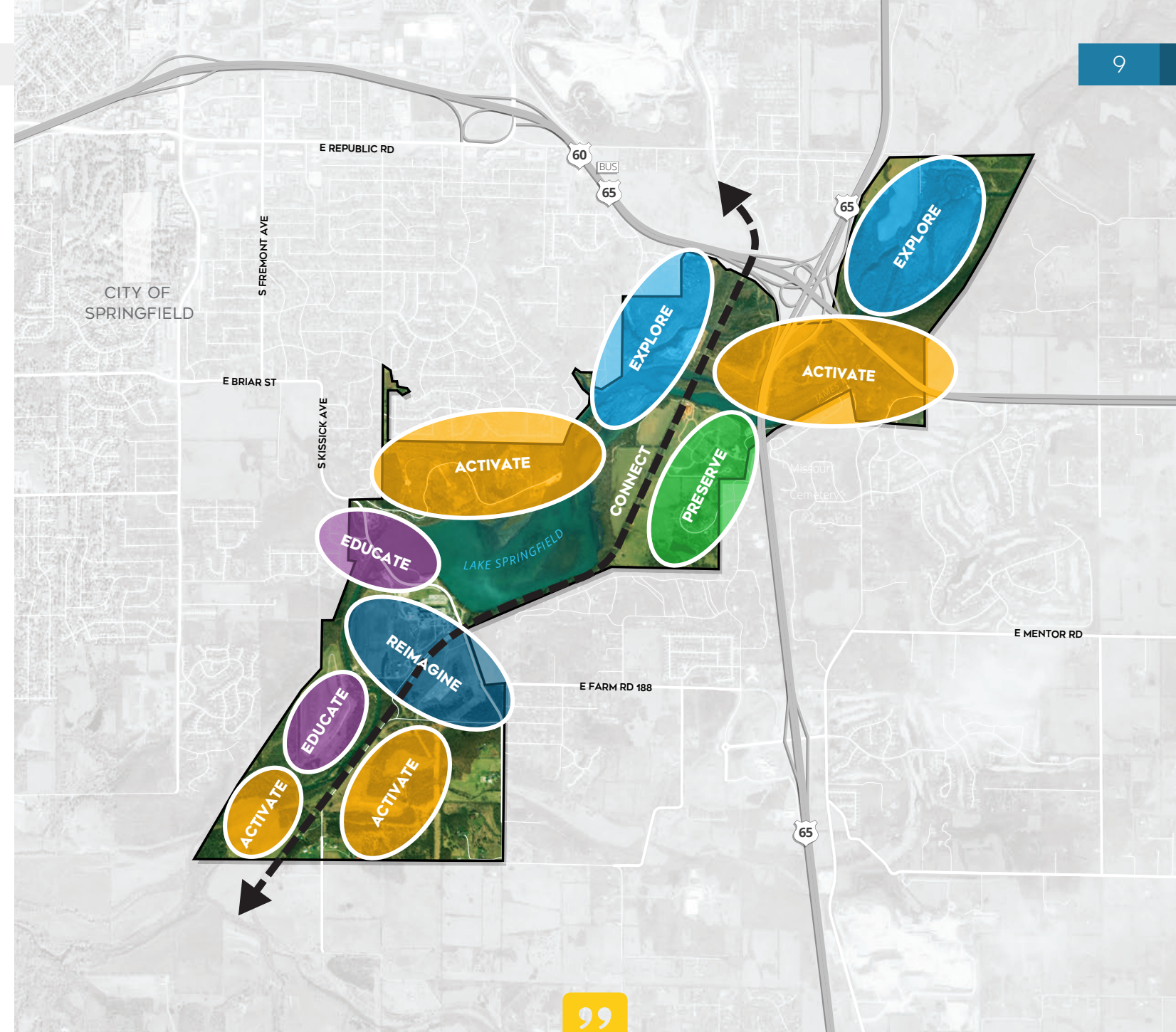
The vision of the Lake Springfield plan is to re-imagine what the area can be. This reimagining process is founded in meaningful community input with a focus on equitable activity to the lake as a natural asset. This planning process set out to intentionally engage a wide range of the public, accounting for the diverse makeup of the Springfield community. A robust community engagement strategy was deployed, to start consensus building from day one.

The planning process started with intentional listening sessions. The goal of this initial work was to ensure the planning team accounted for all levels of input, and to demonstrate that nothing had been pre-determined. The planning process has incorporated significant levels of community input, and building this trust early on is instrumental to the success of this work.

An initial focus of the planning process was to identify emerging themes of the study area to help guide the planning process. This process required significant attention to detail as we worked to remain sensitive to the area as natural asset, while focused on a vision that was rooted in development and growth opportunities. Initial emerging themes focused on:

- **Activate** – While existing recreational opportunities exist within the area, such as the Disc Golf course, as well as kayak/canoe rentals from the boathouse, an early on goal of higher activation, both within the park and the redevelopment site became clear.
- **Explore** – Situated near the interchange of U.S. 60 & U.S. 65, the Missouri Department of Conservation operates the Springfield Nature Conservation Center. Three miles of walking trails offer a place to connect with nature and learn the importance of conservation. Building on this key asset within the planning area is important.
- **Educate** – Experiential learning of nature is taking new forms in communities all across the United States. From Nature Play Scapes to outdoor classrooms, incorporating educational opportunities into future enhancements and developments is important for building off the foundation of the Lake Springfield Area as a key natural asset.
- **Reimagine** – The decommissioning of the James River Power Station presents significant opportunity for reinvestment, as well as sustainable and resilient job creation and growth. A new vision for this site, is imperative to a successful plan, and ensuing implementation.
- **Preserve** – Very early in our planning meetings, we heard several times, we love the natural beauty of Lake Springfield. Balancing preservation and development were an ongoing theme of importance throughout the planning process.
- **Connect** – A lasting comment that was mentioned several times throughout the planning process was ‘Lake Springfield feels very much like look but don’t touch’. This feedback presented a challenge to the planning for developing ways in which a user would feel more immersed in the Lake area.

These themes remained important throughout the entire process as we sought to create a visionary idea of what tomorrow looks like at Lake Springfield.



LAKE SPRINGFIELD FEELS VERY MUCH LIKE
‘LOOK BUT DON’T TOUCH.’ THAT NEEDS
 TO CHANGE.

-Tim Rosenbury








THE PROCESS

The vision of the Lake Springfield plan is to re-imagine what the area can be. This reimagining process must be founded in meaningful community input and focus on equitable activity to the lake as a natural asset.

This plan is the result of the work of a multidisciplinary team to consider all elements related to Lake Springfield. The plan includes technical evaluation of elements critical to a successful implementation. This plan concludes over 18 – months of work that combines engagement and public outreach, technical analysis and assessment, visioning and scenario planning, and final plan refinement. The outcome is a holistic vision for the future of the area, that is firmly based on community input and desires, realistic and achievable, yet offers the vision the community needs for many years to come. The overall vision is one that reimagines how within this important natural area of Springfield, connection to nature and economic development can work hand and hand and promote a more connected and accessible destination for everyone.

KEY TECHNICAL AREAS CONSIDERED IN THE PLANNING PROCESS INCLUDE:

-  **Public Outreach & Engagement** – ensuring the plan represents a diversity of backgrounds and lived experiences, and is rooted in community desire.
-  **Water Quality and Hydraulics** – analyzing water quality, assessing sediment and sediment management strategies, as well as analysis of dam modification options. A critical path item for the rest of the planning work.
-  **Land Use and Site Development** – Proposing site plans that are in line with the comprehensive plan, and also are sensitive to nature. Focusing on solutions that can foster economic development, yet keep natural amenities available for the entire community.
-  **Transportation and Infrastructure** – Identifying infrastructure and access needs to enhance the lake area as a major tourist destination. Access considerations for users of all ages and abilities.
-  **Economic Development** – identifying gaps in the market for what may make sense, and analyzing proposed activities and uses to provide an overview of economic outputs.



MAKE **NO LITTLE PLANS.**

-Daniel Burnham

THE PLAN

As you embark on this vision, the pages will showcase the hard work and dedication of a team that is committed to providing solutions for an enhanced natural asset and economic driver for the Springfield community. This plan is developed for the people of Springfield and larger Springfield region and is the result of tireless work and close collaboration with City Utilities, the City of Springfield, many involved stakeholders, and partner agencies, and most importantly the people of the community.

- 1**

Included in the following pages you will first find our Vision for the Lake Springfield area. This aspirational component of the plan includes an overview of the site plan, proposed activities and area programming, economic drivers to the area, transportation and access enhancements, and details on water quality. This Vision section is intended to distill this planning process into a stand-alone portion of the plan, that is used to build excitement and energize community champions already working toward implementation. The section includes overall recommendations in a holistic manner that will be further defined in technical chapters of the plan. The section is filled with imaginative graphics and renderings about what Lake Springfield can look like in the future.
- 2**

The next section of the plan outlines the planning process, and the detailed work behind the information included in the Vision section. Included here is information outlining the robust engagement process that transpired, a high-level overview of technical analysis by area of expertise, as well as the layout of the zones within the Lake Springfield area. The goal of this section is to follow the inspiring Vision section to demonstrate that the plan is rooted in data and community desire. Simply put, this forward-thinking plan is feasible and already has significant buy-in within the Springfield community. As implementation is beginning, the understanding of the strong consensus building and collaboration that took place will be key to successful outcomes.
- 3**

Following the Planning Process section are four chapters on technical areas of expertise. These chapters are more technical in nature, and clearly call out a framework of goals and recommendations, as well as implementation partners and next steps. While the Vision and Planning Process sections are important for momentum building during the implementation phase, this technical section is meant to serve as a resource of technical details during future project phases.
- 4**

Finally, the plan concludes with a section dedicated to implementation. The focus of this plan is implementation. With a key component of the EDA grant being economic development and sustainable job creation, it is clear this plan simply cannot sit on the shelf. The chapter on Implementation outlines next steps in the vision for Lake Springfield.

THE VISION



WELCOME TO THE LAKE

Located on the Southeast side of Springfield, the Lake Springfield subarea is a key natural asset to both the Springfield Community and the larger Springfield region. With a variety of recreational amenities, the subarea offers future access to the Chadwick Flyer trail, existing access to the Galloway Creek Greenway, passive recreation opportunities at the Lake Springfield Park, a regionally attractive disc golf course, and educational opportunities at the Missouri Department of Conservation Nature Center. While those who are familiar with Lake Springfield today enjoy the serene beauty of the area, there are many opportunities for more inclusive recreation opportunities and enhanced tourism and economic growth.

Envisioning the future for the Lake Springfield subarea offers a once in a generation opportunity to plan a transformative vision that can set the tone for a future where Springfield is known as an iconic region full of unparalleled experiences for everyone. The vision, presented here, is an aspirational look at what could be.



The opportunities are endless and the vision is only just a beginning when we start to imagine what an iconic Lake Springfield includes:

- **Vast park space** complete with miles of trails to explore and take in the peaceful beauty of the lake and James River.
- **Boardwalks** connecting a series of ecological islands, where visitors can immerse themselves within the Lake area, offering a different viewpoint of the area than most are familiar with today.
- **Educational opportunities** honoring those stewards of the land that came before us.
- **Adventure recreation** opportunities such as destination and nature play, bike parks, ropes courses, and water features.
- **Unique entertainment** experiences from lakeside dining, to shopping, to venues where you can catch a show or attend an event.
- **Event centers and overnight options** including hotels, eco-retreats, and RV camping to attract visitors to stay and play, all in Lake Springfield.

This vision represents Lake Springfield as an attractive destination, that preserves the natural beauty of the area, designs with nature in mind, and truly develops a Lake Springfield for all.

SO, WHAT ARE YOU WAITING FOR?

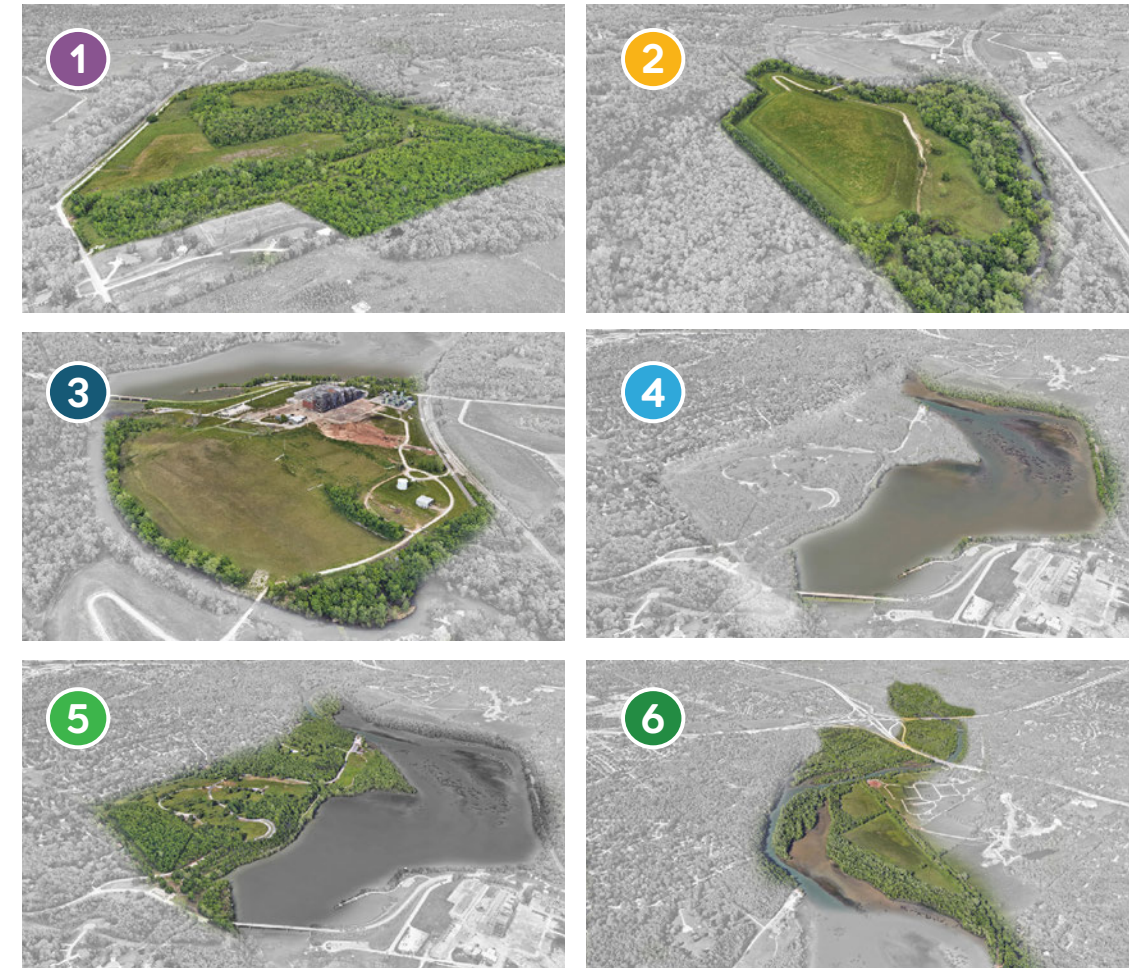
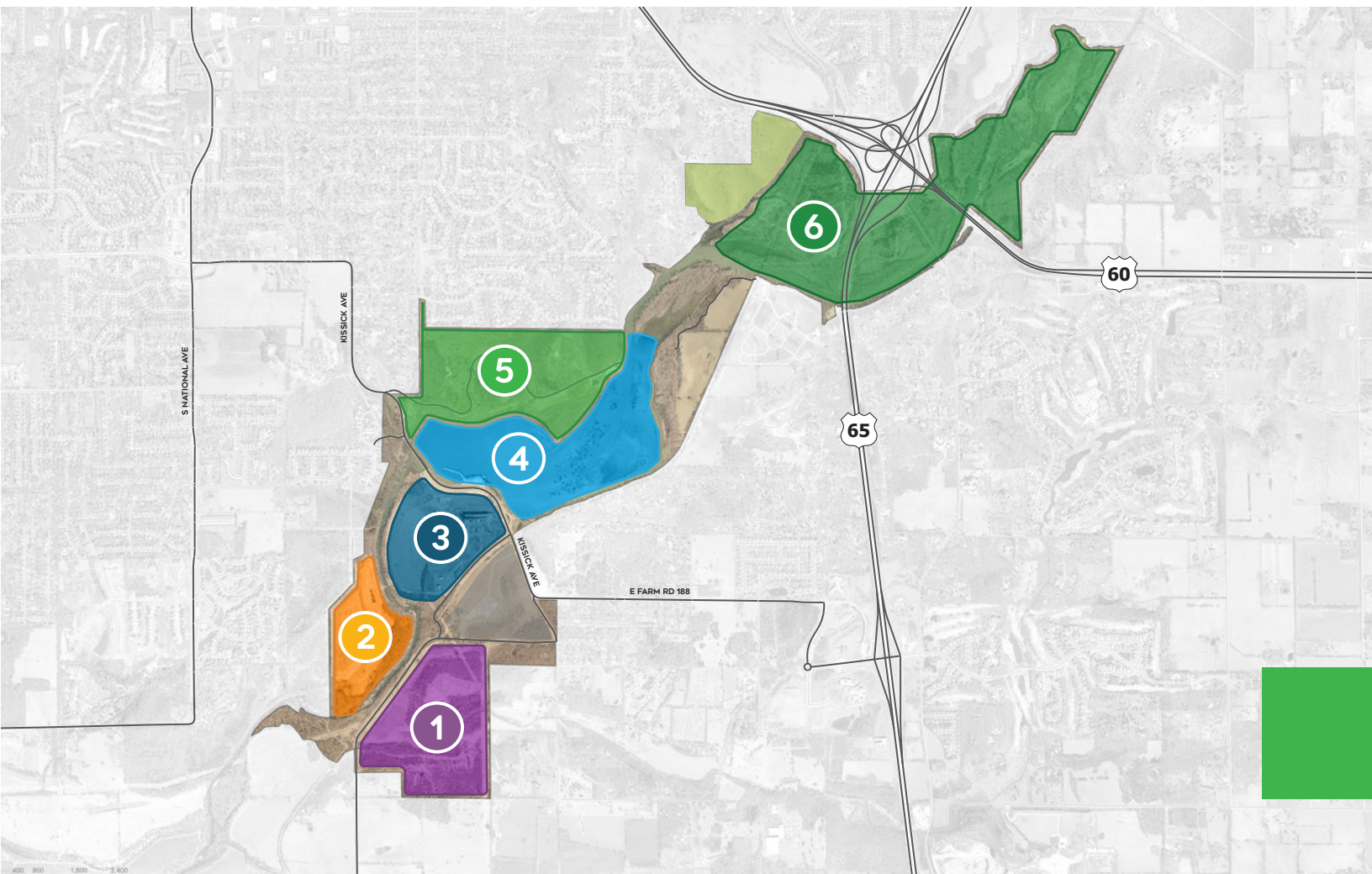
Let new adventures begin at Lake Springfield.



PLANNING ZONES

A key component of the Lake Springfield Plan is a design with nature theme. Context is key, and ensuring proposed planning opportunities as well as future uses are in line with the existing environment and beauty is a critical concern of both the community and the City. With an expansive subarea size of 1,000 acres, an early opportunity emerged to identify zones that could be further refined. The goal of the zone identification is to better scale activities and programming such that the outcome would be highly context sensitive and compatible with the natural environment. The zones are numbered one through six, and given character area names, starting at the farthest south point within the planning area and moving north:

- **ZONE 1** - South Activity Area
- **ZONE 2** - Future Energy Innovation Site
- **ZONE 3** - Power Station
- **ZONE 4** - Lake
- **ZONE 5** - Park
- **ZONE 6** - North Activity Area



Another benefit of the zone analysis is the opportunity to ensure the needs of City Utilities operations are still met. As the landowner of the Lake Springfield Subarea, an element of some pieces of the site remaining functional for the operations of City Utilities is important.

As discussed here, each zone has a unique character and context. Further segmenting the Lake Springfield Subarea in this way ensures this plan matches the unique character and context of the vastly different components within the planning area. Each zone has distinctive functional needs, and different recreational opportunities and natural amenities. Because boosting economic activity while preserving natural assets is central to this plan, the zone identification allows for a focus on economic generating activities to be highlighted in a core area, that preserves other sections of the planning site for environmental and passive recreation activities.



The outcome is a planning scenario that combines nature and development in a way that promotes **sustainable and resilient job creation and growth for the Springfield region.**

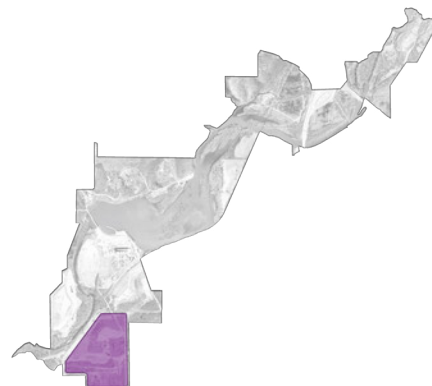
ZONE 1 - SOUTH ACTIVITY AREA



The South Activity Area is approximately 130 acres in size and is currently open fields with woodlands covering a rolling topography. The south zone is adjacent to the Chadwick Flyer Trail and the James River. The character of this site is to build on the link with the Chadwick Flyer, as well as support access and connectivity to the Power Station Site and redevelopment opportunities. Core to the south activity zone is to further support the economic generator of the Power Station Site, linking a stay and play feel between the two uses. Additionally, proposed activities include the potential to have an environmental or adventure theme.

CHARACTERISTICS

- Approximately 130 acres in size
- Adjacent to the Chadwick Flyer Trail and James River
- Utilities and creek are development considerations
- Open fields and woodlands covering rolling topography
- South access point for Lake Springfield
- Destination Activity



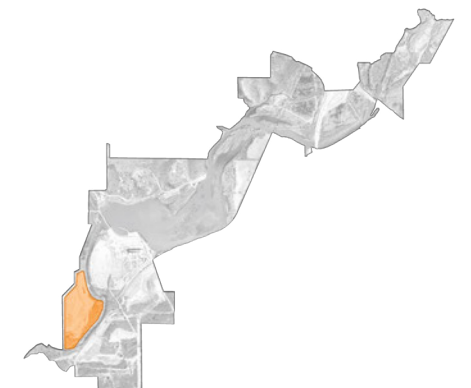
ZONE 2 - FUTURE ENERGY INNOVATION



The Future Energy Innovation zone is south of the Power Station and is approximately 50 acres in size. The existing land is flat and provides open space for passive or light active recreation. To access this zone, you have to cross the James River. The site provides links between the Power Station Site and the South Activity Area. Any re-use of this area requires significant coordination and planning with City Utilities given that it is still an active utility landfill. This area is not included for site enhancements as a part of this Lake Springfield Plan.

CHARACTERISTICS

- Approximately 50 acres in size
- Location access requires crossing the James River
- Flat and open space for use as a passive or light active recreation amenity area
- CU Infrastructure and pilot demonstration site
- Solar Array and innovated cover
- View of power station and dam



ZONE 3 - POWER STATION

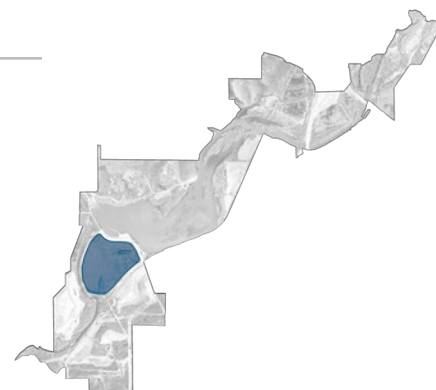


The Power Station Site is central to the entire Lake Springfield Plan. A key focus of this effort is to promote job creation and enhance economic growth, the redevelopment of the James River Power Station is a pillar of this work. Zone three is the economic and trip generator for the Lake Springfield Subarea. While this zone is a signature space for the Lake Springfield area, there are several surrounding areas of this site that must remain in service for operations of City Utilities. Zone 3 presents the most significant opportunity to catalyze economic development, and promote sustainable and resilient jobs, while at the same time providing recreation opportunities and activities for residents of the Springfield community and the larger region. In fact, this site should be viewed as an opportunity for national investment, attention, and tourism.

Also included in Zone 3 is the dam. Options for dam improvements are considered in this analysis as the future of Lake Springfield includes a commitment to enhancing water quality and sediment management.

CHARACTERISTICS

- Signature space at Lake Springfield
- Several surrounding areas remain in service for CU
- Redevelopment as a catalyst for economic, employment and recreation opportunities
- Consider identity, character and visitor experience



ZONE 4 & ZONE 5 - LAKE & PARK

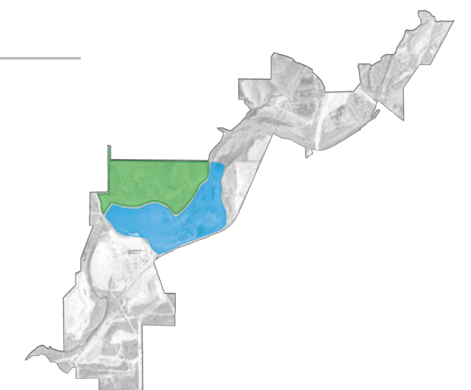


Currently, the Lake and Park zone serves as the biggest driver for visits to the Lake Springfield Subarea. Zones 4 and 5 combine to include 330 acres of the 1,000-acre planning area and are located north of the Power Station and the Dam. The Lake Springfield Disc Golf course is a nationally recognized amenity that attracts visitors from all over the United States. For example, in July 2023, over 150 unique disc golf players visited the course from over 16 states. Additional recreation opportunities exist such as boat rentals at the Boathouse, an existing park with playground structure, and several walking and biking trails.

Access to the site is challenging, with a skewed entrance from Kissick. Limited wayfinding or directional signage exists, and the zone will benefit from an enhanced entryway and focal gateway feature. In addition to updating access and wayfinding, significant opportunity exists in Zones 4 and 5 to expand on current recreational offerings and reimagine new uses to support the power station and modified dam.

CHARACTERISTICS

- Approximately 330 acres in size
- Located north of the Power Station and dam
- Opportunity to expand on its existing offerings
- Opportunity to be re-imagined based on the redeveloped power station & modified dam



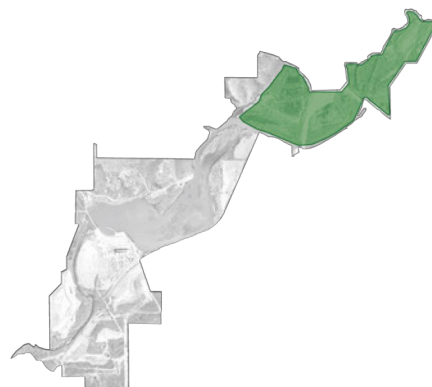
ZONE 6 - NORTH ACTIVITY AREA



The North Activity Area is the largest zone within the Lake Springfield Subarea. The North Activity Area is 450-acres in size and is along the James River. The area includes the Nature Center, a connection to the Galloway Creek Greenway, and the 65/60 Interchange. A significant portion of the zone exists in the James River Floodway and flood plain. Extensive analysis in this zone has already been completed looking for a trail connection from the Nature Center to the Galloway Creek Greenway to better connect bikers to this natural amenity.

CHARACTERISTICS

- Approximately 450 acres in size
- Along the James River north of Lake Springfield
- Includes the Nature Center, Southwood Access, and 65/60 interchange
- A significant amount of the area is located within the James River floodway and flood plain
- Existing trails provide connection over the James River, under the highways, connect to the Nature Center & Galloway Creek Greenway



PLANNING GOALS

Identified within the ForwardSGF Plan as a subarea for future study, the goals of this plan focus on economic development and adaptive reuse, water quality and sustainability, and enhanced access and connectivity. Recognizing the significant opportunity of the area for economic development, the City of Springfield and City Utilities partnered to pursue a U.S. Department of Commerce's Economic Development Administration (EDA) grant, with assistance of local match funding from the Hatch Foundation.

Within each goal in this section, recommendations from the plan are included that align with that goal. These recommendations are structured by the zones identified within the Lake Springfield Subarea, and include specific details about that recommendation.

THE SUCCESSFUL GRANT APPLICATION FOCUSES ON SIX GOALS:

 Economic Development & Resilient Job Creation	 Sustainable Water Quality & Green Infrastructure	 Adaptive Reuse
 Transportation Enhancements	 Active & Passive Recreation Opportunities	 Holistic and Diverse Community Input



■ GOAL #1

ECONOMIC DEVELOPMENT & RESILIENT JOB CREATION

The signature elements of this plan focuses on economic development and job creation. The zones with this goal as the focus include the Power Station/Dam area, the enhanced South Activity Area, and the upgrades to the Lake and Park Area. These concepts focus on centering Lake Springfield as a regional tourism destination, linking several other areas of interest in Southwest Missouri and Northwest Arkansas.

POWER STATION & DAM AREA

Two concepts are envisioned for the updates of the James River Power Station site. While the concepts vary in theme, both concepts feature new uses that are currently missing in the Springfield market and will serve as a draw to the Lake Springfield Subarea. A key component of both concepts is a large indoor event space, which is needed in Springfield. There is a large demand gap in the current market, and this area can host such a site, meeting a need within the community, serving to attract tourists, and offering jobs for residents in the hospitality industry. Both concepts are market justifiable and vary slightly based on the theme.

ENTERTAINMENT DISTRICT - CONCEPT A

Power Station & Dam

As a destination entertainment district, this concept reimagines the James River Power Station as an anchor for a unique regional attraction. With several points of entry, visitors will find access and parking simple for many modes of transportation. In this scenario, the Power Station is a mixed-use development that supports a new a large Multi-Purpose Event Center elsewhere in the zone. The vision for the mixed-use development includes entertainment, retail, residential and office. Event spaces such as concert venues, amphitheatres, and gathering spaces can host crowds, while businesses such as food and beverage halls, yard and game activities, and entertainment options will keep people returning.

In addition to this lively and vibrant redevelopment, this concept is designed in a way to bring nature into the design of the site, by offering a water overlook, riverfront recreation, a bypass channel for kayaks and canoes, event lawn, pavilion and white-water activities. These new recreation opportunities keep water experiences present throughout the site.



- 1. James River Power Station Reuse - Mixed Use Building
- 2. Bypass Channel
- 3. Event Lawn
- 4. Mixed Use Commercial, Dining, Residential, etc.
- 5. Whitewater Recreation



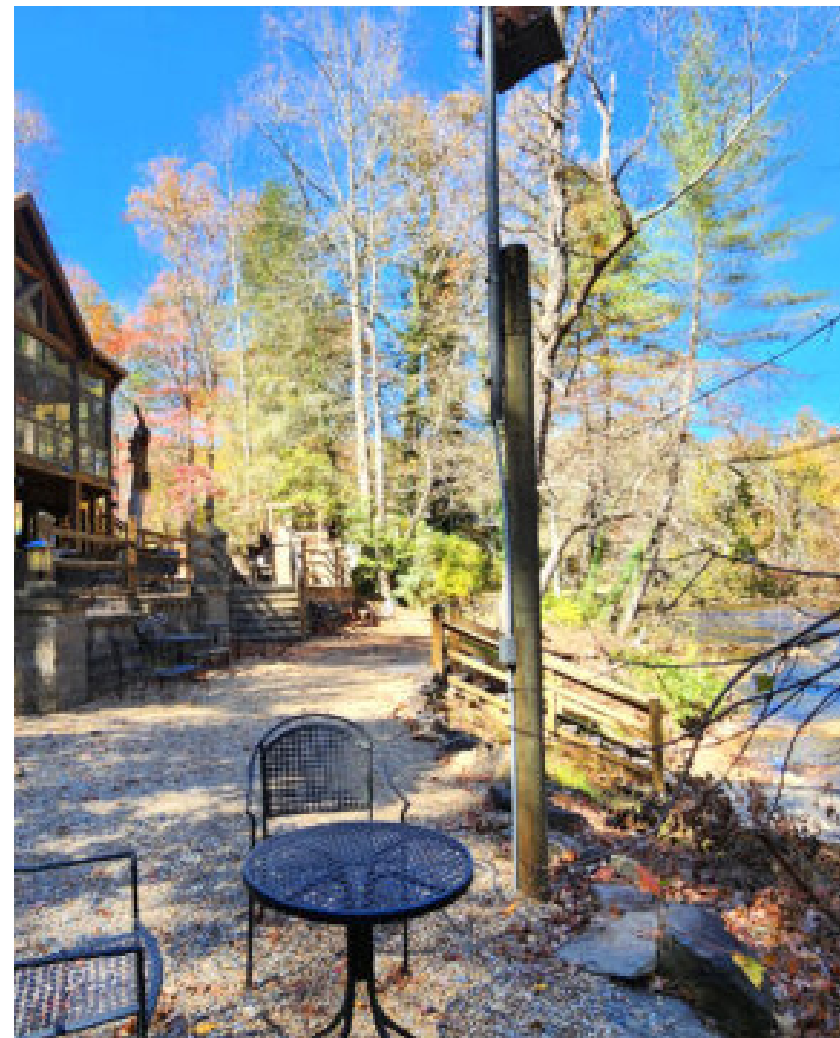
ENTERTAINMENT DISTRICT - CONCEPT A
Power Station & Dam

ADVENTURE HUB - CONCEPT B

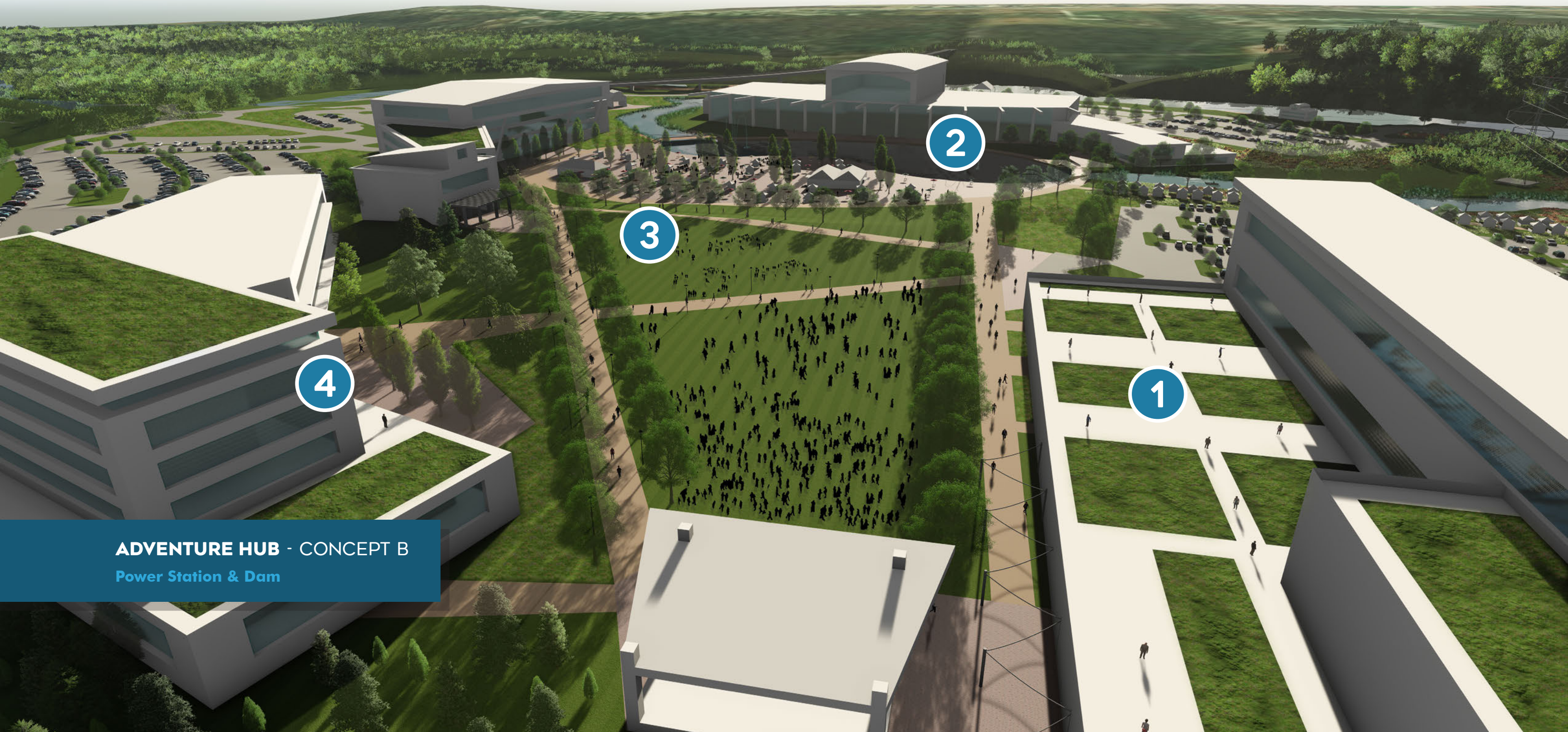
Power Station & Dam

Focusing on the experience of adventure destinations, this concept includes the reuse of the Power Station, a new large-scale conference center, hospitality services and food and beverage options. Additionally, overnight accommodations are important to offer a 'stay and play' environment for large groups looking to host conferences or events with the need for hotel rooms. Restaurants and enhanced community green space add to the overall feel guests will have when attending a conference at this event center.

In this theme, connecting with nature remains an important goal, and proposed amenities to the site include a bypass channel, a kayak basin, water adventure and green space. The site is rounded out with a community green area that further seeks to identify this location as a unique space to host meetings and events.



- 1. James River Power Station Reuse - Conference Center
- 2. Kayak Basin
- 3. Community Green
- 4. Hospitality & Restaurants



ADVENTURE HUB - CONCEPT B
Power Station & Dam

SOUTH ACTIVITY AREA

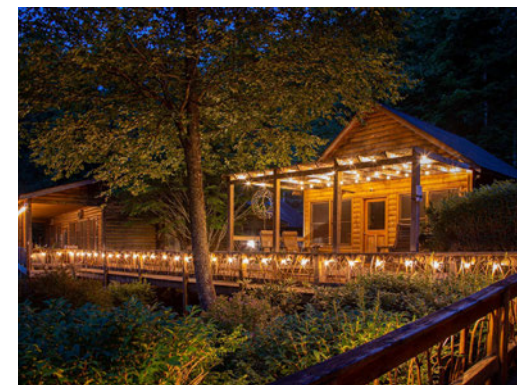
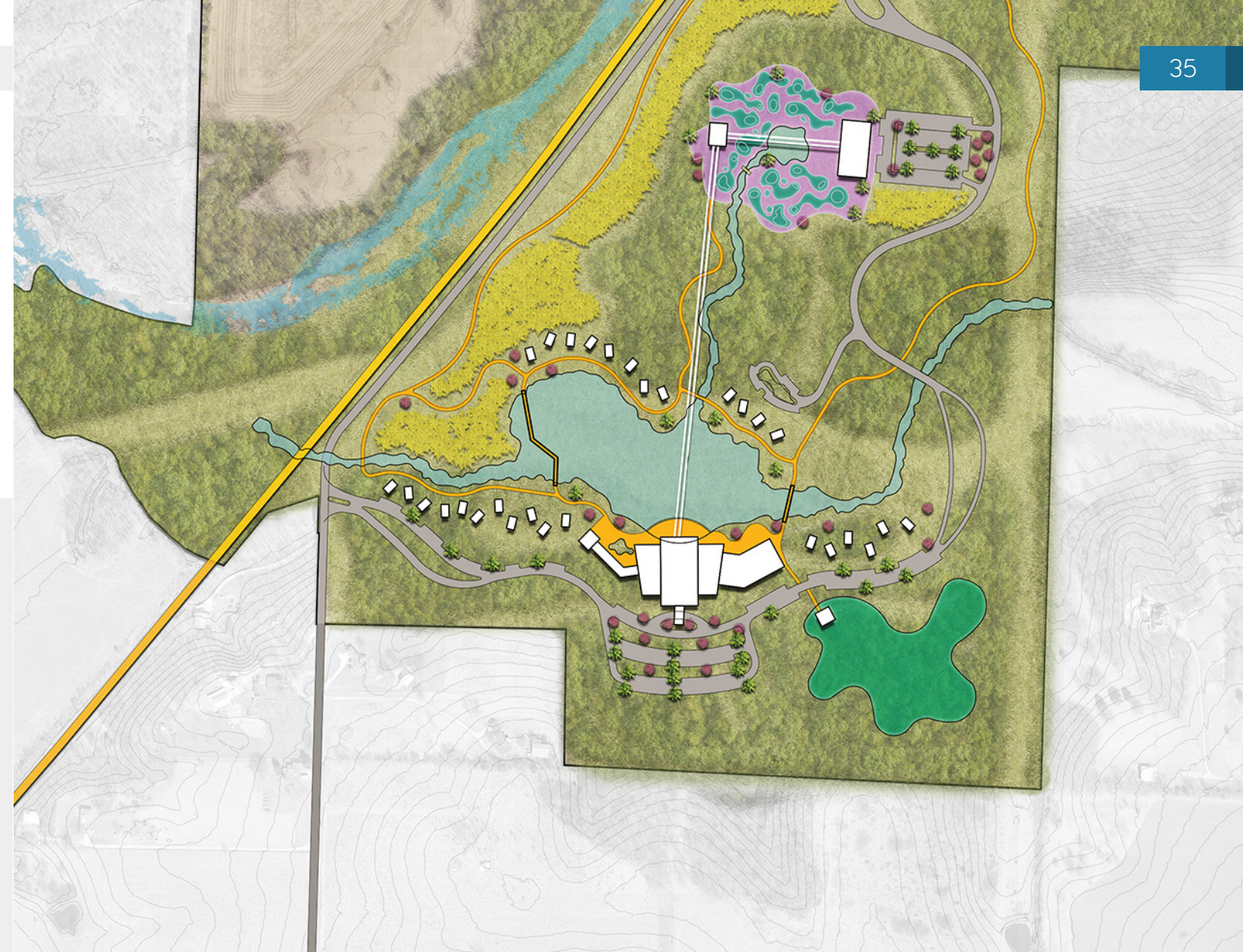
Similar to the Power Station site, the South Activity Area envisions two themes that can connect to the power station site and draw traffic and people to and from each location. With additional space to build recreation amenities as well as commercial or overnight accommodations, the South Activity area is an important zone for economic development within the subarea.

ECO RETREAT - CONCEPT A

South Activity Area

Working in tandem with the Entertainment District theme for the Power Station site, the Eco Retreat theme for the South Activity area provides overnight accommodations for people that are visiting the area and enjoying everything Springfield has to offer. In this concept, the South Activity Area features an upscale retreat center, for smaller executive level leadership retreats. Additionally, retreat cabins are another feature of this theme, which will serve the overnight needs for groups utilizing the retreat center.

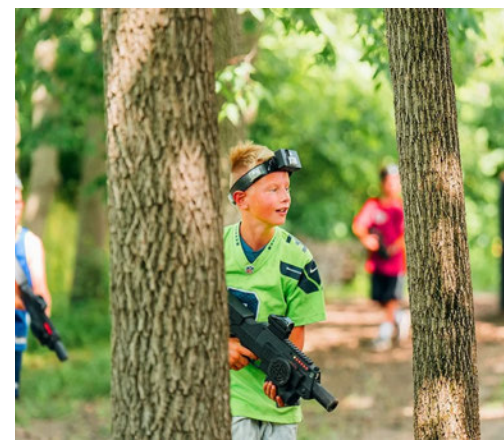
Recreation opportunities included in this theme are a bike park, adventure/team building course, an aerial chairlift connection and lake amenities. The idea is that the focus of the south activity area becomes more about recreation and retreats, where visitors can travel to the entertainment district for food, dining, and commercial activities.



ADVENTURE HUB - CONCEPT B

South Activity Area

The South Activity area adventure park is the option that works with the adventure hub theme of the Power Station site. The focus of this theme is on nature-based adventure activities, such as a ropes course, a bike park, archery and water adventure in an activity lake. The site also features an Amphitheater and RV camping. In addition to these adventure activities, the site will also feature retail and food and beverage.



LAKE & PARK AREA

While the central focus of the lake and park area will not be as an economic driver for the subarea, there is some potential to expand operations at the Boathouse, as well as recreational offerings to draw more people to the Springfield area. The Park and Lake Zone will have a larger development footprint than the North Zone but will maintain a focus on the natural assets at Lake Springfield. Proposed programming in this zone features an improved and expanded Boathouse and Ecology Center, a marina, a boardwalk, a destination play area, cross country, disc golf, river crossing access, and trail connections.

The expanded boathouse will provide the opportunity to host more reception-style events at the location, where guests will be able to stay on site at some of the proposed overnight accommodations located elsewhere in Lake Springfield. The boardwalk and nature-based play will serve as 'destination' play and experience opportunities for residents of Springfield, that will travel across town to use these amenities.

ECO ISLANDS

Lake & Park Area



- 1. Chadwick Flyer Trail
- 2. Expanded Boathouse
- 3. Marina
- 4. Boardwalk Trails
- 5. Destination Play



ECO ISLANDS
Lake & Park Area



■ **GOAL #2**

SUSTAINABLE WATER QUALITY & GREEN INFRASTRUCTURE

LAKE & PARK AREA

Within the Lake & Park area, there is significant focus on the water quality and green infrastructure. An initial step in this planning process was the completion of a hydrology study for a better understanding of the existing issues within Lake Springfield. The outcomes are separated into distinct topics of (1) Sediment Management and (2) Dam Options.

Sediment Management

Sediment management refers to a plan to manage the existing sediment within Lake Springfield. Sediment continues to enter Lake Springfield from 270 square miles of land in the Upper James River. The Bathymetric survey completed as part of this plan revealed that the lake’s depth has largely decreased since originally constructed via Lake Springfield Dam in 1950. The depth of the lake ranges from 1 foot to 4 feet outside of the historic James River Channel, and ranges from 7 feet to 8 feet within the historic James River Channel. From both visual observations and the profiling completed as a part of this plan, sediment deposits are present in the lake, and the lake continues to receive sediment load from the upstream watershed, approximately 7,900 cubic yards/year.

This plan calls for a sediment management strategy to deal with the existing sediment within the lake, as well as manage the continued sediment load from the James River Watershed. While costs range significantly based on the type of plan, and amount of sediment to address, this will be a critical component to a successful Lake Springfield Vision. A breakdown of these costs is included here.

Sediment Management Option	Estimated Cost
2-4 ft of sediment	\$22M - \$57M
As-built to grade	\$35M - \$89M

As discussed in the previous section, the new boardwalk trail system, connecting ecological islands is proposed as a way to repurpose the existing sediment, so that it is engineered in a way that becomes useful to the lake area. The connection of these ecology islands, via a new 1.4 mile trail of boardwalks, will greatly enhance the user experience at Lake Springfield. While the lake is not suitable for primary water contact, the addition of this activity gives users a unique way to experience the beauty of the lake from a new vantagepoint on this one-of-a-kind boardwalk system.

Dam Options Alternatives

The Lake Springfield Dam was originally constructed in 1956, the first water over the spillway occurred January 17, 1957, to supply cooling water to the James River Power Station. The damming of the James River created Lake Springfield and is currently an underutilized recreation asset within the City of Springfield. An important question in this plan, is the future of the Dam and the Lake. Three scenarios related to Dam modifications are included.

1. Dam Removal (partial or full)

There are a couple of benefits to full dam removal. First, the removal of the dam re-establishes the river eco-system. Additionally, the removal of the dam may reduce or remove the liability of maintaining the dam. Full dam removal is the most costly option ranging from \$17 million to \$44 million. This alternative is not recommended given other concepts within the plan that focus on the lake as an asset.

2. Dam modifications (concrete dam or earth embankment)

The benefit of Dam modifications is to provide fish and kayak passage, while not embarking on the significant scale of project that is associated with dam removal. Some sort of dam modifications are the preferred scenario to meet the vision of the Lake Springfield Plan.

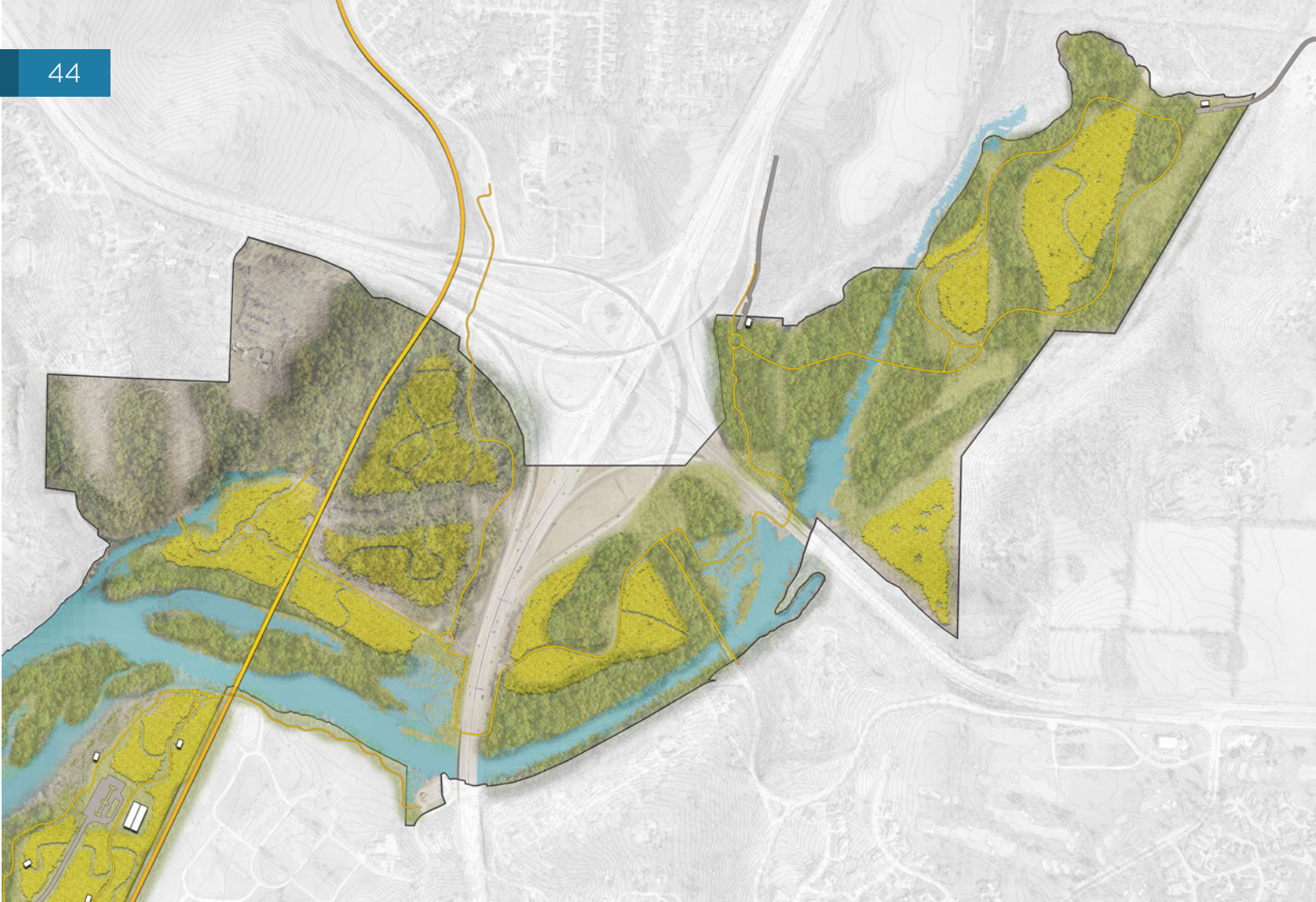
By modifying the earthen embankment, a bypass channel can be constructed that runs through Zone 3, and serves as an asset to the proposed entertainment district or adventure hub on that site. This option is also the most affordable option ranging from \$5 million to \$11 million.

Partial dam removal of the concrete structure is another option here, though not the preferred option. The range in cost here is \$8 million to \$12 million. While this does allow for kayak passage, the proximity is a bit removed from other sites within the planning subarea, and does not become as big as an asset as the bypass channel.

3. No Modification

The final option assessed within this plan is the option to do nothing with the dam and focus on Lake enhancements and sediment management. Given the importance of the dam to Lake Springfield, doing nothing is not an option. To meet the vision of the future of the lake identified within this plan, some level of dam modification is required.





NORTH ACTIVITY AREA

The focus of the North Activity area is preserving the natural amenities of the zone, supporting bike access to the lake, and featuring passive recreation opportunities to remain minimally invasive to the natural environment. The main components of this area are wetland preservation, trails, meadows, river access, nature amenity areas, a nature center, and an event lawn. There is a significant focus on culture and education within this zone with light development.

The North Activity area prioritizes preservation of natural resources, supports enhanced walking and biking access through a network of nearly 7 miles of trails, and offers enhanced river access and trailhead locations along the James River. With direct connection to the Chadwick flyer trail, this zone offers the opportunity for scenic departures for trail users. The Chadwick Flyer Trail bridge offers enhanced access across the James River and to the local neighborhoods, further supporting a connected zone, and the ability of residents within the adjacent neighborhoods to travel to the Lake Springfield Subarea using a more sustainable form of transportation.

With a focus on the ability to use sustainable transportation to access the Lake Springfield Area, this zone supports green infrastructure offering enhanced connections to the North Activity Zone, and within the larger Lake Springfield subarea.



GOAL #3

ADAPTIVE REUSE STRATEGY

The cornerstone of this plan is the re-envisioning of the James River Power Station and surrounding site as an economic driver. A central focus on the power station zone as a new tourist destination and amenity for Springfield residents is a key theme of this plan. With enhanced access and connectivity to the site, guests will now find the area easy to reach and find. As identified within the goal on Economic Development, the adaptive re-use of the Power Station is two distinct concepts, both with the potential to be significant anchors to the Lake Springfield subarea.

In both of these scenarios (Entertainment District & Adventure Hub), the economic impact in 10-years of full build out is significant for the Springfield community:

Economic Impact	Entertainment District	Adventure Hub
Jobs	1,091	946
Direct Visitor Spending (\$M)	197.5	171.2
Room Nights	62,665	34,801
Taxed Generated (\$M)	9.5	8.1



POWER STATION/DAM AREA



Concept A – Entertainment District (Muti-Use Event Venue & Mixed-Use Building)

In this concept, the James River Power Station serves as an anchor to the entertainment district as a mixed use-building, featuring commercial, residential, office and entertainment. An additional feature of the Power Station zone features a large, 270,000 square foot multi-use event venue. This venue may attract various events that would encourage overnight stays elsewhere on the site, and combined with the commercial, hospitality and retail available within the area, people are able to fully stay and play. Once you are on the site, a connected network of trails ensures that you do not need to get in your car to access other amenities located within Lake Springfield.

Additional recreation opportunities located within the power station zone can help attract larger events and functions to come to this site, with the promise of a one site, many activities options for participants and those travelling with participants.



Concept B – Adventure Hub (Conference Center)

In this concept, the James River Power Station is slated for re-use to accompany a new large-scale conference center. This conference center meets a gap that has been identified in the Springfield market. The re-use in this scenario focuses on attracting conferences and events to the area, by promoting a unique environment for conference participants. The conference experience is more destination based versus what you might find in other conference centers.



GOAL #4

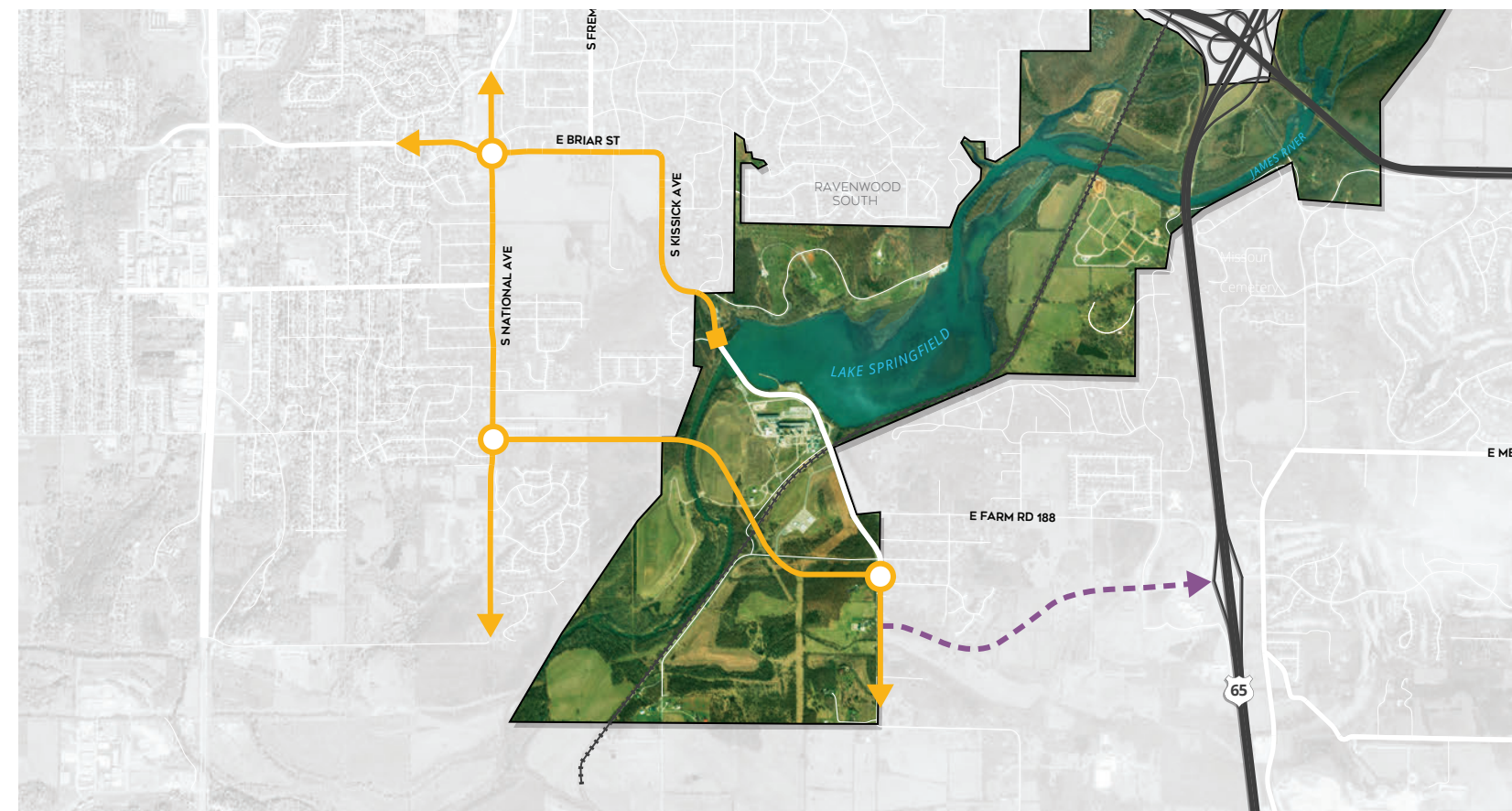
TRANSPORTATION ENHANCEMENTS

Currently, and by design, due to the function of the James River Power Station, Lake Springfield is not easy to find, with limited vehicular access. Reaching the Lake Springfield subarea by foot, bike, or transit is even more challenging with no sidewalk access along many of the main roads that lead to the zones. Ensuring high quality access, regardless of age or ability, is important for fulfilling the vision of Lake Springfield. Several enhancements are recommended here to ensure enhanced access, and identifying Lake Springfield as a place that you know when you have arrived.

POWER STATION/DAM AREA

As the major trip generator, updated access to the Power Station and Dam area is going to be an immediate need to realize the vision of the plan. Currently, Kissick over the dam moves traffic to and from the Power Station site. The bridge is a 2-lane narrow section and does not have space to move people outside of cars. Additionally, if the focus of Kissick is to move heavy volumes of vehicular traffic, the road becomes a major barrier between the power station zone and other zones north of Kissick. Significant bridge upgrades are required if the focus of Kissick is vehicular traffic.

To effectively move motorists to and from the power station site, as well as provide additional space for people on foot and bike, building a new access road, the Southwest Gateway, connecting to National Avenue is a critical first step to ensuring a viable development site.



There are several benefits of this new road to enhance access and connectivity to and within the Lake Springfield Subarea.

Bike Connectivity

Following the recommended designs standards of the Ozark Transportation Organization (OTO), designing the new roadway as a collector road will allow for the opportunity to take a Complete Streets approach, and provide enhancements, such as a shared use path, to further enable direct biking and walking connections.

Chadwick Flyer

Closing Kissick to vehicular traffic, removes an at grade conflict between motor vehicles and trail traffic where the Chadwick Flyer crosses Kissick. The vision of the new Southwest Gateway is a grade separated roadway to ensure the Chadwick Flyer remains a regional trail spine, that is fully separated from motor vehicle traffic.

Gateway Opportunities

currently, when you arrive at Lake Springfield, it is not clear that you have arrived. The new road provides the opportunity to use gateway treatments for both traffic on National Avenue, the parking lot entrance to the power station site, and at Farm Road 169. The idea for Farm Road 169 connection is a new roundabout that features an iconic Lake Springfield Gateway.

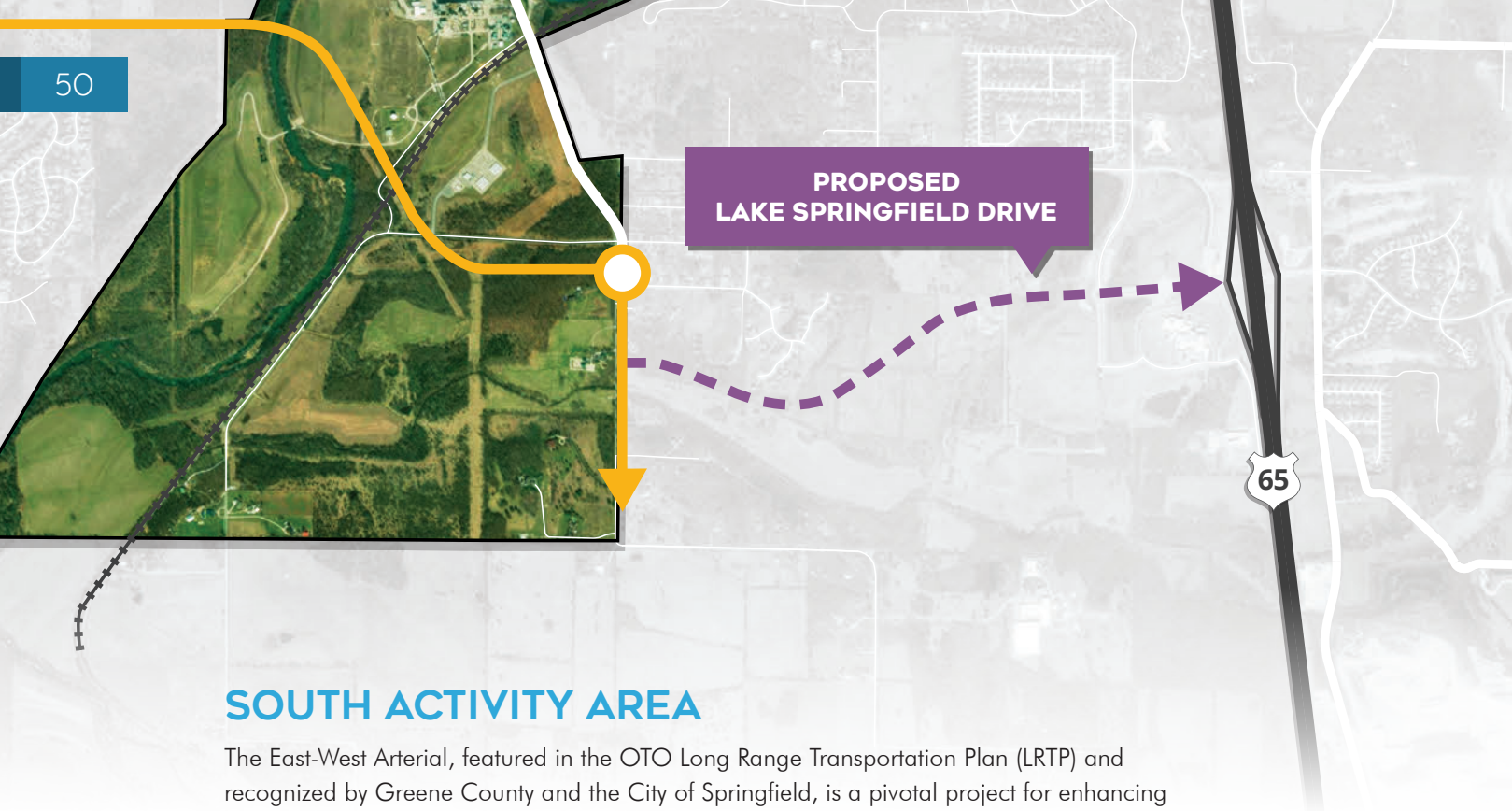


Kissick Linear Park

A common concern during this plan is the lack of safe pedestrian facilities to access the Lake and Park Area. By closing Kissick to vehicular traffic north of the existing dam structure, until after the Chadwick Flyer trail crossing, there is enhanced connectivity for people on foot and bike. The bridge becomes a linear park, that further seeks to connect the experience from the Power Station site to the Lake and Park Area.

Minimize Cut-Thru Traffic

Another concern during this plan is from adjacent neighbors that experience cut-thru traffic for motorists trying to access Kissick to connect south. By closing Kissick to vehicular traffic, and building the new Gateway Road, this cut-thru traffic is minimized for local neighbors, who now have a more pleasant experience walking and biking to the Lake area.



SOUTH ACTIVITY AREA

The East-West Arterial, featured in the OTO Long Range Transportation Plan (LRTP) and recognized by Greene County and the City of Springfield, is a pivotal project for enhancing network connectivity in the Springfield region. Designed to facilitate east-west traffic, it spans from the Kansas Expressway Extension to Campbell, extending southward through the Lake Springfield area to the interchange at US 65 and Evans Road. Although acknowledged in the LRTP and having secured right-of-way (ROW) in part of Springfield, it is not currently a priority for transportation agencies. Moreover, when it becomes a priority, the primary focus is on the section outside the Lake Springfield area, connecting Campbell to National.

Recognizing the regional importance of this route, the recommendation emphasizes the initial development of a section connecting to the Power Station Site and South Activity Area. Despite significant grading challenges in the landscape, prioritizing the construction of this portion of the East-West Arterial is essential for enhanced access to both the South Activity Area and the Power Station site. The stretch from Kissick to Evans Road is particularly prioritized to establish necessary vehicular connections, aligning with the proposed vision for the planning area.

The enhanced intersection at Kissick and Lake Springfield Drive, forming the new East-West Arterial, is envisioned as an iconic gateway, guiding visitors and providing clear directions upon arrival. The project's phased approach is designed to prevent cut-through traffic at the power station site. While the ultimate goal is to connect to the west alignment of the East West Arterial, a phased design strategy ensures that the full build-out of the arterial road is not initially executed. Preserving right-of-way for the final design size is crucial in early project phases, with a focus on designing the road as a collector road to meet projected vehicular needs until the west phase of the East West Arterial, west of Kissick, is prioritized for development.

The goal of this project is for Lake Springfield Drive to connect to the new Southwest Gateway, with this road segment (from US 65 to National) serving site traffic, designed to the standards of a collector road. Once the E/W arterial project west of Kissick becomes a priority, the road can be designed to the standards of an arterial road. At the time of the full E/W arterial buildout (west of Kissick), intersection upgrades at Kissick have become critical to differentiate Lake Springfield traffic, from regional traffic seeking to move east and west throughout the region.

LAKE & PARK AREA

Within the Lake and Park area, the theme for transportation enhancements is about access and identifying the Lake Springfield Subarea as a place. The existing entry to the park is a skewed intersection, set off Kissick, with minimal signage once you have arrived, or signs along the way. In line with the goal of enhanced access, designing Briar and Kissick to be in line with OTO Collector Road Design standards will allow for better access for vehicular traffic, and foot and bike traffic when taking a complete streets approach.

A redesign to the park entry provides an opportunity to serve as an iconic gateway feature, further reinforcing your arrival at the Lake Springfield area. The plan calls for a roundabout at this entry point, which serves as a physical monument to your arrival at the lake and park. Furthermore, this roundabout serves a key functional purpose when Kissick is closed to vehicular traffic. The roundabout provides an updated intersection to remove the dysfunctional skew that exists today, but then also provides an opportunity to bring out the nature-based branding of the area. The roundabout can feature a monument designed by a local artist, or plantings that are in line with the theme of the vision for the Lake Springfield Area.





Another important project for transportation improvements and enhanced access is the addition of a shared use path from Republic Road to the Lake and Park area. This 1.5-mile shared use path runs through neighborhoods, along an existing utility corridor, and provides a direct connection to the public transit stop that is in the closest proximity to the Lake Springfield Subarea. A 1.5-mile path is about a 35-minute walk, or an 18-minute bike ride. The addition of this path ensures that Lake Springfield is an accessible place for everyone in the community, regardless of your ability to own or operate a vehicle.

The updated shared use path to the transit stop on Republic Road presents opportunities to develop the transit stop as an entry point to Lake Springfield for public transit users. Through enhanced placemaking strategies, this stop can be branded as the front door to Lake Springfield for those using public transit. Through updated wayfinding, interesting features, like paint or public art, and enhanced transit amenities (branded shelter or benches), the opportunity to connect public transit users with Lake Springfield is enormous. With a focus on an equitable project, that caters to many different needs and desires in Springfield, ensuring the area is accessible for those that do not own or operate a car is paramount.



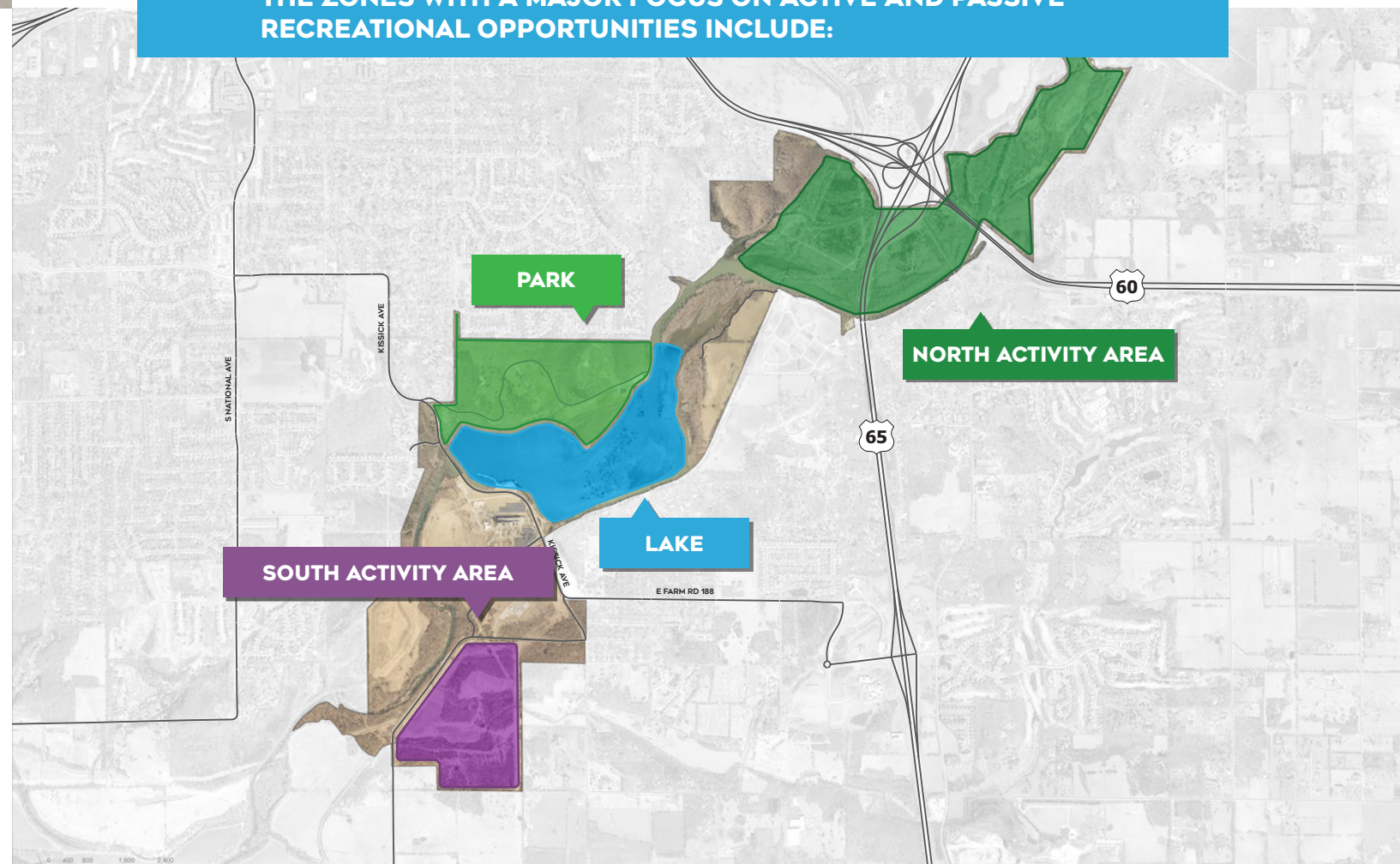
■ GOAL #5

ACTIVE & PASSIVE RECREATIONAL OPPORTUNITIES

The influential concept, to ‘Design with Nature’, developed by Ian McHarg, is the cornerstone of this goal. McHarg, one of the most influential environmental planners and landscape architects of the 20th century, introduced this concept to reinforce the idea that spaces are best designed when done with careful regard to the ecology and characteristic of the landscape. Additionally, the belief focuses on the idea that when communities live with the powerful forces and flows of the landscape, places gain a stronger sense of place and identity. Designing with nature is paramount to the successful vision for the Lake Springfield subarea discussed here.

While there is some element of nature and natural amenities within every zone, the focus on three of these zones is nature elements meant to supplement the economic activity taking place at the Power Station Site. The overall vision for the area is that by promoting destination activities, with a central theme of nature, economic activity can be largely focused on specific areas on the site, minimizing impacts to the natural environment of the 1,000 acres.

THE ZONES WITH A MAJOR FOCUS ON ACTIVE AND PASSIVE RECREATIONAL OPPORTUNITIES INCLUDE:



NORTH ACTIVITY AREA

The North Activity area prioritizes preservation of the natural environment in both concepts for the plan. The largest zone within the Lake Springfield subarea, at 450-acres, with good access to the James River, and including the Nature Conservation Center, a focus of the natural environment in this zone is important to preserving the natural beauty and habitat of the area. Additionally, a network of nearly 7 miles of trails offers enhanced areas for both active recreation (walking and biking) or passive, where guests may detour from the trails to points of interest or scenic detours.

Another signature element of programming within the North Activity area that focuses on passive recreation are enhanced habitat areas, such as bird meadows or riverside wetlands. These habitats help enrich wildlife and environmental health. When compiled with the additional trail network, this area presents significant opportunity for hikers to further explore and enjoy nature through activities such as birding. Also included along the trail system is the opportunity for interpretive signage, where visitors can learn about the history of the area, habitat and the environment.

A key component to the North Activity area that focuses on active and passive recreation, is the opportunity to celebrate the history and contributions of Native American populations on the land long before the City of Springfield existing. Included in this zone is a new cultural education center, located east of Lake Springfield, and connected to the North area via the new Chadwick Flyer trail bridge, and to the lake and park area over a new bridge near the boathouse. This cultural center will honor the contributions of these populations to the land, and is dedicated to promoting education, enrichment, and appreciation of Springfield Native Americans.

The activities focused in the north activity area enable the overall plan to be a forward-thinking vision for development yet rooted in the natural setting of Lake Springfield. In fact, these activities may be a deciding factor in way a group chooses Lake Springfield for a conference or event, understanding their guests will have a unique experience of fully immersing themselves in the outdoors, and taking in all that our natural environment has to offer.



LAKE AND PARK AREA

While the Lake and Park area currently offers the most ability to connect with nature, the land is vastly underutilized in terms of being able to experience nature. Existing amenities within this area include a hilltop pavilion, a small trail network, and well-loved disc golf course. Additionally, the boathouse offers limited meeting/event space and boat rentals. In current configuration, it is not easy to access the other side of Lake Springfield from the boathouse area by foot or bike due to no safe facilities for walking and biking. The vision for the plan is to promote an expanded area to enjoy nature and recreation, while at the same time being able to connect across and around the lake on a dedicated network of trails, including boardwalks, and enhanced or new bridge facilities.

The iconic element of the Lake and Park area of the plan is the addition of Wetland/Ecology islands. Given the desire to further immerse themselves within the lake area, the addition of these islands allows visitors to get close to the lake, through an enhanced boardwalk of nearly 1.5 miles that connects these new islands adjacent to the Boathouse. Scenic overlooks are recommended just south of the park entry, as well as off the Power Station site. Furthermore, the addition of two bridges enhances circulation and connectivity across and around the lake. One bridge connects the boathouse to the trail of honor and new cultural pavilion and education center, and the second bridge connects from the ecology islands to the Power Station site. In addition to these new enhancements for better foot and bike access and circulation, the closure of Kissick to vehicular traffic provides another opportunity for an enhanced linear park that better connects the zones within the planning area.



Another signature component of this new vision is the addition of a destination nature playground. Springfield does not currently have a destination nature playground, and the location of this type of feature within the site will be an important reason that many residents come to visit the area. Play is hugely significant for childhood development, and creating a safe, interactive, and stimulating environment for children to play is a reason parents and caregivers from across the Springfield region visit Lake Springfield.

In recent years, natural playgrounds are becoming increasingly popular, and offer a way for children to better connect with nature in a safe and inviting way. Research shows that natural playgrounds stimulate imagination and boost energy levels of children. Following the natural theme of the Lake Springfield area, the Lake and Park area is a perfect place to have a destination nature play area. The addition of the destination nature play area is a feature that will serve the residents of Springfield, but also campers to the area at the Group Camp/Retreat Center, another significant component of the Lake and Park area. In the new vision, there are several reasons this camping center becomes a regional draw, including all of the amenities to connect with nature on site, but also all of the amenities within the Lake Springfield area that are not accessible via foot or bike.

SOUTH ACTIVITY AREA

The south activity area focuses on economic enhancements that further support the power station site, but is also designed to meet the natural environment, while filling unique adventure experiences that will draw visitors to Lake Springfield. In fact, the South Activity area can be the selling point that makes this destination, entertainment district or adventure hub, the destination to host events and conferences, given the distinctive experiences offered within this zone.

In both concepts Eco Retreat (supplements the Entertainment District of the Power Station site), and Destination Adventure Park (supplements the adventure hub of the Power Station site), economic activities on the site are largely supplemented by active and passive recreation opportunities. These activities offer an experience like no other in the region and have the potential to be a national draw in recruiting large scale events and conferences. The programming is thoughtful when looking holistically at both the Power Station site and the south activity area to ensure that through the advancement of programming that is a catalyst for economic growth, there are also exclusive recreational opportunities that you can only find at Lake Springfield.

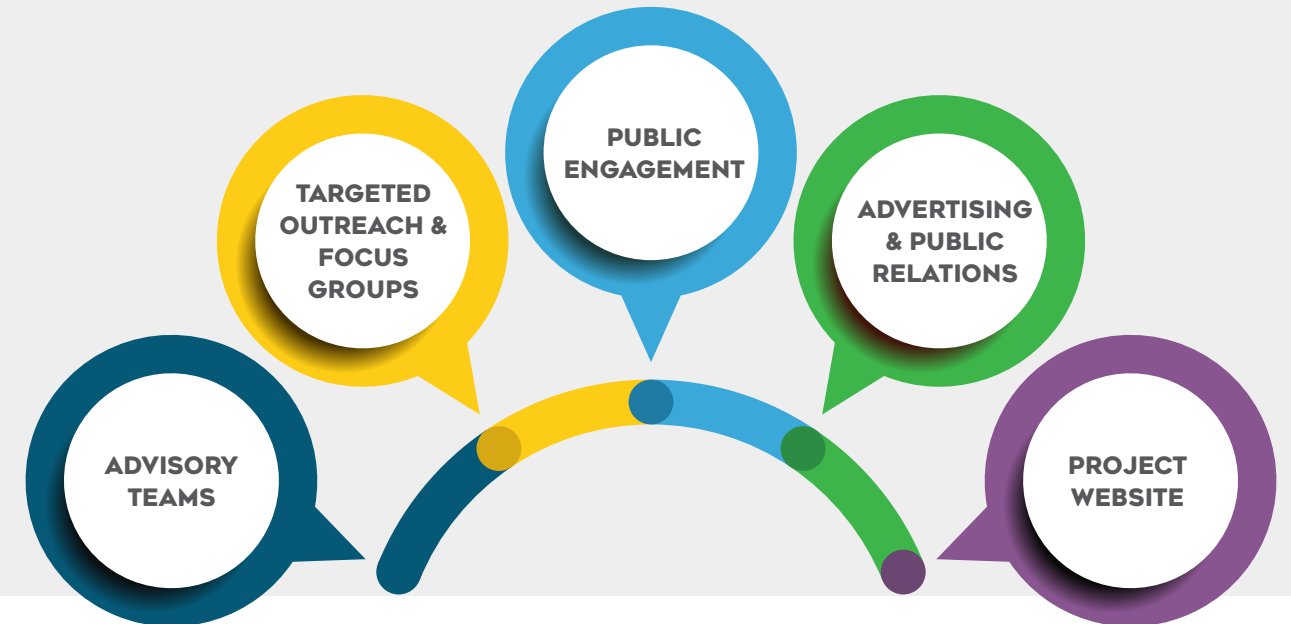
Eco Retreat (+ Entertainment District)

Within the eco retreat concept, the economic catalysts are the high-end retreat center, that offers an exclusive getaway for high level executives or corporate needs. The retreat center also boasts state of the art overnight lakes and cabins for an elite 'glamping experience.' The retreat center is connected via aerial chairlift, offering scenic views of the expansive Lake Area, to a destination recreation park. The destination recreation park supplements overnight stays by offering guests the opportunity to experience nature through active and passive recreational opportunities while at Lake Springfield. Additional amenities for active and passive recreation include a state-of-the-art bike park, as well as an additional outdoor space for adventure exploration and team building. The focus of this concept is attracting visitors to the Eco Retreat conference center by boasting an immersive adventure experience within this expanded network of active and passive recreational offerings.

Destination Adventure Park (+ Adventure Hub)

Within the adventure hub concept, the economic catalyst is the addition of high-end RV parking, of which there is currently a gap within the Springfield Market. Additional economic opportunities include shows or events to take place at the new outdoor amphitheater, which offers a scenic experience for travelling acts and artists a chance to perform in this one-of-a-kind destination. Retail and food and beverage offerings also offer the opportunity for people to purchase everything they need on site while they stay and play. The overnight stays and amphitheater experience are supplemented by destination based recreational offerings, meaning that guests within Springfield and the region will travel here to experience these activities. Activities such as a bike park, archery, water features, and a canopy ropes or zipline course are distinct active recreation opportunities not found elsewhere in the region.





■ GOAL #6

HOLISTIC VISION BASED ON DIVERSE COMMUNITY INPUT

With an overarching vision of making sure this plan is designed for everyone and by everyone, the planning team reached deep within the fabric of the Springfield community and sought to bring all voices to the table. As a significant public amenity for the Springfield community currently, a focus on remaining accessible to all, while still serving as an economic catalyst was imperative to a successful planning process. The core components of the engagement framework for the Lake Springfield plan are depicted in the graphic above.

Advisory Teams

- Community Advisory team (appointed by City staff, representing a variety of interests within the community to provide feedback)
- Technical Advisory team (appointed by the City, representing peer planning and partner agencies with a vested interest in implementation)

Public Engagement

- Public meetings and events
- Online survey opportunities

Targeted Outreach/Focus Groups

- Coordination with adjacent projects in the City of Springfield
- Coordination with community groups or populations of the community interested in learning more and getting involved



PUBLIC SURVEYS

Through three online surveys (two specific to this project and one related to water resources), over 1,000 people within the community were engaged. The planning team carefully reviewed input during each phase of the process to ensure recommendations and collaboration on key planning themes were founded in both technical analysis and detail, but also community vision and desires. The plan is a result of this collaboration, and truly represents a transformative experience developed for and in tandem with the community.

UNIQUE ENGAGEMENT EXPERIENCES

Given the grandiose scale of the plan, and building off the momentum of the ForwardSGF adoption, there was significant interest in this plan and learning more about the vision. Additional environmental and nature concerns elevated the interest and offered the planning team an opportunity to engage with the public through a series of meaningful conversations and more focused dialogue around specific areas of interest. In total, representatives from the planning team participated in over **70 unique engagement opportunities throughout the 18-month span** of this planning process. As a result of this intentional collaboration, implementation champions are already being identified to ensure swift momentum from adoption to implementation.

RACE/ETHNICITY OF RESPONDENTS

Through engagement opportunities, participant race/ethnicity was tracked. The goal of this tracking is to ensure the feedback for the plan is closely aligned with the population diversity of the City of Springfield. The table included here represents responses to the planning process and the demographic makeup fo Springfield.

	Responses	City of Springfield
White	91.08%	87.65%
Hispanic/Latino	2.55%	4.33%
Black/ African American	2.55%	4.28%
American Indian/Alaskan native	1.91%	0.67%
Asian	0.64%	1.81%
Native Hawaiian/Other Pacific Islander	0.00%	0.04%
Other	1.27%	

The level of input and excitement on this project is outstanding and remains a jewel of this work. It is because of this intentional outreach that momentum continues to build toward implementation.

IMPLEMENTATION

The momentum gained for the new vision of Lake Springfield is extremely positive, with several partners and community champions already working toward implementation. Harnessing the positive feedback and keeping the momentum going is important for this next phase. This high level overview presents next steps to move toward implementation. A more detailed chapter on implementation is included as the final chapter of this planning document. This overview focuses on high level considerations, whereas the Implementation Chapter discusses details, by technical area, of implementation steps such as specific projects, funding, and other key partners.

THE IMPLEMENTATION PLAN INCLUDES FOUR LEVELS OF ADMINISTRATION:



CREATING THE PLAN





A PLAN THAT IS ROOTED
IN **COMMUNITY DESIRES**
IS A PLAN THAT **CAN BE**
IMPLEMENTED.

-Mary Shukert

PLANNING PROCESS

This planning process is the result of an intentional effort to engage the community in a way that is inclusive of a diverse and multicultural perspective. The plan incorporates many unique voices from across the community and includes feedback from over 70 distinct engagement opportunities, ranging from public meetings to online surveys, to focused stakeholder meetings and individual interviews.

The engagement feedback is integrated with the technical analysis, and the outcome is a plan that is implementable, with clear action items to achieve the long-term vision for the area, while at the same time is founded in community desire and dreams. Community plans work best when developed in tandem with community residents, and this vision is truly a result of that process.

**THE FINAL PLAN ENVISIONED HERE IS THE
CULMINATION OF AN 18-MONTH PERIOD OF THIS WORK.**

Let's take a look at how it all came together.





Lake Springfield area identified as redevelopment opportunity area in the Comprehensive Plan.

GETTING STARTED

Crawford, Murphy & Tilly selected through competitive bidding process. Formation of Community Advisory Team (CAT) and Technical Advisory Team (TAT). Stakeholder groups identified.

PUBLIC ENGAGEMENT

Public Meeting and Survey. Engagements with stakeholder groups, CAT and TAT.

PUBLIC ENGAGEMENT

Public Meeting and Survey. Continued engagements with stakeholder groups, CAT and TAT.

ACTIVITIES & AMENITIES

CMT presents findings on recreational potential.

VISION

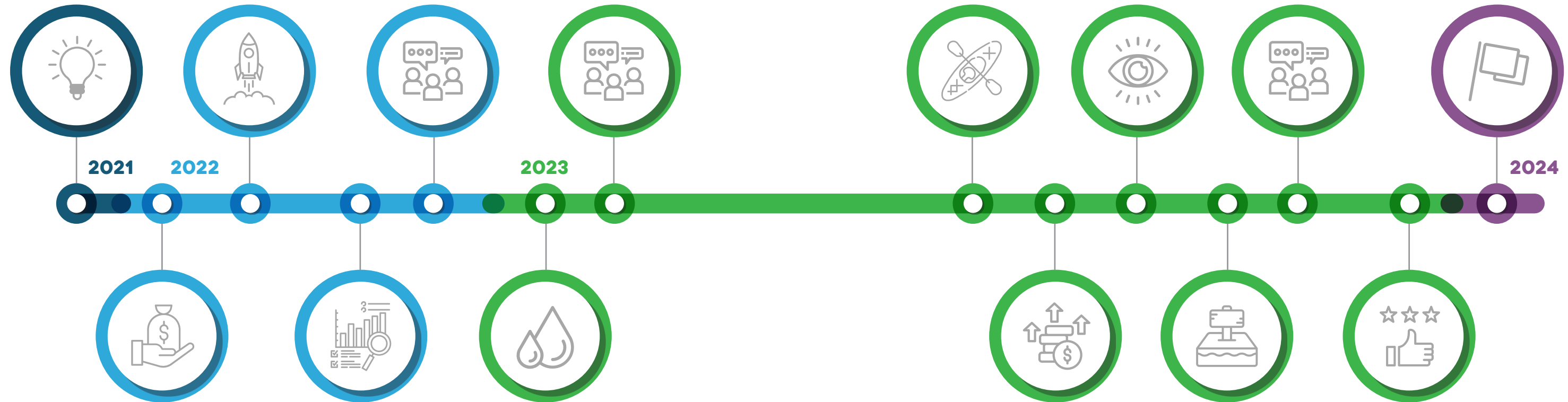
CMT presents vision based on public engagements and research.

PUBLIC ENGAGEMENT

Public Meeting and Survey. First opportunity for feedback on Land Use Plan. Continued engagements with stakeholder groups, CAT and TAT.



ACCEPTANCE



EARLY FUNDING

U.S. Dept. of Commerce Economic Develoement Administration (EDA) awards \$800K to fund a redevelopment plan for the Lake SGF area. Grant is matched by \$200K from Hatch Foundation, City Utilities and City of Springfield for a total of \$1M.

RESEARCH

CMT Performs Market Research.

DAM & WATER QUALITY ANALYSIS

CMT and subconsultant Geosyntec perform hydrology assessments.

ECONOMIC IMPACT

CMT presents findings on economic development potential.

LAND USE PLAN

PUBLIC REVIEW

Additional opportunities for feedback.

PLANNING TIMELINE

ENGAGEMENT

By the Fall of 2023, more than 1,000 people participated in the Lake Springfield Plan. Through a series of meetings, open houses, focused discussions, and advisory groups, the plan engagement strategy has focused on reaching the widest audience of people, representing diverse perspectives, and lived experiences. The input received is critical to the creation of this plan and represents a collaborative partnership between the City of Springfield and City Utilities, as well as significant input from the public about the Vision set forward in this plan.

From day one, the planning team has focused on ensuring the plan represents all voices within the community, and that the vision for the future site remains accessible to all Springfield residents. Ensuring equitable access to recreational amenities is paramount to the future vision for the area. As such, the plan presents a mixture of opportunities that range in scale for accessible and affordable or free chances to connect with nature and enjoy the serene beauty of the area, and programming that focuses on economic drivers and paid attractions. The balance of the proposed programming is critical to the success of developing the Lake Springfield subarea as an equitable asset within the Springfield region, and as a regional and national tourism driver that creates sustainable and resilient job opportunities.

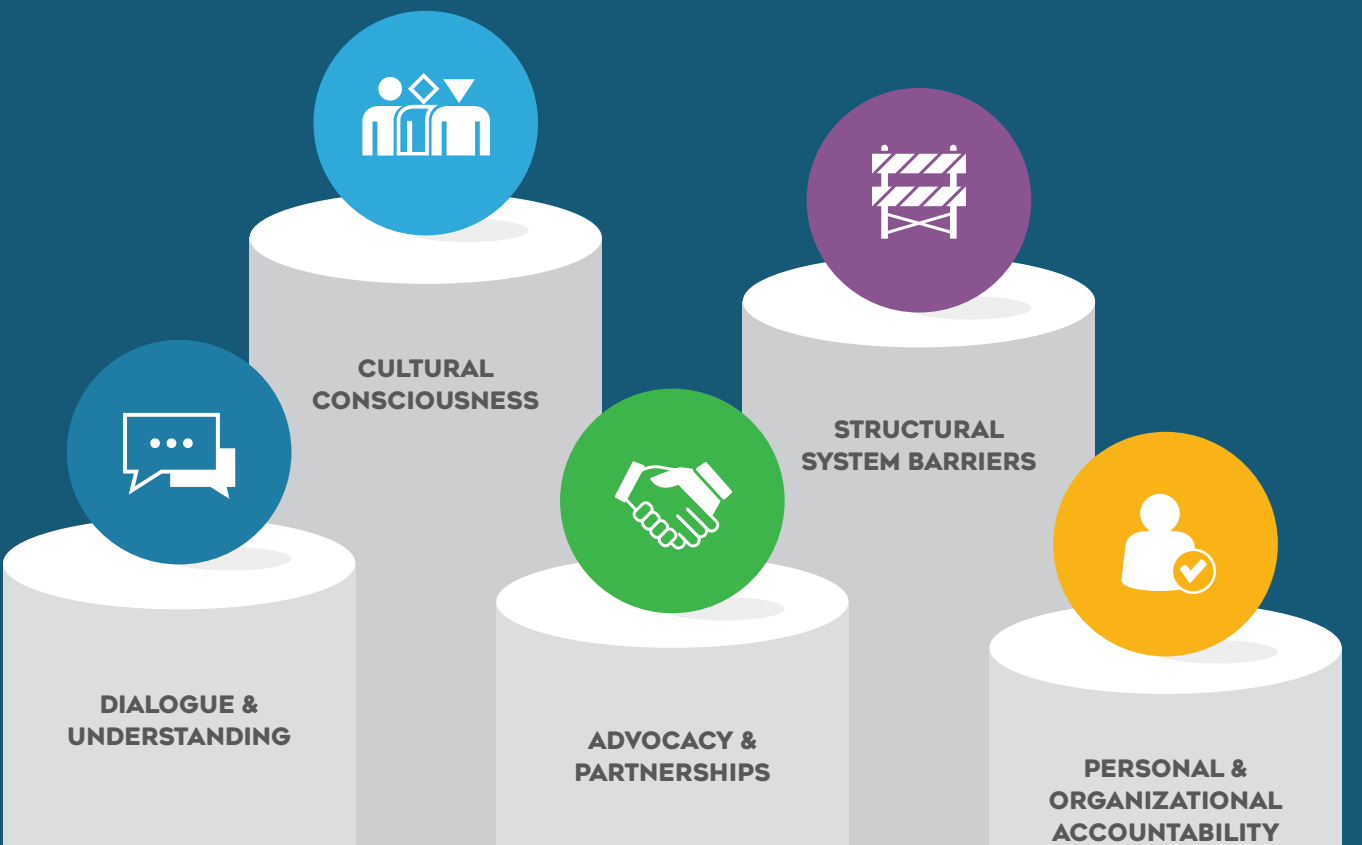


DIVERSE & INCLUSIVE ENGAGEMENT

The engagement process for the Lake Springfield Plan is focused on a diverse and multicultural perspective. The result is a process that provides a wide variety of input through intentional outreach and meeting people where they are. For too long in traditional planning processes, residents from historically excluded race/ethnic and intersectional groups, which includes populations in harder to reach locations in the community have been left out, with a voice not represented at the table. The result tends to be plans that do not represent the vast and varying lived experiences within the community, and lead to infrastructure investments that are harder to access. Acknowledging this shortfall in the planning profession as whole is a key driver as to why diverse engagement is included in one of the six priority goals for the outcome of this plan.

This goal is directly in line with the charge of the Springfield Mayor's Initiative on Equity and Equality. Within this initiative are the Five Pillars of Change that promote inclusive access to opportunities, recognizing that every person within the community has dignity, value and worth. Throughout the Lake Springfield Plan, the Five Pillars of Change were continuously monitored to ensure this recognized value of every Springfield resident's voice is included in the vision set forth in this document.

THESE FIVE PILLARS OF CHANGE ARE:

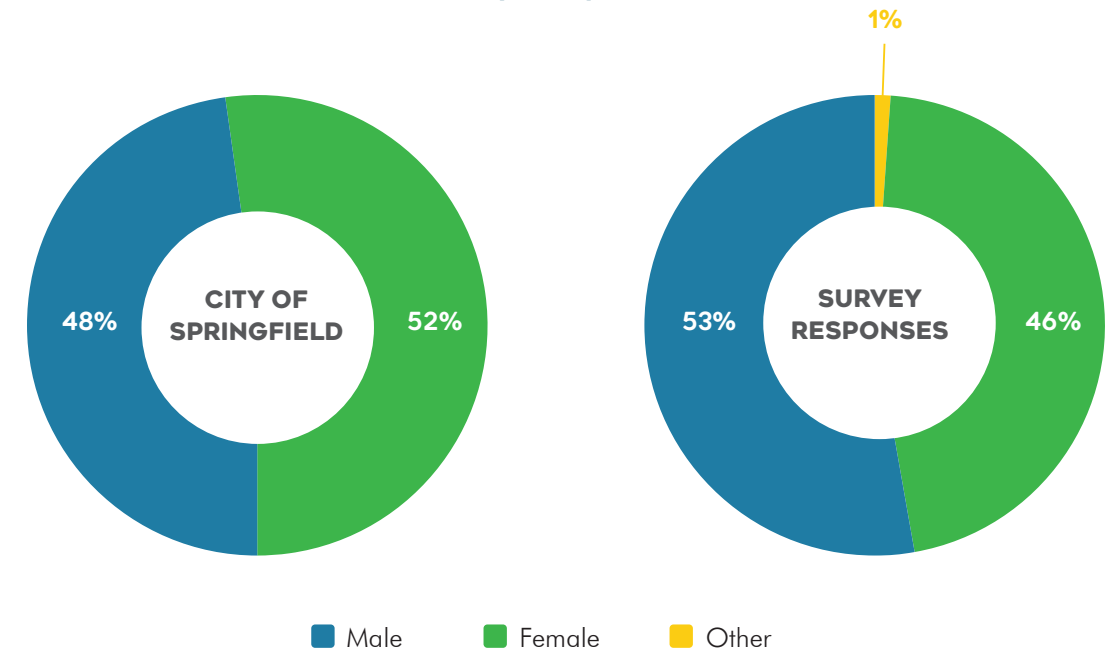


The deliberate outreach within all areas of the community is captured by the responses received throughout the duration of this planning process. Over 1,000 responses have been received on three surveys throughout the planning process, and over 1,000 residents have attended various public meetings, focus group discussions, and in-person outreach events. The breakdown of responses received to the survey is comparable to the demographic makeup within the City of Springfield, which demonstrates the success of this focused outreach to capture all voices for a representative vision for the Lake Springfield Plan.

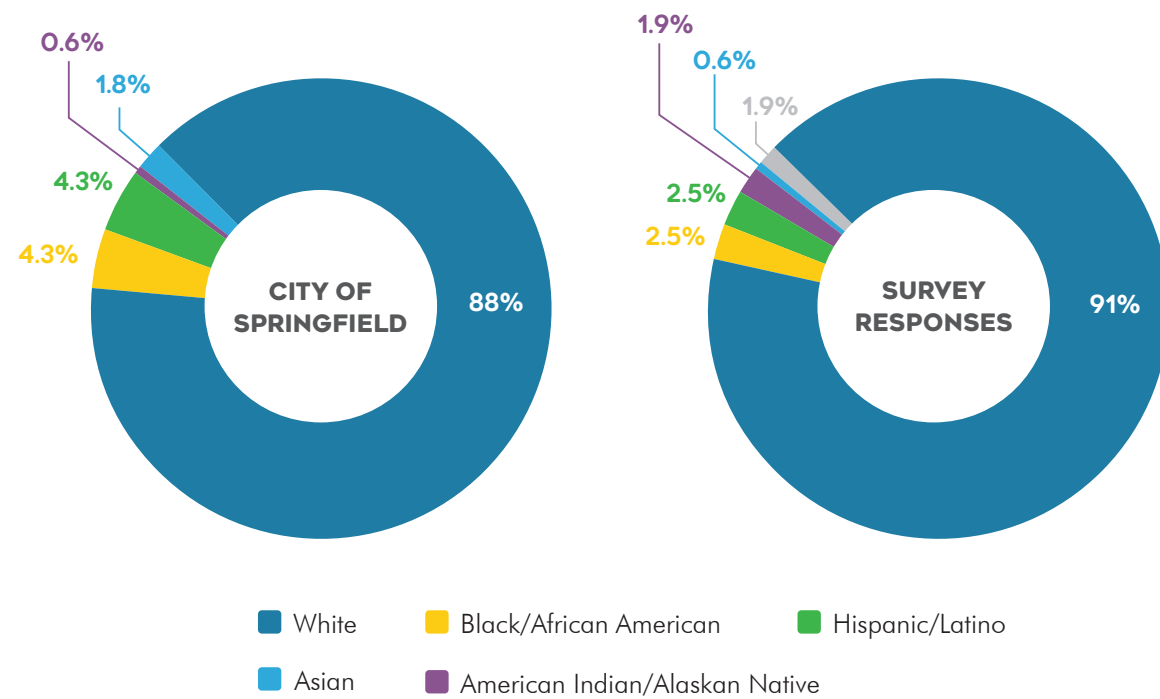
Additional outreach was conducted with members of native American communities as well as Empower Abilities. We recognize the work of those people that were on this land long before us, and this plan represents an opportunity to honor history, while educating the public. Including representatives from these populations on our Community Advisory Team ensured that the final proposed site plan is thoughtful and inclusive to this history. It is also important the lake remains an accessible amenity for everyone, including people with disabilities. Our team presented the plan to Empower Abilities, who also was involved in our Community Advisory Group. During design in future stages, accessibility is essential.

Survey demographic responses are included here as a comparison with City of Springfield demographics, which was used as a key benchmark for ensuring diversity of input.

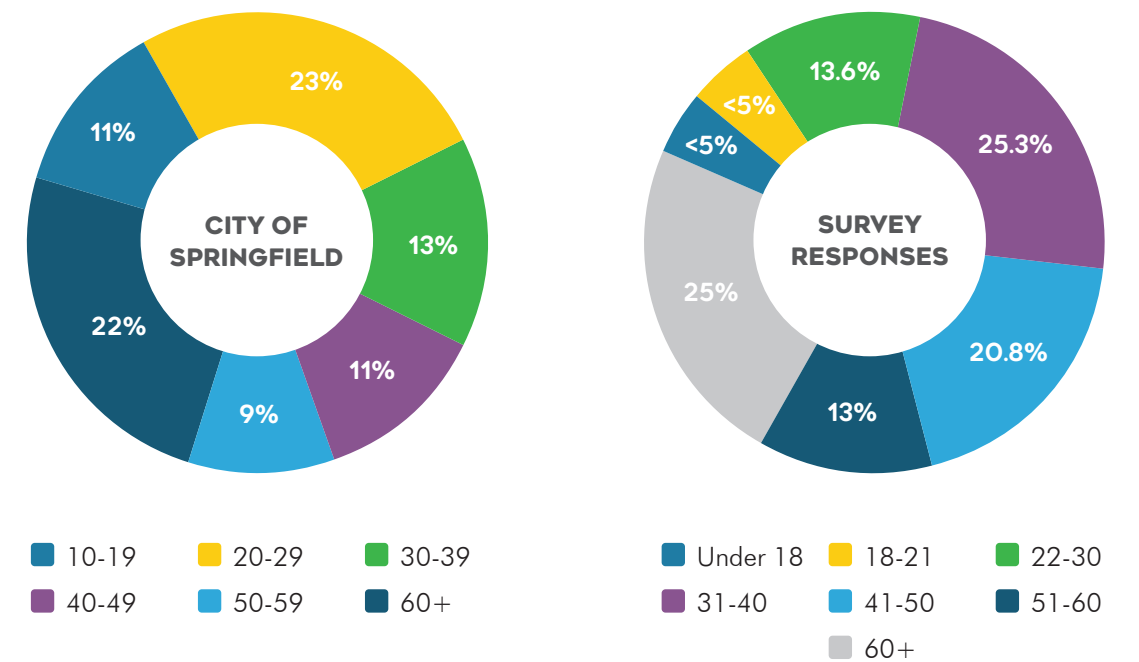
Gender Survey Response Breakdown



Ethnicity/Race Survey Response Breakdown

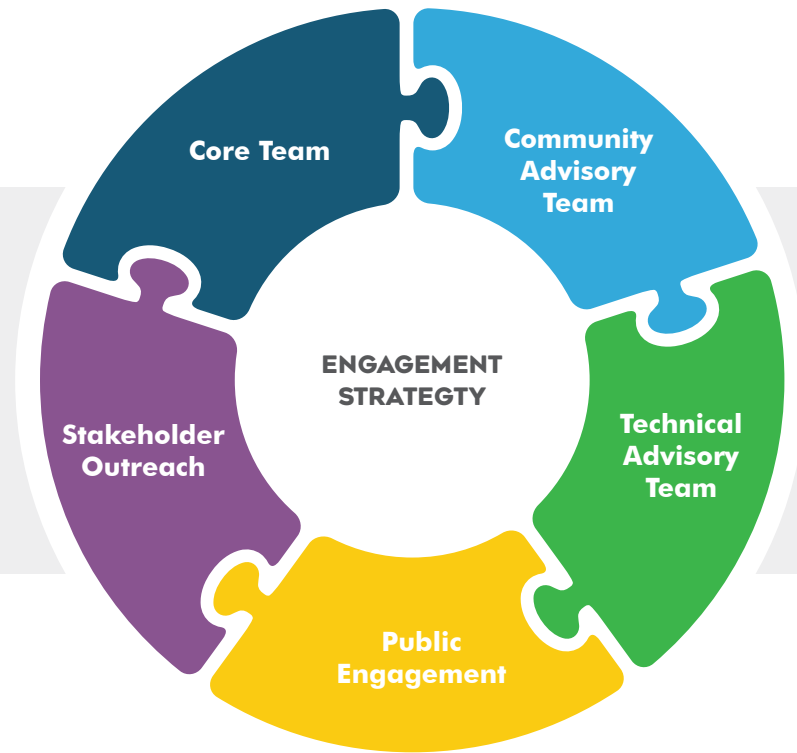


Age Survey Response Breakdown*



*Reported age breakdown does not match exactly with options on Lake Springfield survey

In total, the meaningful input received as a part of this effort ensures the feedback is representative of the entire community. The output is a product that becomes an equitable and accessible asset to the Springfield community, the larger region, and even a national attraction. Activities and amenities are designed in a way to include people with disabilities, as well as provide free opportunities to connect with nature. Additionally, with a focus on active transportation connections, and a path connection to the closest transit stop, access to this important amenity will remain open regardless of transportation mode.



CORE TEAM

The core team meeting met regularly (bi-weekly) throughout the planning process to ensure the project stayed on schedule and keep the direction of the project in line with both the goals outlined within the EDA grant, as well as the public input received during the process. The project was managed by the City of Springfield Department of Economic Vitality, and core team participants included members from several other city departments such as public works, planning, public information, and the mayor’s office. Additional agencies represented on the Core team included City Utilities staff, as well as Springfield Greene County Park Board. Periodically, additional representatives were invited to attend these meetings and provide updates on specific project milestones as the project progressed.



COMMUNITY ADVISORY TEAM

The Community Advisory Team was established with input from the City of Springfield and members of the consulting team (Pratt Consultants). The purpose of the community advisory team is to ensure that community values and needs were incorporated in this plan. The Community Advisory Team met 2 times during the planning process, and served as a critical sounding board for ideas, programming, and ongoing vision of the Lake Springfield Area.

The Community Advisory team includes members from various geographic areas of the Springfield community, as well as with different connections to both the planning area and the project. Additionally, the community advisory team was charged with bringing an equitable community building lens to the project to ensure economic growth and sustainable job creating, worked to enhance the quality of life for all Springfield Residents.

The full list of Community Advisory Team members includes:

- | | | | |
|------------------|------------------|------------------|-----------------------|
| Brian Ash | Jeremy Parsons | Jasmine Cooper | Rob Blevins |
| Stephen Hall | Dana Hubbard | Darlin Mabins | David Burton |
| Suzanne Shaw | Mark Miller | David Miller | Lindsey McDaniel |
| Susie Turner | Jon Mooney | Ian Alaimo | Stephanie Pendergrass |
| Danny Collins | Greg Burris | Bernard Kitheka | Jenny Fillmer Edwards |
| Lindsey McDaniel | Gary Leonard | Tom Prater | Erin Danastasio |
| John McQueary | Todd Wagner | Katie Towns | David Catlin |
| Todd Pamell | Myra Scroggs | Loring Bullard | Bruce Adib-Yazdi |
| Barry Rowell | Martin MacDonald | Gabrielle Martin | |



TECHNICAL ADVISORY TEAM

The Technical Advisory team was established to serve as a review board of technical professionals, which included representatives from several peer planning and partner agencies with the City of Springfield. Members of this advisory team represented organizations from around the Springfield region, that have some level of overlap with goals or mission of this planning process. These agencies have a vested interest in the outcoming of this plan as a way to further advance these regional initiatives.

Technical advisory team members included representatives from organizations such as the Ozark Transportation Organization, the Missouri Department of Conservation, Ozark Greenways, and many more. This team met three times throughout the planning process to review milestone progress and provide feedback to the planning team that was critical in making any adjustments before sharing updates in public settings. In addition, this team kicked off the project with a full-day retreat after the initial neighborhood public meeting. The retreat served as a collaborative environment to share ideas about visions and goals for the final outcome from a wide range of stakeholders as the process commenced.

The full list of Technical Advisory Team agencies and members includes:

Amanda Ohlensehlen	Danny Perches	Mary Kromrey	Sara Fields
Bailey Fowler	Errin Kemper	Matt Crawford	Steve Stodden
Ben Jones	Frank Miller	Melissa Hase	Tim Rosenbury
Brent Stock	Jeff Smith	Mike Kromery	Taj Suleyman
Carrie Lamb	Jon Carney	Miles Park	Megan Morris-Stack
Colten Harris	Justin Smith	Randall Whitman	Eric Roberts
Kristen Milam	Kelly Turner	Ray Eaton	Jason Ray
Cora Scott	Martin Gugel	Saki Urushidani	Megan Buchbinder
Roddy Rogers	Joel Alexander	David Miller	Erin Danastasio
Daniel Hedrick	Mark Hecquet	Dean Thompson	

PUBLIC MEETINGS

With the goal of this project being centered on 'diverse and inclusive' public input, the public meetings during this planning process served as an important step in advancing planning ideas while shaping the final vision laid out in this document. The goal of each public meeting was to share updates on the project by distilling very technical information into a format that is suitable for public consumption. The planning team worked to ensure meeting material was understandable and accessible to participants with a variety of backgrounds. As such, each public meeting was structured slightly differently and held at various locations throughout the Springfield area.



Neighbor Meeting

📅 October 13, 2022 📍 Lake Springfield Boathouse

Recognizing neighbors living adjacent to the planning area may be most interested in the plan and impacted by implementation, an initial public meeting was held with neighbors that lived within a adjacent of the planning area. The goal of this meeting was to serve as a listening session. The project was introduced within the context of the EDA grant but was then an open forum for questions and answers. At the time of this meeting, no technical work had commenced, and the planning team was intentional in seeking feedback without having preconceived notions on the plan outcome.

The format included a formal presentation by City staff, the Mayor, City Utilities staff, and the consultant team. Following the formal presentation, consulting team members discussed concerns and issues with attendees while looking at large scale maps of the planning area, as well as historical photos. Over 85 neighbors attended the meeting. In addition to the meeting, a survey that was only made available to these adjacent neighbors was also available online. The meeting was publicized by local news outlets. After this neighborhood kickoff, the planning team and technical advisory team commenced project work with a full-day kickoff retreat the following day.



Public Meeting 1

November 17, 2022 Springfield Art Museum

Approximately one-month after the project kickoff with the neighbors and technical advisory team, the first public meeting was held in conjunction with a community advisory team meeting. Similar to the neighborhood meeting, the goal of this first input format was to serve as a listening session. No initial ideas or concepts were shared, rather the project was introduced, and input was solicited. Approximately XX people attended this meeting at the Springfield Art Museum. The meeting was publicized on several local news outlets.

The presentation was introduced within the context of the grant application, and the audience heard from City staff, the Mayor, City Utilities, and consulting team members. Information was shared about the planning area and project schedule, and the meeting culminated with a series of live polling questions and open dialogue. Results from the live polling questions were shared on the screen so participants could see what the audience was sharing and how others were responding to questions. Following the live polling, participants were able to meet with the project team for one-on-one conversations around a series of large format maps and historical photographs.



Public Meeting 2

May 4, 2023 Lake Springfield Boathouse

On May 4, 2023, over 100 participants gathered at the Lake Springfield Boathouse, eager with anticipation for initial concepts and ideas from the planning process. With so much information to share, the meeting format included both a formal presentation as well as station-based engagement to garner very specific feedback to initial planning ideas including programming, land uses, access, and dam options alternatives. In addition to the formal meeting, participants were able to register in advance and take tours of the James River Power Station. Approximately 60 meeting participants signed up for those tours, including EDA representatives in town to meet with City staff on the project and grant process.

The meeting kicked off with a formal presentation inside the Lake Springfield Boathouse. The presentation was structured by technical discipline were consulting team members shared on the following areas of the plan:

- Economic development and programming
- Land uses and site plan
- Water quality and dam options alternatives
- Access and mobility

Following the formal presentation inside, participants were invited outside to provide feedback at stations organized by discipline. The interactive feedback boards used at the open house were the same questions used as a public survey online. The online survey was available for people that were not able to attend the public meeting. Additionally, respondents at the meeting were encouraged to submit their responses online, via a QR code, as they navigated the boards.

The meeting was advertised on several local news outlets and participation was successful. Ideas and concepts presented at the second public meeting were the culmination of both technical analysis and a series of several small focus group and stakeholder discussions that transpired from fall 2022 – spring 2023. The feedback received at this meeting, as well as from the online survey, was important in guiding the direction of the more refined site plan and recommended programming for Lake Springfield.



Public Meeting 3

📅 October 12, 2023 📍 Springfield Art Museum

The final public meeting occurred on October 12, 2023, at the Springfield Art Museum. Prior to the final public meeting, a media briefing was held the day before to share with local news outlets about the meeting and details to be made publicly available at the meeting. The goal of this final meeting was to be informational in nature and share the final concepts that are included in this plan. A formal presentation was given, outlining each technical area and recommendations, as well as brief information on the analysis and input that went into each of these overall plan themes.

The presentation included the final site plan options, with two theme potentials, as well as projected numbers on revenue generation and costs to build. Also included was detailed information on costs for sediment management strategies and dam options alternatives, as well as proposed new routes for access and connectivity. Once the formal presentation ended, participants were invited to share their feedback in a one-on-one dialogue with team members. Large format site plan posters were displayed in the lobby of the art museum to be used as a basis for discussion.

Following the final public meeting the presentation that was given was posted to the plan website for participants to review ideas.

STAKEHOLDER MEETINGS

In addition to the formal advisory groups and public engagement opportunities, stakeholder meetings were held on a regular basis throughout the plan. The purpose of these stakeholder meetings was to build consensus with partner agencies during the process, as well as provide a final program that was both visionary and feasible. Critical to this focus on implementation were these discussions, ensuring that our planning team was accounting for day-to-day operating challenges, while still providing creative themes and solutions.

Throughout the planning process, over 70 unique stakeholder group meetings occurred, ranging in everything from meeting style to audience. The value of these added perspectives allowed the planning team to ensure the vision you see here is inclusive, equitable, feasible, and accessible, while serving as an aspirational goal of what can be.

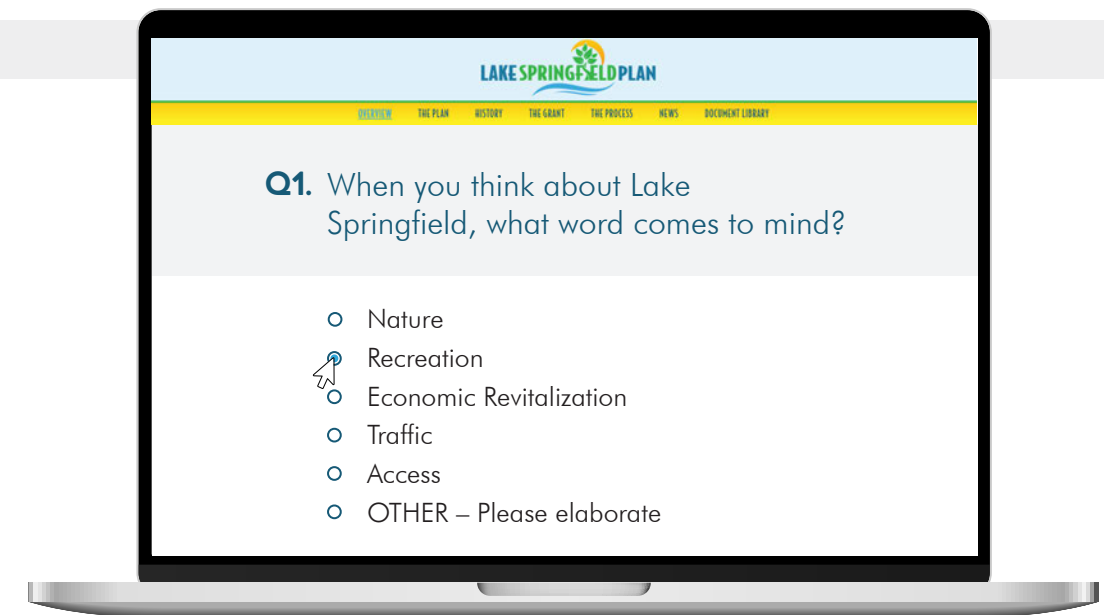
Examples of groups that were engaged during this unique process include:

- Springfield Greene County Parks Board
- Convention Visitors Bureau
- Missouri Department of Conservation
- Environmental Advisory Board
- Springfield City Manager
- Leadership Springfield
- + Many more



In addition to the groups listed here, several other residents and communities within the City of Springfield and the surrounding region were engaged. Given the rich history of the land, the team was intentional on integrating feedback from native American populations in the process, and how the vision may honor the history of those on the land long before our time. Another way to engaged with a different audience was the work the Missouri State University Planning Program. The capstone practicum class for the Spring 2023 semester was engaged in scenario planning for the area. Additionally, close coordination with the several ongoing planning initiatives in the City was key. The Lake Springfield team met with City Utilities – Transit on their ongoing transit study, as well as the consultant team doing the watershed assessment of the James River Watershed through the City.

In addition to the focus group meetings, the project was widely publicized online in various press outlets, including KY3 and with a dedicated KWTO radio interview. Throughout the planning process, the project garnered significant interest, which also led to ongoing discussions with landowners and potential developers. A high level of collaboration and transparency of the planning process has resulted in a vision that meets the community needs and is widely accepted, with implementation steps already occurring.



ONLINE SURVEYS

In addition to the various in person and virtual meeting opportunities, online surveys were used as a tool to supplement feedback and provide people with a quicker way to engage in the project.

Neighbor Survey

The first survey was made available to neighbors living adjacent to the Lake Springfield area. This survey was a benchmark survey to understand existing feelings about the lake area as well as amenities residents currently enjoyed and questions about residents' desires of items to be included in the Lake Springfield Plan. For the most part, questions were open-ended, and offered qualitative feedback to the planning team. The survey was available for approximately 1-month after the neighbor kickoff meeting.

Key themes that came out because of the survey:

- Protect the natural environment
- Enhance access to the lake and the park areas
- Develop brand and create a sense of pride
- Consider a plan that is self-sustaining

The survey confirmed much of what was shared with the team at the first planning meeting. From the beginning of this process the design with nature theme became an important conversation.

Public Survey – Concept Feedback

In conjunction with the May 4 public open house, an online survey was developed that matched the input boards at the public meeting. Participants were asked to respond to emerging concepts and themes in each discipline: economic development, land use and programming, water quality and dam options, and transportation and mobility. Approximately 160 people completed the survey, which helped identify concepts the public enjoyed.

The questions included feedback on general programming concepts and activities that should be included at Lake Springfield, as well as the opportunity to vote on their preferred theme or priorities for each of the planning zones. Participants were also asked to provide feedback on the preferred dam option alternative, as well as preferred transportation enhancements for pedestrian, bike and vehicular connectivity. Using input from this meeting, the planning team worked through a collaborative design charrette to piece together zones, themes, programming, access, and overall vision.

SCHEDULE

The Lake Springfield Plan lasted approximately 18 months from start to finish. Critical path items, such as water quality analysis, were included initially, to keep concepts rooted in reality. The following breakdown highlights the key project milestones by timeline from start to finish.

WINTER 2022-2023

Technical analysis continued through 2022 and into the start of 2023. Water quality and dam analysis was near complete by the end of winter 2023. During this time market analysis of the Springfield region was completed. This included gap analysis and case study review of similar projects. Existing conditions included transportation and land use analysis, and zone analysis began. Stakeholder meetings continued.

SUMMER 2023

A second public meeting occurred in May, which was followed by a collaborate design session by the full planning team. Detailed land use and programming was outlined and considered against project goals and site impacts.

The output from this collaborative design session was the vision for two distinct options for development: Entertainment District & Adventure hub. All zones within these themes remain the same, with the exception of the Power Station Site and South Activity Area.

During this time, refined economic analysis projected market impacts in each proposed scenario, including jobs created, room nights generated, etc. At the same time, cost estimates were provided for order of magnitude costs for implementation of the plan.

WINTER 2023-2024

The plan was compiled during winter 2023 and delivered to the City as a draft in early 2024. Comments and feedback was incorporated into the final version of the plan, submitted in late winter 2024.



FALL 2022

Immediate project task items included the neighborhood kick off meeting, as well as kick off meetings with the technical advisory committee and the community advisory committee. The first public meeting was also included in Fall 2022.

Technical analysis completed in this phase was focused on water quality and dam analysis. Future recommendations required this detailed analysis up front.

SPRING 2023

The water quality and dam analysis were completed by spring 2023. During the spring of 2023, existing conditions analysis wrapped up for all disciplines, and the project moved to the concepting phase. Potential programming options were identified, and themes for the entire area, as well as by zone, were detailed. New access options emerged for vehicular, foot and bike connectivity. Input opportunities included the second public meeting and an online survey.

SPRING 2023

After compiling the economic outputs, projected costs, and refined site plans, meetings were held with both the community advisory and technical advisory committee in fall 2023. These meetings were essentially testing the options before being shared with the public. Input received at these meetings was incorporated into the final public meeting presentation.

Also, during the fall, the project was advertised by several local groups and within the local media. Additionally, a media briefing occurred the day before the public meeting to give local media outlets the opportunity to learn about the project and ask specific questions in a smaller setting. Fall 2023 wrapped up with the final public meeting.

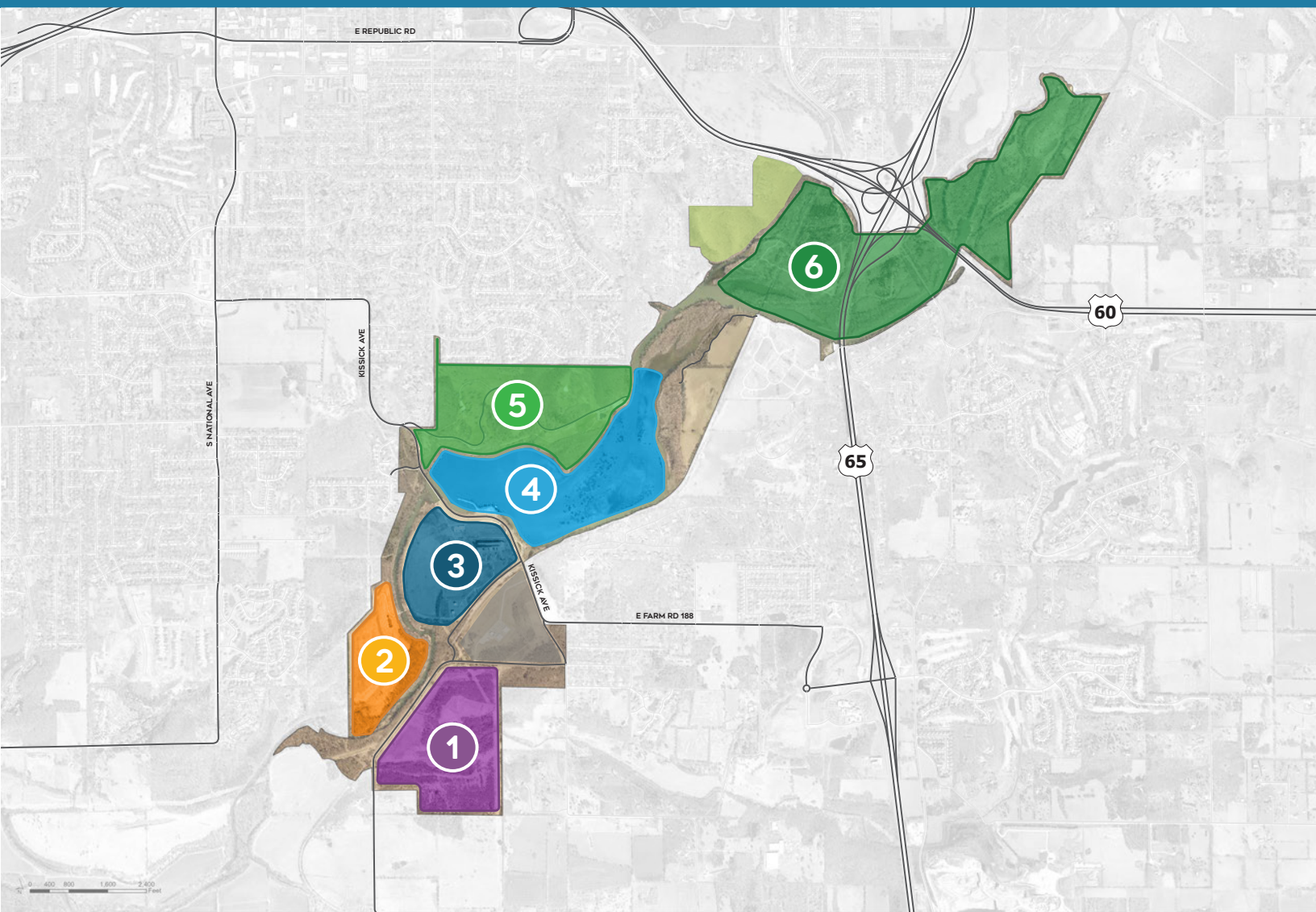
SPRING 2024

The plan was formally adopted in spring 2024. Several meetings with implementation partners have already occurred and there remains significant motivation for the Lake Springfield Plan to move from vision to implementation.

PLAN CREATION

The 18-month planning period was an opportunity for the planning team to fully immerse themselves within the Springfield community, and the Lake Springfield area. As previously discussed, a robust engagement process focused on both public input and stakeholder engagement that ensured our team became intimately familiar with the deep appreciation for the lake as a natural amenity, as well as the importance of focusing on an adaptive re-use with sustainable economic development strategy.

As discussed in the vision section, the lake area was firstly segmented by zones. Technical disciplines focused on existing conditions and challenges within the zones, before collaborating on ideas and concepts. During the programming and site planning, goals were further evaluated by their economic and social impact, to understand in which scenario was the final product meeting both major overarching themes. The final product is a holistic plan, that provides both social and economic impact, in a sustainable way for the region and the state.



ZONE ANALYSIS

Following the place-based approach identified in the ForwardSGF plan, identifying unique contextual needs of the different acres within the 1,000 acres of the planning area was an important initial component of the planning process. Spanning such a large area, and opportunities for programming, the planning team identified 6 zones for further segmenting specific programmatic opportunities. This breakdown allows for a focus on both the economic and natural elements of the planning area.

Zone 1: South Activity Area

Coming at 130 acres in size, adjacent to the Chadwick Flyer, the South Activity Area is an important space to complement the economic development potential of the adaptive re-use at the James River Power Station. Ongoing City Utilities operations remain an element of this site, but the focus is on recreation + economy in the south activity area.

Zone 2: Future Energy Innovation Site *Not Further Studied*

CU plans to maintain control of this 50 acres as a possible future location for energy innovation. This zone is adjacent to both the South Activity Area and the Power Station site. Significant environmental coordination will need to occur before any re-use of this land can be considered and the site was not further analyzed during this planning process.

Zone 3: Power Station

The Power Station site is the anchor of the plan. Adaptive re-use of the James River Power Station is important for creating sustainable jobs and enhancing economic activity. Additional development promotes a vibrant campus environment where one can visit many businesses, participate in recreational activities, and experience natural elements, such as a proposed bypass channel for the James River.

Zones 4 & 5: Lake and Park

The lake and park are the current drivers for traffic to the Lake Springfield area. A well-loved disc golf course is in these areas, as well as the existing boathouse and playground. Trails connect various spaces within the lake and park area. The vision for this area builds on existing assets and focuses on a destination playground and expanded boathouse and marina.

Zone 6: North Activity Area

The North Activity Area is the largest zone at 450 acres. With the location of the Nature Center being in this zone, a central theme here is to remain a largely natural asset with a focus on passive recreation. The plan proposes enhanced trail connections and activities where users can experience nature and pay homage to those on the land before us.

PROCESS BY DISCIPLINE

In addition to spanning a large geographic area, the plan spans a large technical area. Several technical leads created the planning team, and provided important analysis to ensure the plan here is feasible for implementation.

HYDRAULICS & WATER QUALITY

Before informed planning could take place for the lake area, it was important to establish a baseline understanding of the Lake Springfield waterbody and dam. The results of this initial work informed decisions on potential future recreational activities as well as economic opportunities within the area. The work was completed from October 2022 – February 2023 and culminated in the final Lake Hydrology report focused on three main components of the planning area: the Upper James River Watershed, the Lake and the Dam. Detailed information on this can be found in the technical chapter, as well as in the technical appendices.

THE MARKET & ECONOMIC CASE STUDIES

To analyze the future opportunities for Lake Springfield, the team undertook a detailed analysis of market conditions in Springfield and its surrounding area, relative to state and national averages. While characteristics such as population, employment, and income are not strict predictors of performance for potential developments, these variables provide insight into the capacity and ability of a market to provide ongoing support for such facilities and activities. Overlaid with the market analysis was the review of case studies to inform potential options for inclusion in the plan. The economic analysis was closely linked with the site planning and programming to ensure a cohesive product that promotes sustainable job creation.

TRANSPORTATION AND INFRASTRUCTURE

Given the very functional nature of City Utilities' operations, the Lake Springfield area currently feels very hidden and hard to get to, very much by design. However, with a new focus on attraction to the area transportation and access were an important component of this process. Collaborating with the team on proposed programming allowed for informed infrastructure decisions given the potential trips generated by the new uses. Additionally, connectivity for all modes of transportation is a key component of this plan, as evidenced by the connected trail network and safer spaces for people on foot or bike.

LAND USE & PROGRAMMING

An iterative and collaborative process occurred with the team after existing conditions analysis was completed to develop the final two proposed concepts for the site. Specific attention was focused on areas that should largely remain nature focused with passive enjoyment and areas that have the potential to be major economic generating locations within the plan. Collaborating on infrastructure needs also helped identify connectivity to and within the 1,000-acre site so that once people arrive at Lake Springfield, there is no reason to leave.

The final result of the collaboration between these disciplines leads, sets forward an aspirational picture of what Lake Springfield looks like in the future, that is based in data and rooted in feasibility.



RISK ASSESSMENT

An important component of the Lake Springfield Planning Process was to determine risks associated with the plan and mitigate the risks throughout the planning process. The goal of this process is to ensure collaboration at every step of the way, and aid in consensus as the plan moves from final plan document to implementation. This risk assessment is vital to the success of the project, as the project team reviewed and tracked project risks and associated consequences throughout the planning process. Risks likelihood and impacts are on variable scale, and thus, continuing to review risks as the project progresses is key for mitigating and managing risks. Risks are categorized by high, medium and low level, depending on their likelihood of occurring, as well as the impact should the risk occur.

THE RISK ASSESSMENT PROCESS WORKS TO ACHIEVE THE FOLLOWING OUTCOMES FOR THE LAKE SPRINGFIELD PLAN:

- ✓ Establish risk categories that are critical to the project
- ✓ Include individuals with knowledge of Lake Springfield and experts in various disciplines to identify risks.
- ✓ Include stakeholders with area knowledge and a desire to have their concerns be part of the risk assessment process
- ✓ Achieve a better understanding of risks and opportunities for the Lake Springfield area
- ✓ Understand which risks are of a higher concern to prioritize mitigation strategies
- ✓ Consider cost and schedule contingency to assist in Development Inquiries
- ✓ Organize allocation, mitigation, and acceptance strategies for high-level risks to prioritize mitigation strategies
- ✓ Help identify the Development Community perspective to risk and how it will impact the submittal/cost

RISK ASSESSMENT STEPS

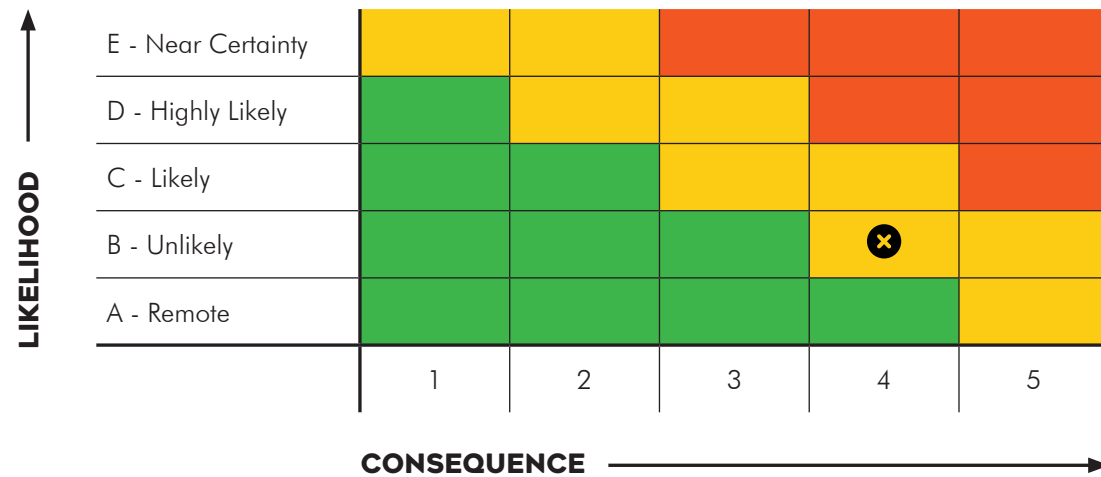
There are five primary steps in the risk assessment process. Steps 1 – 4 were completed by the planning team, in conjunction with the technical advisory team, at the Lake Springfield Kickoff retreat in October, 13, 2022. Following the retreat, the risk assessment process remained in the final step (tracking, monitoring, and updating) throughout the duration of the plan. It is important to note that risks should continue to be monitored and mitigated during each step of implementation.

- 1 **Risk/Opportunity Identification Brainstorming Session** – this occurred at project kickoff retreat. Risks were reviewed, consolidated, and organized by the project team.
- 2 **Qualitative Risk Assessment** – Risks were separated into specific categories and reviewed for likelihood and consequences. Each technical team member worked through this process in December 2022 and January 2023.
- 3 **Risk Analysis** – This is an important step for high level risks. For each of these, the risk analysis phase estimates the likelihood of the risk occurring (0% - 100%), and the associated costs or schedule impacts to the project. The risk analysis was worked through in tandem with step 2.
- 4 **Risk Mitigation and Risk Allocation/Acceptance** – The objective of this step is to explore response strategies for identified risks. This step is key in understanding who is responsible for the risks and the approach to accepting, mitigating, ignoring, or sharing the risk. Team members worked through this alongside steps 2 and 3.
- 5 **Tracking, Monitoring and Updating** – The project team continued to monitor the risks identified during the planning phase. Following the second public open house in May, 2023, the project team reviewed the risks list and reassessed the likelihood as well as consequences should that risk occur. Also at this time, new risks were added to the risk register that had been identified following the initial risk register identification in Fall 2022.



RISK ASSESSMENT SUMMARY

In total, 109 risks were developed during the brainstorming session at the project kickoff retreat. The list was reviewed and consolidated to combine overlapping risks and assign risks to the appropriate technical category (water, parks and rec, etc.). Once risks were categorized, team members by technical expertise reviewed risks and completed steps 2 – 4 for their respective risks. At this stage, some risks were removed or consolidated further.



INITIAL RISK ASSESSMENT SUMMARY

Completed October 2022 – January 2023

In total, 62 risks were identified in this category. The summary list here is completed by technical area as identified previously. The total number of risks for that category are included, as well as a listing of the risks identified as ‘high level’ during this phase of the risk assessment, as well as the identified project owner.

After reviewing the initial list from the retreat, 62 risks were identified for the Lake Springfield Plan. These risks are identified here by category, and by risk level within each category. A brief summary of each risk assessment report is included here. The full risk assessment following both the initial risk register identification, and the tracking, monitoring and updating phase, are included in the technical appendix of this plan.

TRACKING, MONITORING & UPDATING SUMMARY

Completed June – August 2023

Following the public meeting in May 2023, the project team reviewed the risk register to monitor and track identified risks. This summary outlines where any risks had changed in level or, if any risks have been added to or removed from the risk register at this stage in the planning process. Additional risks were added that had come to light during the planning process, with the new number of identified risks associated with the Lake Springfield Plan as 65.

TECHNICAL RISK AREAS

The technical areas of risks were categorized by the following:

Parks and Recreation

These risks involve the recreational aspects of the planning process as well as items related to park systems, including operations and maintenance.

- Initial Assessment:** Eight (8) total risks were included in this category after the initial identification at the kickoff retreat. Three (3) total risks were flagged as high level risks.
 - Lack of plan or support for operational/maintenance budget sufficient to maintain the park vision (owner: Springfield-Greene County Park Board)
 - Negative impacts to natural character of the lake and park / loss of native habitat / unimproved or worse water quality (owner: City of Springfield)
 - Pedestrian / user safety (water & land recreation) (owner: City of Springfield)
- Second Assessment:** Eight (8) total risks were included in this category after the initial identification at the kickoff retreat. During the assessment phase, two (2) risks were downgraded to moderate level, and one (1) risk remains as high level.
 - Lack of plan or support for operational/maintenance budget sufficient to maintain the park vision (owner: Springfield-Greene County Park Board)

Economic Development

The risks identified in this category deal with economic development related to the planning process. These development risks may be associated with real estate needs, jobs creation, ability to re-use physical/existing structures within the planning area, or potentially divisive development ideas within the community.

- Initial Assessment:** Seven (7) total risks were included in this category after the initial identification at the kickoff retreat. There was one (1) risk flagged as high level.
 - Power Station – unable to use or cost prohibitive to re-use due to previous use (owner: City Utilities – which may change depending on if CU leases building or sells to a potential developer)
- Second Assessment:** Seven (7) total risks were included in this category after the initial identification at the kickoff retreat. Two (2) additional risks were added within this category that were not previously included in the initial risk register. One (1) risk remains high level.
 - Power Station – unable to use or cost prohibitive to re-use due to previous use (owner: City Utilities – which may change depending on if CU leases building or sells to a potential developer)

Transportation

The risks identified in this category are focused on transportation both to, and within, the Lake Springfield area. These risks are focused on how people within the City of Springfield and the Springfield region can access the lake as a regional amenity, as well as circulation within the lake area. Transportation also focuses on all modes of access and connectivity, including vehicular connections, as well as safe access for people walking and biking. While public transit routes do not currently service the Lake Springfield area, this is also an important component of access, as we plan for an equitable recreation amenity for the community.

1. **Initial Assessment:** In total, eight (8) risks were identified in this category. While no high-level risks were identified initially, transportation and access was determined to be a major consideration with any redevelopment scenario. At present day, vehicular access to the lake is not direct or intuitive. Local neighbors are already concerned about cut-thru traffic and what a redevelopment looks like. Additionally, it was noted that access for those not traveling in private vehicles is limited, with poor existing connections for people on foot, bike or taking public transportation.
2. **Second Assessment:** In total, eight (8) risks were identified in this category. As a key consideration of the plan remains access to all Springfield residents, one (1) risk was elevated to high level, indicating the need to consider how those that do not have the ability to own or operate a vehicle access the Lake Springfield area.
 - Inclusivity of a plan with no access to Lake Springfield via Public Transit (owner – City of Springfield)

Public Relations

Effective communication and engagement are paramount to a successful planning process. Risks outlined within the public relations category focus on project issues that may arise from public relations associated tasks. The initial engagement work has garnered significant support and demonstrated a high level of collaboration that is important moving forward.

1. **Initial Assessment:** In total, seven (7) risks were identified in this category. Due to the robust engagement effort put forth by both the City and the planning team, no high level risks were identified. Ongoing collaboration and consensus building was identified as key tool to continue to mitigate risks in this category.
2. **Second Assessment:** In total, seven (7) risks were identified in this category. Due to the robust engagement effort put forth by both the City and the planning team, no high level risks were identified. Continued collaboration remains key.

Dam

Risks identified in this category are related to the central part of Lake Springfield, the Lake Springfield Dam. The first part of the planning process was the dam analysis and hydrological study. To vision and develop feasible concepts for implementation, understanding existing conditions of the Dam and water was a critical first step.

1. **Initial Assessment:** Nine (9) total risks were identified in this category. Of these risks, one (1) was identified as a high level risk.
 - Sedimentation (owner: City Utilities)

2. **Second Assessment:** Nine (9) total risks were identified in this category. Of these risks, one (1) was remained identified as a high level risk.

- Sedimentation (owner: City Utilities)

Environmental

This category combines both concerns over development uses and their compatibility with nature, with issues related to redevelopment of a former power station and any remediation that needs to take place. The natural beauty and sanctity of the lake is a significant asset for the Springfield community and region. Preserving this beauty, while working with nature to better design a more regional amenity is an important component of the Lake Springfield Plan.

1. **Initial Assessment:** In total, ten (10) risks were identified in this category. Of these risks, one (1) was identified as high level.
 - Dredging of the lake may consider elevated contaminates (owner: City Utilities)
2. **Second Assessment:** In total, ten (10) risks were identified in this category. Of these risks, one (1) was identified as high level.
 - Dredging of the lake may consider elevated contaminates (owner: City Utilities)

Utilities

With the decommissioned power station presenting significant opportunity for development, utility impacts are another key consideration of this plan. City Utilities owns much of the infrastructure within the Lake Springfield area, and there is a balance between maintaining affordable services for City of Springfield residents, while focusing on development opportunities and recreational amenities.

1. **Initial Assessment:** In total, seven (7) risks were identified in this category. While no risks were identified as high level, it is important to understand existing needs for City Utility operations and ensure redevelopment accounts for those.
2. **Second Assessment:** In total, eight (8) risks were identified in this category. While no risks were identified as high level, one risk was added to this category. It remained important to understand existing needs for City Utility operations and ensure redevelopment accounts for those.

General

General risks may impact the overall project and are not specific to a certain expertise involved in the planning process. These are more economic factors that may interrupt the project, and specifically have impacts to implementation. Thus, these risks need to be carefully monitored and considering during concepts and recommendations, to ensure the Lake Springfield Plan is feasible and implementable.

1. **Initial Assessment:** In total, five (5) risks were identified in this category. While no high level risks were identified, it is important to note that general awareness of the concern for the environment and outside economic factors is critical to a successful plan.
2. **Second Assessment:** In total, five (5) risks were identified in this category. While no high level risks were identified, it is important to note that general awareness of the concern for the environment and outside economic factors is critical to a successful plan.

GOAL ALIGNMENT REVIEW

To remain consistent with the vision for the planning area, the recommended programming that resulted from the collaborative teamwork was analyzed for its impact in three categories: Economic, Environmental and Social. The concept of comparing potential social and economic impacts is important for fostering a healthy balance of revenue-generating and community-centric assets. Programs such as hotels, dining, and conference centers contribute to the economic health of Springfield and the lake area, while assets like nature playgrounds, trails, and open spaces contribute to the healthy of vibrant community spaces.

ECONOMIC	ENVIRONMENT	SOCIAL
E1 Innovative Economic Opportunities	N1 New/Green Infrastructure	S1 Innovative Recreation Opportunities
E2 New Funding Allocations	N2 Sustainable Water Quality	S2 Access & Equitable Transportation
E3 New Business Development	N3 Appealing Outdoor Amenities	S3 Water Access for Recreation
E4 Attract Private Investment	N4 Identity - Gateway to the Ozarks	S4 Elevating Quality of Life
E5 Resilient Job Creation	N5 Unique Adaptive Reuse	S5 Regional Draw

Using these indicators by topic, the team analyzed each of the significant programmatic items by zone. Diagrams were created to highlight each zone, call out the major programmatic elements, and identify how these elements achieve project goals, as well as their potential economic and social impacts. Program items showing up more heavily in green indicate an asset that is centered on economic goals, where as program items showing up in purple indicate an asset centered on social goals. The final product of each of these analysis by zones, ensured the team continued to balance the economic components of this plan and the social goals of the plan.

READING THE GOAL ALIGNMENT DIAGRAMS

The following pages detail the methodology for how goals were aligned during the planning process. Programmatic elements of each zone were reviewed against the goals, and scored. Within each activity area on the following pages, each program is assigned a score for economic and social impact.

Each cell labeled with a letter and number refers to its corresponding box in the grid to the left. As you can see, the first sample programmatic element will have minimal economic impact (green), but a strong social impact (purple). Whereas the second sample will have a slightly lesser social impact but a much stronger economic impact. Environmental impact was also assessed and is visible for each programmatic element (blue).



1. Sample Programmatic Element

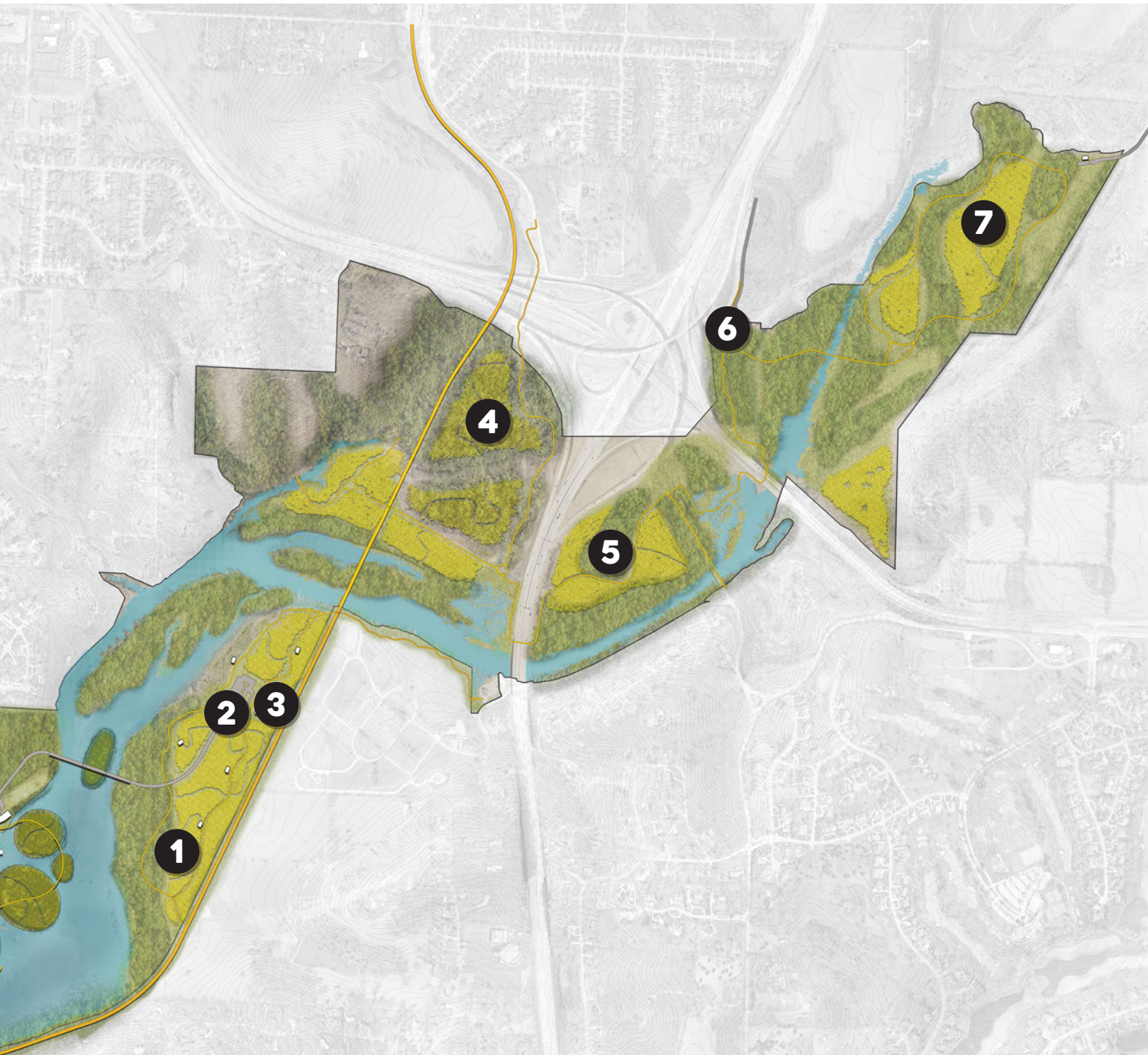


2. Sample Programmatic Element



NORTH ACTIVITY AREA

The north activity area, with its central focus on passive recreation and nature preserve, falls largely within the social and environmental goals. As indicated here, blue and purple are more heavily weighted in reviewing programming opportunities. The area is a complement to the economic drivers at the Power Station Site and South Activity Area.



1. Culture Meadow



Economic Impact ●○○○○

Social Impact ●●●●○

2. Culture Center Lawn



Economic Impact ●○○○○

Social Impact ●●●○○

3. Culture Center



Economic Impact ●●●○○

Social Impact ●●○○○

4. Bird Meadow



Economic Impact ●○○○○

Social Impact ●●●●○

5. Preserved Nature & Trail



Economic Impact ●○○○○

Social Impact ●●●●○

6. River Access & Trailhead



Economic Impact ●○○○○

Social Impact ●●●●○

7. Nature Amenity Area



Economic Impact ●○○○○

Social Impact ●●●●○

PARK & LAKE

Most activities in the lake and park area fall heavily on the environmental and social impact component of the plan. However, the expanded marina and boat house, as well as the eco retreat buildings. This area offers more of a mix of economic and nature, but is still largely an area to remain important for natural recreation amenities.



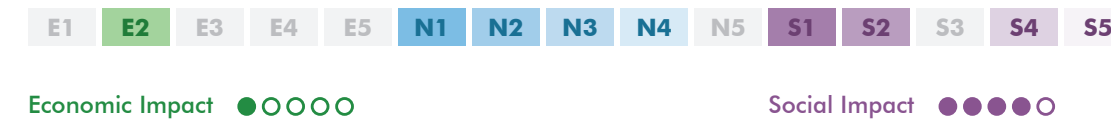
1. Park Entry



2. Park Entry



3. Preserved Nature & Trail



4. Wetland Boardwalk



5. Eco Retreat Buildings



6. Eco Retreat Support



PARK & LAKE

(CONTINUED)



7. Hilltop Overlook

E1 E2 E3 E4 E5 N1 N2 **N3** **N4** N5 **S1** S2 S3 **S4** S5

Economic Impact ●○○○○

Social Impact ●●●○○

8. Destination Play

E1 E2 E3 **E4** **E5** N1 N2 **N3** **N4** N5 **S1** S2 S3 **S4** S5

Economic Impact ●○○○○

Social Impact ●●●●○

9. Bridge

E1 E2 E3 E4 E5 **N1** N2 **N3** **N4** N5 **S1** **S2** S3 **S4** S5

Economic Impact ●○○○○

Social Impact ●●●○○

10. Boathouse/Eco Center

E1 **E2** E3 E4 E5 N1 N2 N3 **N4** **N5** S1 S2 S3 **S4** S5

Economic Impact ●●●○○

Social Impact ●●●○○

11. Marina

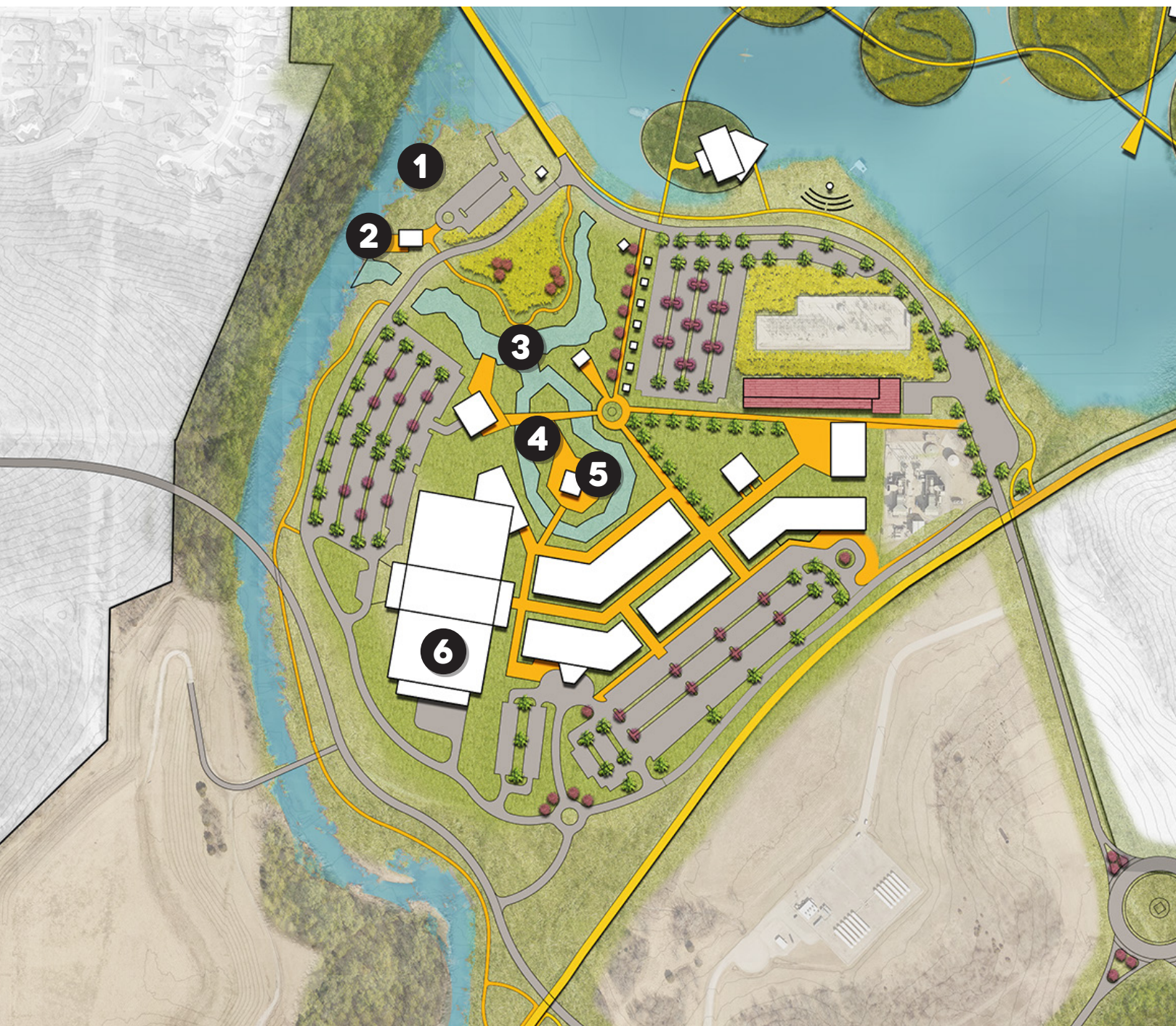
E1 **E2** E3 E4 E5 N1 N2 N3 **N4** **N5** S1 S2 S3 **S4** S5

Economic Impact ●●●○○

Social Impact ●●●●○

POWER STATION - ENTERTAINMENT DISTRICT

In the entertainment district concept, the Power Station Site is more heavily weighted toward the goal of economic impact. Paid attractions and businesses will serve as drivers for the area, as well as the anchor of the area with the multipurpose event space. The outdoor event lawn and other free natural amenities supplement as the social impact goals for the site.



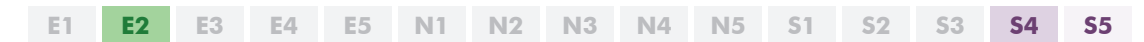
1. Riverfront Play Area



Economic Impact ●●○○○

Social Impact ●●●○○

2. Riverfront Hospitality



Economic Impact ●●○○○

Social Impact ●●●○○

3. Water Adventure



Economic Impact ●●○○○

Social Impact ●●○○○

4. Ropes Course



Economic Impact ●●○○○

Social Impact ●●○○○

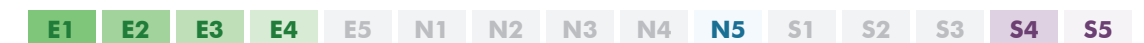
5. Adventure Island



Economic Impact ●●○○○

Social Impact ●●○○○

6. Multi-Purpose Event



Economic Impact ●●●○○

Social Impact ●●○○○

POWER STATION - ENTERTAINMENT DISTRICT

(CONTINUED)



7. Restaurant/Overlook

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●●○○

Social Impact ●●●○○

8. Bypass Channel

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●○○○○

Social Impact ●●○○○

9. Powerplant & Addition

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●●●○

Social Impact ●●●●○

10. Event Lawn

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●○○○○

Social Impact ●●●○○

11. Entertainment Building

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●○○○

Social Impact ●●○○○

12. Mxed Use Buildings

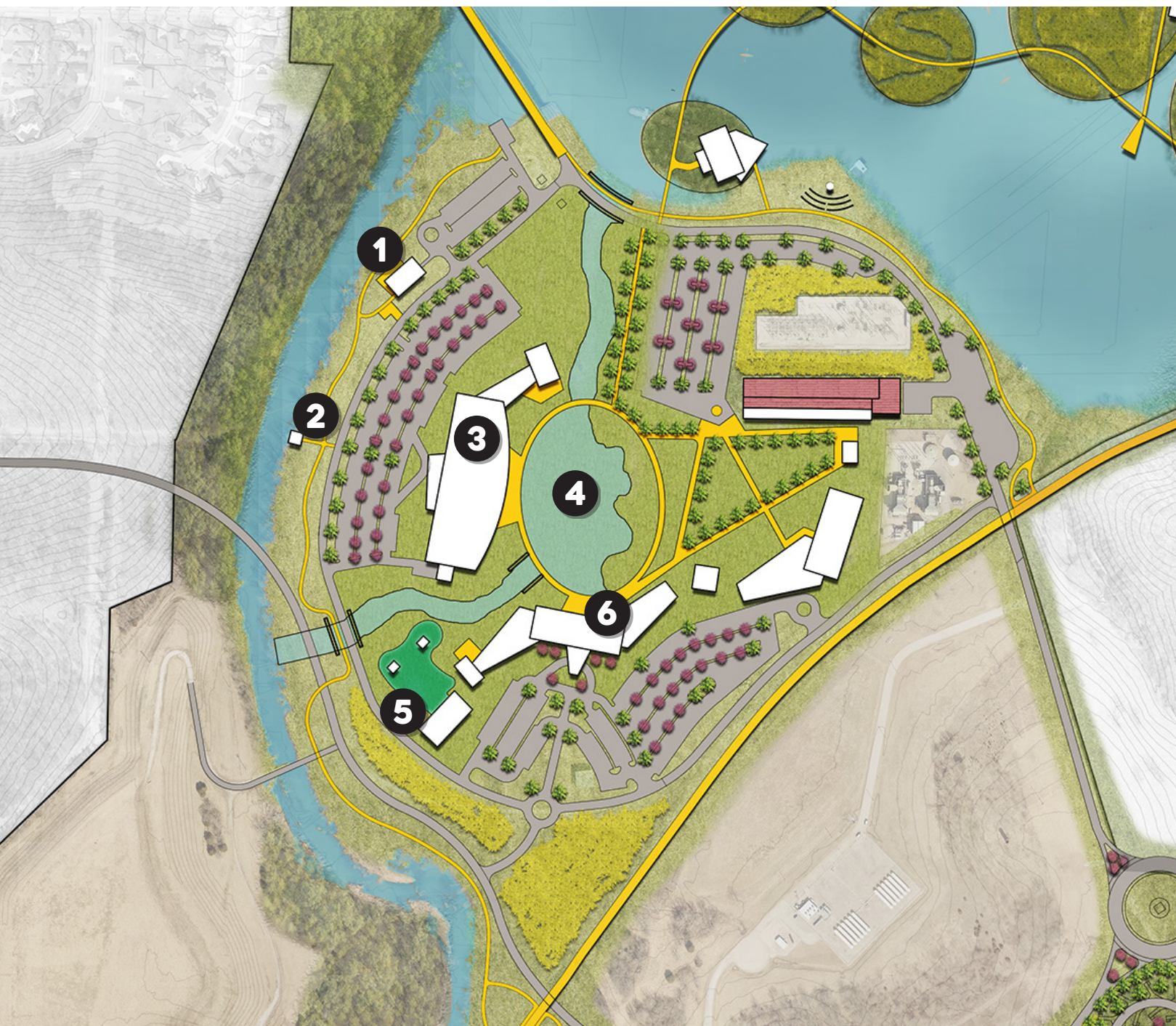
E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●●●○

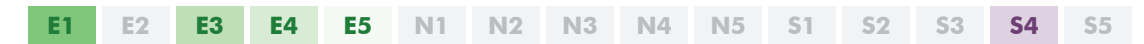
Social Impact ●●●○○

POWER STATION - ADVENTURE HUB

In the adventure hub concept, the Power Station Site is more heavily weighted toward the goal of economic impact. The conference center is an anchor for the area, which also features paid attractions and commercial needs of guests attending conferences at Lake Springfield. With a heavier focus on outdoor and recreation activities, this concept is also more in line with the social impact goals of the project.



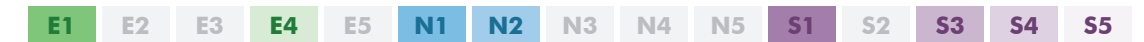
1. Riverfront Dining



Economic Impact ●●●○○

Social Impact ●●●○○

2. Riverfront Amenity



Economic Impact ●●○○○

Social Impact ●●●○○

3. Multi-Purpose Event



Economic Impact ●●●○○

Social Impact ●●●○○

4. Water Adventure



Economic Impact ●●○○○

Social Impact ●●●○○

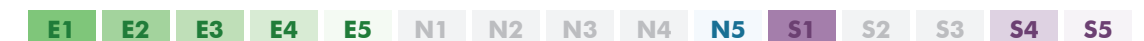
5. Recreation/Entertainment



Economic Impact ●●○○○

Social Impact ●●●○○

6. Mixed Use Building



Economic Impact ●●●●○

Social Impact ●●●○○

POWER STATION - ADVENTURE HUB

(CONTINUED)



7. Restaurant/Overlook

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●●○○

Social Impact ●●●○○

8. Surrounding Green

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●○○○○

Social Impact ●●●○○

9. Community Green

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●○○○○

Social Impact ●●●○○

10. Powerplant & Addition

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●●●○

Social Impact ●●●○○

11. Ampitheater

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●●●○

Social Impact ●●●○○

12. Mixed Use Building

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●●●○

Social Impact ●●●○○

SOUTH ACTIVITY AREA - ECO-RETREAT

In the entertainment district concept, the South Activity Area is a healthy mix of programming that achieves both social and economic impact goals of the plan. The economic focal point of the area is the executive retreat center, with more boutique overnight accommodation for CEO or executive level meetings. Additional recreation opportunities such as destination plan, and lake adventure feature programming that is in line with the social goals of the project.



1. Destination Play



2. Retreat Cabins & Yurts



3. Aerial Chairlift



4. Lake Adventure



5. Retreat Center



6. Adventure/Team Building



SOUTH ACTIVITY AREA - ECO-RETREAT

(CONTINUED)



7. Preserved Nature & Trail

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●○○○○

Social Impact ●●●○○

8. Bike Park

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●●●○○

Social Impact ●●●○○

9. Park Entry

E1 E2 E3 E4 E5 N1 N2 N3 N4 N5 S1 S2 S3 S4 S5

Economic Impact ●○○○○

Social Impact ●●●○○

SOUTH ACTIVITY AREA - ADVENTURE HUB

In the adventure hub concept, the economic focal point of the area is the RV camping area, which will be a unique feature for the region and offer a more upscale RV camping experience. Paid nature attractions promote enhanced economic activity, that is further supported by free chances to connect with nature. In this theme the programming meets social and economic plan goals at the same level.



1. Archery



Economic Impact ●●○○○

Social Impact ●●○○○

2. Lake Adventure



Economic Impact ●●○○○

Social Impact ●●○○○

3. Preserved Nature & Trail



Economic Impact ●○○○○

Social Impact ●●●●○

4. Bike Park & RC Track



Economic Impact ●●●○○

Social Impact ●●●○○

5. Amenities Plaza



Economic Impact ●○○○○

Social Impact ●●●○○

6. Ampitheater



Economic Impact ●●●●○

Social Impact ●●●○○

SOUTH ACTIVITY AREA - ADVENTURE HUB

(CONTINUED)



7. Retail/Food/Beverage



Economic Impact ●●●○○

Social Impact ○○○○○

8. Ropes Course



Economic Impact ●●○○○

Social Impact ●●●●○

9. RV Camping Area



Economic Impact ●●○○○

Social Impact ●●○○○

10. RV Camping Area



Economic Impact ●●○○○

Social Impact ●●○○○

11. Park Entry



Economic Impact ●○○○○

Social Impact ●●●○○

TECHNICAL REPORT

READ THE FULL REPORT

In the following pages of this document, are more detailed chapters of each discipline included in the process. Equipped with the aspirational vision for Lake Springfield, dive into each area of this important plan by technical discipline. Each section includes existing conditions, recommendations, and steps toward implementation. The plan culminates with a detailed call to action in the implementation chapter.





ENVISIONING THE FUTURE FOR LAKE

SPRINGFIELD OFFERS A

ONCE IN A GENERATION OPPORTUNITY

TO CREATE A DESTINATION THAT

PROVIDES RECREATIONAL AMENITIES,

ECONOMIC OPPORTUNITIES, AND

ECOLOGICAL RETREAT TO THE

SPRINGFIELD COMMUNITY.

HYDRAULICS & WATER QUALITY

Geosyntec Consultants Inc. (Geosyntec) performed a multi-faceted hydrology study as part of the Lake Springfield Sub-area planning process. The purpose of the study was to establish a baseline understanding of the Lake Springfield waterbody (the Lake) and the Lake Springfield Dam (the Dam). The results of the study will be used to inform the development of potential economic growth opportunities and enhancements to recreational opportunities desired by the community.

Geosyntec commenced work in October 2022 by first collecting water quality and sediment quality data from the Lake. The work concluded in February 2023 with the submission of the hydrology report that presents an assessment of three main components of the Lake Springfield study area, the Upper James River watershed, the Lake, and the Dam.

The field data collected in 2022 was intended to supplement previously collected watershed-wide data by others. As part of the field data collection effort, a detailed bathymetry survey and sediment profiling were performed to build an initial understanding of the sediment distribution within the Lake. The assessment of the 270 square mile James River watershed included an analysis of the flow regime from stream gage data collected since 1955. The study also included a regulatory compliance assessment of the dam, along with an identification of potential dam modification alternatives. A brief overview of the study and assessment is provided below. The detailed hydrology report prepared by Geosyntec is included as Appendix ().

LAKE & WATERSHED ASSESSMENT

Geosyntec reviewed available reports, plans, and studies performed previously and collected target supplemental data to provide an assessment of the Springfield Lake and tributary watershed. A list of the reviewed documents is included in the hydrology report in Appendix ().

Let's take a closer look at the technical findings.

WATER QUALITY ASSESSMENT

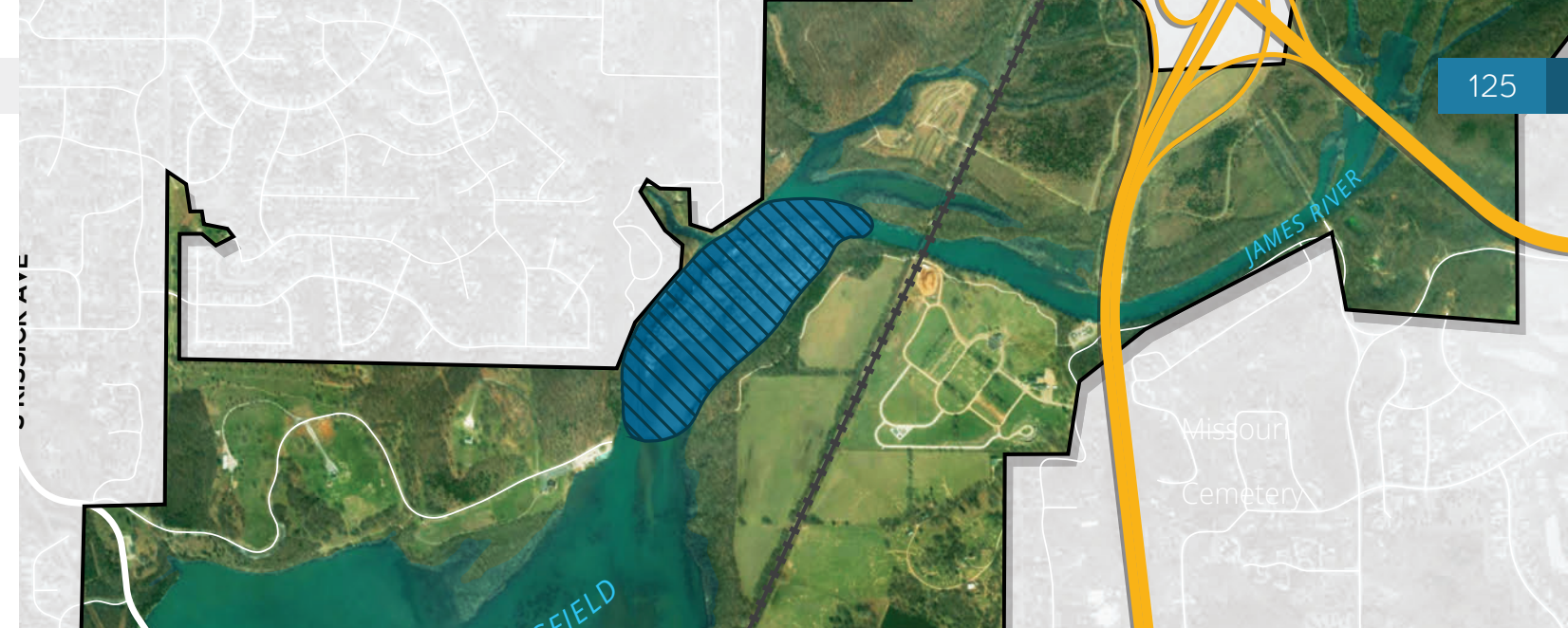
The Lake is a large (~300-acre) waterbody that is currently experiencing periodic low dissolved oxygen levels which is vital for aquatic life. The Missouri Department of Natural Resources (MoDNR) designates all waters within the state to protect aquatic life. Currently the Lake is listed under the 303d list for aquatic life impairment, largely due to high algae concentration in the Lake. The contributing factors include the nutrient-rich runoff from the upstream watershed, the buildup of sediment upstream of the dam, and the back water pool of stagnant water upstream of the dam during low flow conditions.

The Springfield-Greene County Integrated Plan, (2017) indicates that the James River flowing into the Lake has a higher bacteria concentration than the concentration measured immediately downstream of the dam. The concentration measured in the upstream reach of the James River was above the limit for whole body contact recreation category B and secondary contact recreation, which includes kayaking and activities that do not typically result in complete submergence of the body. The concentration was above the limit for whole body contact recreation category A, which includes swimming. The reported concentration below the dam was below all three limits, including whole body contact recreation category A.

Geosyntec collected eleven water quality samples from five select locations: one upstream of the Lake at Crighton beach access, one immediately downstream of the Dam at Tailwater public access, and three in the Lake. The rationale for these sampling locations was to understand upstream inputs, downstream outputs, and water quality gradients within the lake itself. The brief window during which water quality samples were collected provides useful but limited information regarding long-term water quality conditions for Lake Springfield. Water quality samples collected in November and December 2022 provide insight to lake homogeneity, and water quality changes upstream to downstream.

Recommendations

- **Aquatic Life Use Monitoring.** Continued monitoring of the Lake for microcystin and cylindrospermopsin (algal toxins) is recommended as the lake likely will continue to receive excess nutrients from unregulated, upstream nonpoint sources. Although algal toxin criteria are not currently promulgated in the Missouri water quality standards, the United States Environmental Protection Agency recommends the national criteria. An expanded watershed-based approach, similar to the Watershed and JRBP on going efforts can be implemented as a mitigation strategy to improve the Lake's water quality for the protection of aquatic life.
- **Human Recreational Use Monitoring.** Historically, bacteria data have not been collected in the Lake during the recreational season (April 1–October 31). Bacteria concentration during the recreational season should be obtained and monitored for one or more recreational season(s) to better understand the health risks.
- **Microbial Source Tracking (MST).** If bacteria concentration levels are elevated methods of source tracking can be used to determine the origin of the bacteria. Microbial source tracking (MST) tools are host-associated quantitative Polymerase Chain Reaction (qPCR) methods, which can measure fecal pollution levels and identify the source of the pollution. Researchers use qPCR methods to make millions of copies of highly diluted fecal bacterial host-associated target genes found in a contaminated water sample to determine if a particular pollution source is present and at what level.



SEDIMENT ASSESSMENT

Fish tissue analyses from the Missouri Department of Conservation provided a historical (2016–2017) insight into the bioaccumulation of polychlorinated biphenyls (PCBs) in fish tissues recovered from the Lake, which is useful when evaluating human health protection.

Geosyntec collected sediment samples at 41 locations from the top 6 inches of substrate using a Ponar grab sampler in early December 2022. Sampling locations were selected for maximum lake coverage in readily accessible areas and in areas of potential concern, including near the historic cooling water discharge pipe and at the Dam. The sampling strategy examined more recent sediment deposition by sampling the six inches, which is more likely to impact aquatic life and recreators. The 2022 sediment samples had PCB below detectable concentrations, potentially indicating that significant PCBs are not present within recent sediment accumulating in the lake.

Bathymetric mapping and sediment thickness profiling were conducted in early November of 2022 within the boatable portions (>2.0 feet water depth) of the Lake. The extent of the mapping extended from the Dam to upstream of the Lake Springfield Boat House launch. Transects approximately 100 feet apart were established across the boatable portions of the lake where data was collected. A raster surface was created in Geographic Information System (GIS) to illustrate sediment thickness across the Lake.

The data showed presence of approximately 476 thousand cubic yards of unconsolidated (loose) sediment distributed across the Lake. The Lake is relatively shallow outside of the historic James River channel, which hugs the southern shoreline of the Lake, with varying sediment thicknesses. Since the construction of the Dam, the lake's depth has significantly decreased due to the accumulation of sediment. The depth of unconsolidated sediment ranges from 1.0 to 4.0 feet across the lake, and in some places the depth is equal to 14 feet.

Geosyntec performed a preliminary assessment of the sediment accumulation rate from the Upper James River watershed using a watershed-based predictive model. The model results indicate that the Lake could potentially continue to accumulate an average of 7,900 cubic yard of sediment on an annual basis.

Recommendations

- Future projects requiring dredging of sediment beyond the top 6-inch horizon should perform additional sediment characterization of deeper sediment horizons for handling and disposal (if contaminated) or re-use (if clean).
- Proactive management of sediment loading can be achieved by reducing erosion within the upstream watershed by using stormwater runoff control measures where applicable.
- Creating a wetland restoration area upstream of the Lake to filter sediment prior to entering the Lake will help to reduce the sediment accumulating within the lake.
- Manage erosion along the eastern bank of the Lake by creating a wetland restoration area upstream of the lake.
- Physical management of sediment inventory can be achieved through mechanical or hydraulic dredging. Variables influencing the selection of dredging techniques include the physical properties of the sediment; size, shape, and water depth of the waterbody being dredged; and available space for staging and equipment setup; and the presence or absence of significant debris. Dredged materials removed from the lake must be dewatered and prepared for its ultimate disposal or re-use.
- Sediment management as a sustainable design strategy should be implemented if the dredged materials are found to be clean. Detailed sampling analysis would be needed to verify there are not elevated levels of contaminants or pollutants of concern. Example beneficial use strategies could include:
 1. Dredge and place material in study area for land contouring.
 2. Adding dredged material to marginally characteristic soil could alter the physical and chemical characteristics to make water and nutrients more available for crop growth.
 3. Dredge or reposition sediment within the lake to create deeper pools to mitigate algae formation and allow for habitat features.
 4. Use of dredged material as the substrate for habitat development is one of the most common and important beneficial categories.
 5. “Eco” Islands can be created by repositioning dredged material. Additional study and geotechnical work are required to determine suitability for engineered fill within the Lake. Sections of the Lake will need to be confined within a cofferdam and dried before placing fill.

WATERSHED ASSESSMENT

About 270 square miles of the Upper James River basin is tributary to Lake Springfield. Eight sub-watersheds—Headwaters, Dry Creek, Panther Creek, Turnbo Creek, Sawyer Creek, Pearson Creek, Turner Creek and Lake Springfield—make up the Upper James River basin and extend across portions of Greene and Webster Counties.

Agricultural uses, primarily cattle on pastures, covers 47% of the basin and is the predominate land use. The next highest land cover is forested areas, at 35% of the basin. Approximately 13% of the watershed is mapped as developed area, which is concentrated around the City of Springfield and urbanized Greene County. The change in land cover composition per the USGS National Land Cover Database estimates an increase in developed areas by about 2,020 acres and a decrease in forest land about 850 acres occurred from 2001 to 2022.

Land cover changes influence environmental conditions in many ways, such as altering hydrologic regimes, runoff patterns, and flood buffering in watersheds. Changes can also affect water quality, habitat and species composition, climate, and carbon storage. If this trend of an increase in imperviousness along with a decrease in forested areas observed in the past 20 years continues, the Lake will experience increased stream flows during wet weather conditions.

Geosyntec utilized stream gage data to assess seasonal and annual fluctuations in the flow regime since 1955. Quantifying the range of flows is highly useful in planning for potential recreational activities, such as determining the minimum depth of flow within the channel to support kayaking or determining typical seasonal high flows where the anticipated discharges over the dam would preclude recreational activities due to safety. From the data, the typical wet months are March, April, and May; whereas the typical dry recreational months are July, August, and September. The average daily flow during the wet months range from 188 cfs to 253 cfs. The average daily flow during the dry months range from 20 cfs to 45 cfs. To graphically depict the seasonal fluctuations of the flow, flow data from 2012 through 2022 is presented as Figure 1.

In addition to evaluating the typical flow regime that could be anticipated, the flow data from 1955 was used to evaluate extreme high flow events. Figure 2 presents the annual maximum flow from 1955 through 2022. In comparing the most recent 21 years of high flow events (2001 through 2022) to the prior 45 years, a distinct increase in extreme events is visible. Flow regime assessment indicates seasonal drought and high flow conditions that should be considered as future recreational opportunities are planned.

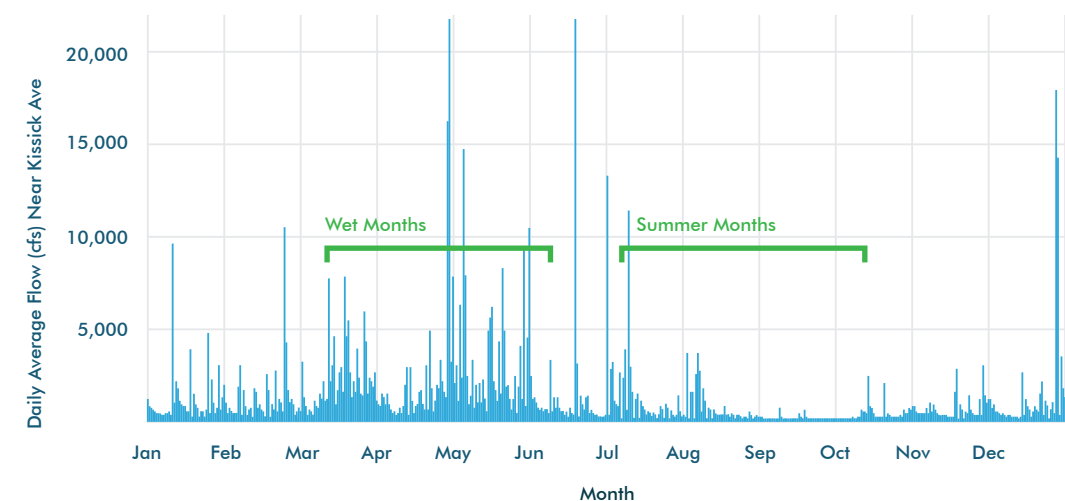


FIGURE 1: DAILY AVERAGE FLOWS IN A TYPICAL YEAR (PERIOD OF RECORD 2012-2022)

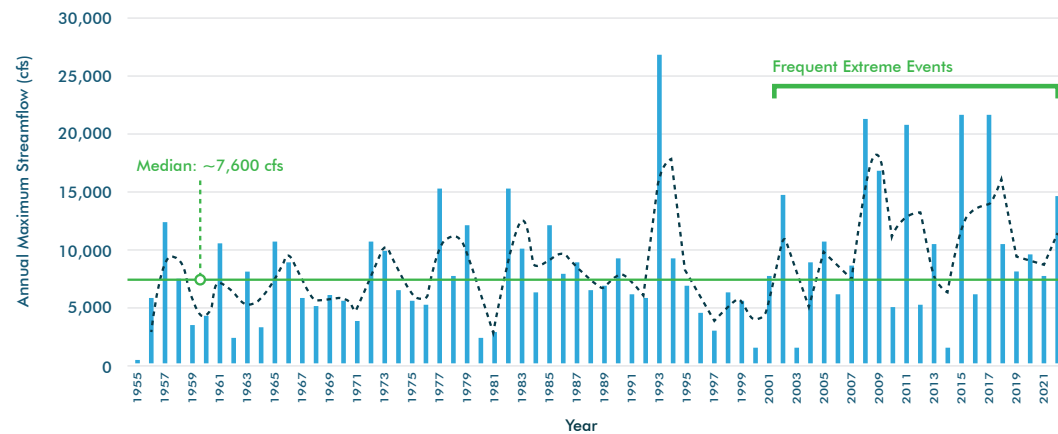


FIGURE 2: ANNUAL MAXIMUM STREAMFLOW SHOWING FREQUENT EXTREME EVENTS

Recommendations

- Recreational activities included within the plan should consider and accommodate the seasonal flow fluctuations, as well as protecting individuals during wet weather events.
- Operational flexibility could be incorporated into the plan by managing reservoir levels and flow rates.
- To mitigate potential impacts due to climate change and development within the watershed, floodplains and wetlands in the Upper James River watershed should be preserved. Their preservation will maintain a healthy watershed ecosystem, maintain flood storage to attenuate flood flows, and minimize an increase in sediment loads or a decrease in water quality.

DAM ASSESSMENT

DAM REGULATORY ASSESSMENT

The Dam, registered with the National Inventory of Dams as MO.20023, is owned and operated by City Utilities of Springfield, Missouri. The Dam is an earth fill dam with a concrete ogee spillway section located on the right (north) abutment. Construction of the Dam was completed in late 1956/early 1957 to function as a cooling water impoundment for the adjacent James River Power Station. Until January 28, 2021, when the power station was decommissioned, the Dam was under the jurisdiction of the Federal Energy Regulatory Commission. Currently considered a recreational dam, the Dam is regulated by MoDNR and registered as a Class 1 dam (high hazard potential classification).

Dam Components

The earth embankment section is approximately 1,400 feet long with a maximum height of approximately 45 feet. The earth embankment is primarily founded on rock and is comprised of low plasticity clays for the core and coarser materials on the upstream and downstream slopes. A rock

toe is present along the embankment. Upstream and downstream slopes of the earth embankment were designed to be 2-horizontal to 1-vertical (2H:1V). A paved road (S Farm Road 169/S Kissick Avenue) is atop the crest of the dam.

The spillway consists of a concrete gravity ogee section, with a maximum height of 30 feet. A 10-foot-deep cutoff is present on the upstream toe of the gravity section. The upstream slope of the Dam is vertical. A 30-foot-long concrete apron extends below the toe of the gravity sections with a 4-foot-deep cut off. The spillway is 563 feet long and contains six concrete piers which support the roadway bridge superstructure.

Regulatory Review

MoDNR was identified as the sole regulatory authority for the Dam, and Geosyntec researched MoDNR’s current (2019) state-level dam rules and regulations. The Dam was built in 1955 and owned by City Utilities. An initial registration permit for the Dam was completed in 1987 following the change in dam safety state regulations. This permit package was used as the main source of information to assess hydrologic and hydraulics, geotechnical, and structural engineering components of the dam. A graphical representation of historic congressional and state regulatory updates in relation to the dam is provided in Figure (3).

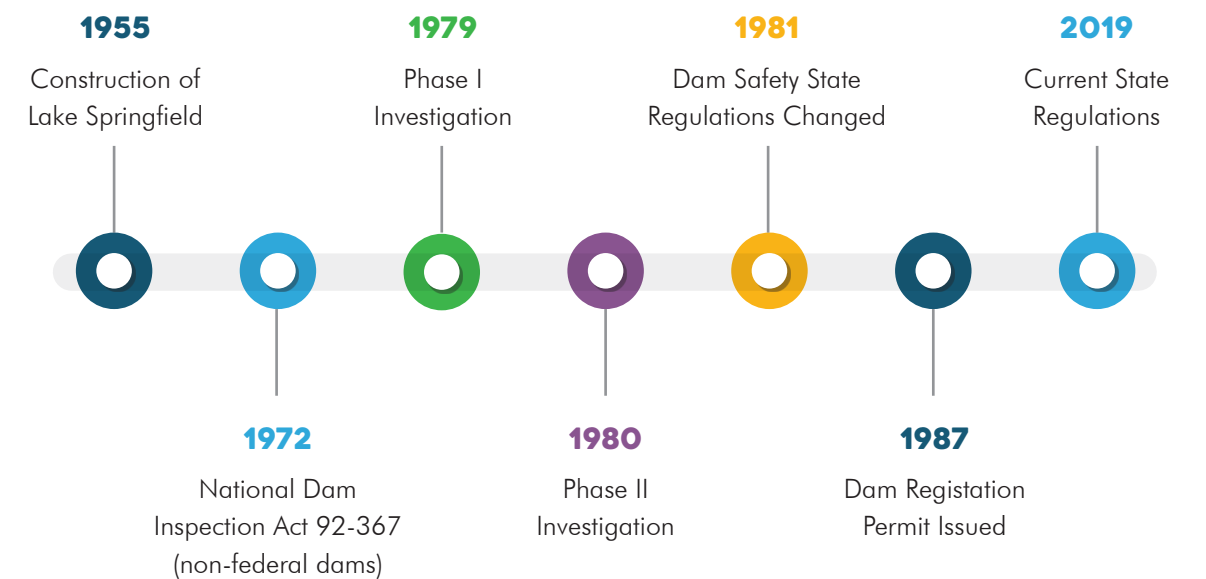


FIGURE 3: HISTORIC CONGRESSIONAL AND STATE REGULATORY UPDATES ON DAM SAFETY

The original engineering analyses performed when the dam was designed and permitted appear to have complied with regulations at the time the dam was constructed and subsequently permitted. Since the issuance of the Dam Regulation Permit in 1987, dam safety requirements have evolved. If the dam is modified, a dam construction permit must be obtained from the MoDNR Dam and Reservoir Safety Program must be obtain. To obtain the construction permit, all supporting analyses and calculations must comply with current regulations.

DAM MODIFICATION ALTERNATIVES

Geosyntec evaluated potential modification alternatives to the Dam to support recreational opportunities while enhancing the environment through improving water quality and aquatic habitat. The following modification alternatives were assessed:

- **Dam Removal:** Full or partial Dam removal with the intent of restoring the historic James River alignment. Full removal would comprise of removing the entire width of the concrete dam or lowering the entire width of the concrete dam by a minimum of 20 feet. Partial removal would comprise of lowering only the middle two bays by a minimum of 20 feet.
- **Concrete Dam Modification:** Lowering either the south or center concrete bay by 2 feet and creating a kayak and/or fish ladder at the downstream face of the Dam.
- **Earth Dam Modification:** Grading a channel in the earthen Dam/embankment by creating a 50-foot-wide opening at an elevation 2-feet deeper than the primary spillway.
- **No Modification:** No structural modification to the Dam’s components, but an update to engineering analysis using current practices based on current state regulations.

Amongst all the alternatives, the earth dam modification presents the opportunity to create fish or kayak passage while the concrete dam is kept in-place to support the existing superstructure (Kissick Ave.) As the report moves through the implementation process, further investigation of all dam modification alternatives may be warranted. Additional public input including engagement of residents near Lake Springfield will be required before implementation.

Any significant structural modification that changes the original function of the dam will require associated engineering analyses and a construction permit from MoDNR. A sediment management plan for present and future sediment load would be critical, regardless of the selected alternative, as it would impact what recreational amenities or activities are chosen. The implementation cost of each alternative should consider an itemized sequence of construction, permit coordination, associated engineering analysis, environmental impacts, and sediment management.

Recommendations

- Further study and develop a concept for Earth Dam Modification by incorporating a bypass channel. The bypass channel would be 50-foot wide at an elevation 2-feet deeper than the primary dam spillway. This modification would facilitate passage for kayakers traveling along the James River Water Trail while maintaining the existing Lake Springfield waterbody.

COST CONSIDERATIONS

Geosyntec developed planning level cost predictions for the select dam modification alternatives (Table (2)); standard of care costs are needed for the operation and maintenance of the Dam whether modified or not modified (Table (3)); and prediction of cost for removing sediment deposited in the lake and future deposition from the watershed (Table (4)). Line items considered in developing cost range for dam modification alternatives are presented in Appendix E.

For dam modification alternatives, assumptions included general contractor mobilization, site access, temporary water retention structures, dewatering inside cofferdam, demolition of concrete weir features, finishing of concrete to remain, removal of temporary water retention structures, and site restoration.

Cost Range Prediction
(2023 Dollars in Millions)

Alternative	Description	Cost Range Prediction (2023 Dollars in Millions)		
		Lower	Middle	Upper
A-1	Complete removal	\$17M	\$27M	\$44M
A-2	Partial Removal	\$8M	\$12M	\$20M
C-1, C-2, or C-3	Earthen Embankment Bypass	\$5M	\$7M	\$11M

TABLE 1: DAM MODIFICATION COST PREDICTION SUMMARY

To achieve a standard of care for the operation and maintenance of the existing dam, routine and capital maintenance are expected to be around \$28,000 in the first year escalating to over 1 million in the next 20 to 30 years. Routine maintenance is assumed to include monthly and annual inspection and mowing of the earth embankment. While capital maintenance is assumed to include periodic inspection (every 5 years), seeding of eroded areas, backfill of settlement and animal borrow areas, clearing of large vegetation, riprap replacement, debris removal from the spillway, and minor concrete repairs.

As of the date of this report, no additional sediment investigation has been performed to determine the condition of the sediment. The cost to remove unconsolidated sediment is predicted to range from \$22 Million to \$57 Million. The cost to remove unconsolidated and consolidated sediment is predicted to range from \$35 Million to \$88 Million. The unit cost assumed based on Geosyntec’s professional judgement is \$50 per cubic yard of sediment removed.

Additionally, the predicted cost to remove incoming annual sediment volume of 7,900 cubic yard (estimate based on PLET model) from the Upper James River watershed ranges from \$100,000 to \$200,000 per year.

The following elements must be considered when developing detailed project costs:

- Sediment management plan including investigation, analysis, treatment (if needed), reuse and disposal alternatives.
- Wetlands identification, delineation and restoration or preservation.
- Riverine or lake reservoir restoration.
- Fish passage and kayak passage design alternatives.
- Water pump and treat system design alternatives.
- Continuous water quality monitoring for public health and safety.
- Operation and preventative maintenance of the Dam structure and the Lake.
- Drawdown operation of impoundment and earth embankment bypass feature.
- Extent of revegetation of the formerly inundated area and long-term maintenance.
- Engineering analysis and design.
- Local, state and federal permitting and compliance requirements.
- Construction and oversight.

TRANSPORTATION & INFRASTRUCTURE

By design, the Lake Springfield area is not an intuitive or easy place to find within the Springfield community. Due to the functional needs of the James River Power Station, as well as the several utility needs that the Lake area served, the main purpose of the site was not to serve as an attractor within the community. Thus, routes to Lake Springfield are not direct, and wayfinding in its current state is limited. Additionally, there are known infrastructure impacts that will need to be accounted for and addressed as the plan moves to implementation. This chapter outlines these technical elements of the planning process.

EXISTING CONDITIONS

Several times throughout the planning process, our team heard from residents about the challenges of getting to the Lake Springfield area. Additionally, we heard concerns from City Utilities about the ongoing utility needs of the area located around the James River Power Station, as well as the known infrastructure that will be critical to account for during site build out. Examining existing conditions of the planning area as important to aide in moving to through the visioning and concept portion of the planning process.

VEHICULAR ACCESS & CONNECTIONS

Functional Classification

Roadway functional classification is governed by federal guidelines and refers to the process by which roads, streets and highways are grouped into classes according to the type of vehicular service they are intended to provide. The functional classification network outlines the role a particular street or road is intended to serve within the transportation network. Because the functional classification refers to the role a particular road, street or highway is to have within the system, it also carries with it expectations about roadway design, including speed, capacity, and relationship to future land use development. Roadways serve two primary travel needs: access to and from specific locations and mobility. The classification of roadways progresses from a lower classification, handling these shorter trips with more access, to a higher classification, intended for longer trips to connect regional traffic. Functional classification is assigned based on how the roadway currently functions and is maintained by MoDOT. Ozark Transportation Organization (OTO) endorses any functional classification changes within their planning region and maintains the OTO Major Thoroughfare Plan. That plan shows how OTO sees function changing over time.



Republic Road and National Avenue are primary arterials. Kissick Drive, Briar Street, Fremont Avenue, and Farm Road 188 are secondary arterials. Timbercrest, Southwood, Wildwood, Arlington, Charleston, and Nottingham are collectors. Other nearby streets are local streets, with several streets like Lake Springfield Park Road being private streets.

LakeSPF Thoroughfare with Legend

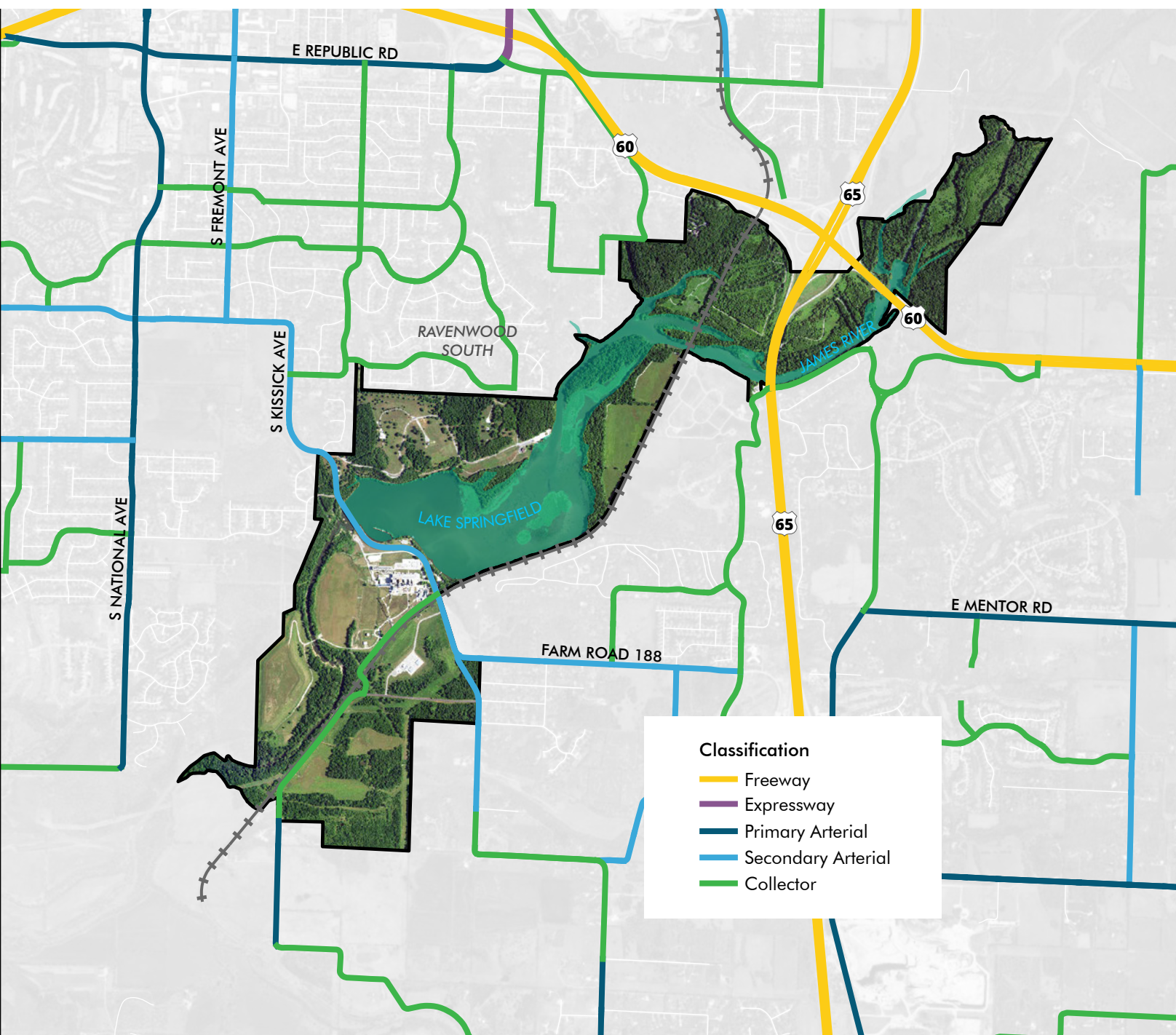
Access & Parking

The main direct and primary vehicular entry points are Kissick from the north and south. There are currently limited ways to reach various destinations around Lake Springfield, and some routes involve taking indirect routes through (or “cutting through”) local streets, of which there have been some complaints from nearby residents of increased through traffic on their residential streets with vehicle traffic trying to reach the lake and park areas.

The primary way that people access the Lake and Park area is via Briar. In current conditions, a motorist travelling from north of the lake will be routed to Fremont and connect to Briar, versus utilizing Republic Road. While Fremont is a secondary arterial on the roadway functional classification map, the current design of Fremont is a two-lane section with stop control at the intersection of Briar. Most land uses adjacent to Fremont are residential. In future conditions, and with the need to move much more vehicular traffic, National is a critical connection for moving vehicular traffic from the north. In its current condition the roadway is 5-lanes, with commercial land use adjacent, and a full traffic signal at the intersection of Briar.

Vehicular traffic coming from the south exits US 65 at Evans Road, connects north via a roundabout and Southwoods Road, and continues west on Evans Road before connecting to Kissick just south of the Lake near the Power Station and South Activity sites. The current design of these roads will not accommodate projected traffic volumes in the new development conditions.

There are an estimated 9 parking lots serving Lake Springfield with a combined total of approximately 443 parking spaces. The two largest lots are at the Springfield Conservation Nature Center (110 spaces) and at the Lake Springfield Park & Boathouse (186 spaces). Other smaller lots are scattered across the area, ranging from about 20-30 spaces each, including at the Northwoods Pavilion, Hilltop Pavilion, Maintenance Road, Clay Henshaw Memorial Access, and Lake Springfield Fishing Access. No parking, and accompanying access to parking exist at either the Power Station site or the South Activity area in current conditions.



Roadway Typical Sections & Accommodations

A brief description is included here of the most common roadways for accessing Lake Springfield. Trip generation was completed for the proposed uses, which helps identify future roadway needs to accommodate increased levels of vehicular traffic.

North

Fremont: The typical section from Fremont between Republic and Briar is a 20-foot, 2-lane roadway, with two 10-foot lanes. There is a continuous 4-foot sidewalk on the east side of the road, and sporadic 4-foot sidewalk segments on the west side of the road.

National: The typical section from Republic to Briar is a 72-foot, 5-lane roadway, with two 14-foot thru lanes in both the northbound and southbound directions. There is a 16-foot center median where turning movements are not needed, that provides space for left turning movements where access to adjacent land uses exists. There is a continuous 4-foot sidewalk that exists on both the east and west side of the road.

Briar: The typical section from National to Kissick is a 24-foot wide, 2-lane section, with two 12-foot lanes. There is no sidewalk connectivity. Briar is signalized at National and stop controlled at Fremont.

Kissick: The typical section from Briar to the lake and park entry is a 22-foot wide, 2-lane section, with two 11-foot lanes. There is no sidewalk connectivity. The intersection entry at the lake and park is only stop controlled for traffic exiting the park, and sites at a skew which causes site challenges for the turning movements.

Republic Road vis US65 interchange: The only access point to the Nature Center is via Republic Road, Nature Center way which is a 2-lane, 30-foot section to the parking lot entry. There are no sidewalk accommodations, but there are elevated asphalt shoulders approximately 5-foot in width one each side of the road.

South

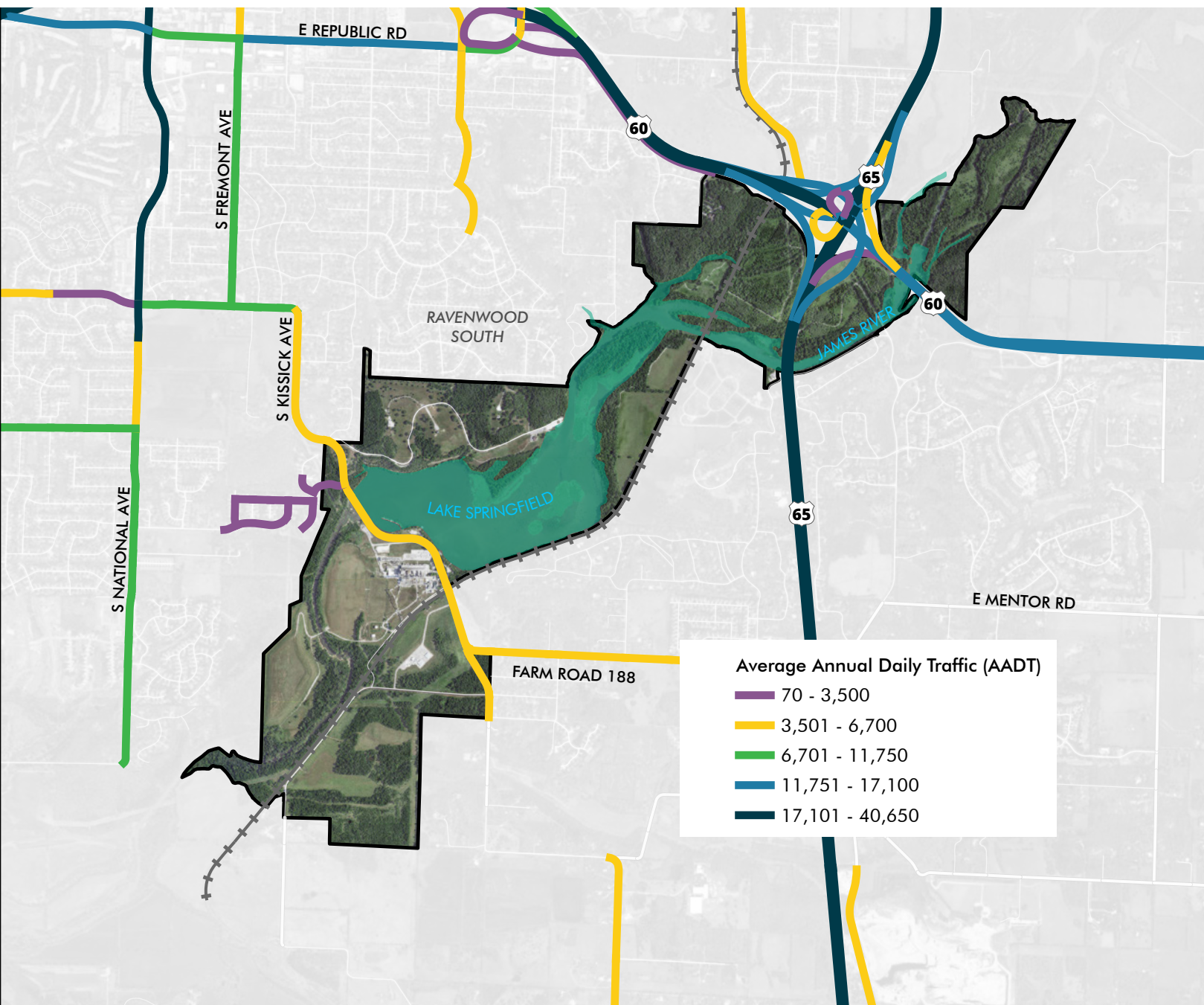
Evans: The section of Evans from US65 is built to accommodate heavy vehicular trip movements pending new development as well as an east-west arterial connection. The section of Evans from Southwoods to Kissick is a 20-foot wide, 2-lane section, with two 10-foot lanes. There is no sidewalk connectivity.

Southwoods: The typical section from Evans at US65 off ramp, to Evans/Farm Road 188, is a 56-foot, 2-lane divided roadway with 18-foot travel lanes in each direction. There is a 20-foot center grassy median. Turn lanes are built out at a future entry point pending site redevelopment in between the off ramp and the Evans connection (about 650 feet north of the roundabout). A 6-foot sidewalk runs along both the east and west side of the road, terminating at Evans, and connecting south to the Mercy Hospital development.

Kissick: The typical section from Briar to the lake and park entry is a 22-foot wide, 2-lane section, with two 11-foot lanes. There is no sidewalk connectivity.

Existing Plans

The most significant planned project that exists within the study area is the addition of a new East West Arterial. The proposed arterial road connects to the roundabout at Evans/Southwoods, runs south of the lake (partially through the south activity area), connects to National, and then continuous west to the Kansas Expressway Extension. The roadway is partially City of Springfield jurisdiction and partially Greene County Jurisdiction. An ordinance preserving the space for roadway buildout has been passed within the City of Springfield. While there are several challenges associated with full project buildout, the connection from US65 to Kissick remains an important vehicular connection to the lake Springfield Area. There are several challenge associated with full project buildout.



WALKING AND BIKING

Existing Trail Connections

There are currently several trail segments and connections within the Lake Springfield Planning Area. While connectivity within the planning area via trails is good, connectivity to the Lake Springfield area, specifically the Lake and Park zones, as well as the Power Station Site is limited. Additionally, there is not connecting trail around and across the lake, which presents significant barriers for multimodal connections to access all components of the current lake area.

Galloway Creek Greenway

The Galloway Creek Greenway is 5-miles in total length and connects from Pershing Middle School to the Old Iron Bridge in the north activity area. There is a parking lot at the Old Iron Bridge for recreational riders. While this trail is in close proximity to the Trail of Honor, (south of US 65), there are not bike accommodations to access the Trail of Honor Loop. The Galloway Creek Greenway does connect to the Nature Center Trail system, but there is no dedicated bike parking facility before accessing the Nature Center. There is also a connection to the James River Water Trail, for those wishing to explore that trail via canoe or kayak.



Lake and Park Trails

Connecting to a parking lot on Kissick, just south of the Lake and Park entry, is a .8-mile trail that can be used to access the Lake and Park Boathouse. The trail does not connect to any other zones within the Lake Springfield planning area. In addition to this paved trail entry, there is a 1.4 mile wood chipped trail.

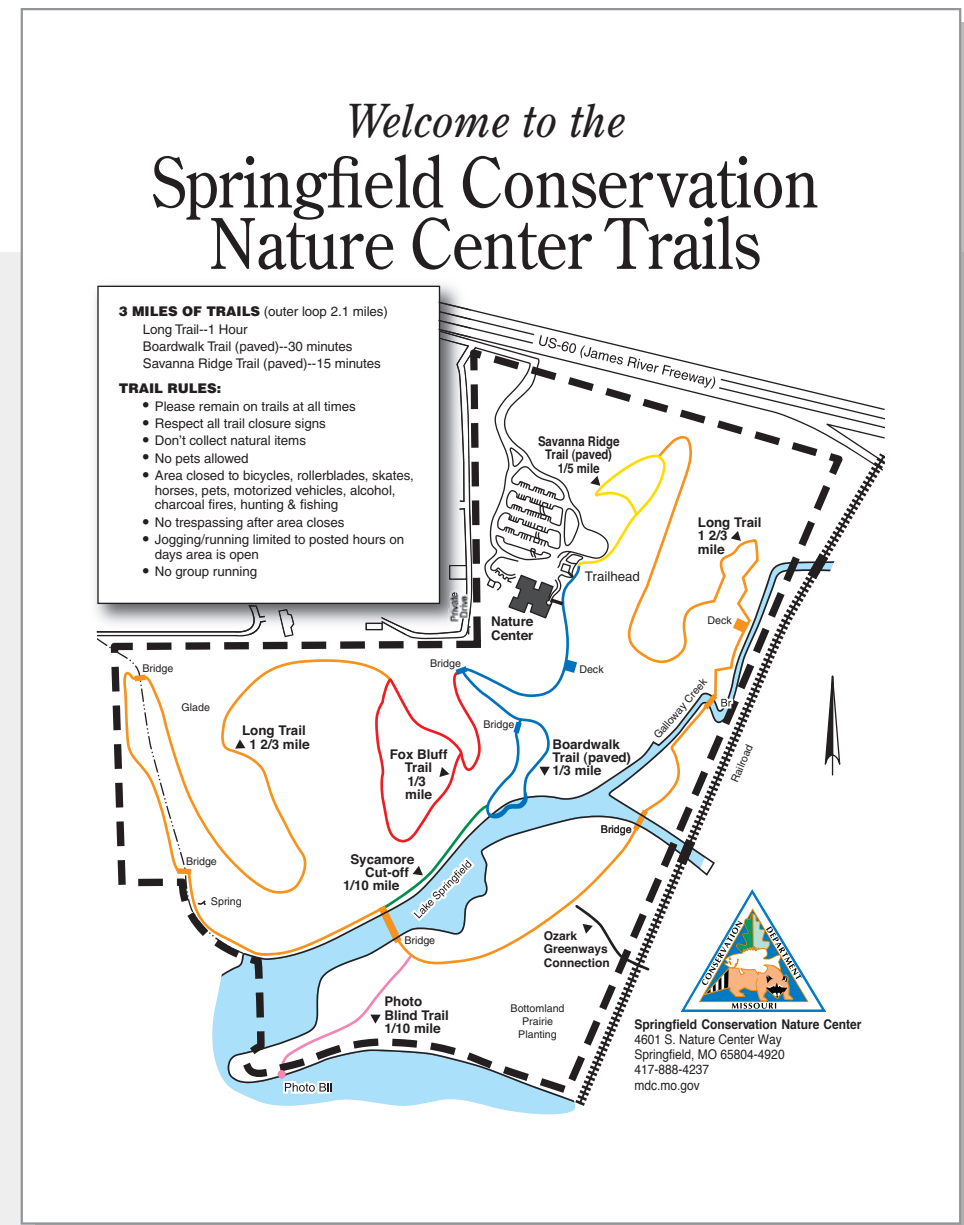
Trail of Honor

The Trail of Honor is a .8 mile section of the James River Greenway that meanders along the James River near Veteran’s Memorial Cemetery. There is a large stone gateway that frames the trail as you enter from the adjacent parking lot.



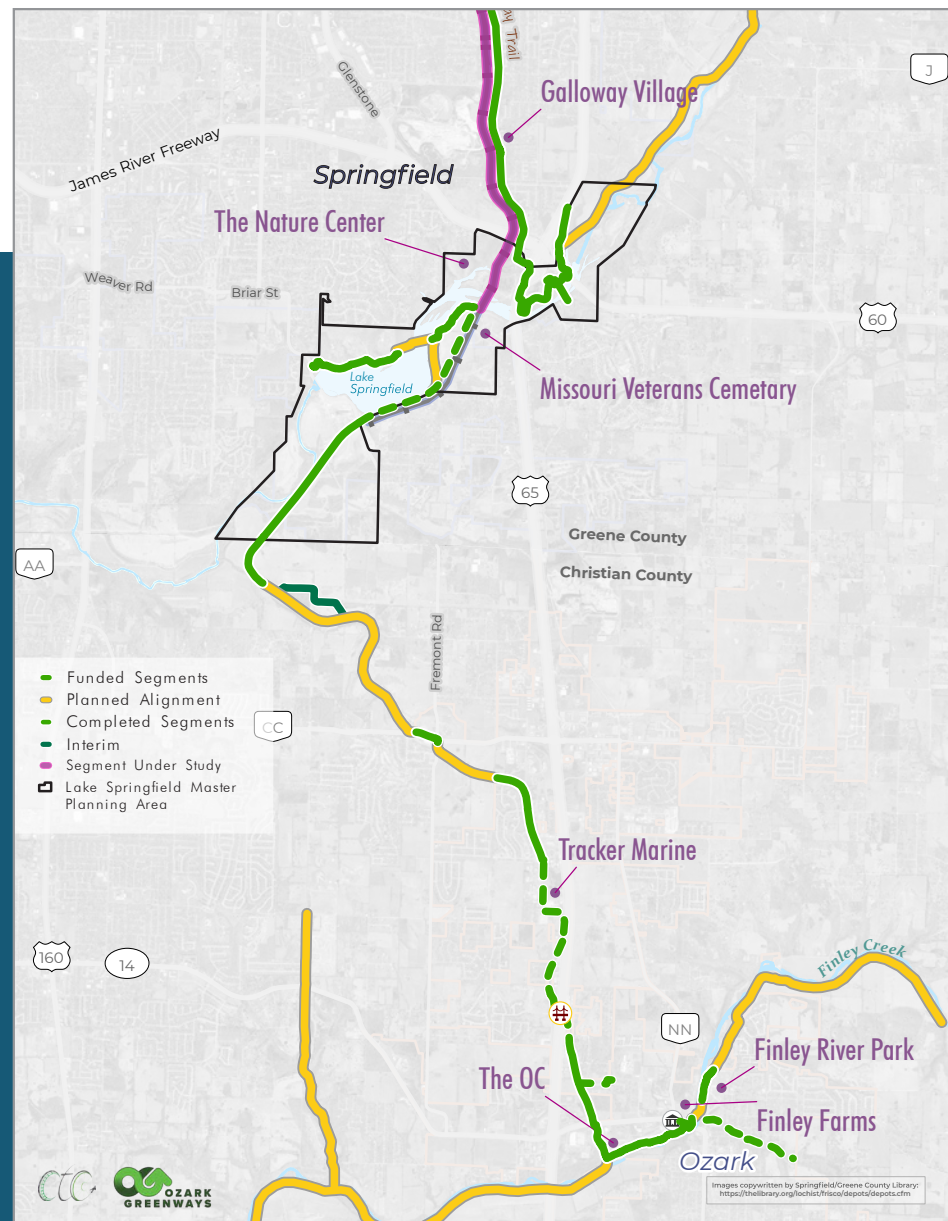
Nature Center Trails

There are 3-miles of trails within the 80-acre Nature Center site. The trails are a mix of paved and natural surface. The trails are meant for passive recreation and strictly prohibit group running, bicycles and pets. Jogging is only allowed at certain times when the center is not busy with group outings and field trips.



Chadwick Flyer

The Chadwick Flyer Trail is planned 12-mile connection from Sunshine Street in Springfield to several destinations in Ozark, such as Finley River Farms and the Ozark Community Center. During the Lake Springfield planning process, the segment through the South Activity Area and Power Station Site was built, which connects from Christian County, through the planning area, to Kissick Avenue. The City of Springfield and BNSF RR are in negotiations for the City to acquire the corridor for the trail from the Missouri Veteran’s Cemetery to Sunshine Street. Funding is secured to extend this trail alignment which significantly enhances active transportation connections to the Lake Springfield area.

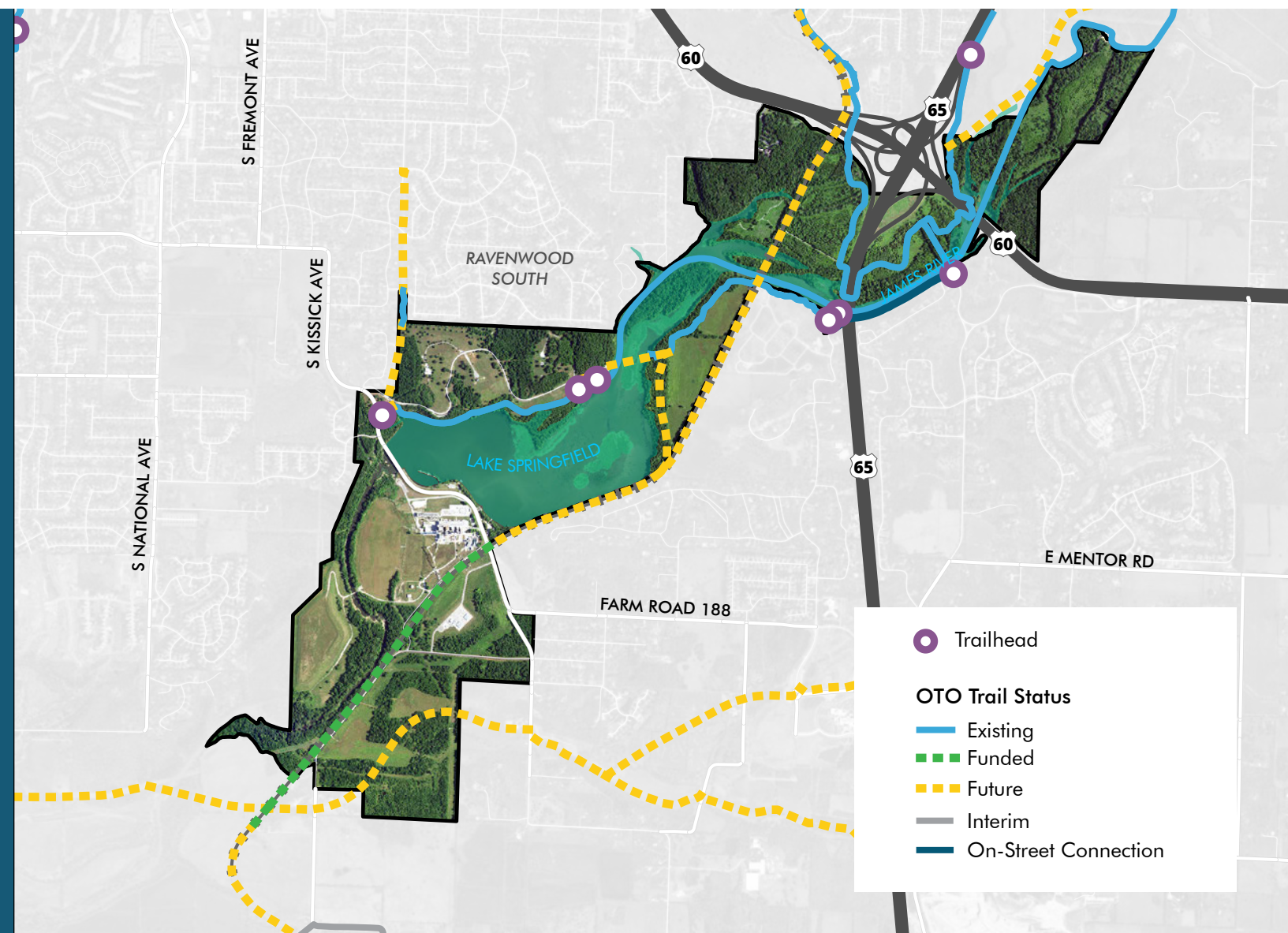


James River Water Trail

The James River Water Trail is not a trail for walking, running, or biking. This is a trail for canoeing, kayaking, fishing, and watching wildlife. The current trail is 6-miles and runs from Joe Crighton Access to the Lake Springfield Boathouse. The current terminus at the boathouse presents a significant opportunity for enhancing connectivity further south to more wildlife and outdoor destinations.

Sidewalk Connectivity & ADA accommodations

In the current state, sidewalk connectivity and ADA accommodations to the Lake Springfield planning area are non-existent. For people wanting to walk and bike to the Lake area, there are limited opportunities to make meaningful connections. In current conditions, neighbors from Lake Ridge Estates cannot safely access the Lake Springfield area by foot on any dedicated facility for walking.





Wayfinding & Signage

Limited wayfinding exists for people to know they have arrived at Lake Springfield. Similar to the discussion on vehicular access, the functional nature of the Lake for previous power station uses, is much different than envisioning a local, regional, or national tourist destination. A unique brand, with clearly identifiable wayfinding is an important component of plan implementation. Wayfinding should be scaled for all modes of transportation as well. Large scale and iconic wayfinding should be used for vehicular sense of place and arrival, where as more meaningful ‘time to destination’ wayfinding, with directional signage to key points of interest, should be used for people on foot and bike.

Existing Plans & Programmed Projects

The Ozarks Transportation Organization has several identified future trail alignments on their trail map for future implementation. These alignments are currently in a concept phase and will have to move through more refinement in planning and design. Specifically, there is an alignment along the proposed East-West Arterial Road, and the future Chadwick Flyer Trail (north of Kissick, discussed previously in the trails section).

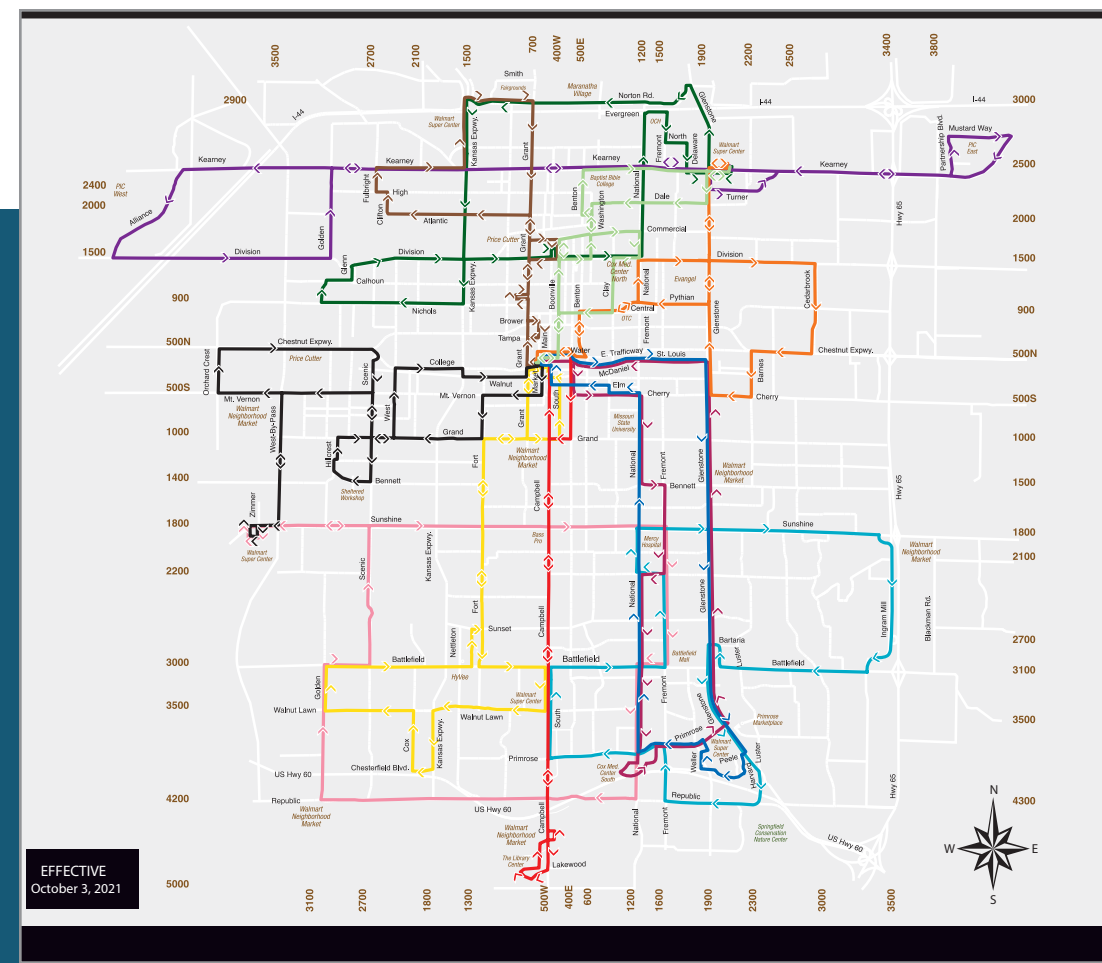
PUBLIC TRANSPORTATION

Existing Public Transit & ConnectSGF

Currently, public transportation does not serve the Lake Springfield area. City Utilities operates The Bus, A public transit system for Springfield. During the Lake Springfield Planning process, the ongoing ConnectSGF plan for public transportation improvements and future routing was ongoing. The result of ConnectSGF is to focus frequency and updates on areas more in the core of Springfield, and areas, such as Lake Springfield, will not be frequently serviced routes.

Stops and Frequency

The nearest transit stop is Republic Road near Charleston Avenue to the north of Lake Springfield. In current conditions, there is no safe way for people to get to the lake via foot or bike from that transit stop. Additional barriers to using public transportation to access Lake Springfield include the long headways, of 60-minute frequencies during the weekdays, that offer limited trips to the site. The route on Republic Road does also not service the area on Sunday or holidays.



UTILITIES

There are several known utilities within the planning area that will need to be considered during the implementation phase. These utilities are mapped in **Appendix C** and outlined below.

- Twin 30' sewer lines through the lake
- High pressure natural gas main south of the bridge
- Southern Star Central Gas Pipeline south of the Power Station

Additionally, there is a major electrical substation north of the old power station that connects to multiple transmission circuits. City Utilities will want to retain the substation and associated electrical transmission line, natural gas transmission main, storage tanks and natural gas turbines. Any future development needs to be planned around these very critical infrastructure items.

Electric

The Land and Park areas receive power from an overhead line that runs along Lake Springfield Park Road until turning northeast and providing service to the existing maintenance building and pavilion.

There are two existing electric transmission lines, each containing two 69 kV transmission lines, that cross the James River south of the dam and receive power from the existing substation. There are two existing 161 kV transmission lines that start at the substation and run southeast along Kissick Avenue until they turn southwest after the intersection with Evans Road and cross Ridgecrest Street.

The South Activity area has two 161 kV transmission lines that cross Ridgecrest Street. After crossing Ridgecrest Street one 161 kV line heads south through the southern area. The other 161 kV line heads west then travels parallel to Crenshaw Road until it turns and crosses the James River.

Water

The Lake and Park areas have an existing 8" waterline that runs southeast from Nottingham Street serving the existing pavilion and boathouse. There is also an existing 8" water line to the maintenance building.

The Power Station Site has an existing network of 8" water lines that supply water from three deep wells to the power station. This area is also served by an existing 12" water line that runs from the South Activity area across the Chadwick Flyer Trail and then east to Kissick Avenue.

The South Activity area has an existing 12" water line located east of Crenshaw Road that continues northeast along the existing road, then heads east south of Ridgecrest Street the line then branches east/west along Ridgecrest Street until it turns and travels northeast crossing Ridgecrest to the intersection of Kissick Avenue and Farm Road 188.

Natural Gas

The Lake and Park areas have an existing 4" natural gas line located along the northwestern edge of the area that terminates before reaching Lake Springfield Park Road. There is also a 12" feeder line along the western edge that follows the electric transmission line before it splits off at Kissick Avenue and crosses the Lake along the dam.

The Power Station Site has an existing 12" natural gas feeder line that crosses the dam and continues following along Kissick Avenue providing service to the power station. There is an existing 16" City Utilities natural gas transmission line running along the south side of the Chadwick Flyer Trail to feed the existing gas turbines near Kissick Avenue.

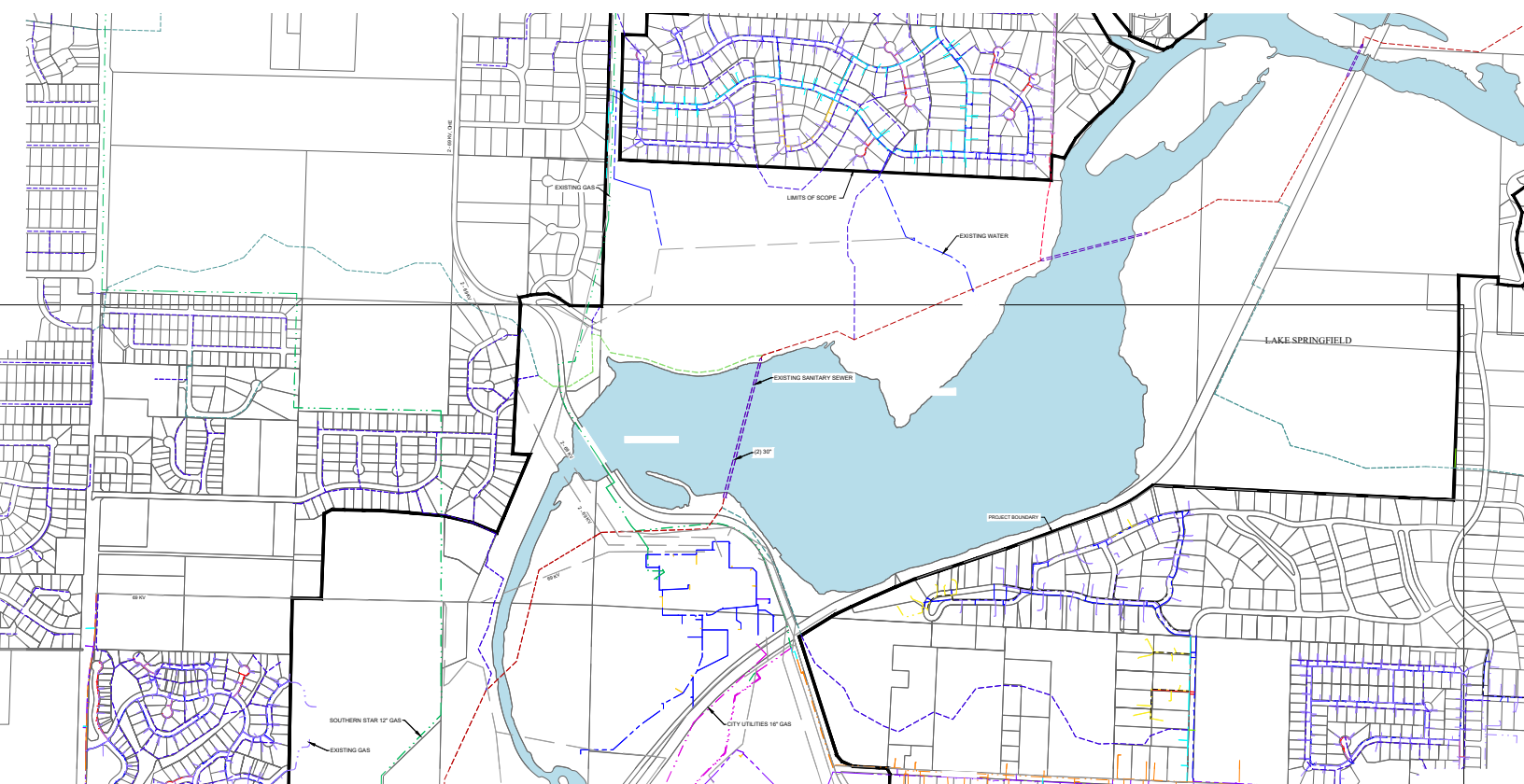
The South Activity area has an existing 16" City Utilities natural gas transmission line located east of Crenshaw Road that continues northeast along the existing road, then heads east south of Ridgecrest Street, and then turns and travels south along the eastern edge of the site. There is also a 12" Southern Star Central Gas Pipeline that travels east/west through the southern part of the South Activity area

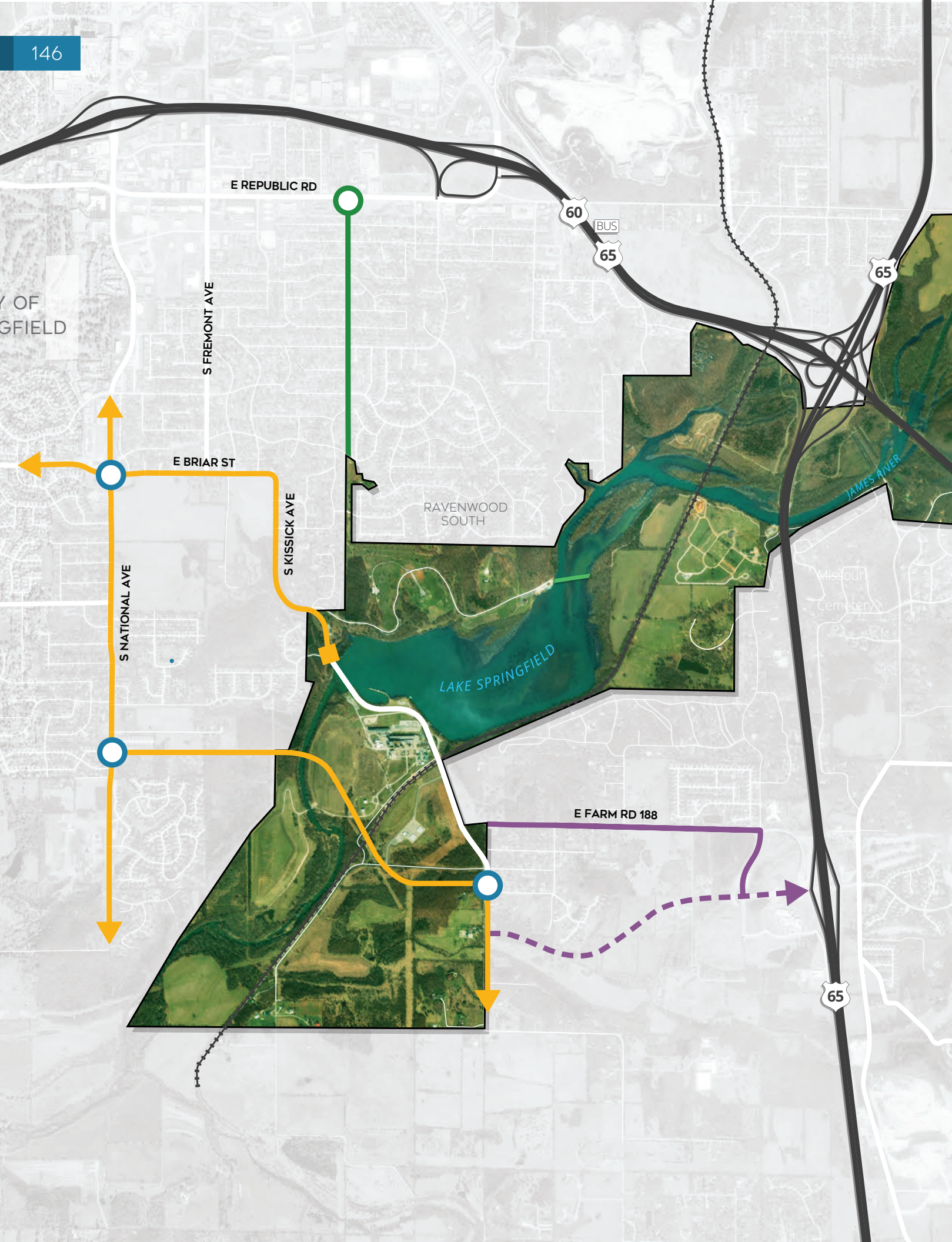
Sanitary Sewer

The Lake and Park areas have an existing 48" sanitary sewer that travels southwest across the site with a 16" and an 8" line that provide service to the residential parcels north of the project site. There is also an existing 12" sewer along the north side of the lake that provides service to residential parcels west of the project site and connects to the existing 48" sewer before crossing the lake in two 30" sewer lines.

The Power Station Site has an existing 10" sanitary sewer that follows along S Kissick Avenue and connects to an existing 48" sanitary sewer north of the power station. There is an existing 48" sanitary sewer that connects to two 30" sewer lines that travel through the lake, the 48" sewer then travels southwest and crosses the James River to the landfill.

The South Activity area has an existing 36" sanitary sewer that travels east and west through the site and connects to an existing 48" sanitary sewer to the west. The 48" sanitary sewer travels south from the landfill crossing the James River and turns to the west.





GOALS AND OBJECTIVES

The vision for the future of Lake Springfield is to create an accessible amenity and destination for the entire Springfield community, ensuring people can access and enjoy the lake, regardless of mode of travel or ability. The future site needs to provide infrastructure that supports enhanced access to the site, as well as better support the more intense uses planned for the James River Power Station and South Activity area. Objectives in this section are framed around key projects that work to achieve that goal. Just as the plan was created with the community, the intent is that the future of the area is meant for everyone in the community.

OBJECTIVES & KEY PROJECTS

Objective 1: Enhance Vehicular Access & Circulation At Lake Springfield

Current vehicular access is challenging and limited. Necessary strategies for increased vehicular access and mobility are included here.

- **Strategy: Improve Roadway connectivity to the Lake area, via a new Southwest Gateway.**

The recommended Southwest Gateway is proposed to connect to National Avenue near the current Wisdom Lane and connect east to the back of the James River Power Station site. Trip generation performed for the proposed land uses in both scenarios (Entertainment District and Adventure Hub) estimates about 20,000 trips/day, with a peak hour volume of 2,000 trips. The Power Station Site and the South Activity area are the focus of major trip generation within the final site plan. While the lake and park area will see some enhanced vehicular traffic with an expanded marina and boathouse, the new mixed-use development south of Lake Springfield will be the largest driver to the area. The goal of this new roadway is to offer direct access to the site and move car parking to the back of the proposed mixed-use district. Developing the site plan in this way will promote more vehicular efficiency when connecting to the site, as well as move parking to the back of the site, to create more people-oriented uses between the site and the natural lake environment.

Given the functional purpose of the proposed Southwest Gateway, as well as the estimate traffic volumes, the recommendation is to plan, design and construct the new Southwest Gateway as a collector road, in line with Ozarks Transportation Organization Collector Design standards. These standards call for at least 65-feet of Right of Way Space, and two through lanes of traffic. Turn lanes to the site and site access points will need to be considered for within the final design once a full traffic impact study under a refined development scenario occurs. While the interim goal is to connect from the site to Lake Springfield Drive (EW Arterial discussed next), designing this road as a collector remains a vital component to keeping the scale of the site people oriented, and not separated by a primary arterial moving through the middle of the Mixed Use district.

The Southwest Gateway is one possible strategy presented by this report. City Utilities reserves the right to approve any future plans/roadway alignments to ensure existing CU property is protected for any utility infrastructure requirements.

■ **Strategy: Plan for the addition of the Springfield Portion of the East West Arterial – Lake Springfield Drive**

The East West Arterial is a long identified, yet unfunded need, for the Springfield Region. The proposed arterial serves an important East-West connection on the South side of Springfield and for the entire region. Given the recent completion of the Kansas Expressway to the south, the east west arterial priority is more focused on the portion of the alignment located in Greene County, versus the portion of the alignment that is located in Springfield. While regional priority is focused on the Kansas Extension connection, the City of Springfield has a focus on this portion of the alignment that connects to Kissick at Farm Road 188. There is currently a City Ordinance that preserves right of way along the alignment, which is an important first step in the future planning of the road.

While significant grading challenges exist, the project alignment for the original arterial was thoroughly studied and ultimately determined to be the best alignment. For the Lake Springfield Implementation, the project provides the most direct Route to Kissick, where traffic is routed north to a new Lake Springfield Entrance Gateway at Kissick and Farm Road 188. The new roadway should be planned as primary arterial in conformance with Destination 2045, the OTO Long Range Transportation Plan. This design includes at least 110-feet of right-of-way space, accommodating 4 through lanes of vehicular traffic, as well as center space that can be utilized as a turn lane or a center median where left turning movements are not required. The typical design standard also requires at least 17-feet of space outside of travel lanes to be utilized for buffer zones for people on foot or bike from vehicular traffic, as well as for pedestrian and bike accommodations.

■ **Strategy: Improve Briar to better accommodate anticipated vehicular needs**

As discussed in the existing conditions section of this report, Briar is currently a 2-lane roadway with no accommodation for people on foot or bike. According to Destination 2045 and the Major Thoroughfare Plan (MTP), Briar is identified as a secondary arterial. However, given the recommendation to close Kissick to vehicular traffic, the process to reclassify Briar as a collector on the MTP is recommended as a future project. In the proposed access and circulation scenario, Briar only serves a connection to the Lake and Park areas and will no longer be a route that serves trips in the area. The proposed design standards for a collector will be sufficient to handle the proposed trips to the Lake and Park sites.

Collector roads require at least 65-feet of ROW and include 2 lanes of through vehicular travel. There is some flexibility in the final design width of the roadway to accommodate left turning movements where needed. However, Briar does not serve commercial uses, and thus left turn space will likely be limited to the intersection at Freemont. Space outside of the curb should be given to provide safe facilities for people on foot or bike, to further enhance multimodal access and connectivity to the Lake Springfield area.

■ **Strategy: Improve vehicular access and sense of place at Lake & Park Entrance**

The current Lake and Park entry is skewed and creates a challenging atmosphere for people leaving the park. For traffic exiting and heading northbound, sight distance for oncoming northbound traffic is limited, which creates issues for exiting traffic. Additionally, for traffic entering the site, there is limited wayfinding to indicate the entrance for inbound traffic the Lake and Park from Kissick. The current configuration is more confusing given the proximity to both a residential driveway and Timberlake Drive.

The current configuration of Kissick at the Lake and Park Entrance will benefit significantly from the addition of a roundabout to clean up access, and even further amplify to motor vehicle traffic that ‘you have arrived at Lake Springfield’. Roundabouts are shown to reduce crashes and provide a traffic calming effect on traffic entering the site, which will enhance pedestrian and bike safety within the Lake and Park areas. Additionally, roundabouts serve as important tools for defining gateway features. When the roundabout is designed, consideration should be given for enhanced landscaping or unique and iconic public art to be placed at the center of the roundabout. Additionally, gateway signage should supplement this design treatment at the Park entry.

Objective 2: Enhance Pedestrian Accommodations & Access At Lake Springfield

The current pedestrian accommodations and access points are limited to non-existent. Necessary infrastructure improvements to improve pedestrians’ safety and accessibility are included here. All recommendations should be developed using universal design standards, ensuring the Lake Springfield area remains an accessible and equitable amenity in the community and region.

■ **Strategy: Re-imagine Kissick as a Linear Park**

In current configuration, Kissick serves as the primary entry point for vehicular traffic to the James River Power Station. However, with the proposed redevelopment concept, the existing vehicular capacity will not be enough to serve the site. Additional challenges will exist to add pedestrian and bike facilities, which we heard are necessary several times during the planning process. Compounding these issues is the maintenance and upkeep of a vehicular bridge (separate from the Dam structure) this is costly to maintain and upkeep at current traffic needs and will be even costlier when widened and accommodating heavier traffic loads. A significant opportunity exists with the reimagining of Kissick as a linear park for people, not a cut through for vehicular traffic.

This re-use of the bridge structure places and emphasis on better connecting people to the lake and creating a more cohesive environment for people from the new entertainment district/adventure hub and the natural features of the planning area. Additionally, the removal of this roadway to serve vehicular needs minimizes cut-through traffic for Lake Ridge Estates neighbors and does not adversely impact travel times. Using proposed alternative routes to access locations outside of the Lake Springfield area in this scenario adds approximately 5 minutes to the total trip time.

Additionally, the linear park provides the opportunity to be a national icon in repurposing critical infrastructure that is past its intended life span, into social infrastructure, where people can foster mingle and make new connections, all while building enhanced social capital, a sense of civic pride, and stronger place attachment to the Lake Springfield area and the entire Springfield community. Linear parks are coming online in cities all over the country, and this infrastructure asset can serve as a powerful tool for tourism, especially when coupled with other site destinations.

- **Strategy: Implement sidewalk accommodations in line with OTO MTP Design Standards on improved or new roadway infrastructure**

With the recommendation of new and updated roadway infrastructure, sidewalks and accommodations for people travelling by foot or bike should be included as standard with these updates. There are little to no sidewalks in place in the planning area today, and certainly none that allow people to make the choice to walk to Lake Springfield. Key features included in the Power Station site recommendations rely on the ability for people to park their car once and stay and play without needing to get back in a vehicle. For example, conference planners usually look for sites where guests can park a single time, and enjoy amenities such as dining, shopping, and nightlife nearby the conference site without needing to drive.

Additionally, Lake Springfield benefits from being surrounded by residential neighborhoods, where people may choose to walk to grab a bite to eat, or enjoy a family walk to the proposed nature play destination playground. A future thinking plan for transportation infrastructure, relies heavily on prioritizing all modes of transportation, with a focus on safety and connectivity of people on foot or bike, or those that are more vulnerable road users. The addition of these pedestrian accommodations on important routes that are recommended for improvements is a critical component of encouraging active transportation connections to this natural amenity.

Objective 3: Use Project Branding and Unique Public Art to Enhance Sense Of Place at Lake Springfield

Image is a key component of what makes a public space great. As such, enhancing sense of place and image around Lake Springfield is important to develop as a beloved community asset for generations to come.

- **Strategy: Public Art elements incorporated at key gateways (Lake and Park Entrance, and Farm Road 188)**

When a place has a high-quality image and makes people feel comfortable, that place is viewed as a great public space within its community. The appearance of care for a place can significantly impact the environs as well as how people feel when they are there. Given the unique role Lake Springfield has to fill within the community, the addition of public art throughout the site, and specifically at key gateways will add quality to the overall image and appearance of the area. There are several instances in which roundabouts are coupled with interesting public art to elevate this typical roadway treatment to an iconic gateway for the community.

Utilizing this public space to enhance public art and placemaking, can be coupled with public art installations in other parts of the planning area, as well as tie in the cultural history of the land and the native populations. Public art also offers the opportunity to build buy-in within the local community. Hiring a local artist, or even opening up design ideas to an art competition can continue the collaborative approach to this planning process through design and construction.

- **Strategy: Placemaking enhancements at Republic Road Transit Station as transit gateway to Lake Springfield**

To move the needle from function to enjoyment at public transit stops, amenities must be included beyond the basic wayfinding, comfort and ADA accommodations that should be standard. Because public transit trips often involve a wait on either trip end, or a mode shift, these stations should have people focused infrastructure that enhances user experience. As long as The Bus runs the route on Republic Road near Fremont, the public transit stop here as the public transit gateway to Lake Springfield. A new trail is proposed to connect to Republic Road, and align through the neighborhoods along an existing utility corridor to connect to the Lake and Park areas. Upgraded amenities such as interpretive signage, interactive art pieces, unique wayfinding, and many other opportunities exist to elevate the transit experience here and serve as a visual gateway for motorists and transit users alike to Lake Springfield.

- **Strategy: Implement branded and appropriately scaled wayfinding & directional signage within the Lake Springfield area**

Another component of an accessible and equitable transportation system that supports all modes of transportation is enhanced wayfinding that is intuitive for users, easily identifiable, and placed strategically to offer guidance to key connections and destinations. In current conditions, Lake Springfield does not offer much wayfinding and signage.

When marketing the project for implementation, a project brand is important to serve as a unique identifier of the destination. This brand should be carried over to a cohesive wayfinding strategy that can be scaled at various levels depending on intended audience (motorist, bicyclist, pedestrian, interpretative, etc.). To accomplish this cohesive wayfinding, a wayfinding plan should be developed during the next steps of implementation, that can include details on sign standards, sign placement, materials, and many other factors. Similar to all the recommendations in this chapter, universal design should be considered, and people with disabilities should be involved in an advisory capacity to ensure ADA compliance.

Objective 4: Provide Enhanced Bike Connections to and Within the Lake Springfield Area

To enhance active transportation connections to Lake Springfield, providing a more connected trail network is important. While trail segments currently exist, the lack of connectivity makes bicycling as your primary mode of transportation to Lake Springfield unreliable. A connected bike network, around the across the Lake is important to enhance access for everyone.

- **Strategy: Provide a trail corridor from Republic Road to Lake Springfield Park**

To create an accessible amenity for all, Lake Springfield must be accessible via foot and bike for people making trips from other areas of the community. The nearest public transit stop is north of Lake Springfield on Republic Road, and this additional trail corridor will add connectivity for people taking public transportation. The proposed trail corridor runs north from Lake Springfield Park on an existing utility corridor, and then runs along S. Charleston Avenue north of E. Lakewood Street, connecting to Republic Road. This proposed trail segment is 1.3 miles in length, which is approximately a 25 minute walk or a 10 minute bike ride.

In addition to the trail facility serving people taking public transit or visiting commercial locations, or the YMCA on Republic, the trail adds another way for adjacent neighbors to access Lake Springfield. A recurring concern during the planning process was the inability for nearby neighbors to access the lake and park via foot or bike. The new trail serves several neighborhoods just north of the Lake and Park areas that will not have easier access to the improved destination amenities at Lake Springfield.

- **Strategy: Implement Bicycle accommodations in line with OTO MTP Design Standards on improved and new roadway infrastructure**

On new or improved facilities (Briar, SW Gateway, EW Arterial), bike accommodations should be designed in line with OTO MTP standards. A complete streets approach should be taken to these facilities during the design process, that will result in better connectivity for all modes of transportation. Another component of this enhanced bicycle infrastructure is taking an all age and abilities lens to design. In general, 60% of the population is interested in bike commuting, but concerned. These concerns stem largely from safe infrastructure, as well as end of trip facilities. Designing new access to Lake Springfield with this population in mind will result in an inclusive design, the promotes active transportation.

- **Strategy: Better connect internal trail system, and provide enhanced bicycle parking**

Similar to access to the lake, current access across and around the lake is non-existent. While there are several trail segments that exist within separate areas of the planning site, these separate trails are not connected. Through internal trail updates, people will be able to arrive a Lake Springfield via car, park, and then bike to all of the zones and their planned destinations. Alternatively, people will also be able to bike to Lake Springfield and connect to each area without needing to mix in vehicular traffic. Proposed trails in the North Activity Zone create a better internal system that connects south to the Lake and Park areas, as well as across via the proposed Chadwick Flyer to the Power Station Site and South Activity area.

- **Strategy: Provide cross-lake connectivity via a new bridge that connects the Boathouse to the Trail of Honor**

Connecting the unique amenities and proposed new assets within the Lake area is important for a cohesive place, that offers a mix of entertainment, nature, and recreation. A bridge connecting the Boathouse to the north activity area is an important feature to tie more passive recreation opportunities with more adventure focused and destination experiences. The bridge will serve primarily people on foot or bike but may be open to vehicular traffic in some capacity to facility events at the new proposed cultural pavilion in the North Activity area.

Objective 5: Plan For Adequate Public Infrastructure & Utilities

Given the higher intensity of uses with this proposed plan, as well as the need to retain some of the functional utility purposes of City Utilities operations, infrastructure and utility investments should be clearly planned during the final site development plan.

- **Strategy: Plan for early coordination with existing known utilities in the area and City Utilities**

With limited commercial or hospitality uses currently, specific consideration needs to be included in the final site plan and utility coordination. Early discussions on utility needs, as well as impacts to existing utilities and operations is critical to a successful plan.

LAND USE & PROGRAMMING

This chapter describes the process for developing land use and programming strategies for Lake Springfield. The following sections describe project goals, existing conditions, activity zones, programming concepts, and the final plan. Additional plan details and renderings further describe the amenities and experiences envisioned for the future of Lake Springfield.

GOALS AND OBJECTIVES

VISION GOALS

Identifying overarching goals during the master plan process is critical to ensuring the outcome meets clear expectations. The following goals established at the beginning of the project help to guide the vision and are reflected in the final plans for Lake Springfield.

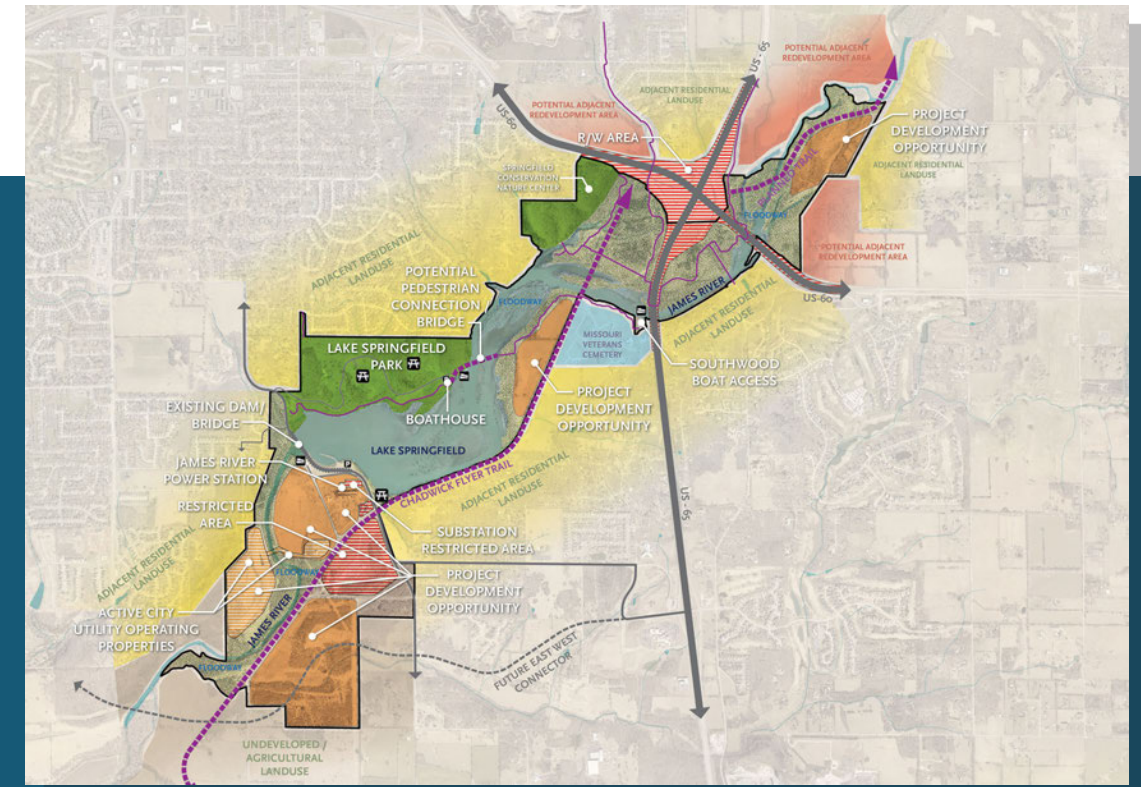
- Engage and activate the James River & Lake Springfield
- Expand pedestrian/bicycle access to & throughout the project
- Establish an identity for vehicular arrival and circulation
- Build upon the strengths of Lake Springfield Park
- Varying levels of intensity for passive & active development
- Create a destination for 'play' and 'stay'
- Opportunity to integrate the history of people and place

PROJECT IDENTITY

Shaping an identity for Lake Springfield sets the tone for a cohesive vision. When considering the entirety of 1,000 acres to be planned for, having a strong anchor is critical for managing the endless possibilities. The natural beauty of the Lake Springfield site should be admired through the lens of this area becoming the "Gateway to the Ozarks". This identity is celebrated throughout the site, whether through preserved nature or development that takes cues from the surrounding environment. No matter if you are bustling in a lively atmosphere or reflecting in the solitude of nature, reminders of the splendor of the Ozarks will be abundant.

LAND USE ANALYSIS

With 1,000 acres of project area, Lake Springfield has a wide variety of conditions, both within and adjacent, to identify. Areas to protect, neighbors to respect, and restrictions to adhere to are outlined in the sections below.



EXISTING NATURE AND PARKLAND

The Lake Springfield Park and Springfield Conservation Nature Center north of Lake Springfield are successful public amenities. The MDC Springfield Conservation Nature Center is outside the scope of this master plan but is a valued neighbor and important partner. Considerations such as the restricted biking on trails and enhanced connectivity will be critical to a cohesive Lake Springfield.

ADJACENT RESIDENTIAL LAND USE

Any successful vision for the future of Lake Springfield depends on mindful planning and respect for the existing and future communities. Areas highlighted in yellow represent shared boundaries with adjacent residential areas. Future programs should be mindful of noise, light, traffic, and increased activities, especially near these edges.

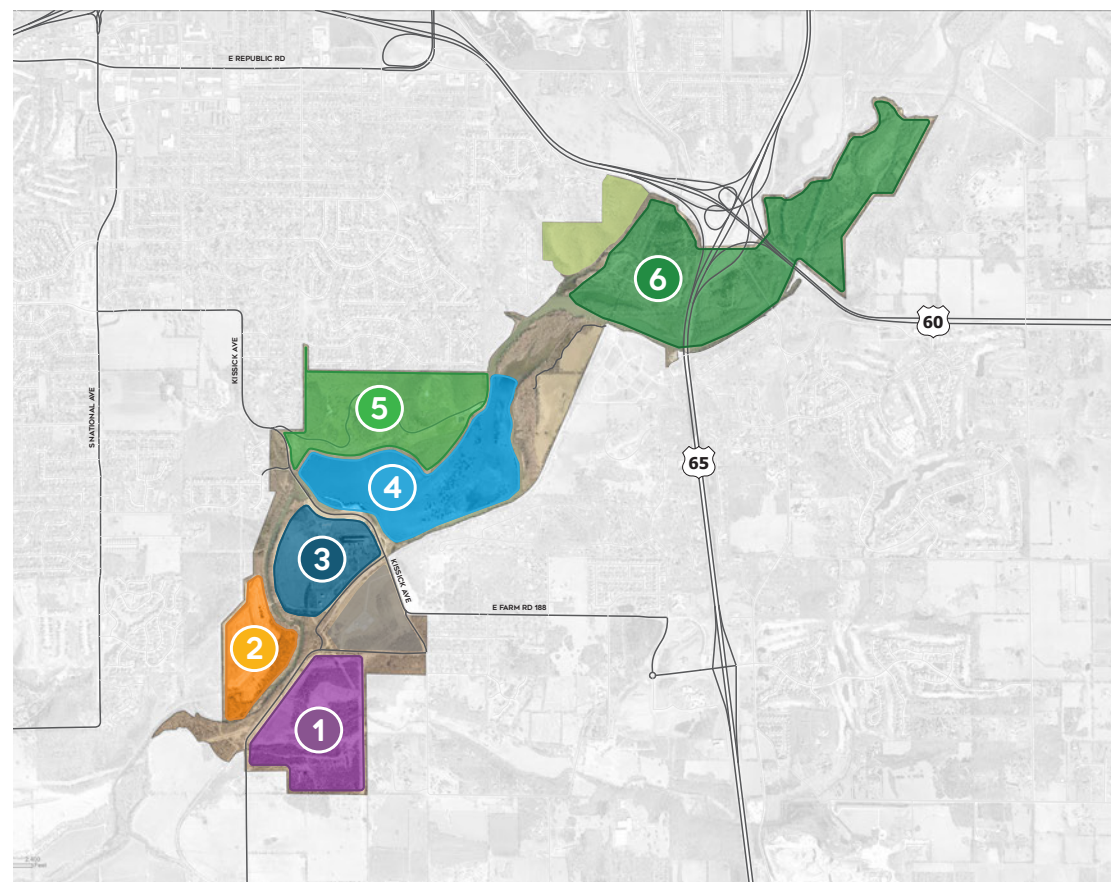
RESTRICTED AREAS

Several zones within the Lake Springfield project area have on-going City Utilities operations. Areas shown in the orange and red stripes are considered off-limits for the master plan. These zones include the power station substation, turbines, landfill, and highway right-of-way areas.

ACTIVITY ZONES

To begin conceptual design and programming, the total 1,000 acres of the site were divided into 6 activity zones. Each zone represents similar site features, access and environments with complementary possible activities.

- **ZONE 1** - South Activity Area
- **ZONE 2** - Future Energy Innovation Site
- **ZONE 3** - Power Station
- **ZONE 4** - Lake
- **ZONE 5** - Park
- **ZONE 6** - North Activity Area



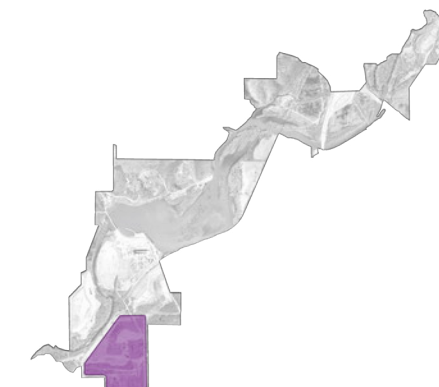
● ZONE 1 - SOUTH ACTIVITY AREA

Activity Zone Site Features:

- Approximately 130 acres in size
- Open fields and woodlands covering rolling topography
- Utilities and creek are development considerations
- Adjacent to the Chadwick Flyer Trail and the James River
- South access point for Lake Springfield
- Potential for a destination activity

Possible Activities Include:

- Lodging (Cabins / Camping)
- Lake w/ Amenities
- Playgrounds
- Trails / Trailhead
- Athletic Field Complex / Unique Sports
- Adventure Recreation (bike/skate park)
- Woodland Restoration
- River Access





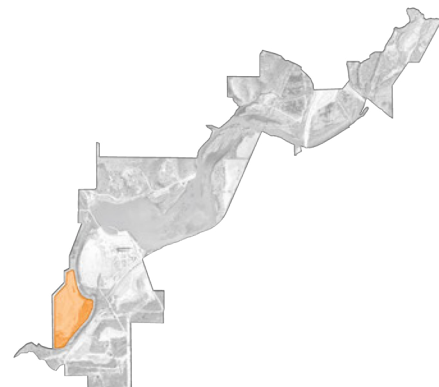
● ZONE 2 - FUTURE ENERGY INNOVATION SITE

Activity Zone Site Features:

- Approximately 50 acres in size
- Requires coordination and planning for use
- Flat and open space for use as a passive or light active recreation amenity area.
- CU infrastructure and pilot demonstration site
- Solar array and innovative cover
- Views of the power station and dam
- *Area not further developed at this time

Possible Activities Include:

- Native Landscape
- Art
- Education (site & ecology)



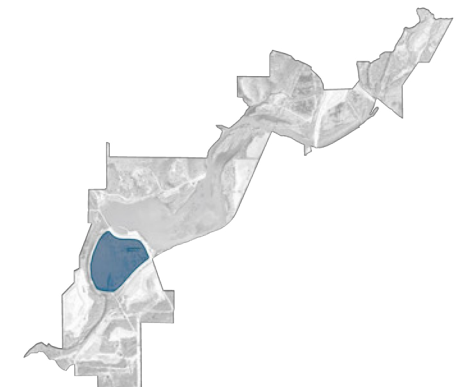
● ZONE 3 - POWER STATION

Activity Zone Site Features:

- Signature space at Lake Springfield
- Several surrounding areas remain in service for CU
- Redevelopment of the Power Station as a catalyst for economic, employment and recreation opportunities
- Consider the identity, character, and visitor experience

Possible Activities Include:

- Themed Lodging
- Museum / Skills Training
- Day Trip Outpost
- Trailhead / Transit Station
- Indoor Athletics / Adventure Recreation / Event Space
- Midway / Outdoor Education / Gardens
- River Access / Overlook
- Amphitheater / Demonstration Areas





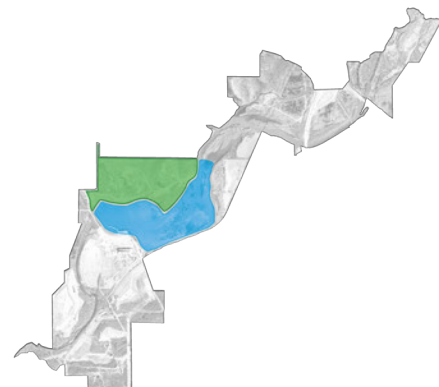
ZONES 4 & 5 - LAKE AND PARK

Activity Zone Site Features:

- Approximately 330 acres of existing public park and water based amenity area.
- Located north of the Power Station and dam,
- Opportunity to expand on its existing offerings or
- Opportunity to be re-imagined based on the redeveloped Power Station and modified dam.
- Potential to expand existing boathouse

Possible Activities Include:

- Restore River Channel and Create Wetland
- Dredge Lake for Deeper Water
- Activate Lake Edge with Access
- Group Camping / Nature Based Education
- Nature Center / Marina
- Expanded Disc Golf and Day Use Amenities
- Expand Pedestrian Access to Park
- New Vehicular Entry and Park Access
- Cabins / Lodges w/ Amenities along Lake Edge



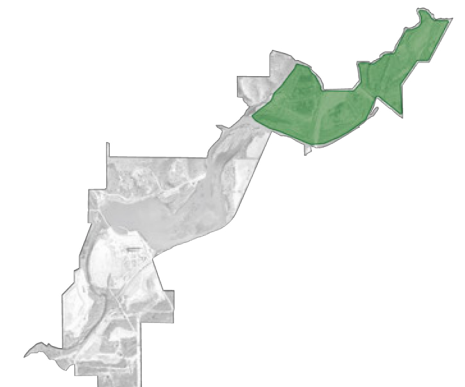
ZONE 6 - NORTH ACTIVITY AREA

Activity Zone Site Features:

- Approximately 450 acres in size
- Along the James River north of Lake Springfield.
- Includes the Nature Center, Southwood Access, and 65/60 interchange
- A significant amount of the area is located within the James River floodway and flood plain.
- Existing trails provide connection over the James River, under the highways, and connect to the Nature Center and Galloway Creek Greenway.

Possible Activities Include:

- Bridge Crossing North of Lake Springfield
- Loop Trail Development with Chadwick Flyer
- Branding and Identity at 65/60 Interchange
- North side trailhead and river access
- E. Timbercrest Road trail connection

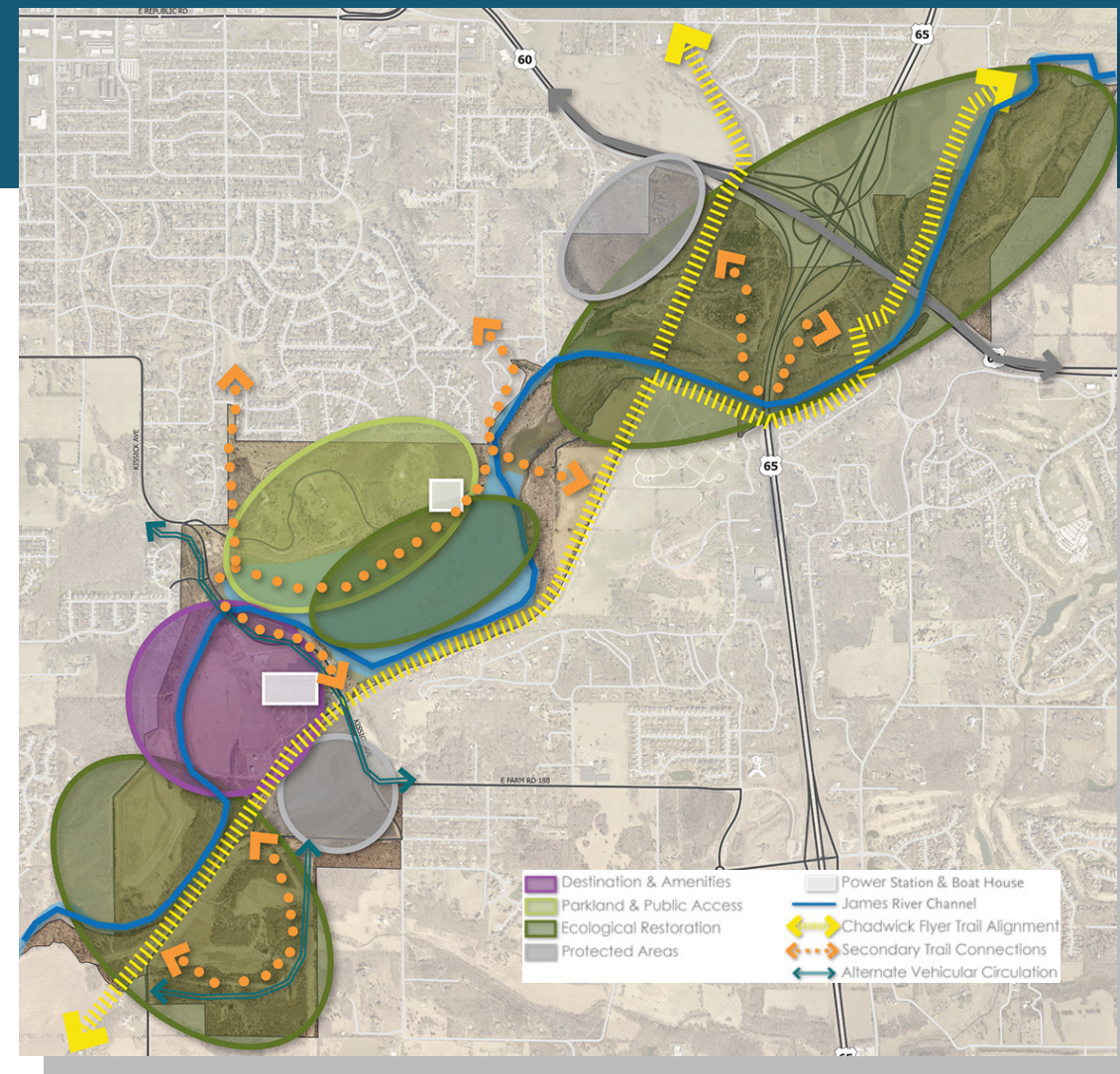


INITIAL PROGRAMMING CONCEPTS

To identify program priorities at a large scale, several concepts were developed to explore blending natural amenities, entertainment and recreation opportunities. The following concepts outline general ideas of place and event based programs and regions they might be suitable for.

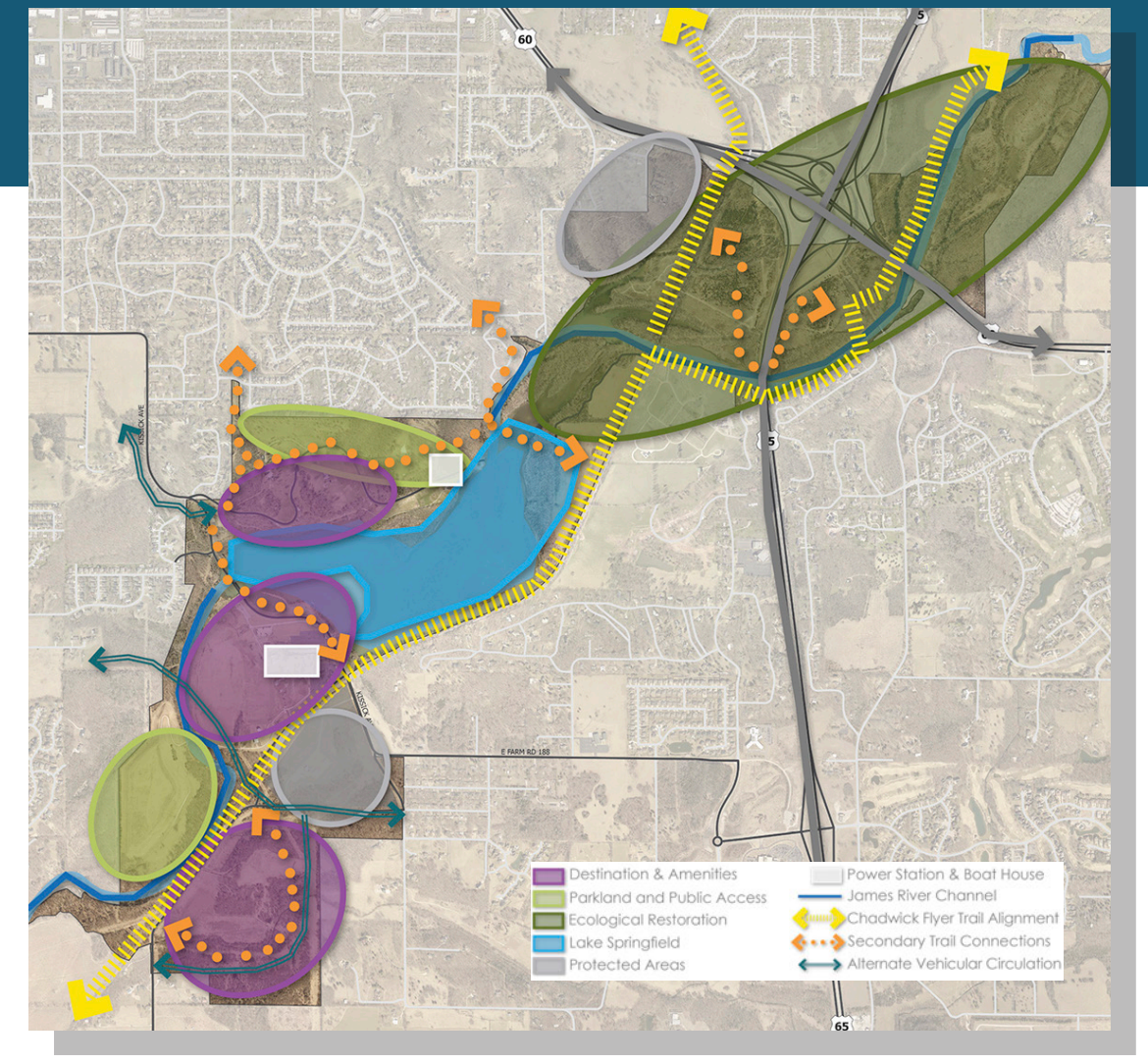
ECO-TOURISM

This place based concept distinctly prioritizes place based amenities highlighting the beauty of the Ozarks. Economic benefits would be driven by eco-tourism and spaces for those seeking connection with nature. Low impact amenities such as destination play would complement the overall goal of blending with place.



ENTERTAINMENT DISTRICT

In an active, event based scenario, the main objective is elevate entertainment experiences. Tourist attracting and revenue generating amenities are heavily featured to support events, competitions, gatherings and more. High development projects and unique businesses will attract visitors from the region and bolster economic vitality in Springfield.

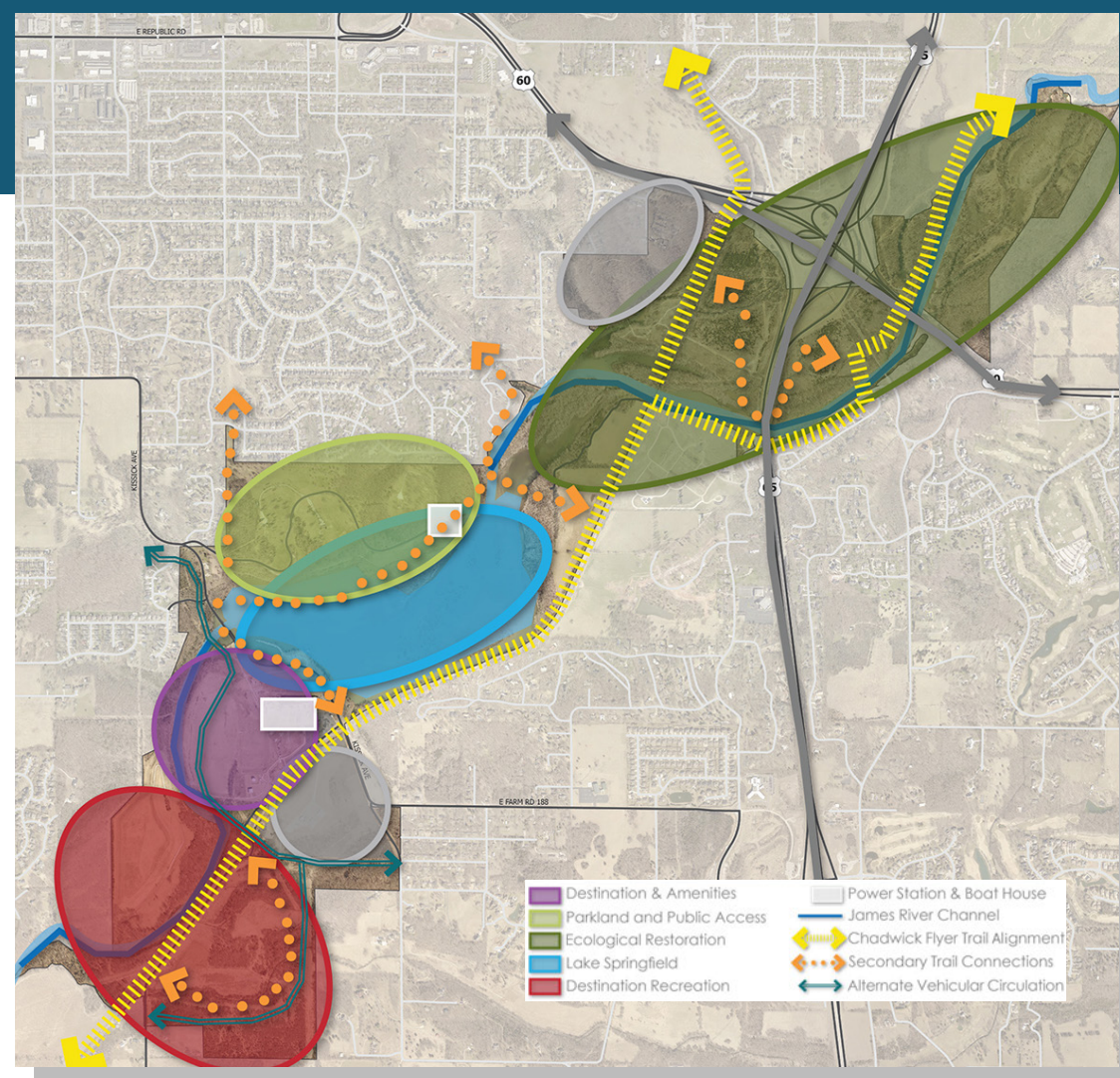


INITIAL PROGRAMMING CONCEPTS

(CONTINUED)

RECREATION DESTINATION

To blend place and event program ideas, this concept seeks to provide a variety of activities that bring people to Lake Springfield for the local amenities paired with large capacity event spaces. Visitors would be inclined to plan multi-day stays and varieties of venues with capacity for large conferences, athletic and recreation spaces would host regional or even national events.



CONCEPT REFINEMENT

Following the public open house and on-going feedback, two concepts were developed to explore more refined spatial arrangements of desired program elements.

Initial program explorations made it clear that the North Activity area should remain a place of protected environment and limited development. The current successes of the Lake Springfield Park would be transformed into an updated boathouse/marina and destination play areas.

New constructed wetland islands are imagined as way to make use of existing lake conditions and create ecologically beneficial and exciting habitats. Boardwalk trails weaving among the islands draw visitors to engage with Lake Springfield in ways never possible before.

The Power Station and South Activity areas explore two concepts, blending the ideas of entertainment, adventure, and retreat. The Entertainment District concept generates high activity programming near the James River Power Station, with a focus on unique and exciting attractions. This is complimented by destination play and retreat spaces to the south. The Adventure Hub concept prioritizes multi-use event space and recreation options. In this concept, adventure parks and a signature bike park activate the south activity area.

Both concepts include other dining, retail, commercial and lodging options. Miles of trails connect these activity areas to other zones within the Lake Springfield project area. Options for new water activities, including kayaking, white water rafting, or other water adventures, will bring visitors from the surrounding region and beyond seeking time on the water.



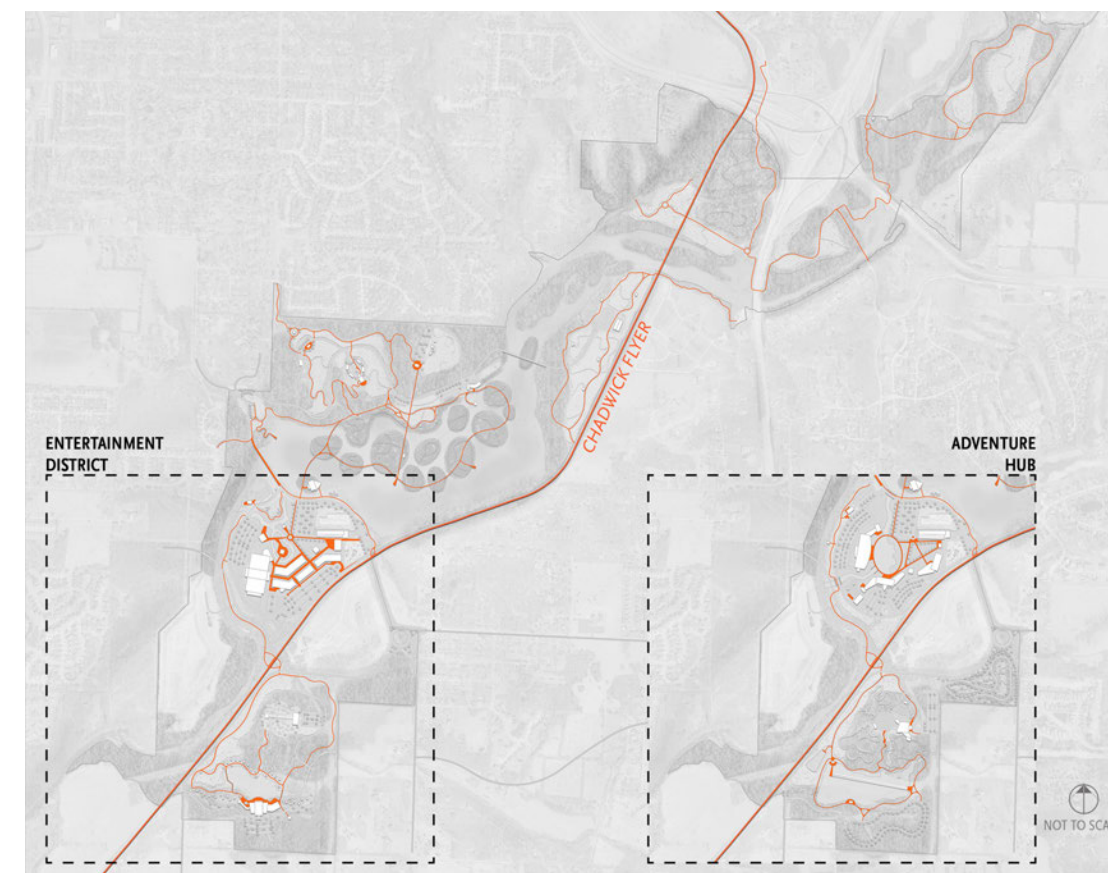
FINAL CONCEPTS

The final concepts developed for Lake Springfield explore a variety of options for outdoor experiences, recreation activity, and entertainment options that span the 1,000 acres of opportunities. The site plans presented below show the entire project area, which remains the same in the Park, Lake, and North Activity areas. The Power Station and South Activity areas reflect two different concepts: The Entertainment District and The Adventure Hub. The following sections describe overall proposed site conditions, followed by detailed zone site plans and concepts. Additional information regarding transportation, building/area sizes, and economic projects can be found in other chapters of this report.



TRAILS & CONNECTIVITY

The existing trails, including the Chadwick Flyer which is planned to bisect the project area, are strong foundations for site wide networks of trails and connectivity. The Lake Springfield project will contain approximately 14 miles of paved trails to connect visitors to different areas. Nearly half of this will be in the North Activity areas, where visitors will meander through varieties of ecosystems, guided by interpretive signage. In addition, many meadow`s and forests will have mowed trails or dirt paths offering even more opportunities to those seeking nature hikes.



Zones	Miles
North Activity	6.1
Park & Lake	3.1
Lake Boardwalks	1.4
Entertainment District	3.7
Adventure Hub	3.0
Total (Approximate)	14

PRESERVED NATURE AREAS

To ensure protection of the invaluable natural resources, the Lake Springfield plan identifies key areas to maintain or restore as natural areas and ecological zones. The North Activity area remains entirely low-development, and the majority of high-development activity revolves around the James River Power Station, an already disturbed site. Development occurring in the South Activity area prioritizes development opportunities ready to blend with the existing site.

In addition to protecting the successes of the current environment, new wetland islands constructed in the lake will create habitat and invite wildlife and people to the water.

RESTRICTED AREAS

Several key sites within the project area require long term consideration and on-going coordination. Some components of the James River Power Station need to remain in operation and readily accessible, including the substation, turbines, and landfill.





NORTH ACTIVITY AREA

In both concepts the North Activity area prioritizes preservation of natural resources with the addition of trail networks to connect people to the outdoors. Several points along the James River are ideal for new river access and trailhead locations. With access to the Chadwick Flyer Trail, this zone would offer points of departure or scenic detours for users of this regional trail. Additional or improved access points to neighborhoods and across the James River keep the site connected.

Enhanced habitat areas such as bird meadows or riverside wetlands would enrich wildlife and environmental health. Hikers would have nearly 7 miles of trails to explore, go birding, or appreciate nature.

There is opportunity to celebrate the contributions of Native Americans and their stewardship of this land long before the City of Springfield existed. The land east of Lake Springfield, connected by a new bridge, will host a Cultural Center, dedicated to education, enrichment, and appreciation of Springfield Native Americans.

Zone Amenities

- Wetland Preservation
- Nature Amenity Area
- Meadows
- Trails / Trailheads
- River Access
- Culture Education / Event Lawn
- Nature Center Access



LAKE SPRINGFIELD PARK

The park provides an opportunity to reimagine the land to host options for light development to enhance recreation and gathering activities.

A new bridge will connect Lake Springfield Park to the North Activity area, engaging with the Cultural Center upon arrival. To the south, an iconic pedestrian bridge will encourage visitors to explore new areas of Lake Springfield.

The jewel of the park is an iconic expanded and redeveloped boathouse and marina, providing a gateway to connecting people to the water. Visitors could rent kayaks, begin a boardwalk trail journey, host events, and engage with interpretive resources, expanding upon the beautiful surrounding landscapes.

High points and iconic overlooks in the park are accentuated with spaces to bring people together. A destination playground would showcase nature play elements while a retreat center offers unique stays and experiences.

Zone Amenities

- Boathouse / Ecology Center
- Marina / Wetland Boardwalk
- Retreat Center
- Destination Play
- River Crossings / Overlooks
- Disc Golf
- Neighborhood Trail Connection
- Renovated Park Entry



ENTERTAINMENT DISTRICT - POWER STATION

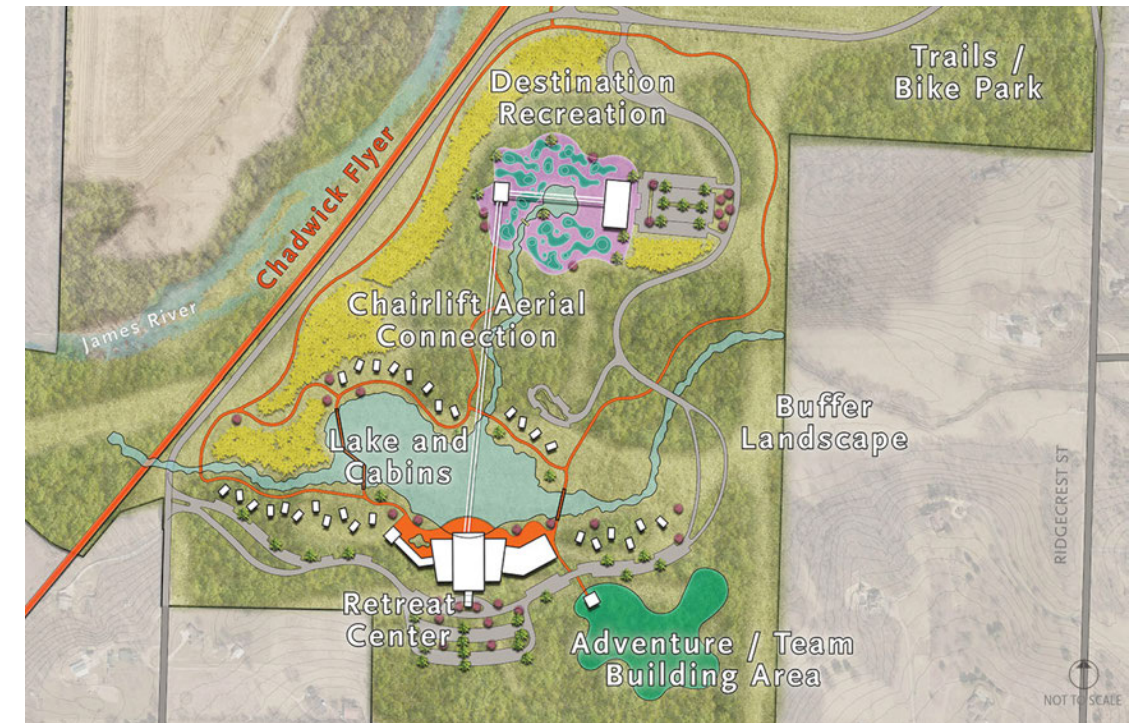
As a destination entertainment district, this concept reimagines the James River Power Station as an anchor for a unique regional attraction. With several points of entry, visitors will find access and parking simple for many modes of transportation.

The main building would be a multi-use event venue, with a 270,000 square foot capacity. Supporting buildings arranged along a pedestrian promenade would house mixed use retail/commercial/office/residential spaces.

A channel bypass would allow river trail users to bypass the dam and continue along the James River without portaging. New recreation opportunities, such as white water courses and adventure courses keep water experiences present throughout the site. Event spaces such as concert venues, amphitheatres, and gathering spaces can host crowds, while businesses such as food and beverage halls, yard and game activities, and entertainment options will keep people returning.

Zone Amenities

- Power Station Entertainment
- Multi-use Event Venue
- Retail / Residential / Office
- Restaurant / Overlook
- Riverfront Recreation
- Event Lawn/ Pavilion
- Bypass Channel
- Whitewater Adventure
- Chadwick Flyer Trailhead



ECO-RETREAT - SOUTH ACTIVITY AREA

To the south of the bustling Entertainment District lies a quieter, but no less active, recreation and retreat area. Programming elements here focus on blending with the natural resources of the South Activity area while curating new experiences. A destination recreation area with room for activities such as putting courses, rope and aerial obstacle courses, outfitters and other retail offerings and more.

A new retreat center surrounded by lakefront cabins will provide stay options with a focus on quiet time in natural settings. The retreat center can host rooms, amenities and gathering spaces, while an adventure/team building area nearby can enhance family reunions or corporate retreats. Additional space to the northeast could become a bike park with trails to provide further recreational benefits.

New trails continue to weave in and around the Eco-Retreat areas fostering connections to other zones. A scenic chairlift ride connects the destination recreation area to the retreat center bringing visitors up and over the forest and lake.

Zone Amenities

- Retreat Center
- Retreat Cabins/Yurts
- Adventure Course
- Destination Recreation
- Lake / Amenities
- Bike Park



ADVENTURE HUB - POWER STATION

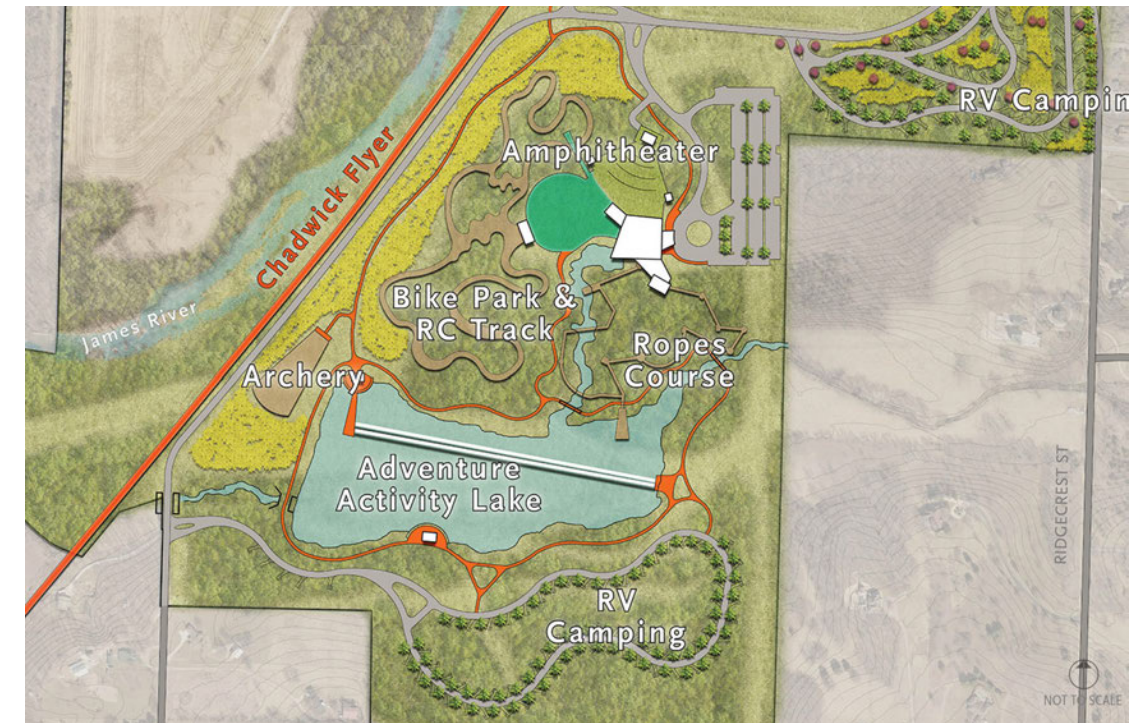
The second concept for the revitalizing the Power Station area focuses on adventure recreation and conference center programming. A large community green complements the anchoring power station and provides open flexible space for gathering or farmer's markets and festivals.

The conference center expands upon Springfield's existing offerings with 155,000 sqft of new space, supported by mixed use buildings and smaller entertainment venues. Hospitality and restaurants scattered throughout the site will further time spent in Lake Springfield.

A new opportunity for visitors to engage with water is showcased through the kayak basin. The integrated bypass channel allows James River Water Trail users to continue pass the dam without portaging. Areas adjacent to the kayak basin are ideal for unique gathering and programming opportunities.

Zone Amenities

- Power Station Reuse
- Conference Center
- Hospitality
- Restaurants
- Integrated Bypass Channel
- Kayak Basin
- Community Green
- Water Adventure



ADVENTURE PARK - SOUTH ACTIVITY AREA

To complement activity near the power station, this concept continues the adventure programming with unique and thrilling outdoor activities.

A 10 acre bike park and RC track weaves through courses for all skill levels to bring adventure-enthusiasts to Lake Springfield. Supporting amenities such as bike shops, other retail, or food and beverage help generate visits and spending. A amphitheater and open lawn can host concerts or other events, or be used regularly for picnics or gatherings. A large ropes course brings thrills to the treetops and promises exciting experiences.

A new adventure activity lake developed on the south end could bring people to the water with floating obstacle courses and cable wakeboard parks. Surrounding RV Camping makes extending stays convenient for those ready to continue the adventure. With plenty of unique attractions that are not provided in the region, Lake Springfield's potential to bring people in and create unforgettable memories promises to foster lasting benefit for generations to come.

Zone Amenities

- Canopy Ropes / Zipline
- Lake / Water Adventure
- Bike Park / Archery
- Trails
- RV Camping
- Amphitheater
- Retail / Food & Beverage

CONCEPTS & GOAL ALIGNMENT

To remain consistent with the Vision and goals of the Lake Springfield Project, each project zone and its related programming were evaluated against a series of environmental, economic, and social goals. Potential social and economic impacts are also compared to foster a balance of revenue-generating and community centric assets. Program items such as hotels, retail/dining, commercial and residential spaces contribute to economic growth. Other amenities like playgrounds, trails, parkland, and community spaces are critical to providing social benefits. New adventure parks, entertainment venues, and recreational offerings can attract regional visitors with unique experiences only found at Lake Springfield.

See pages 96-119 for a detailed view of the goal alignment diagrams.

ECONOMIC	ENVIRONMENT	SOCIAL
E1 Innovative Economic Opportunities	N1 New/Green Infrastructure	S1 Innovative Recreation Opportunities
E2 New Funding Allocations	N2 Sustainable Water Quality	S2 Access & Equitable Transportation
E3 New Business Development	N3 Appealing Outdoor Amenities	S3 Water Access for Recreation
E4 Attract Private Investment	N4 Identity - Gateway to the Ozarks	S4 Elevating Quality of Life
E5 Resilient Job Creation	N5 Unique Adaptive Reuse	S5 Regional Draw

ECONOMIC DEVELOPMENT

With a feature component of the Lake Springfield Plan being the adaptive re-use of the James River Power Station and the economic opportunities, understanding the existing market potential and impacts of proposed activities is important to the implementation of this plan. This technical chapter on Economic Development provides an overview of the outcome of economic development analysis conducted for this project. This part of the study includes a market assessment, real estate analysis, case studies, strategic recommendations, and a fiscal and economic impact analysis.

MARKET ASSESSMENT

INTRODUCTION

To analyze the future opportunities for Lake Springfield, Johnson Consulting undertook a detailed analysis of market conditions in Springfield and its surrounding area, relative to state and national averages. While characteristics such as population, employment, and income are not strict predictors of performance for potential developments, these variables provide insight into the capacity and ability of a market to provide ongoing support for such facilities and activities. In addition, the size and role of a marketplace, its civic leadership, corporate presence, proximity to other metropolitan areas, transportation concentrations, and the location of competing or complementary attractions directly influence the success of facilities.

The objective of this analysis is to assess the strength of the Springfield and Greene County market and its ability to support Lake Springfield as an economic driver for the community.

MARKET OVERVIEW

Springfield is a southwestern city in Missouri known as the Queen City of the Ozarks. The city sits on the Springfield Plateau of the Ozarks and is known for its outdoor recreational activities, such as Lake Springfield. The many parks, trails, and other recreational amenities are key drivers for local economic activity and tourism.

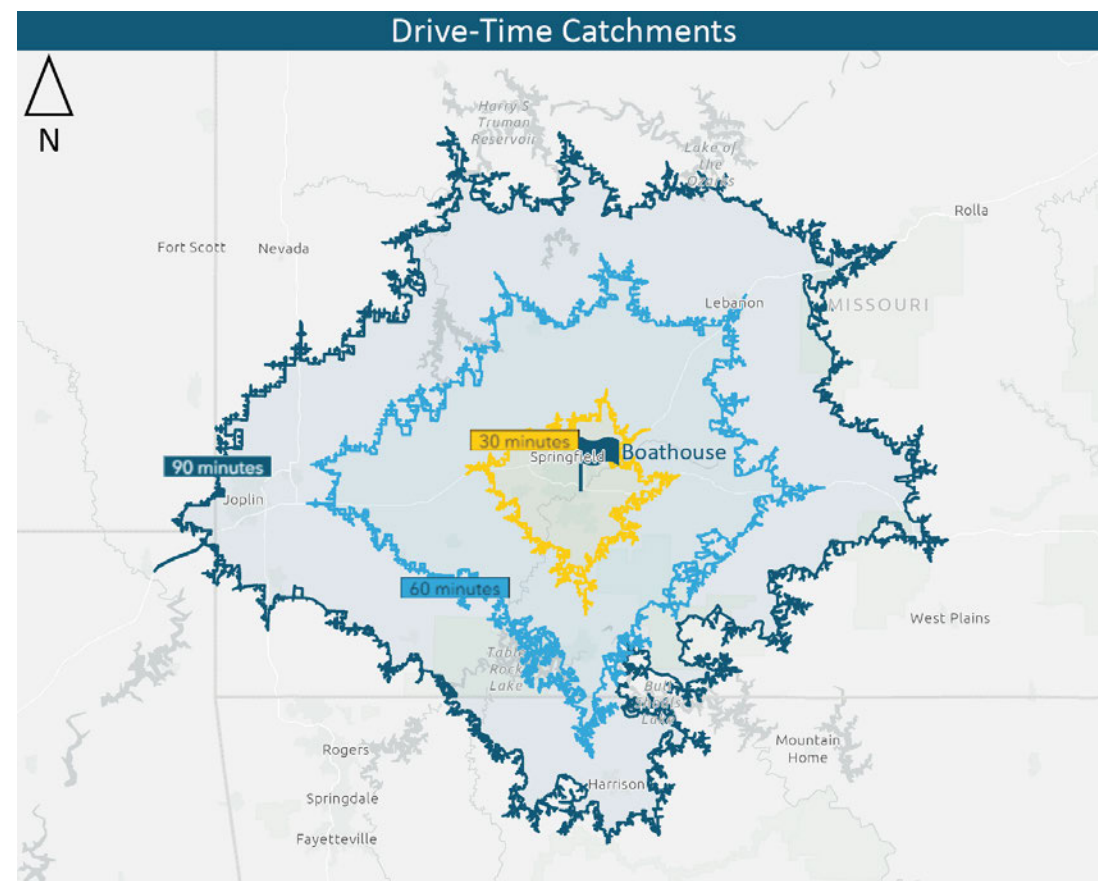
Accessibility

Springfield's Location is advantageous from an accessibility standpoint. This applies to various transportation modes:

- **Road:** Springfield is easily accessible by U.S. Route 66, 65, and 160 and connects through Kansas City to the north, St. Louis to the northeast, and Oklahoma City to the southwest. Ozark, 8 miles south, and Branson, 34 miles south are both Missouri cities within a short drive of Lake Springfield.

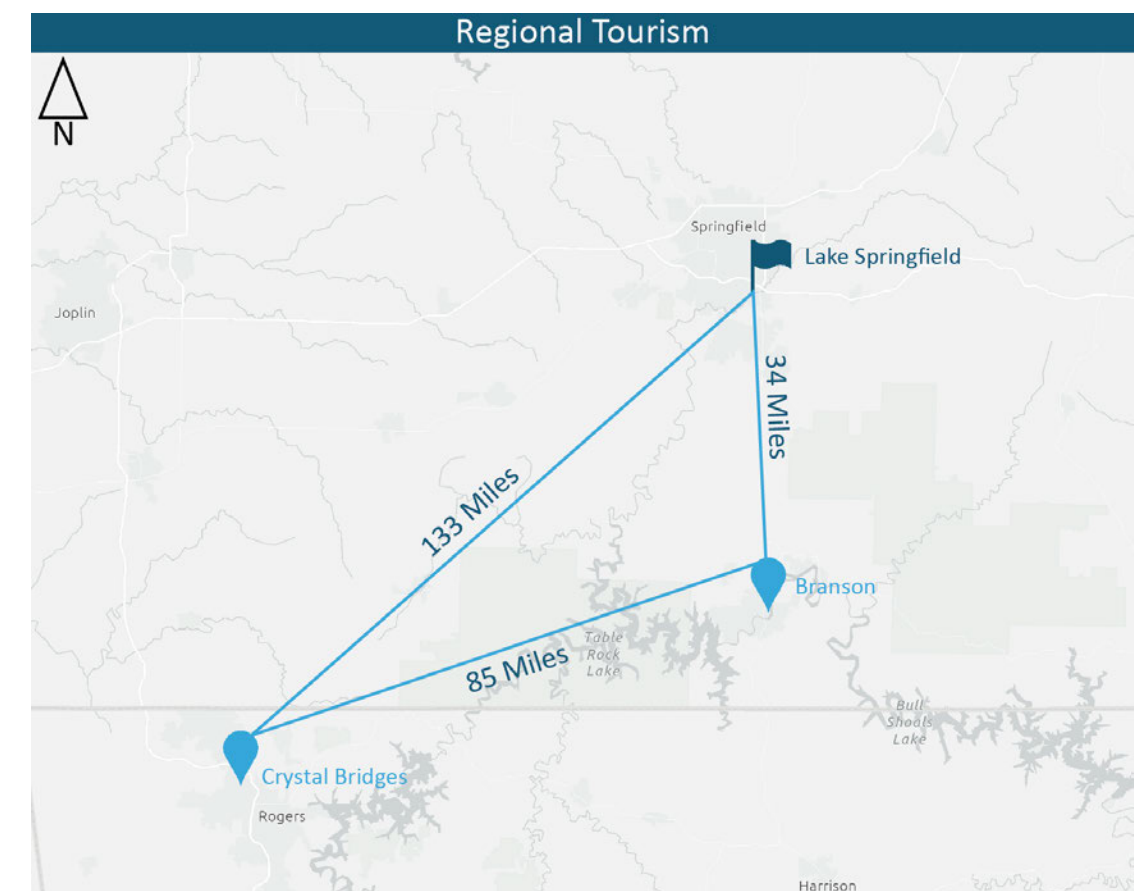
- **Bus:** Springfield is served by The Bus, a public transit agency run by City Utilities. Unfortunately, the bus lines do not currently reach Lake Springfield. For out-of-town visitors, there is a Greyhound bus station in downtown Springfield.
- **Air:** The Springfield-Branson National Airport (SGF) is located in northwest Springfield and serves American Airlines, Allegiant, Delta, and United. In 2019, the annual airlift at SGF was 1.19 passengers. Kansas City, St. Louis, and Tulsa are all nearby major cities with an international airport. Tulsa International Airport would be the closest at 177 miles southwest of Springfield.
- **Rail:** Passenger rail service is not available to or from Springfield.

Lake Springfield serves a key role in contributing to this unique identity of Springfield, while also tapping into the regional draw that this geographic proximity provides. The map below shows 30, 60, and 90-minute drive time radii from Lake Springfield, representing the typical primary catchment areas for a project of this type. It is the business, retail, medical, and cultural hub of a very large catchment area. As shown, the 90-minute drive time radius extends throughout southwestern Missouri, crossing over the state borders of Arkansas, Oklahoma, and Kansas. Springfield is located in Greene County and is the most populous city within the county.



Tourism

As shown below, Lake Springfield is north of two regional tourist destinations, Crystal Bridges and Branson, MO. Crystal Bridges was founded by a philanthropist and is a public non-profit that opened in 2011. The art museum, a series of pavilions nestled around two spring-fed ponds house galleries, a glass-enclosed gathering hall, and other meeting spaces, offers free admission. The site also recognizes the indigenous heritage associated with the land. Branson is an Ozark town known for family vacations. The city is home to various theatres, attractions, museums, amusement parks, and other entertainment venues and attractions. Creating a third destination at Lake Springfield will create a tourism hub in the region.



Population

Population forecasts indicate continued population growth across all subject areas. In 2000, Greene County had a population of 240,391, while the 60-minute drive time catchment had 286,559 residents. The 90-minute drive time catchment area had 871,264 residents in 2000. The county has had an overall population increase of 1.0% from 2000 to 2022. The 30-, 60-, and 90-minute drive time catchment areas have all experienced a higher positive population change compared to the state and national averages as well.

The table below presents the historical population trends for Greene County and the relevant comparative jurisdictions.

Population					
	2000	2010	2022	2027	CAGR
United States	281,421,906	308,745,538	335,707,897	339,902,796	0.8%
Missouri	5,595,211	5,988,927	6,186,582	6,219,856	0.4%
Greene County, MO	240,391	275,174	304,262	310,566	1.0%
30-Minute Drive Time*	286,559	345,103	388,537	399,263	1.3%
60-Minute Drive Time*	498,516	587,953	637,139	649,556	1.1%
90-Minute Drive Time*	871,264	998,419	1,048,860	1,063,101	0.8%

*Drive time from Lake Springfield
Sources: Esri, Johnson Consulting

Income

Income is another important indicator to consider when evaluating the potential to support new programming. Higher incomes are often correlated with higher participation in activities that generate demand and can present opportunities for philanthropic initiatives that can be beneficial in boosting revenues.

In 2022, Greene County reported a median household income of \$48,501, which was lower than that of all other comparative geographies. The drive-time catchment areas had an average median household income of about \$51,500 and the state and national averages were substantially higher. Additionally, while median household incomes are projected to grow for the county, the growth rate is lower than the state and national growth rates. In 2027, the median household income in Greene County is projected to be nearly \$30,000 less than the national median household income.

The table below outlines the median household incomes for Greene County and the comparative geographic areas.

Median Household Income			
	2022	2027	CAGR
United States	\$72,414	\$84,445	3.1%
Missouri	\$61,811	\$73,496	3.5%
Greene County, MO	48,501	55,873	2.9%
30-Minute Drive Time*	51,553	59,563	2.9%
60-Minute Drive Time*	51,626	58,633	2.6%
90-Minute Drive Time*	51,365	57,823	2.4%

*Drive time from Lake Springfield
Sources: Esri, Johnson Consulting

Age

Age is an important indicator to consider for new event facilities. Higher proportions of older residents can present opportunities to capture attendance from individuals who have more time to participate in activities. Higher proportions of children and families could be indicative of a successful market for children's activities or educational programs. A larger presence of young adults could emphasize the importance of investing in the latest technologies and design trends for the facility. Age should also be considered in marketing efforts.

Greene County, Missouri, and the United States all have similar median ages. In 2022, Greene County's median age was 38.0, while that of the drive-time catchment areas was between 37.9 and 40. All comparative geographies are also projected to grow at a rate of about 0.5% over the next 5 years, increasing all median ages by about 1 year.

The table below shows the median ages over time for Greene County and its surrounding areas.

Median Age			
	2022	2027	CAGR
United States	38.9	39.6	0.4%
Missouri	39.6	40.5	0.5%
Greene County, MO	38.0	39.0	0.5%
30-Minute Drive Time*	37.9	38.8	0.5%
60-Minute Drive Time*	39.5	40.3	0.4%
90-Minute Drive Time*	40.0	40.9	0.4%

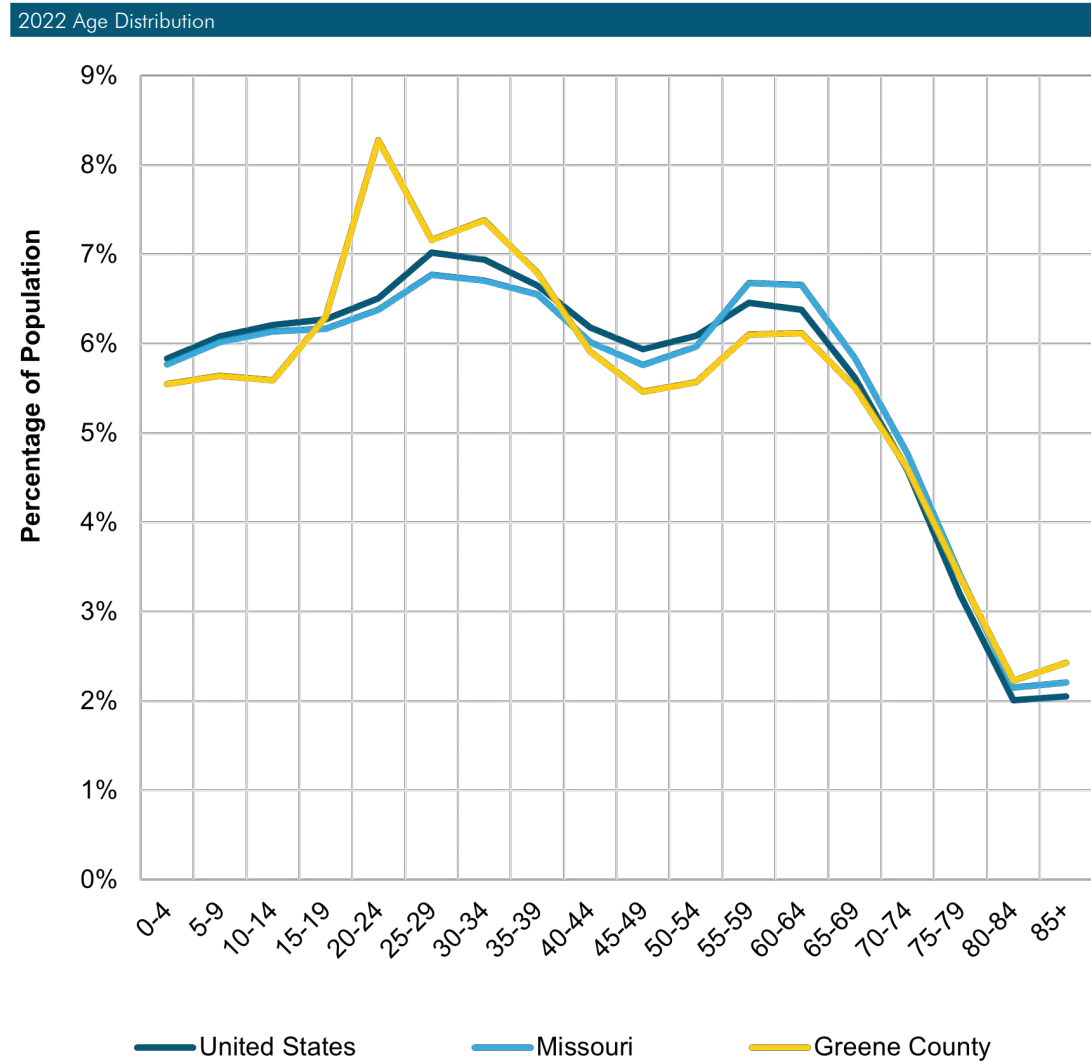
*Drive time from Lake Springfield
Sources: Esri, Johnson Consulting

Age Distribution

Another important indicator to consider is age distribution, as it can be indicative of trends that may not have been captured by the more generalized median age figures.

There are a few noteworthy observations from this assessment. The age distribution in Greene County seems to split from the state and national distribution for younger age ranges. A significant outlier would be the increase in 20–39-year-olds in Greene County compared to Missouri and the United States. This increase is primarily due to the portion, over 8%, of 20–24-year-olds in the County, compared to the state and nation.

The graph below reflects these age distribution trends.

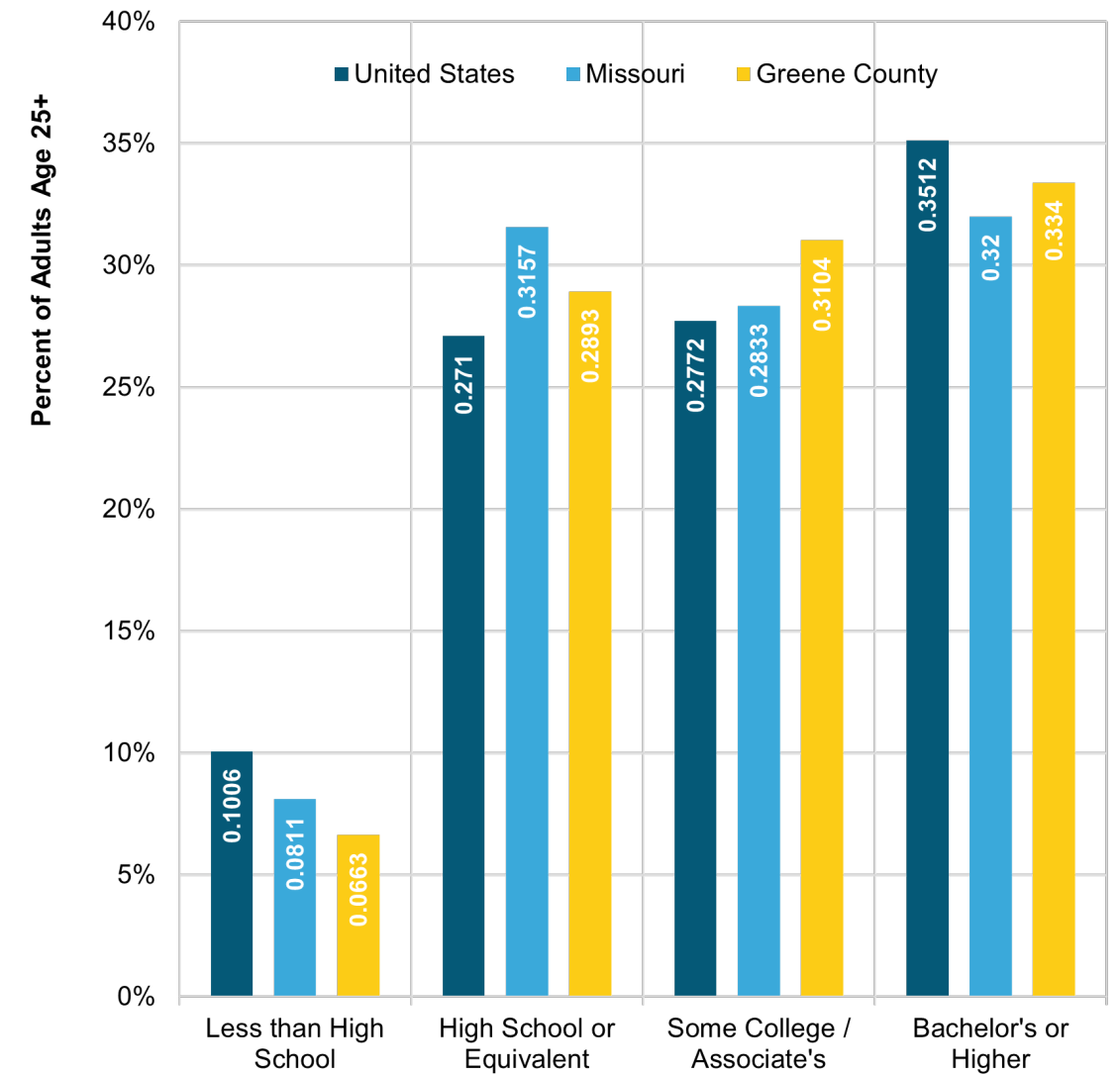


Education

Educational attainment is another indicator that tends to be correlated with higher engagement with activities. For illustrative purposes, these numbers focus primarily on the primary geographic areas.

This analysis paints a favorable picture of educational attainment in Greene County. Again, the trends between the county, state, and nation are similar. Noteworthy observations are that the County and State have a similar proportion of residents with bachelor's degrees or higher as compared to the nation.

The chart below presents a detailed breakdown of educational attainment in Greene County, relative to state and national averages.



Springfield also has several higher education institutions as well as regional branch campuses for other large Universities. The table below details the most recent enrollment numbers for the primary institutions in the city, which adds over 20,000 students to the area. Although these students may be transient residents, it is helpful to note when thinking about programming and event types to draw in the student audience.

Ozark College in Branson does not charge tuition. Instead, the students work on the farm and in other areas to compensate for tuition. A similar model could be considered for local area schools, using Lake Springfield as one of their tuition-earning options.

Higher Education Institutions in Springfield, MO	
Institution	Enrollment
Two-Year Colleges & Technical Schools	
Southwest Baptist University - Springfield	363
Baptist Bible College	250
Cox College	
Four-Year Colleges & Universities	
Missouri State University	15343
Columbia College - Springfield	200
Evangel University	1,480
Drury University	2,412
Total	20,048

Source: Relevant Facilities, Johnson Consulting

Economy

Economic analysis provides key insights into the employment and business distributions in the area and can help identify potential resources that Lake Springfield could tap into, such as corporate sponsorships or partnerships. It can also be an important consideration for industries to target as users of the proposed programming, as well as taking into account the unique programmatic needs of each target industry sector.

The table below identifies the total number of employees by the NAICS industry sector in Greene County, as well as the proportion of employees relative to employment throughout the United States. This method involves using a calculation called a location quotient. A location quotient of less than 1 indicates a lower concentration of that industry in Greene County, while a location quotient higher than 1 indicates a higher concentration of that industry within Greene County.

Employment Location Quotient by Industry Sector			
Sector	Greene County	United States	Location Quotient
Health Care/Social Assistance	26,833	23,506,215	1.2
Retail Trade	19,513	17,507,961	1.2
Educational Services	14,955	14,659,591	1.1
Manufacturing	12,321	15,599,649	0.8
Accommodation/Food Services	11,773	10,606,059	1.2
Construction	9,324	11,547,929	0.8
Professional/Scientific/Tech Services	9,203	13,016,951	0.7
Transportation/Warehousing	8,697	8,951,781	1.0
Finance/Insurance	8,310	7,841,079	1.1
Other Services (excl Public Administration)	7,920	7,599,446	1.1
Admin/Support/Waste Management Services	6,539	6,232,378	1.1
Public Administration	5,151	7,945,677	0.7
Wholesale Trade	5,022	4,005,424	1.3
Information	3,161	3,018,469	1.1
Real Estate/Rental/Leasing	2,852	3,251,996	0.9
Arts/Entertainment/Recreation	2,124	2,872,227	0.8
Utilities	1,254	1,362,753	1.0
Agriculture/Forestry/Fishing/Hunting	722	1,885,414	0.4
Management of Companies/Enterprises	222	97,694	2.4
Mining/Quarrying/Oil & Gas Extraction	48	581,692	0.1
Total Employees	155,944	162,090,385	

Source: Esri, Johnson Consulting

As shown, the industries that account for the largest number of employees in Greene County are Health Care/Social Assistance, Retail Trade, and Educational Services. As of 2022, total employment in Greene County was 155,944. Industries that are concentrated in Greene County relative to national average Management of Companies/Enterprises and Wholesale Trade. These top industries reflect the strong healthcare and educational services sectors in the area. Tourism is also a positive force, with the market already penetrating the retail and hospitality sectors.

Employers

The table below identifies the largest employers in Springfield, according to the Springfield Area Chamber of Commerce. As shown, there is only one company that employs over 10,000 people and two entities that employ more than 5,000 people. The large presence of the Health Care, Education, and Retail sectors is further evidenced in this analysis. This information can be useful to target potential users of Lake Springfield, as well as for prospecting corporate partnerships and sponsorships.

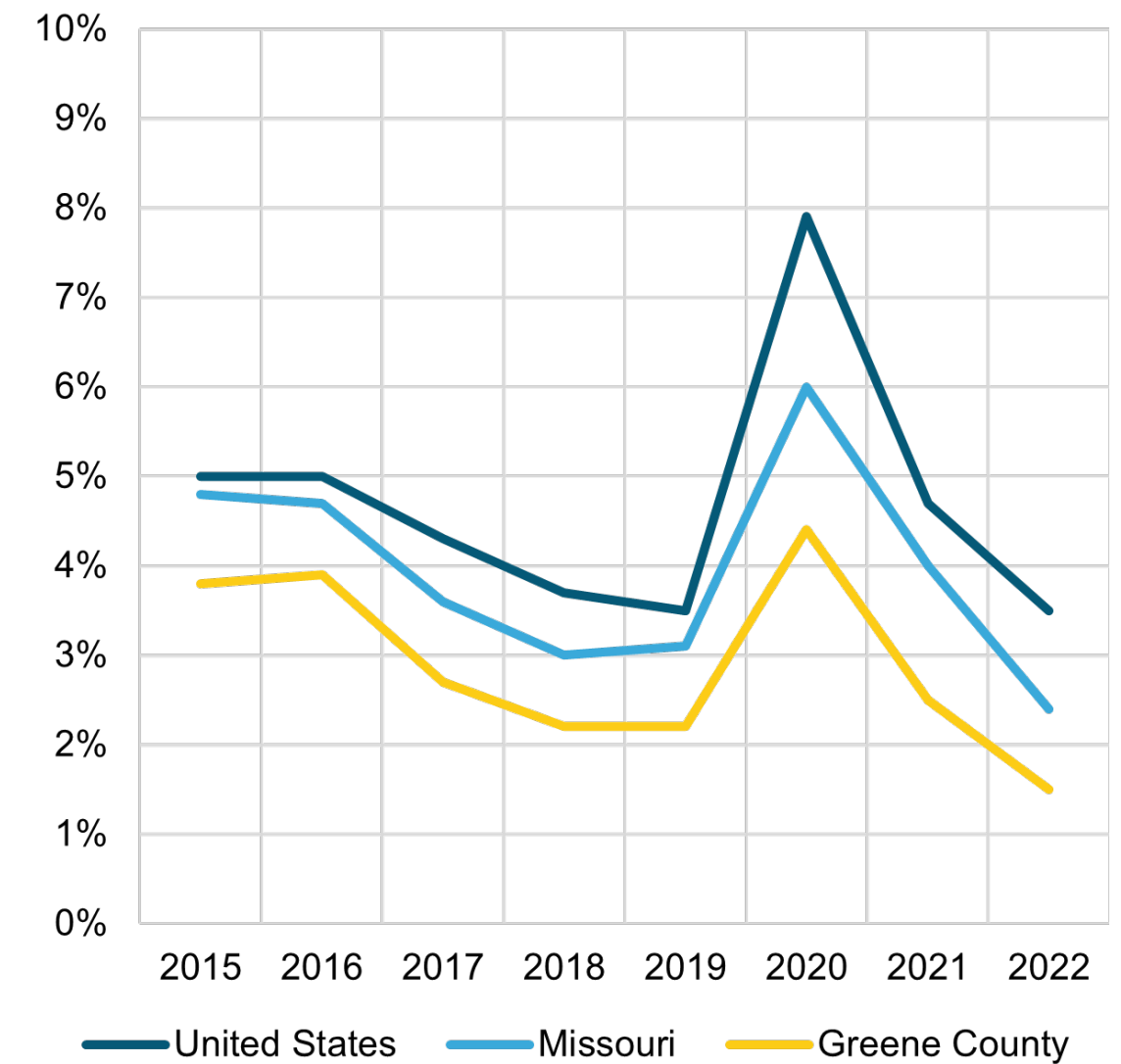
Major Employers (1,000+ Employees)		
Employer	Industry	Employment
CoxHealth	Healthcare	12,164
Mercy Hospital Springfield	Healthcare	8,202
Walmart Inc.	Retail	5,381
Springfield Public Schools	Education	3,694
Bass Pro Shops Tracker Marine	Retail/Manufacturing	3,127
State of Missouri	Government	3,018
United States Government	Government	2,919
Missouri State University	Education	2,760
O'Reilly Auto Parts (HQ)	Retail/Manufacturing	2,307
City of Springfield	Government	2,028
Citizens Memorial Healthcare	Healthcare	2,025
Jack Henry & Associates, Inc.	Software Development	1,853
SRC Holdings (HQ)	Manufacturing	1,500
Prime, Inc. (HQ)	Transportation	1,301
Burrell Behavioral Health (affiliate of CoxHealth)	Healthcare	1,218
Ozarks Technical Community College	Education	1,191
EFCO (HQ)	Manufacturing	1,170
Chase Card Services	Financial	1,120
Lowe's	Retail	1,010

Sources: Springfield Area Chamber of Commerce, Johnson Consulting

Unemployment

The unemployment rate is a standard indicator used to evaluate the economic strength of an area and can be insightful for considering the ability of an area to support certain facilities proposed at Lake Springfield.

The graph below shows the average annual unemployment rates for Greene County relative to state and national averages. As shown, Greene County had nearly identical trends compared to the state and nation, but the rates for Greene County are consistently lower. Most recently, Greene County reported a very low unemployment rate of 1.5%, which must be putting undue pressure on the regional employers.



Market Tapestry

This demographic analysis featured earlier provides an accurate overview of each population profiled, but it fails to determine what type of consumer resides in these areas. By using Tapestry breakdowns, that classify certain consumers based on the demographic and socioeconomic factors, we can better understand what type of consumer would be engaging in economic activity at the proposed development. When examining the drivetime catchment areas, several tapestry consumers are most prevalent:

■ **Genxurban**

Gen X in middle age; families with fewer kids and a mortgage, live and work in the same county, have a shorter commute, 1/5 are 65 or older, 1/4 have retirement income, own older single-family homes, invest wisely, well-insured, news junkies, enjoy going to museums and rock concerts, dining out, walking for exercise, renting movies.

■ **Affluent Estates**

Established, well-educated, well-traveled married couples with children ranging from grade school to college; mostly homeowners with mortgages; expect quality products and invest in time-saving products; active participants in their communities; enjoy sports and traveling.

■ **Middle Ground**

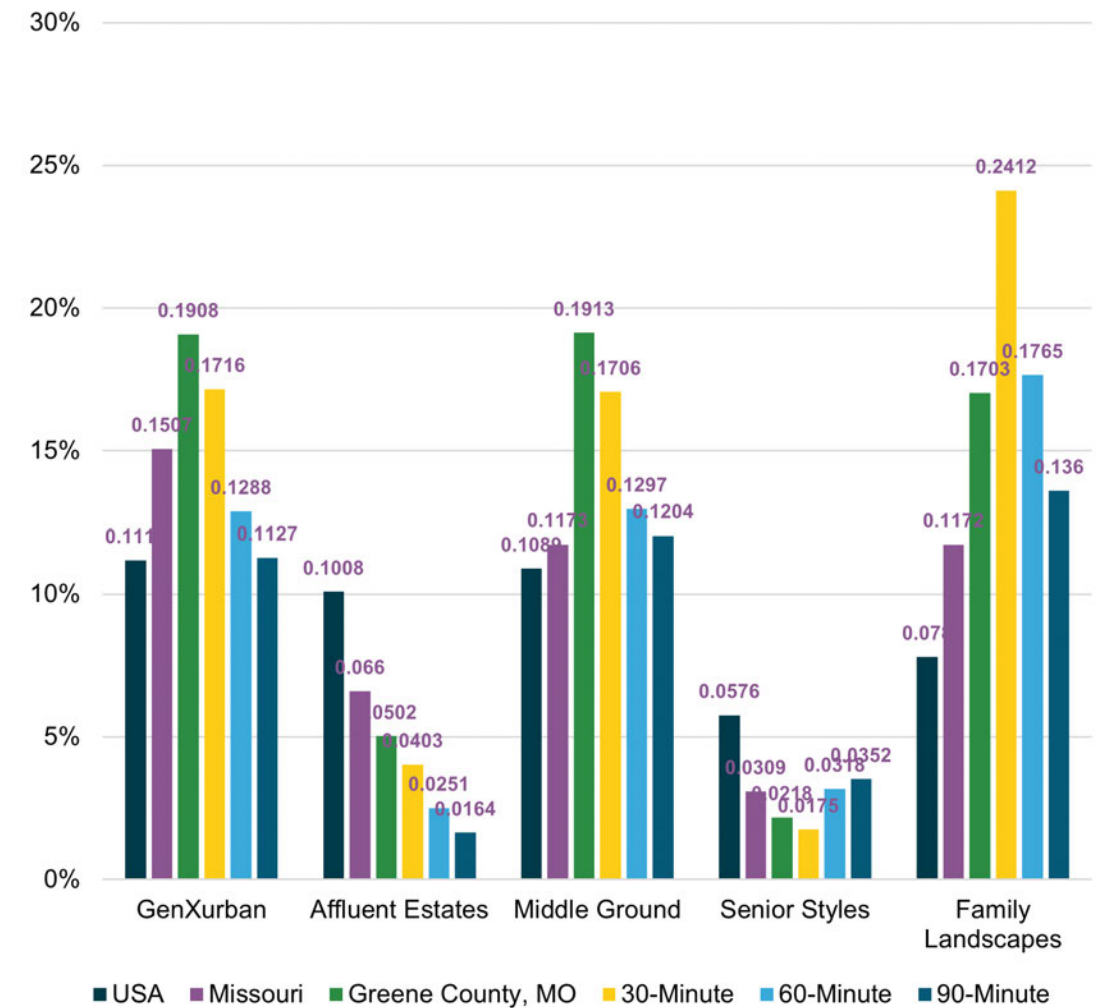
Millennials in the middle: single/married, renters/homeowners, middle class/working class; majority attended college, householders have cellphones which they use for music, news, and sports, online all the time: entertainment, social media, utility; enjoy nightlife, movies, beaches, traveling.

■ **Senior Styles**

Reveal the effects of saving for retirement; commonly married empty nesters or singles living alone; single-family homes, retirement communities, or high-rise apartments; affluent seniors looking to retire and perhaps relocate to a warmer climate; many prefer print to digital media, but may subscribe to cable TV; committed to lifestyles that promote longevity.

■ **Family Landscapes**

This market segment shares demographic traits such as low unemployment, and young families living in newer, single-family homes with median home values slightly higher than the U.S. average. This is a family-oriented population.



The highest concentrated tapestry segment in the 30-minute drive time catchment area is the Family Landscapes at 24.1% followed by GenXurban at 17.2%. These two groups are most closely aligned with younger to middle-aged residents with families, which is also reflected in the age distribution graphic. These populations are generally more likely to use and support new programming at Lake Springfield. It is significant to note the proportion of families in Springfield and should be considered for any new programming, such as ensuring there is an educational component for children.

FACILITY INVENTORY

This section of analysis inventories the existing infrastructure in Springfield. An inventory will provide insight into what the market is currently supporting, as well as highlight any gaps in supply where there is potential demand not being met.

Local Attractions

Below is a list of local Springfield attractions including museums, outdoor activities, and other entertainment venues. As shown, there are a larger number of indoor entertainment options in Springfield, demonstrating that additional outdoor attractions would likely be viable at Lake Springfield.

Springfield, MO Attractions	
Museums	Other Indoor Attractions
Air & Military Museum of the Ozarks	1984 Arcade
Archery Hall of Fame	Abou Ben Adhem Shrine Mosque
History Museum on the Square	Alamo Drafthouse Cinema
Missouri Institute of Natural Science	Bass Pro Shops Outdoor World
Missouri Sports Hall of Fame	Battlefield Mall
NRA National Sporting Arms Museum	BigShots Golf
Railroad Historical Museum	Craft Axe Throwing
Route 66 Car Museum	Discovery Center of Springfield
Springfield Art Museum	Fun Acre Miniature Golf
Springfield Softball Hall of Fame Museum	Getaway Golf
Wonders of Wildlife National Museum & Aquarium	Great Southern Bank Arena
Outdoor Attractions	Performing Arts
37 North Expeditions	Itty Bitty City
Crystal Cave	Pythian Castle
Dickerson Park Zoo	Swing Right Mini Golf & Driving Range
Fantastic Caverns	The Library Center
Mizumoto Japanese Stroll Garden	Zenith Climbing Center
Ozark Empire Fairgrounds & Event Center	Gillioz Theatre
Ozarks Kayak Fishing	Juanita K. Hammons Hall for the Performing Arts
Sequiota Park	Springfield Contemporary Theatre
Springfield Botanical Gardens	Springfield Little Theatre
Springfield Cardinals	Founders Park Amphitheatre
Springfield Conservation Nature Center	Springfield Ballet
	Ozarks Lyric Opera
	Blue Room Comedy Club
	Springfield Symphony

With the mild, year-round weather that Springfield benefits from, there is room for more outdoor attractions in the city. For example, there is an amphitheater at Founders Park, but it is landlocked and has a limited capacity. The attractions in this list are potential local competitors for any proposed programming at Lake Springfield, any proposed development at Lake Springfield should aim to complement the existing amenities in Springfield, as opposed to cannibalizing them.

Further, facilities that can host small and large events including corporate meetings, weddings, and other social and community events are identified in the table below. Excluding the total indoor and outdoor capacity at the Ozark Empire Fairgrounds & Event Center, the next largest venue in Springfield is the Great Southern Bank Arena with an 11,000-person capacity. There are also a substantial number of smaller venues in Springfield. That said, there is potentially a gap in the market for an event facility with a capacity between 10,000 and 30,000 guests.

Springfield Event Facilities			
Facility	Capacity	Facility	Capacity
Ozark Empire Fairgrounds & Event Center	37,000	Midnight Rodeo	700
Great Southern Bank Arena	11,000	White River Conference Center	650
Hammons Student Center	8,846	Springfield Little Theatre	500
O'Reilly Family Event Center	4,000	Regalo Orchard & Event Center	385
Shrine Mosque	3,289	The Outland Ballroom	350
University Plaza Hotel & Convention Center	3,120	Diamond Room	330
Springfield Expo Center	3,000	The Barley House	310
Remington's	2,426	Veridiane Events	300
Juanita K. Hammons Hall for the Performing Arts	2,278	Savoy Ballroom	250
Oasis Convention Center	1,500	The Gallery	250
Gillioz Theatre	1,130	425 Downtown Events & Catering	250
Glendalough Conference Center	800	RC Events & Conference Center	170
		Springfield Contemporary Theatre	80

Sources: Springfield Area Chamber of Commerce, Relevant Facilities, Johnson Consulting

TOURISM & HOSPITALITY

In any market looking to promote event facilities, hotel room supply is of the utmost importance. For meetings and events, patrons typically require a full-service hotel or similar within walking distance of the venue. This section will present an inventory of the hotel rooms in Greene County.

Hotel Inventory

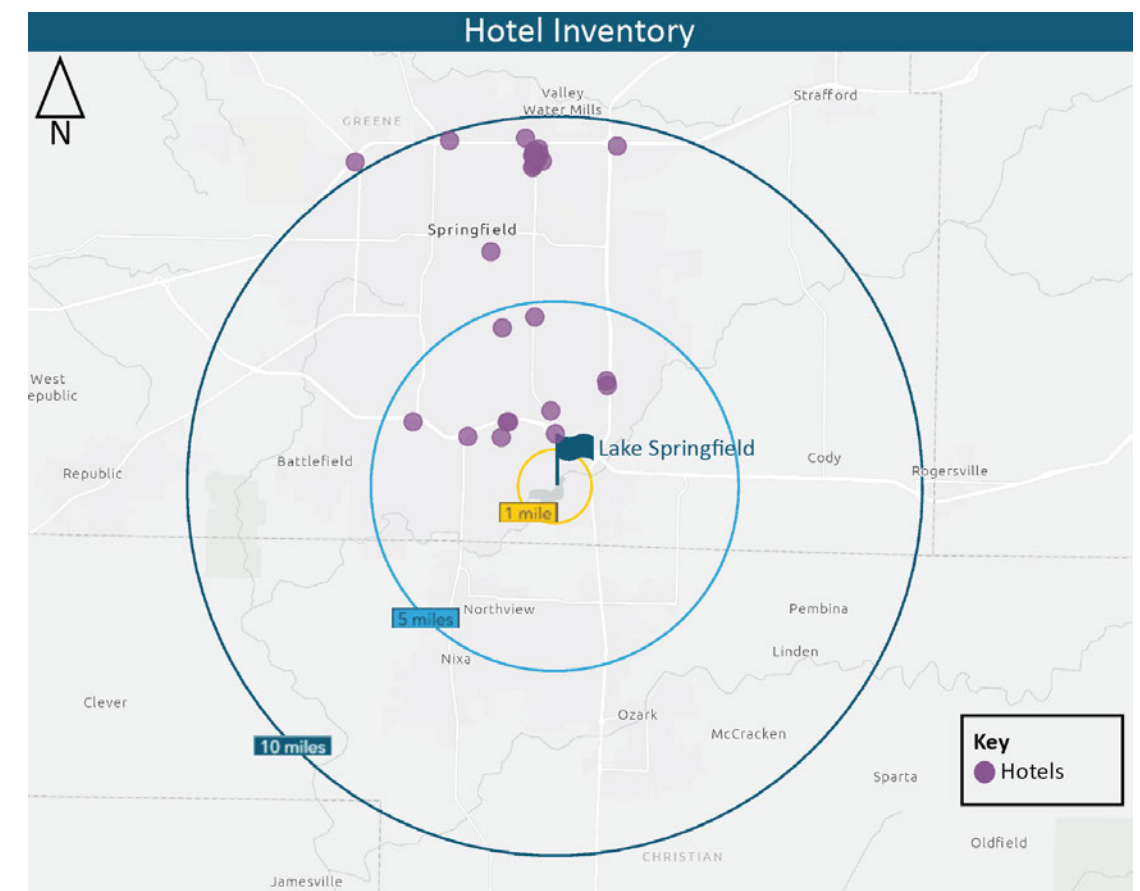
The table below lists the current hotel inventory in the Springfield market, as defined by CoStar, including the name of the hotel, hotel class, the year the hotel was built, the year it was renovated, the number of guest rooms, and the total meeting space.

Springfield, MO Market - Hotel Inventory*				
Hotel	Hotel Class	Year Built (Renovated)	# of Rooms	Meeting Space
University Plaza Hotel	Midscale	1983	267	46,818
Campus Inn	Economy	1964	222	
DoubleTree by Hilton Hotel Springfield	Upscale	1985	201	21,588
Holiday Inn & Suites Springfield - I-44	Upper Midscale	1987	188	8,309
Ascend Collection Oasis Hotel & Convention Center	Upscale	1974	173	25,000
Welcome Inn	Economy	1986	171	
Fairview Studios	Economy	1999 (2009)	143	
Courtyard Springfield Airport	Upscale	2000 (2006)	142	1,953
Residence Inn Springfield	Upscale	2001 (2004)	136	2,400
Lampighter Inn & Suites	Economy	1975	129	8,500
Best Western Coach House	Midscale	1960	126	315
Hilton Garden Inn Springfield	Upscale	2011	125	3,671
Lampighter Inn & Suites South	Midscale	1964	122	3,400
Homewood Suites by Hilton Springfield Medical District	Upscale	2022	122	
Extended Stay America Select Suites Springfield South Battlefield	Economy	2006	121	
Q Hotel & Suites	Midscale	2005	120	1,352
Econo Lodge Springfield I-44	Economy	1991	119	
Holiday Inn Express & Suites Springfield North	Upper Midscale	2016	111	1,400
Drury Inn & Suites Springfield MO	Upper Midscale	1997	110	814
Extended Stay America Springfield - South	Midscale	1997	110	
TownePlace Suites Springfield	Upper Midscale	2014	110	1,296
Greenstay Hotel & Suites Courtview	Economy	1991	107	1,653
Motel 6 Springfield - North	Economy	1987	106	
Hampton by Hilton Inn Springfield-Southeast	Upper Midscale	2015	106	575
Comfort Inn South Springfield	Upper Midscale	1998	105	80
Sleep Inn Springfield South I-60 Near Medical District	Midscale	1997	103	600
Fairfield Inn & Suites Springfield North	Upper Midscale	2018	103	
Quality Inn & Suites North Springfield	Midscale	1978	102	375
Total			3,800	130,099

*Hotels with 100 rooms or more only

As shown, there are 28 hotels with more than 100 rooms and only 6 hotels with more than 150 rooms. The largest hotel is the University Plaza Hotel with 267 rooms, supported by the meeting space at the convention center and expo hall. The Hilton Garden Inn, 5 miles north of Lake Springfield, is the closest hotel to the project site currently. To include all hotels in the market in this inventory would amount to over 6,900 hotel rooms, but many of these hotels are small-scale and lower quality, which will not support room blocks or tourist groups. To plan for a greater regional and national draw, the addition of proximate hotel rooms may be necessary as attendees prefer to be able to walk between their hotel and event venue, if it is not already under the same roof. Boutique products have entered the market close to the downtown core and have proven successful in Springfield.

The map below shows the hotels closest to the project site. As shown, there is not a single hotel within a 1-mile radius of Lake Springfield. There are 1,267 rooms between 1 and 5 miles away from Lake Springfield and 2,271 rooms between 5 and 10 miles of Lake Springfield. If this becomes a regional and national draw, more hotel rooms on-site and nearby should be developed.



Hotel Pipeline

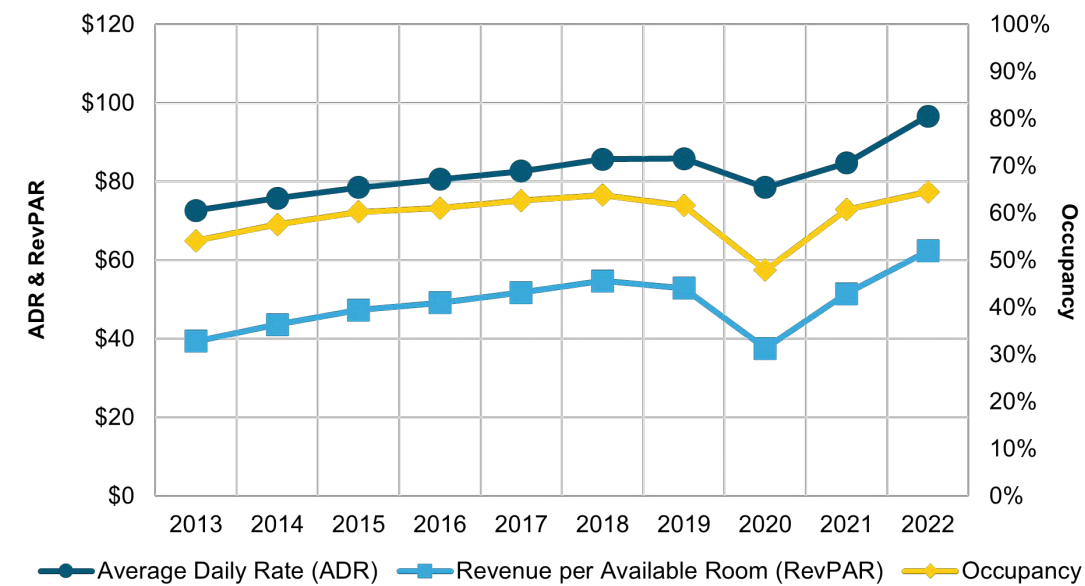
The hotel market also has 3 hotels in the pipeline that will add 299 rooms over the next two years. The Staybridge Suites Springfield hotel will be located 4 miles northwest of Lake Springfield. The Springfield market hotel pipeline is shown below.

Springfield, MO Market - Hotel Pipeline				
Hotel	Class	Phase	Opening	Number of Rooms
Element Springfield South	Upscale	Under Construction	2024	115
Staybridge Suites Springfield	Upscale	Final Planning	2024	86
MOXY Springfield Downtwon	Upper Midscale	Under Construction	2023	98
Total				299

Sources: CoStar, Johnson Consulting

Hotel Performance

The graph below shows hotel performance in the Springfield market over the last 10 years. From 2013 to 2018, hotel performance gradually increased each year. As with most markets, COVID-19 had a negative impact on hotel demand, but the market is already on the road to recovery, exceeding pre-pandemic numbers in 2022. Most recently, occupancy rates were reported to be at 64.5%, Average Daily Rates (ADR) were at \$96.66, and Revenue per Available Room (RevPAR) was at \$62.38, all of which are historically higher than numbers reported since 2013.



OBSERVATIONS

Given the location, site attributes, and features, the proposed development at Lake Springfield has the potential to become a strategic transformational project for Springfield. Springfield has some key demographic and socioeconomic conditions necessary to support various land uses within the 1,000-acre Lake Springfield project site. There is growth in numbers in median incomes and population, which skews on the younger side and is highly educated. There is a robust economic base with many higher education institutions, large employers, low unemployment rates, and tourism and hospitality is a growing sector that will be supported by growing the list of local attractors. The market tapestry illustrates the concentration of family-oriented residents in the region, which is a key indicator of the type of programming that should be targeted for development in Springfield. When coupled with broader demographic influences, and the right mix of high-quality and unique amenities and activities, Lake Springfield can become an enhanced destination and can serve as an attractive recreational hub for local, regional, and national visitors to gather.

REAL ESTATE ANALYSIS

REAL ESTATE MARKET TRENDS

The following analysis considers market fundamentals related to various potential land uses that could be developed within the Lake Springfield project site. The analysis is based upon the most current sources of published data available at the time of this study (primarily CoStar, which maintains a database of commercial real estate information that is widely regarded in the industry, LoopNet, which is a sales database also maintained by CoStar, and Smith Travel Research, which is an independent hotel research firm whose statistics are widely used within the industry).

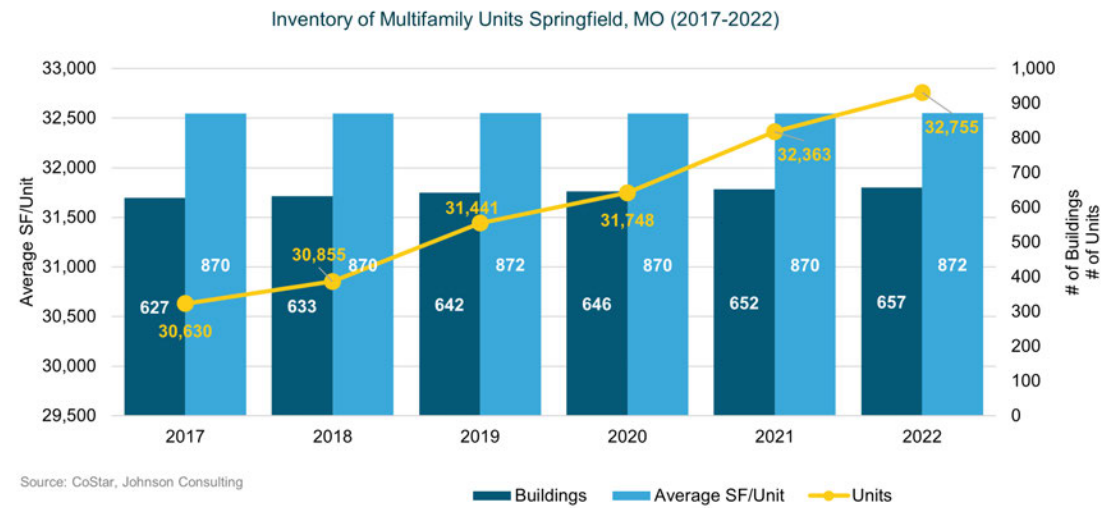
POTENTIAL LAND USES

Our analysis considers the market potential for the following:

- Multi-Family Housing
- Retail
- Office
- Hotel
- Event/ Conference Space
- Cultural/ Entertainment/ Recreation Uses

Multi-Family Housing

CoStar defines multi-family housing as structure(s) typically containing 5 or more dwelling units that may also include common areas and facilities (e.g. entrances, lobby, elevators or stairs, mechanical space, walks, grounds, recreational facilities, and parking, both covered and open).



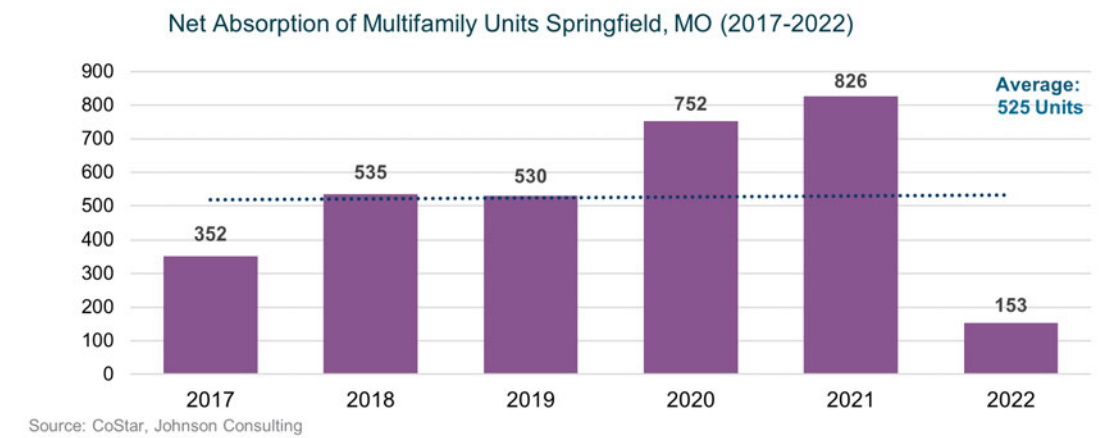
Inventory

As of 2022, there are 657 multi-family housing buildings, totaling 32,755 units, throughout Springfield. The average size of each unit is 872 SF. The chart below shows the total inventory of multi-family housing buildings (as classified by CoStar) in Springfield.

Absorption

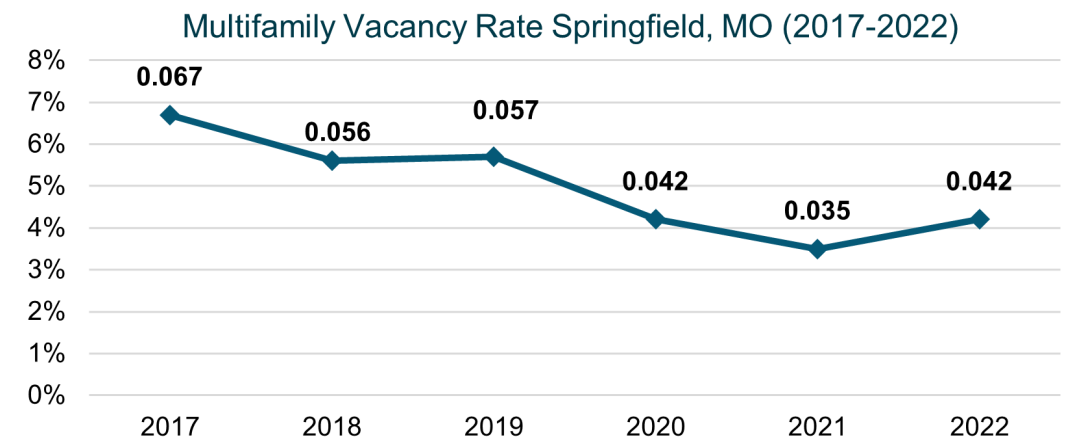
In 2022, Springfield reported 153 multi-family housing units (whereby net absorption is defined as occupied space less vacated space).

This was lower than the positive net absorption reported in the 5 years prior. Overall, between 2017 and 2022, Springfield reported an average positive net absorption of 525 multi-family housing units per annum, as shown in the chart below.



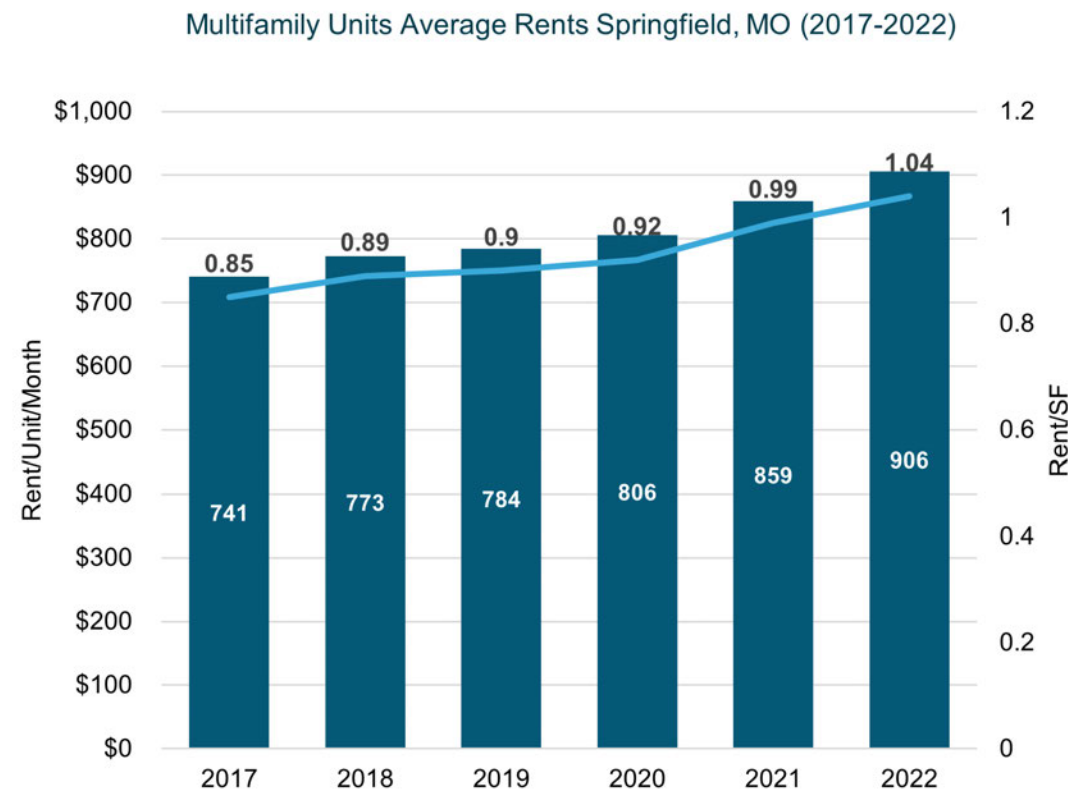
Vacancy

In 2022, Springfield reported a vacancy rate of 4.2 percent (or 1,367 units), up from 3.5 percent in 2021, but equal to or lower than years prior, as shown in the graph below.



Rental Rates

In 2022, the average rent was \$906 per month, or \$1.04 per SF per month, for multi-family units in Springfield. This represented an increase over 2021 when Springfield reported an average rent of \$859 per month or \$0.99 per SF per month. Overall, between 2017 and 2022, monthly rents have increased at an average annual rate of 3.4 percent in Springfield, as shown in the graph below.



Source: CoStar, Johnson Consulting

New Inventory And Pipeline Development

Based on data from CoStar and LoopNet, there are currently 0 additional multi-family housing developments planned within Springfield. However, as shown in the inventory chart, 5 new multifamily buildings were added to the market in 2022.

Located in south Springfield, The Ridge at Ward Branch is a new 100-acre mixed-use development that is proposed to include 150 luxury apartment units.

Market Assessment

Springfield has a relatively large inventory of multi-family housing units with sound fundamentals including steady growth in inventory, positive net absorption, low vacancies, and growth in rents. While the inventory of multi-family housing is healthy, there is room for growth, especially with the proposed development at Lake Springfield.

Multi-Family Housing: Assessment of Market Potential Springfield, MO 2022

	Existing Inventory*	Vacancy Rate*	6 Year Avg. Annual Absorption*	Demand Potential (see Note 1)	Other New Supply	Market-Supportable
Multi-Family Housing	32,755 units	4.2%	525 units	1,184 units	0 units	✓

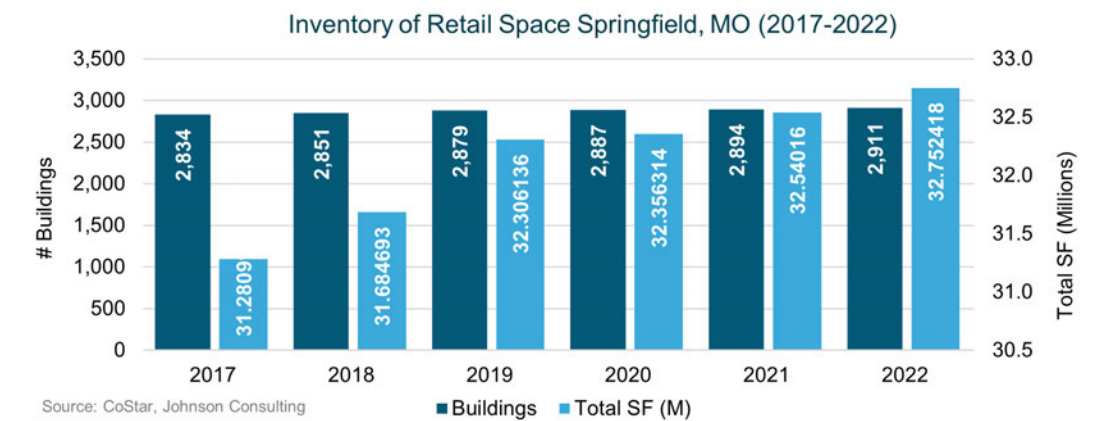
Retail

CoStar defines retail property as a property intended to promote, distribute, and sell products and services to the general public such as stand-alone buildings, storefronts, strip centers, malls, outlets, and other specialty centers.

Inventory

There are 2,911 retail spaces within Springfield, totaling 32.8M SF. Of this total inventory, 193 premises are classified as restaurants, totaling 1.07M SF. The chart below shows the inventory of retail spaces in Springfield.

As shown, there have been gradual increases in retail space over the last 6 years. The chart below shows an average of 0.8 percent growth in retail buildings on an annual basis.

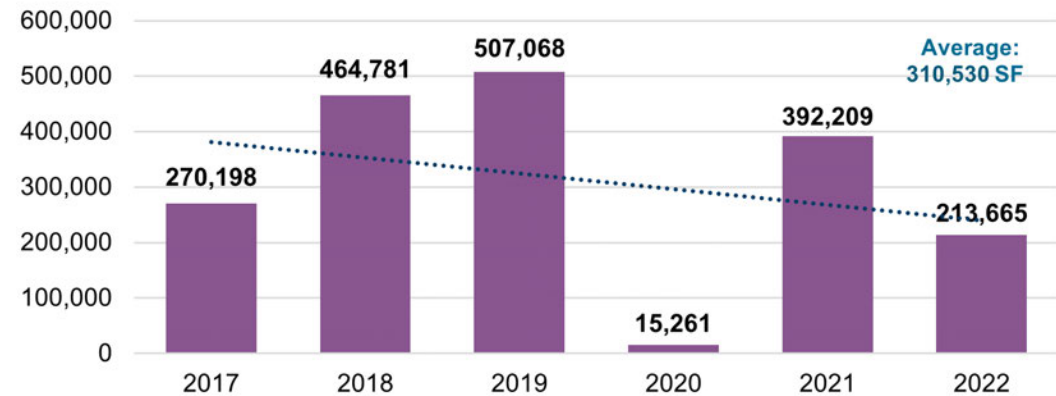


Source: CoStar, Johnson Consulting

Absorption

In 2022, Springfield reported a positive net absorption of 213,665 SF of retail and restaurant space. This was in line with the previous 5 years also reflecting positive absorption rates, with an overall 6-year average absorption rate of 310,530 SF.

Net Absorption of Retail Space Springfield, MO (2017-2022)

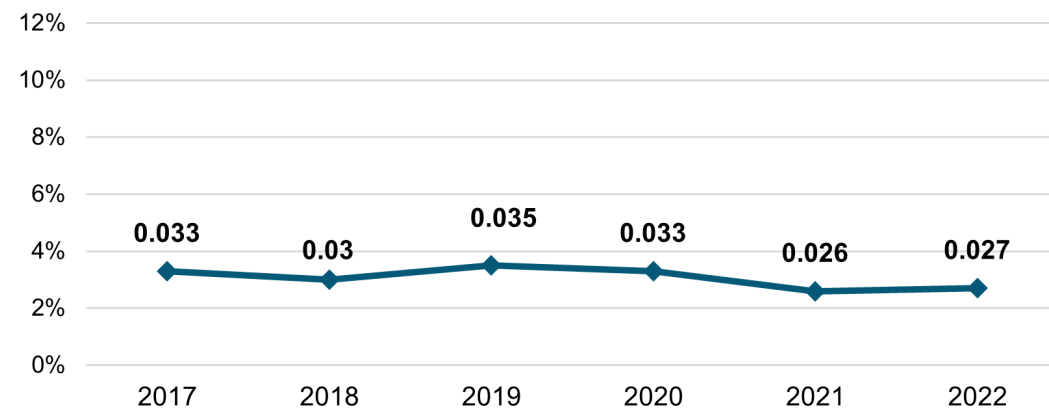


Source: CoStar, Johnson Consulting

Vacancy

In 2022, Springfield reported a retail and restaurant vacancy rate of 2.7 percent, up slightly from 2.6 percent in 2021 but remaining below the most recent peak of 3.5 percent in 2019. Specifically, as it relates to restaurant space, a vacancy rate of 5.7 was reported at the end of 2022. Figure XX shows the annual vacancy rate for retail space in Springfield between 2017 and 2022.

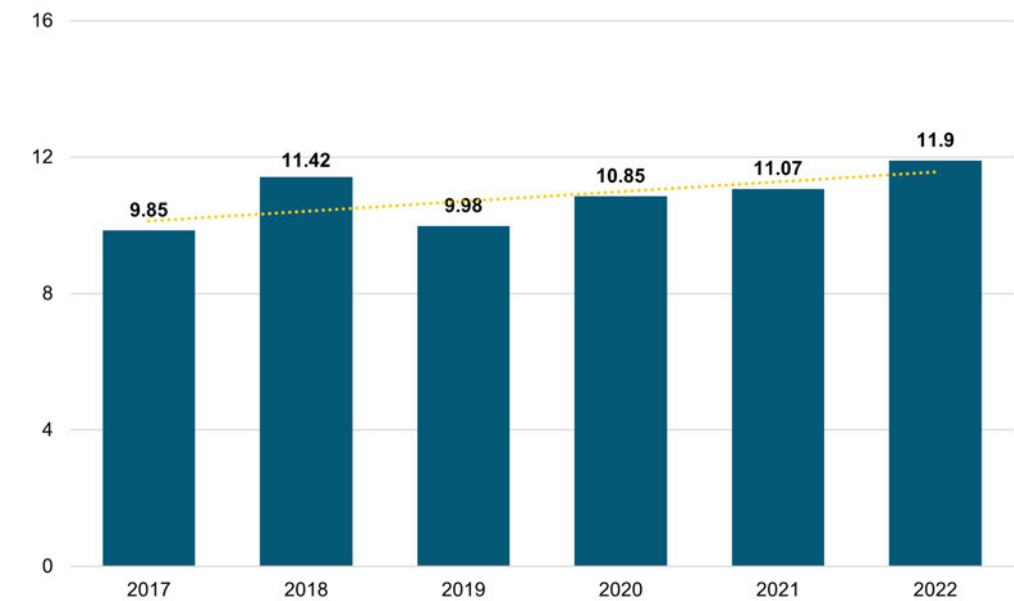
Retail Vacancy Rate Springfield, MO (2017-2022)



Rental Rates

CoStar publishes metrics for All Service Type rent and Triple Net (NNN) rent for retail properties. Typically, NNN rents are the best indicator of market performance as property taxes, insurance premiums, and maintenance and repairs, which can vary significantly from building to building and between lease agreements, are excluded from the tenant payments.

Retail Space Average Rents (per SF/Yr.) Springfield, MO (2017-2022)



Source: CoStar, Johnson Consulting

In 2022, Springfield reported an average price of \$11.90/SF annually for retail space, which is a record high since 2017, the last peak at \$11.42 in 2018. For restaurants specifically, it was most recently reported for 2022 that rental rates per SF per year were significantly higher, at \$17.81.

New Inventory And Pipeline Development

As of July 2023, CoStar has not identified any new retail spaces that are planned or under construction. However, the new development, The Ridge at Ward Branch, is proposed to include retail and restaurant space, specific square footage has not been released.

Market Assessment

In recent years, retail and restaurant space in Springfield has been characterized by low vacancies, in part reflecting the fact that there has been minimal growth for retail or restaurant space in the market. That said, paired with the demand potential for retail space, there is a demonstrated gap in the market for additional retail. The demand potential, the result of potential demand versus actual sales within the market, demonstrates a surplus of demand of almost 1M SF. Further, development at Lake Springfield will likely call for additional retail and restaurant space as supportive infrastructure for other venues and programming.

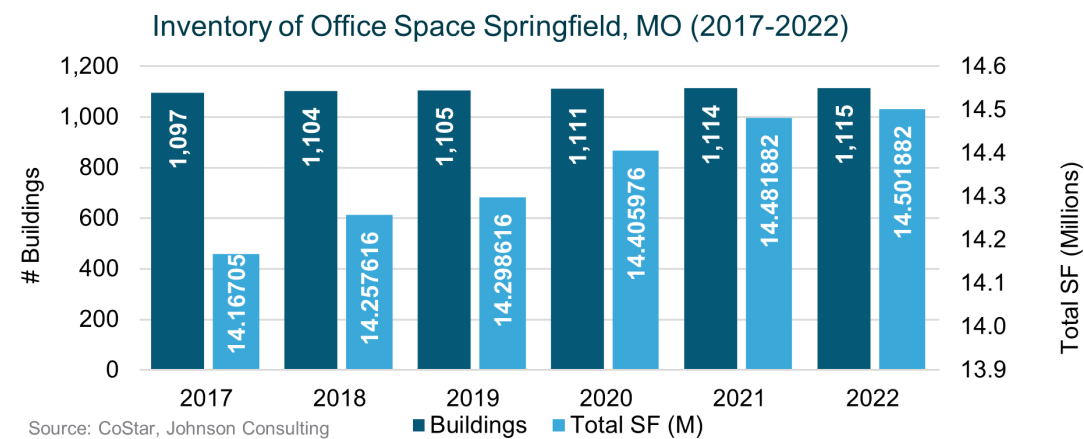
Retail: Assessment of Market Potential Springfield, MO 2022						
	Inventory*	Vacancy Rate*	6 Year Avg. Annual Absorption*	Demand Potential (see Note 1)	Other New Supply	Market-Supportable
Retail	32.8M SF	2.7%	310,530 SF	975,831 SF	-	✓

Office

CoStar defines office space as a building that houses employees of companies that produce a product or service. Office buildings are characterized by work-efficient floor plans, work areas, and other conveniences that allow people to conduct business.

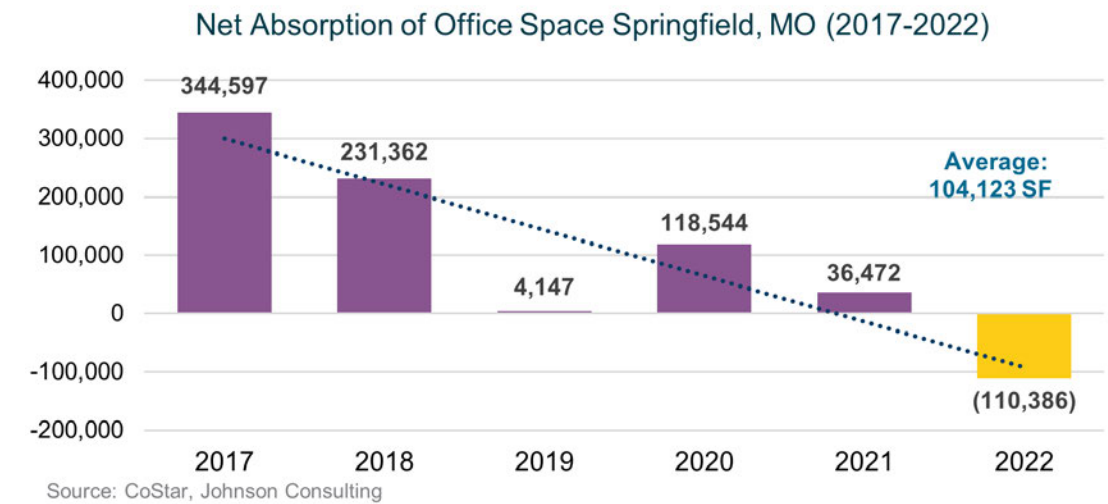
Inventory

There are 1,115 office buildings within Springfield, totaling 14.5M SF. As shown in the chart below, the most recent addition to the office inventory in Springfield occurred in 2022, with the addition of a single office building. There have only been 9 new office buildings introduced to the market since 2018, increasing office space by 0.3 percent per annum.



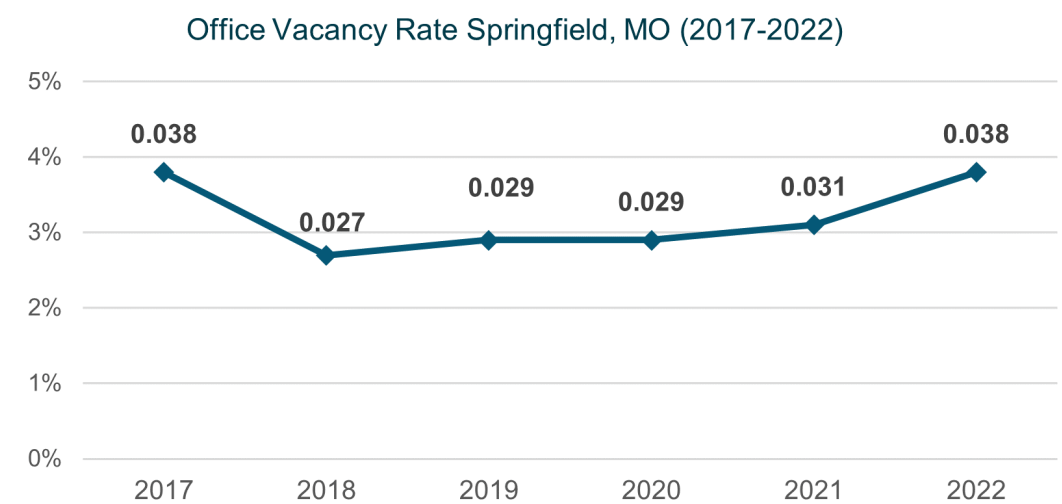
Absorption

In 2022, Springfield reported a negative net absorption of 110,386 SF of office space. This is not surprising due to the downward trend in preceding years. Overall, since 2017, Springfield has reported an average positive net absorption rate of 104,123 SF annually, as shown below.



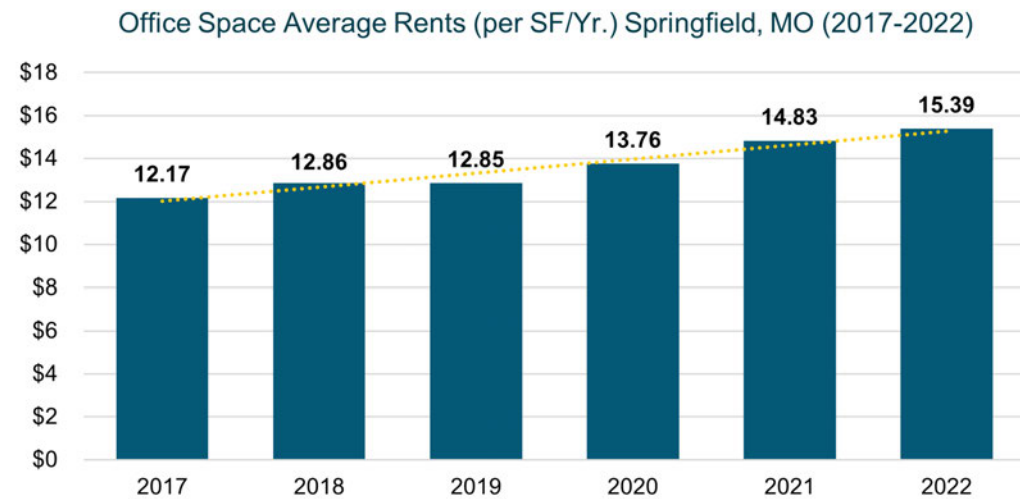
Vacancy

In 2022, Springfield reported an office vacancy rate of 3.8 percent, continuing the upward trend since 2018. The graph below shows the annual vacancy rate for office space in Springfield between 2017 and 2022.



Rental Rates

Springfield reported a 2022 base rent of \$15.39 per SF per annum for office space, up slightly from \$14.83 per SF per annum in 2021. Overall, between 2017 and 2022, office rents in Springfield increased at an average annual rate of 4.0 percent. The graph below shows the annual base rental rates for office space per SF per year in Springfield between 2017 and 2022.



Source: CoStar, Johnson Consulting

New Inventory And Pipeline Development

Based on data from CoStar and LoopNet, there are no office or medical office spaces under construction or proposed within Springfield. However, the proposed development, The Ridge at Ward Branch, is proposed to include some office space, though specific square footage has not been released.

Market Assessment

In recent years, office space in Springfield has been characterized by increasing vacancies, overall positive, yet declining, net absorption, and steady growth in rents. As a national trend, office space has generally become increasingly vacant and less desired as companies have transitioned into remote and hybrid work models as a result of the COVID-19 pandemic.

Office: Assessment of Market Potential Springfield, MO 2022

	Inventory*	Vacancy Rate*	6 Year Avg. Annual Absorption*	Demand Potential (see Note 1)	Other New Supply	Market-Supportable
Office	15M SF	3.8%	104,123	602,327 SF	0 SF	✓
Note 1: Demand Potential						
Daytime Employees (Est.) 2023	167,537	workers				
Projected Annual Population Growth (Submarket) 2023-2028	1.4%					
2015-2020	1.2	percent				
SF per Office Worker	250	SF				
Demand Potential (2028)**	602,327	SF				

An increase in residents and employees is projected for the Springfield market over the next 5 years, resulting in a need for more office space. However, many of these new employees may work remotely, as Springfield was voted the #1 place to live in the U.S. for remote workers by the Wall Street Journal in February of 2023.

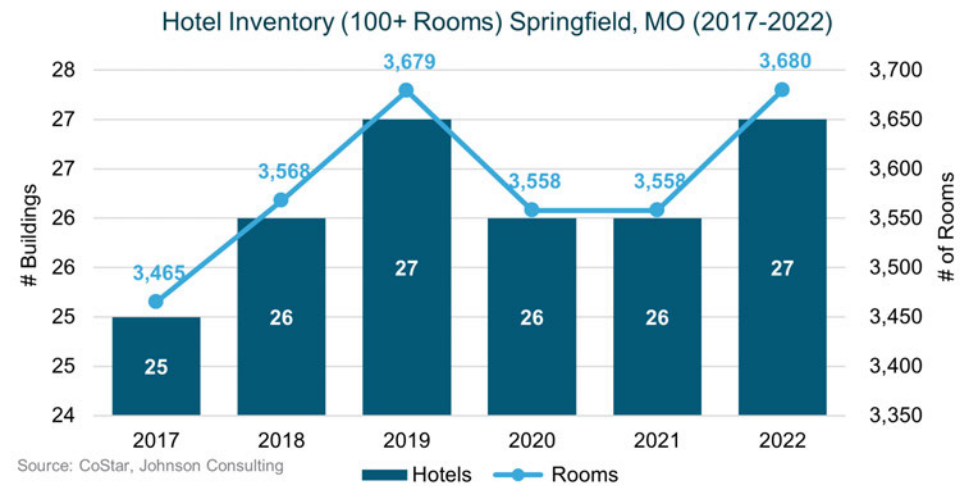
On the other hand, it should be noted that there is a desire for office space by several stakeholders and other interested parties that have been involved throughout the planning process for the Lake Springfield project.

Hotel

This section analyzes the hotel inventory in Springfield, MO with a focus on hotels with at least 100 rooms. CoStar defines hospitality properties as all types of lodging facilities, including hotels and motels. Hotels are facilities that offer lodging accommodations and a wide range of other services such as restaurants, casinos, meeting rooms, recreational facilities, and commercial shops. Motels are primarily designed to serve those traveling by car.

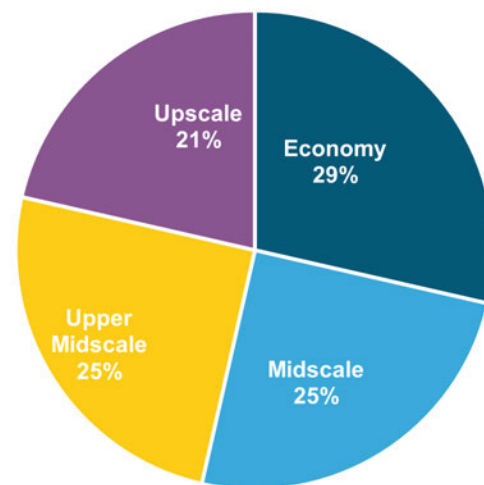
Inventory

Data from CoStar indicates that there are 27 hotels located throughout Springfield, ranging from economy to upscale, totaling 3,860 hotel rooms and 130,099 SF of meeting space. The largest hotel in the market is the 267-room University Plaza Hotel with 46,818 SF of meeting space.



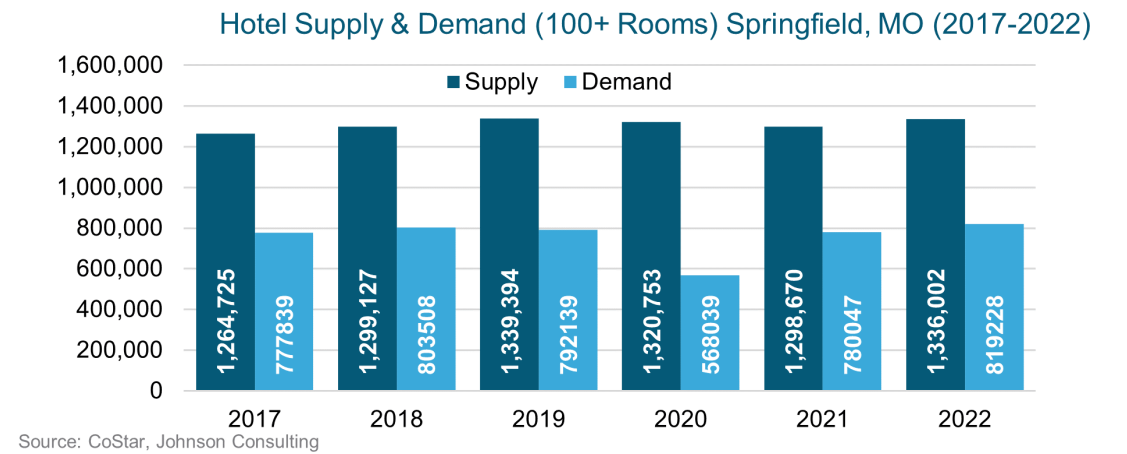
Further, the pie chart below shows the breakdown of hotel class across the largest hotel properties in Springfield. The majority of hotel rooms are Economy class, while Upper Upscale and Luxury hotel rooms are absent from the market. This demonstrates a need for more high-quality hotel rooms in Springfield.

Springfield, MO Hotel Class Breakdown (100+ Rooms)

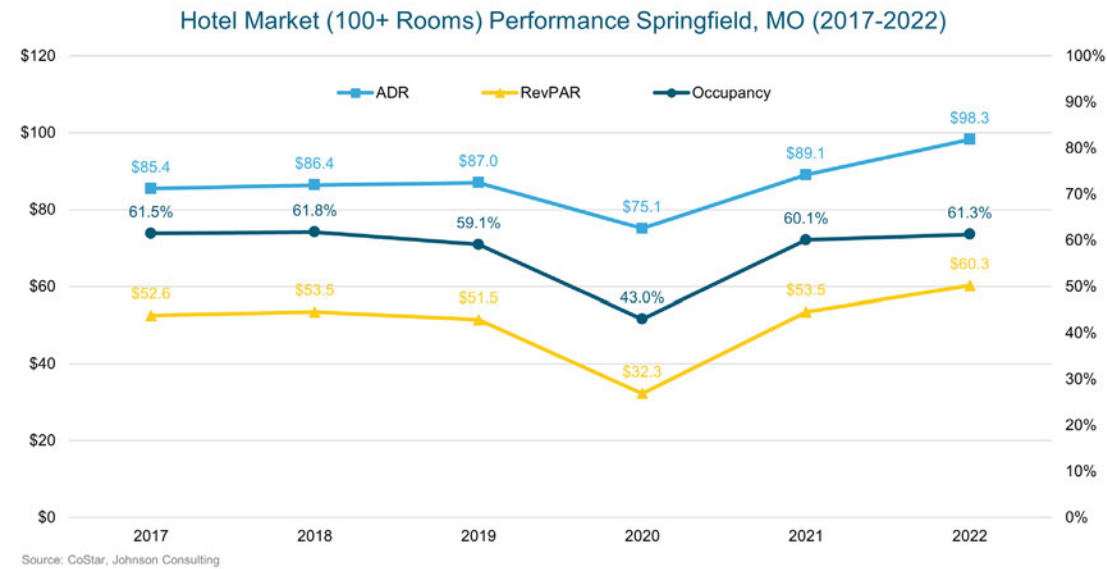


Market Trends

The graph below shows key supply and demand statistics for hotel properties within Springfield, indicating that supply totaled 1,336,002 room nights in 2022, while demand totaled 819,228 room nights. Overall, between 2017 and 2022, room night supply and room night demand grew at 0.9 percent and 1.0 percent per annum, respectively.



In 2022, Springfield reported an Average Daily Rate (ADR) of \$98.30 and a Revenue per Available Room (RevPAR) of \$60.30, both of which were the highest reported in Springfield over the past 6 years, as shown in the graph below. Overall, between 2017 and 2022, ADR increased at an average annual rate of 2.4 percent and RevPAR grew at a rate of 2.3 percent per annum. The 12-month Occupancy rate for 2022 was 61.3%. 70% is the optimal occupancy rate for a standard hotel, insinuating room for improvement and a need for additional demand drivers to bring overnight visitors into Springfield.



New Inventory And Pipeline Development

Based on data from CoStar, there is currently one hotel property under construction, the element Springfield South. The hotel property is proposed to be completed in 2024 and will add 121 Upscale rooms to the market.

Market Assessment

By 2022, hotel properties in Springfield have exceeded performance metrics indicators from 2019, or before the COVID-19 pandemic. While occupancy rates are increasing at a slower rate than ADR and RevPAR, this demonstrates the health and resilience of the hotel market in Springfield. While there is a planned Upscale hotel entering the market next year, it will be located 6 miles north of the project site, near Battlefield Mall, and will likely be consumed by alternate business. That said, there will be a need for hotels within or in close proximity to the Lake Springfield project area, specifically of high quality, and that can support group business.

Hotel: Assessment of Market Potential Springfield, MO 2022

	Existing Inventory*	ADR	RevPAR	Occupancy Rate*	Other New Supply in the Market**	Market-Supportable
Hotel	3,558 rooms	\$98.25	\$60.25	61.3%	121 rooms	✓

Real Estate Market Summary

The chart below shows the overall real estate market summary for Retail, Office, Multifamily, and Hotel land uses.

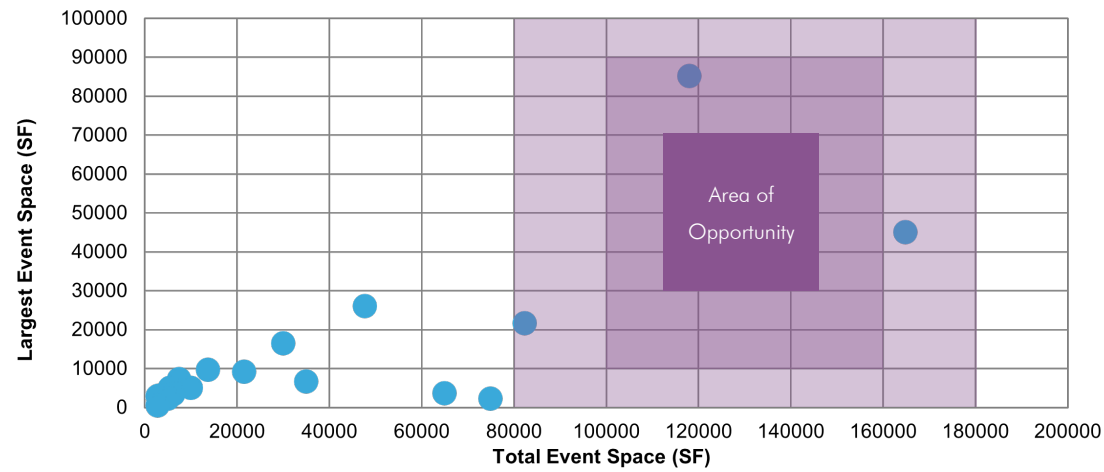
Real Estate Market Analysis				
	Inventory (SF)	Rent*	Vacancy	Absorption (SF)
Retail				
2017	31,280,996	\$9.85	3.3%	270,198
2018	31,684,693	\$11.42	3.0%	464,781
2019	32,306,136	\$9.98	3.5%	507,068
2020	32,356,314	\$10.85	3.3%	15,261
2021	32,540,160	\$11.07	2.6%	392,209
2022	32,752,418	\$11.90	2.7%	213,665
Average	32,153,453	\$10.85	3.1%	310,530
% Change (2018-2022)	0.8%	3.2%	-3.3%	-3.8%
Office				
2017	14,167,053	\$12.17	3.8%	344,597
2018	14,257,616	\$12.86	2.7%	231,362
2019	14,298,616	\$12.85	2.9%	4,147
2020	14,405,976	\$13.76	2.9%	118,544
2021	14,481,882	\$14.83	3.1%	36,472
2022	14,501,882	\$15.39	3.8%	(110,386)
Average	14,352,171	\$13.64	3.2%	104,123
% Change (2018-2022)	0.4%	4.0%	0.0%	-17.3%
Multifamily Housing				
2017	30,630	\$0.85	6.7%	352
2018	30,855	\$0.89	5.6%	535
2019	31,441	\$0.90	5.7%	530
2020	31,748	\$0.92	4.2%	752
2021	32,363	\$0.99	3.5%	826
2022	32,755	\$1.04	4.2%	153
Average	31,632	\$0.93	5.0%	525
% Change (2018-2022)	1.1%	3.4%	-7.5%	-13.0%
Hotel**				
2017	3,465	61.5%	\$85.44	\$52.55
2018	3,568	61.8%	\$86.41	\$53.45
2019	3,679	59.1%	\$87.03	\$51.47
2020	3,558	43.0%	\$75.10	\$32.30
2021	3,558	60.1%	\$89.05	\$53.49
2022	3,680	61.3%	\$98.25	\$60.25
Average	3,585	57.8%	\$86.88	\$50.59
% Change (2018-2022)	1.0%	-0.1%	2.4%	2.3%

*Rent per SF per Year **Hotels with 100+ rooms only Sources: CoStar, Johnson Consulting

Event/ Conference Space

Inventory

The Springfield region is home to numerous meeting and event facilities, including both indoor and outdoor venues. As noted in the market analysis, there are 21 primary meeting and event facilities located within Springfield offering over 700,000 SF of space, including 2 of the largest facilities in the market – the Ozark Empire Fairgrounds & Event Center and the Springfield Expo Center.



Considering the inventory of meeting and event assets in Springfield, the graph below highlights the area of opportunity in Springfield that is unmet by the current venues in the area. The chart shows a gap in the market for a venue with 100,000-150,000 SF of total space and a high-quality large meeting space of 80,000-100,000 SF.

Market Assessment

Springfield is home to numerous meeting and event facilities, including 2 of the largest and preeminent venues in the Springfield market. These meeting and event venues serve to attract residents and visitors to the Downtown core but are still limited in size and quality. A large meeting and/or event space will be a critical component of the master plan for Lake Springfield.

Cultural/ Entertainment/ Recreation Uses

The rich culture and history of Springfield is reflected in several dedicated museums and historical sites. Additionally, there are numerous other attractions and entertainment options in the market. The graphic below summarizes key cultural, entertainment, and recreation offerings in and around Springfield.



Market Assessment

Springfield is home to numerous cultural and entertainment offerings, including a mix of museums, parks, theatres, sports facilities, and other indoor and outdoor attractions. Downtown Springfield is sufficiently walkable with some dining, retail, and entertainment options. However, there is a lack of a regional and national draw to the market that gives Springfield a unique identity. The proposed development at Lake Springfield should consider meeting that gap in the market.

OBSERVATIONS

Based upon the preceding analysis, our assessment of existing market conditions is summarized in the table below:

Summary of Assessment of Market Potential: Springfield, MO

	Inventory*	Vacancy Rate*	6 Year Avg. Annual Absorption*	Other New Supply in the Market	Marketwide Demand Potential	Market Supportable
Hotel	3,558 rooms	-	-	121 rooms	+/- 200 rooms	✓
A new hotel within the Lake Springfield project site will increase inventory of hotel rooms in Springfield, will be strategically located, and will support conference space and other programming on site; Performance metrics are forecast to improve prior to any new hotel that would be developed						
Retail	32.8M SF	2.7%	310,530 SF	-	975,831 SF	✓
Significant retail spend leakage from local market area; New types of retailers and restaurants will serve residents, students, workers and visitors; Unique retail offerings will draw from significant catchment area.						
Office	15M SF	3.8%	104,123	0 SF	602,327	✓
Speculative office development is not recommended, however a modest amount of office space that is either pre-leased or will serve a supportive function for existing corporations would be appropriate. There is a possibility for corporate partnerships on site.						
Multi-Family Housing	32,755 units	4.2%	525 units	0 units	1,184	✓

Summary of Assessment of Market Potential: Springfield, MO

Unmet demand for multi-family housing in the market; Site attributes, including location, park frontage, and proximity to highway, will be very attractive.

Retreat/ Conference Space	21 Facilities / 700,000+ SF	-	-	0 SF	150,000 SF Total Space / 100,000 SF Largest Space	✓
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Market is sufficiently saturated with smaller event venues, but a facility with 100,000-150,000 SF of total space and a high-quality large meeting space of 80,000-100,000 SF does not currently exist within the market; meeting this market need at Lake Springfield can be accomplished through one or more event venues

Other
Educational/
Institutional/
Cultural
Uses



There is a healthy mix of educational, institutional, and cultural amenities and offerings in Springfield, but there is a lack of a large draw to drive tourism and provide Springfield with a unique identity.

Source: Johnson Consulting

Multi-Family Housing – Market Rate And Affordable

Springfield has a substantial inventory of multi-family housing units with sound fundamentals including steady growth in inventory, positive net absorption, low vacancies, and growth in rents. The development of Lake Springfield will catalyze the need for additional multifamily residential units within or near the Lake Springfield project site as the appeal of the area grows.

Retail/ Restaurants

Retail and restaurant space in Springfield is characterized by low vacancies, in part reflecting the fact that no new retail or restaurant space has been delivered to the market. The demand potential illustrates a demand for additional retail in the market and will be further desired as supplemental development for larger programming elements at Lake Springfield.

Office/ Medical Office

In recent years, office space in Springfield has been characterized by increasing vacancies, overall positive, yet declining, net absorption, and steady growth in rents. As a national trend, office space has generally become increasingly vacant and less desired as companies have transitioned into remote and hybrid work models as a result of the COVID-19 pandemic. However, interested stakeholders in office space at Lake Springfield that align with the programming theme would be encouraged.

Hotel

Hotel properties in Springfield have exceeded performance metrics indicators from 2019 or before the COVID-19 pandemic. There will be a need for hotels within or in close proximity to the Lake Springfield project area, specifically of high quality and that can support group business. A variety of hotel classes and other lodging options should be offered at Lake Springfield as it relates to nearby programming within the project site.

Event/ Conference Space

Springfield is home to numerous meeting and event facilities, two of which are significant in size to support large events. However, development at Lake Springfield will increase event demand, resulting in a need for several meeting and event spaces of varying size to accommodate small social events to larger conferences.

Cultural/ Entertainment/ Recreation Uses

Springfield is home to numerous cultural and entertainment offerings, including a mix of museums and historical sites. Cultural, entertainment, and recreation offerings serve to attract residents and visitors and will be a critical component of the master plan for Lake Springfield. The key use will be entertainment and recreation, especially unique outdoor recreation options.

CASE STUDIES

INTRODUCTION

To understand the market opportunity for the Lake Springfield site, the team reviewed several case study profiles on a variety of different land uses that exist in comparable markets. Full case study reviews are included in a technical appendix at the end of this plan.

The following profiles were analyzed:

Active and Passive Recreational Parks

- Origins Park – Jeffersonville, Indiana
- Forest Park – St. Louis, Missouri

Reclaimed Mills & Power Stations

- Optimist Hall – Charlotte, North Carolina
- Falls Park – Sioux Falls, South Dakota
- Hollywood Sports – Bellflower, California

Outdoor Recreation Resort

- Greylock Glen Resort – Adams, Massachusetts
- Camp Aramoni – Tonica, Illinois

Multi-Purpose Event Centers

- CenterPlace Regional Event Center – Spokane Valley, Washington
- The Gathering Place & River Parks – Tulsa, Oklahoma
- Gumbo Limbo Nature Center – Boca Raton, Florida
- The Grand Experience & RecPlex – West Des Moines, Iowa

Casinos

- Harrah's Cherokee Casino – Maggie Valley, North Carolina
- Mohegan Sun – Uncasville, Connecticut

The case studies present information about each use, as well as market comparisons to Springfield. The goal of these reviews was to present both visionary options to what might work within the Springfield community, as well as understand realistic impacts to proposed ideas. Additionally, using case studies for the second public meeting gave public participants a chance to see real ideas of what they could be when fully implemented.

STRATEGIC RECOMMENDATIONS

INTRODUCTION

This section presents an assessment of the opportunity for various market-supportable land uses in the Lake Springfield subarea. The assessment reflects the market demand analysis and input from key stakeholders and community members presented in the preceding sections of the plan. Also presented in this section are discussions regarding development themes, ownership and management models, and funding opportunities for the Lake Springfield subarea.

PRELIMINARY CONCEPTS

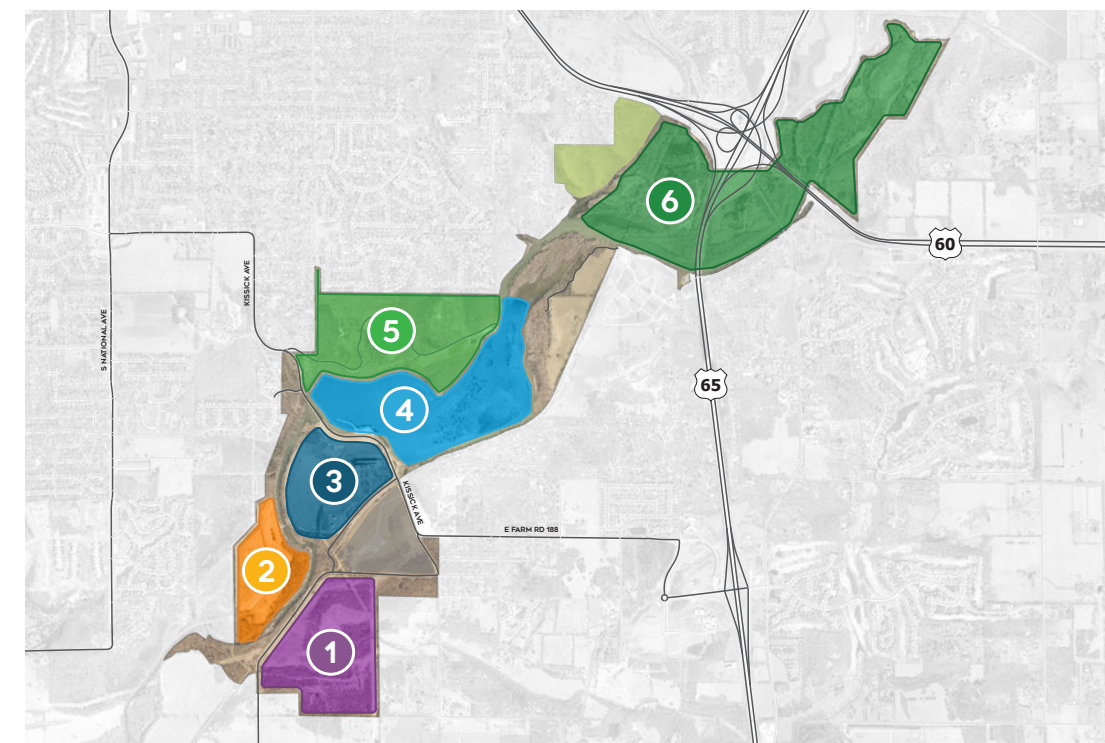
As a result of the demand analysis and stakeholder and community feedback, two primary concepts are included in the Lake Springfield subarea. Overall, analysis of the market and public engagement revealed a high level of interest in developing the 1,000 acres and leveraging Lake Springfield as a community and regional and even broader economic asset. A design that is respectful of the current natural environment and location of the project site, while enhancing public access is of critical importance to the community. Mixed opinions emerged regarding large-scale development such as indoor event space, hotels, and other mixed-use development components. However, this type of growth and development would be strategic and necessary as market demand increases. Keeping in mind the desire to preserve the unique attributes of the subject site, two alternative concepts are presented with varying programmatic themes. It should be noted that these options are conceptual and can be modified in the future.

Each concept has a similar program for the North Activity, Park, and Lake Zones, 780 acres of the total 1,000-acre site. Programming elements for the two Zones near the Power Station and south of the Power Station are unique to each concept.

The North Activity area consists of the northernmost portion of Lake Springfield that ends just north of the existing Boathouse. The main components of this area are wetland preservation, trails, meadows, river access, nature amenity areas, a nature center, and an event lawn. There is a significant focus on culture and education within this zone with light development.

The Park and Lake Zone will have a larger development footprint than the North Activity area but will maintain a focus on the natural assets at Lake Springfield. Proposed programming in this zone features an improved and expanded Boathouse and Ecology Center, a marina, a boardwalk, a destination play area, cross country, disc golf, river crossing access, and trail connections.

The Power Station Zone and the South Activity Area Zone will be unique to each concept while maintaining the same programming for the North Activity, Park, and Lake Zones. Concept A is characterized by an Entertainment District development theme, while Concept B is characterized by an Adventure Hub development theme. A key component of both concepts is a large indoor event space, which was proven to be a demand gap in the current market that could be met at the Lake Springfield Subarea. This plan sets forth a market-justifiable project. It is anticipated that changes to the plan will occur, and aspects of each project can cross over, etc.



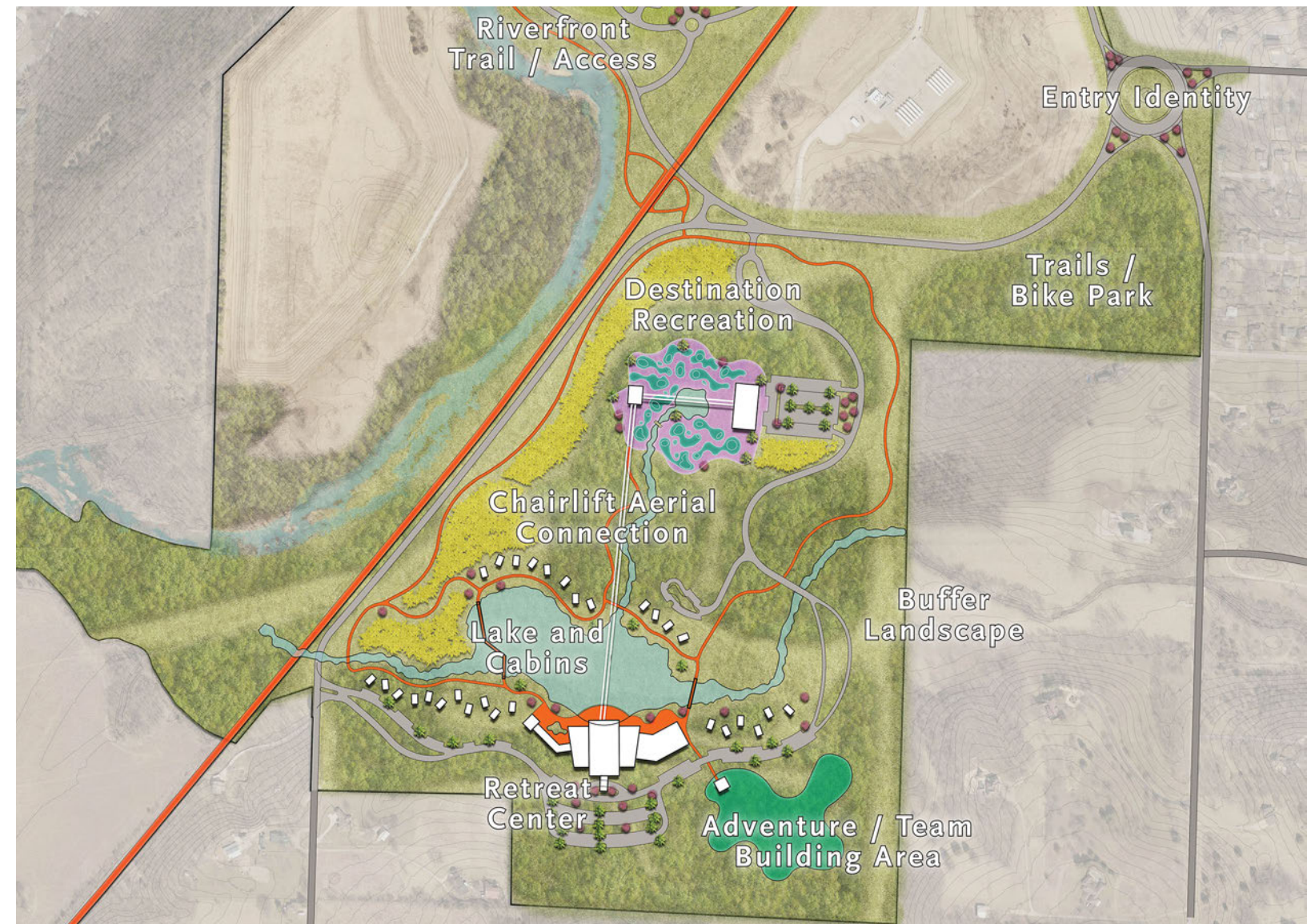
- **ZONE 1** - South Activity Area
- **ZONE 2** - Future Energy Innovation Site
- **ZONE 3** - Power Station
- **ZONE 4** - Lake
- **ZONE 5** - Park
- **ZONE 6** - North Activity Area

Concept A – Entertainment District

In Concept A, the main focus of the adaptive reuse of the powerplant will be a large Multi-Purpose Event Center of approximately 270,000 gross square feet with supporting amenities. The Power Station Zone features a large Multi-Purpose Event Center, mixed-use development including entertainment, retail, residential, and office, overlook, riverfront recreation, bypass channel, event lawn, pavilion, whitewater, and the Chadwick Flyer trailhead.



The South Activity Area Zone will feature a retreat center, luxury camping, outdoor adventure course, recreation, bike park, and a man-made lake with supporting amenities.

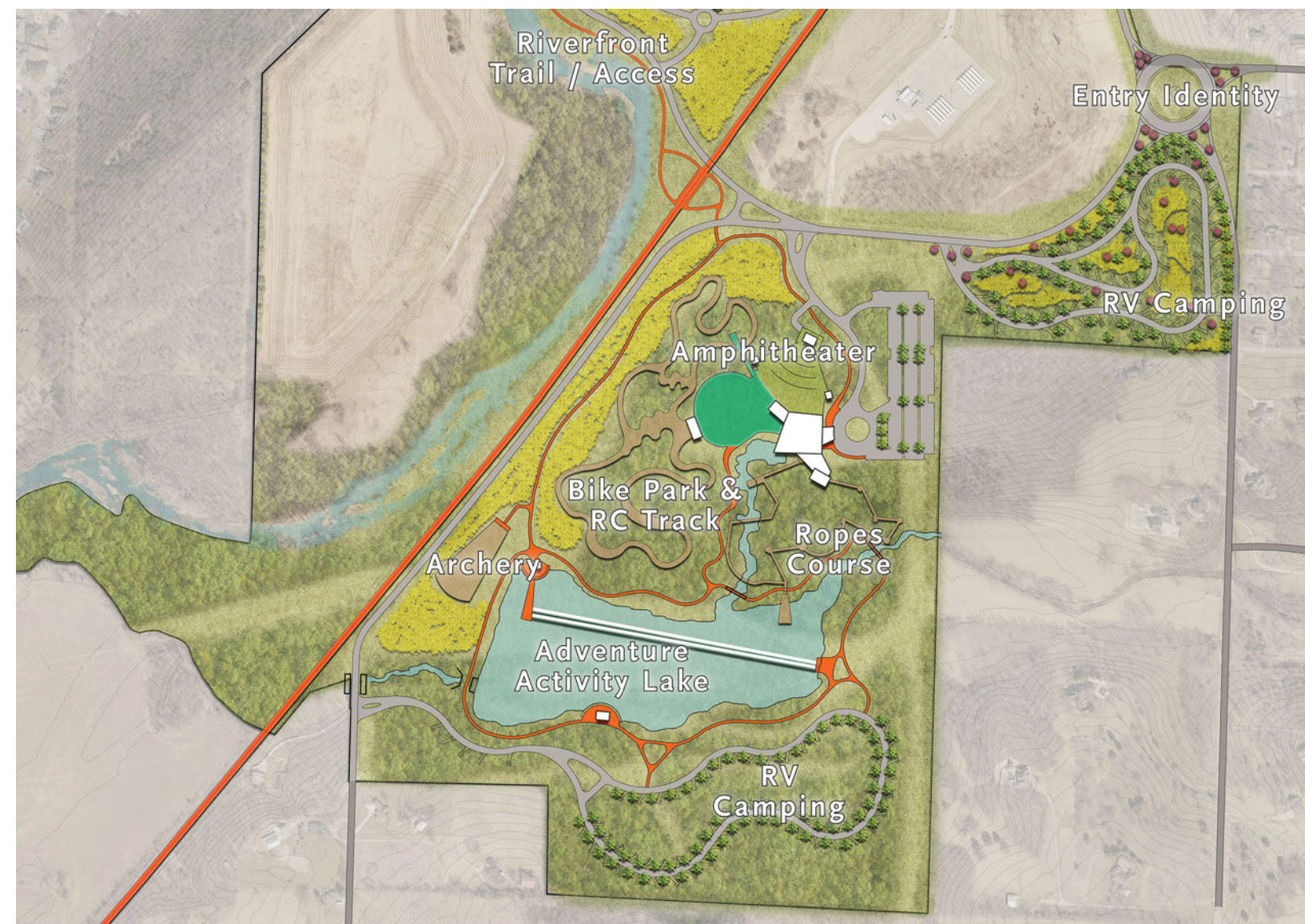


Concept B – Adventure Hub

In Concept B, conversion of the James River Power Station will focus on a conference center that will serve the activity driven by the south recreation hub. The Power Station Zone features adaptive reuse of the Power Station with a conference center, hospitality services, food and beverage options, accommodations, a bypass channel, a kayak basin, water adventure, and green space.



The South Activity Area Zone will feature RV camping, an amphitheater, a zipline course and/or canopy ropes, a bike park, archery, food and beverage, retail, trails, and a man-made lake with water recreation and amenities.



Each concept was developed based off of public feedback, market demand and potential, paired with meeting the goals of the EDA grant for adaptive reuse of the decommissioned power station, which will serve as the anchor for any development that may occur at Lake Springfield.

OPERATING MODELS

There are a variety of ownership and operating models. Typically, the structure adopted flows directly from the financing strategy used to develop the facility (public, private, or a public/private partnership), and is a reflection of the anticipated strategy for sustaining long-term operation, future capital improvements, surviving governmental administrative changes, and potential expansion. Park ownership is dominated by the public sector, but many are also set up as not-for-profit organizations. The public sector often has and can raise capital. These funds are important in any capital stack developed for the project. These projects often have growing pains as they launch and operations have limited cash flows and often operate a deficit, and the public often provides initial and hopefully less and less investment over time. More importantly, the public sector is the only entity that can capture the macro-level benefits of these projects, which extend well beyond the envelope of the facility and grounds themselves. To manage a project site of this size and scale, a team with extensive multidisciplinary talent will be required. There are three primary levels of administration: ownership, management, and daily operations.

Currently, Lake Springfield is publicly owned, with City Utilities having ownership over the decommissioned Power Station Site. The initial phases of this project will require significant public realm investment in order to attract a private developer. With this in mind, the management model will likely evolve over time as development phases take shape. For example, Lake Springfield will likely maintain public management until development near the Power Station and South Activity areas begins. At that point in time, it is likely that management will move to a private model in which skilled operators can manage the development effectively and successfully.

Overall ownership is suggested to take shape as a non-for-profit that can begin raising funds and applying for grant dollars in the immediate future. This will be an important first step to advance the project.

Ownership

City Utilities, a public entity, is the current owner of the 1,000-acre planning area and project site, and more specifically, the Power Station, including other restricted areas identified. The project could be owned by a governmental agency and be run through a non-profit, including a board that represents a variety of partnerships and skills such as real estate, environment, heritage, education, hospitality, tourism, finance, and fundraising. Further, a smaller, executive committee should be in place for stewardship and decision-making. To serve the board and executive committee, an executive director should be hired and would manage all facets of the project.

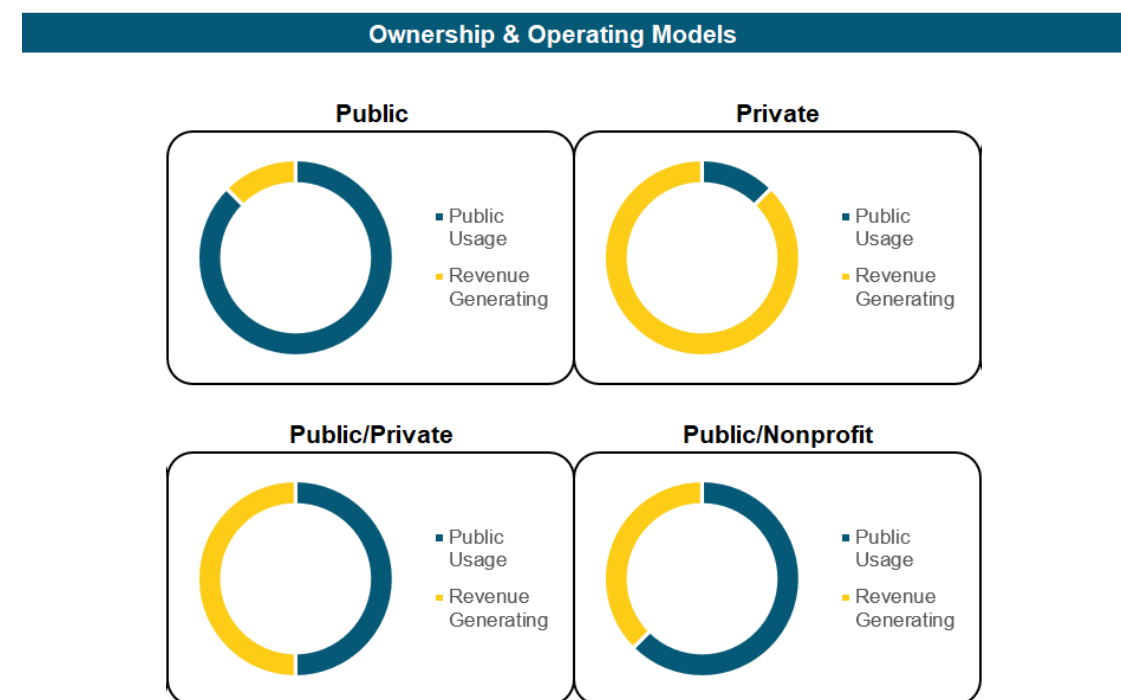
Another model, seen in other similar projects, is an enterprise fund. An enterprise fund is where revenue and expenses are matched or raised and the capital stack, the layers of funds to finance the operation, are comprised of a myriad of elements where the revenue model meets the capital requirements.

Management

The ownership model will in turn impact the management model. The project can be self-operated or privately managed but would handle the overall operations of the project. A self-operated model is management staff hired by the ownership entity. A private management model is where management is provided by a third-party entity. Private management is a relevant consideration for this concepts for the Lake Springfield Subarea, as utilizing an experienced and professional team could bolster the success of this project. It should be noted that management models can evolve as development progresses.

Daily Operations

An organizational hierarchy will evolve once the ownership and management models are finalized. The management entity should continually evaluate the efficacy of services such as in-house services, vendors, and contractors. The proposed programming at the Lake Springfield subarea will require a substantial level of staffing as development phases advance.



To reiterate, it is expected that the ownership and management model will evolve over time as development occurs on site. It is recommended that an operational strategy be studied in a future phase of the project, but ownership is suggested to be in the hands of a non-for-profit in order to raise funds and philanthropic dollars for the project.

FUNDING STRATEGIES OTHER CONSIDERATIONS

Funding and financing this project are key for the momentum to continue. An important first step is to hire an executive director or a consulting project manager to carry on driving the effort. A foundation can be created to accompany the ownership entity. There is a high level of philanthropy and development efforts in relation to parks and recreation, and a non-profit organization can raise philanthropic dollars and apply for grants.

The programming proposed at the site will consequentially transform Lake Springfield into a major regional project and asset and will be a prominent anchor in the State of Missouri. That said, a regional and national approach should be utilized for funding opportunities.

Funding Strategies

There are two categories of investment and annual expense. These are- 1) Public Realm investment and operations; and 2) commercial and concession operations. The overall objective is to devise a perpetual or evergreen funding model. The Ownership entity should be able to receive public and private funds. It should also be able to receive land lease income and assess fees and other charges.

The public sector is generally the front-end investor. Sources of funds used to repay any debt to launch the project are usually tax revenues and may be generated from activities or businesses that are most likely to use, or otherwise benefit from the project. Hotel room occupancy taxes, special taxes on restaurants, sales taxes, car rental fees, parking taxes, airport access fees, and adjacent real estate taxes and profits are most often the revenue sources used to repay debt service. In addition, these tax sources are frequently used to finance the ongoing operating, capital improvements, and marketing needs of the facility.

The mix of revenue sources selected in any given case depends upon the comparative level of existing taxes or fees, as well as what is considered to be both fair and feasible under the unique political and economic circumstances relating to each development. In most communities, a high level of commitment and coordinated community-wide effort, including both state and local governments, is necessary to successfully fund a project.

Taxing Mechanisms

In addition to the financing tools described above, there are a number of taxing mechanisms that can be used to fund public assembly facilities and expansions, including:

■ Sales Taxes

Sales tax provides strong credit structures because they are relatively predictable and tend to track with inflation and economic growth. A general sales tax increase, or expansion of the base, can provide a strong incremental revenue stream. However, these taxes are often difficult to implement because they primarily tax residents and require referendum and/ or State legislative approval. There are examples of municipalities using a general sales tax, over a fixed period, to finance major capital projects. The quick-pay method enables municipalities to generate the necessary revenue over a short period, but a general sales tax is a blunt taxing instrument that does not provide a direct correlation between burden and beneficiary.

■ Hotel Occupancy Tax

Hotel taxes have the major advantage of primarily taxing out-of-town visitors, rather than local residents. A number of facilities throughout the U.S. have had their debt service paid fully, or in part, by dedicated hotel tax revenues.

■ Tax Increment Financing (TIF)

TIFs are based on the incremental tax value of ancillary economic development projects that are triggered by a major new facility. The tax base of a defined TIF district is frozen and any increases in the future tax base are used to repay TIF bonds. This is a logical source of funding for this project if the TIF potential exists. A creative TIF District may have to be formed to engender sufficient revenues to fund this facility, or phases of it.

■ Meals Taxes

Meals taxes have been used throughout the U.S. to support the costs of developing, and renovating, public assembly facilities and to fund related infrastructure, such as parking decks. This is a natural extension of the concept of lodging taxes, as the second highest spend occurs on food service. Meals taxes are directed towards beneficiaries of the project and to some extent, non-residents. Meals taxes can also generate substantial revenue to support the operations of a facility.

■ Development Fees/ Land Lease Income

Fees for the right to develop projects near a public assembly facility can assist in funding. These so-called linkage fees have been imposed in locations where land adjacent to a public assembly facility is at a premium, typically on hotels, parking decks, retail stores, and other uses that can benefit from their proximity to the facility. Such fees generally do not produce significant revenue and are typically not a creditworthy source for debt financing because of their speculative nature.

■ Other Sources

Other common sources of partial funding include general fund support, car rental taxes, taxi airport access fees, parking taxes, and special purpose districts. Special purpose tax districts happen all the time around the country. This model should be pursued and may require state level enabling legislation. Over a 12 month period, one should be able to conclude if this is a possibility and have it structured.

The various financing mechanisms detailed here are being utilized throughout North America. As municipalities and local governments are becoming more aware of the economic and fiscal benefits that public assembly facilities create for a community, they are increasingly issuing public debt over either the short- or long-term, the latter of which incurs significantly minimized risk due to the greater impact the venue produces for the community. The best strategy varies from location to location and is also influenced by the type of public assembly facility involved.

DEMAND AND OPERATING PROJECTIONS

This section discusses projections for the proposed Lake Springfield development according to the proposed Concept A and Concept B programs described in the preceding component of this section of the plan. Critical to the success of the project and attracting the level of visitation and business projected below, will be the operation and organizational structure of the facilities.

ANTICIPATED FINANCIAL PERFORMANCE

It is too premature to develop a full project and loss statement. The information included here develops the scale of operations and portrays capital investment by whom, over time. Johnson Consulting has developed an operating model for the project, for each of the development concepts: Entertainment District (Concept A) and Adventure Hub (Concept B). This model was used to develop the scale of numbers considered in the analysis.

The Public Realm

The capital budget for the Public Realm is \$470.9 million for Concept A, or \$502.0 million for Concept B, and will be spent over the development time horizon. Dedicated tax revenue and grants and gifts will be needed to fund working capital and a small initial operating unit that will drive the project. This entity will be the staff of the Ownership entity. It would operate the park and cause its development and improvements. We estimate that current operations are a \$1-\$2 million operation, depending on how accounted for and how capital is treated.

Over time, it is expected that the operating entity will be a \$10 to \$30 million or more a year business, depending on operating units operated by this entity. This budget includes maintenance, but not necessarily capital investment, depending on the nature of the project. This will be an operating entity and will operate from earned revenue, land lease income, taxes, grants, and gifts. It will be the Board of Directors and the Executive Director's duty to constantly work on capital sources and uses management.

Private Investment

The long-term capital budget for private sector investment is \$766.4 million for Concept A or \$557.4 million for Concept B. Some of these projects will be blended into the public realm, so there is not a bright line between the operational and capital allocations.

Private investment will be for cultural, hospitality, recreational, and commercial development. There will be financial responsibility for each entity. Some initial incentives may be required, but the Ownership entity should be responsible for structuring deals and organizing incentives, land leases, and ongoing operating relationships.

Depending on the nature of the operation and its evolution, it is reasonable to expect the business to yield \$50 to \$100 per visitor. Restated, if the project attracts 1 million visitors, the business units will be in the range of \$50 to \$100 million in sales.

The following subsections summarize the anticipated level of investment and scale of operations for each of the development concepts.

CONCEPT A - ENTERTAINMENT DISTRICT

Estimated Development Program and Cost

	Est. Development Cost (\$M)*	Est. Square Footage
Entertainment District (Power Station)		
Private Investment		
Multi-Family Housing		135,600
Retail and Restaurants		76,500
Office		33,900
Event/ Conference Space		270,000
Cultural/ Entertainment/ Recreation Uses		290,000
Subtotal	\$567.4	806,000
Public Realm: Public Facilities, Trails, Parks, etc	\$227.8	465,000
Subtotal	\$795.2	1,271,000
Conference / Supporting Adventure (South Activity Area)		
Private Investment		
Hotel/ Lodging Facilities		142,600
Cultural/ Entertainment/ Recreation Uses		230,000
Subtotal	\$130.7	372,600
Public Realm: Public Facilities, Trails, Parks, etc	\$30.6	3,860,000
Subtotal	\$161.3	4,232,600
North Activity-Park-Lake		
Private Investment		
Retail and Restaurants		33,000
Cultural/ Entertainment/ Recreation Uses		341,000
Marina		25,000
Subtotal	\$68.4	399,000
Public Realm: Public Facilities, Trails, Parks, etc	\$212.4	17,431,800
Subtotal	\$280.8	17,830,800
Total	\$1,237.3	23,334,400
	↓	↓
Distribution by Private Investment vs. Public Realm		
Private Investment	\$766.4	1,577,600
Public Realm: Public Facilities, Trails, Parks, etc	\$470.9	21,756,800
Total	\$1,237.3	23,334,400

*Including MP contingency, site infrastructure, and professional and contractor services

Source: SWT, Johnson Consulting

The following figure summarizes the proposed development program and cost of the proposed Lake Springfield Entertainment District (Concept A). Consistent with the discussions in this plan, the various uses within both concepts are grouped into land uses under Private Investment and Public Realm.

As shown, Concept A calls for approximately 23.3 million square feet of development, estimated at a cost of \$1.2 billion. Public Realm development totals 21.8 million square feet at an estimated cost of \$470.9 million. Approximately 1.6 million square feet will be land to be developed through private investment, for a total cost of approximately \$766.4 million.

CONCEPT B - ADVENTURE HUB

Estimated Development Program and Cost

The following figure summarizes the proposed development program and cost of the proposed Lake Springfield Adventure Hub (Concept B). Consistent with the discussions in this plan, the various uses within Concept B are grouped into land uses under Public Realm and Private Investment.

	Est. Development Cost (\$M)*	Est. Square Footage
Private Investment		
Multi-Family Housing		97,200
Retail and Restaurants		60,500
Office		24,300
Event/ Conference Space		155,000
Cultural/ Entertainment/ Recreation Uses		187,200
Subtotal	\$466.4	524,200
Public Realm: Public Facilities, Trails, Parks, etc	\$240.0	1,155,000
Subtotal	\$706.4	1,679,200
Conference / Supporting Adventure (South Activity Area)		
Private Investment		
Hotel/ Lodging Facilities		1,830,000
Event/ Conference Space		165,000
Cultural/ Entertainment/ Recreation Uses		387,000
Subtotal	\$22.7	2,382,000
Public Realm: Public Facilities, Trails, Parks, etc	\$51.4	3,453,500
Subtotal	\$74.0	5,835,500
North Activity-Park-Lake		
Private Investment		
Retail and Restaurants		33,000
Cultural/ Entertainment/ Recreation Uses		341,000
Marina		25,000
Subtotal	\$68.4	399,000
Public Realm: Public Facilities, Trails, Parks, etc	\$210.6	17,431,800
Subtotal	\$279.0	17,830,800
Total	\$1,059.4	25,345,500
	↓	↓
Distribution by Private Investment vs. Public Realm		
Private Investment	\$557.4	3,305,200
Public Realm: Public Facilities, Trails, Parks, etc	\$502.0	22,040,300
Total	\$1,059.4	25,345,500

*Including MP contingency, site infrastructure, and professional and contractor services

Source: SWT, Johnson Consulting

As shown, Concept B calls for approximately 25.3 million square feet of development, estimated at a cost of \$1.06 billion. Public Realm development totals 22 million square feet at an estimated cost of \$502 million. Approximately 3.3 million square feet will be land to be developed through private investment, for a total cost of approximately \$557.4 million.

SCALE OF OPERATIONS

The following summarizes the estimated scale of operations of the proposed development at Lake Springfield. The projections are based on market research, especially with regard to the potential vacancy rates, rents, and operational structure of each of the land uses, as outlined in the case studies appendix. The scale of operations will range based on the variety of land uses that can be programmed for the 1,000-acre site and are based on Johnson Consulting's preliminary financial projections for both Concept A and Concept B, which are delineated by each land use type. Utilizing market rates for average sales per square foot of each land use, the projected scale of operations for these new businesses at Lake Springfield falls between \$72 million and \$85 million in Year 10, when the preponderance of development should be completed. The scale of operations for both scenarios were based off of the conceptual programming options laid out in this section. Either concept will likely be developed in phases and will be contingent on the ownership model and the scale of commitment from the public realm and private sector. As mentioned, the ownership model is expected to evolve as the project advances, but it is suggested that a shift towards a private ownership model aligns with the development of the decommissioned power station and the south end of Lake Springfield. The following table summarizes the proposed development schedule for the projections for Concept B.

Proposed Development Phases	
	Opening Year
North Activity-Park-Lake	Year 1
South Activity Area	Year 5
Power Station	Year 10

Source: Johnson Consulting

FISCAL AND ECONOMIC IMPACT ANALYSIS

This section analyzes the total economic and fiscal benefit that is being generated by the proposed development for the Lake Springfield subarea. All types of economic, social, economic development, image, and social benefits can happen as a result of the proposed development and operation of the development. This analysis quantifies the effect of spending of visitors to this development, which also represents lost benefits if the development is not built. Additionally, Johnson Consulting's prior development of economic analyses for other mixed-use developments and specific knowledge of the marketplace of Greene County, and the State of Missouri contributed to the analysis.

A key component of the grant that funded this planning process requires this analysis. This project is much more than about numbers. It takes an aging asset and repurposes it into an attractive amenity for the region, but also aspires to be nationally prominent and be a new attraction for the region and state. The following figures reflect this new vision and economic development role. This analysis is discreet in its assumptions when development happens. This development is still subject to much input and structuring, so projections may occur at a different rate of speed than shown in the analysis.

DEFINITION

ECONOMIC IMPACT

Economic impact is defined as incremental new spending in an economy that is the direct result of certain activities, facilities, or events. For the purpose of this analysis, impact totals are discussed in terms of the Lake Springfield and Greene County economies. The levels of impacts are described as follows:

- **Direct Spending** is an expression of the spending that occurs as a direct result of the events that occur in the facility. For example, an event attendee's expenditures on hotel rooms, shopping, and meals are direct spending.
- **Indirect Spending** consists of re-spending of the initial or direct expenditures, or, the supply of goods and services resulting from the initial direct spending in the performing arts center. For example, an event attendee's direct expenditure on a restaurant meal causes the restaurant to purchase food and other items from suppliers. The portion of these restaurant purchases that are within the local, regional, or state economies is counted as an indirect spending.
- **Induced Spending** represents changes in local consumption due to the personal spending by employees whose incomes are affected by direct and indirect spending. For example, a waiter at the restaurant may have more personal income as a result of the attendee's visit. The amount of the increased income the waiter spends in the local economy is called an induced spending.
- **Increased Earnings** measure increased employee and worker compensation related to the project being analyzed. This figure represents increased payroll expenditures, including benefits paid to workers locally. It also expressed how the employees of local businesses share in the increased outputs.
- **Employment** measures the number of jobs supported in the study area related to the spending generated as a result of the events occurring in the event center. Employment impact is stated in a number of full-time equivalent jobs.

Indirect spending, induced spending, increased earnings, and employment are estimated using a set of multiplier rates that are applied to the amount of direct spending, as shown in the Economic Impact Multipliers table. These figures are derived from prior studies for the State of Florida. Such multiplier factors are commonly used to estimate economic impacts. Utilizing the multipliers, an input-output model analyzes the commodities and income that normally flow through various sectors of the economy.

Economic Impact Multipliers		
Impact	Multiplier	Base
Indirect and Induced Spending	0.796	per \$1 of direct spending
Increased Earnings	0.586	per \$1 of direct spending
Increased Employment (FTE jobs)	12.95	per \$1 million of direct spending

Source: Implan, Johnson Consulting

Fiscal Impact

Fiscal impact reflects tax revenues that result from the spending and income related to the activities associated with the proposed development at Lake Springfield. This analysis estimates fiscal impacts for the governmental units that levy taxes in the jurisdiction.

80_TaxRates

The fiscal impact is the public sector’s return on investment and an incentive to develop and operate the various uses within the Lake Springfield development Concept A and Concept B. The overall impacts, including the fiscal impacts, provide a rationale for public participation in a project such as the Lake Springfield development. Based on the spending estimates, Johnson Consulting projected the fiscal impacts from major categories of tax revenues that are directly affected by a visitor’s activity: sales tax at 8.1 percent and hotel/motel tax at 5 percent.

The fiscal impact represents only a fraction of the overall impact on the economy, as they are only the public sector’s increase in tax revenue resulting from the overall increased spending in the economy. The presence of the proposed Multi-Purpose Event Center would increase the value of commercial establishments in areas surrounding the new facility and beyond, which result in increased property tax supported by the project.

IMPACT OF CONCEPT A - ENTERTAINMENT DISTRICT DEVELOPMENT

This subsection discusses the estimated impact of the development when built as an Entertainment District (Concept A). Serving as the basis for the economic and fiscal impact estimates are the development’s projected visitation volume and room nights. They are developed from the event demand and attendance as described in the previous section. It should be noted that there is no phasing assumption utilized in the Concept A development.

Visitor-Days

Visitation volume is measured in the number of visitor-days. The table below shows the projected visitor-days at the proposed Lake Springfield Entertainment District. As shown, they are projected to total approximately 437,000 visitor-days in Year 1; approximately 551,900 visitor-days in Year 5, and approximately 783,500 visitor-days in Year 10. Today, Lake Springfield attracts approximately 50,000 annually. It is expected that Lake Springfield can attract over 1 million visitors in the future. This assumes a good product at the scale analyzed herein and also assumes that an aggressive operating team is in place.

Estimated Visitation Concept A - Entertainment District								
	Assumptions	Year 1	Year 3	Year 5	Year 7	Year 9	Year 10	Year 20
Entertainment District (Power Station)		172,500	179,469	217,839	259,017	269,482	309,230	418,833
Conference Center Lodge		24,000	24,970	30,308	36,037	37,493	43,023	58,272
South Adventure Area		99,000	103,000	125,021	148,653	154,659	177,471	240,374
North Activity Area		126,000	131,090	159,118	189,195	196,839	225,872	305,930
Park		106,800	111,115	134,871	160,366	166,844	191,454	259,312
Lake		18,000	18,727	22,731	27,028	28,120	32,267	43,704
Total		546,300	568,371	689,888	820,297	853,437	979,319	1,326,427
Possible Visitation Overlap	20%	(109,260)	(113,674)	(137,978)	(164,059)	(170,687)	(195,864)	(265,285)
Net Total		437,040	454,696	551,911	656,237	682,749	783,455	1,061,141

Source: Johnson Consulting

Room Nights

The following table shows the projected room-nights generated by the attendance to the proposed Lake Springfield Entertainment District. They are derived from the number of visitor-days, assuming that certain percentages of them would be out-of-town visitors and stay overnight at hotels/motels. As shown, the attendees to the proposed development are projected to generate approximately 31,500 room nights in Year 1; approximately 39,700 room nights in Year 5, and approximately 56,400 room nights in Year 10.

Estimated Room Nights Concept A - Entertainment District								
	Assumptions	Year 1	Year 3	Year 5	Year 7	Year 9	Year 10	Year 20
Room Nights								
Entertainment District (Power Station)	7%	12,075	12,563	15,249	18,131	18,864	21,646	29,318
Conference Center Lodge	40%	9,600	9,988	12,123	14,415	14,997	17,209	23,309
South Adventure Area	5%	4,950	5,150	6,251	7,433	7,733	8,874	12,019
North Activity Area	2%	2,520	2,622	3,182	3,784	3,937	4,517	6,119
Park	2%	2,136	2,222	2,697	3,207	3,337	3,829	5,186
Lake	1%	180	187	227	270	281	323	437
Total		31,461	32,732	39,730	47,240	49,149	56,398	76,388

Source: Johnson Consulting

Direct Spending, Economic Impact, Fiscal Impact

Based on the visitation volume and room nights shown in the previous two tables, the following table shows the estimated direct spending, economic impact, and fiscal impact of the proposed Lake Springfield Entertainment District.

Estimated Direct Spending, Economic Impact, and Fiscal Impact Concept A - Entertainment District								
Assumptions	Year 1	Year 3	Year 5	Year 7	Year 9	Year 10	Year 20	
Direct Spending (\$ Million)								
Visitors Spending								
On Lodging	\$151.66	\$5.2	\$5.8	\$7.4	\$9.3	\$10.3	\$12.2	\$22.2
On Food and Beverage	50.91	30.4	33.5	43.2	54.5	60.1	71.1	129.4
On Transportation Expense	49.01	1.7	1.9	2.4	3.0	3.3	3.9	7.2
On Retail	15.00	9.0	9.9	12.7	16.1	17.7	20.9	38.1
Total Visitors Spending	\$266.58	\$46.2	\$51.0	\$65.7	\$82.9	\$91.5	\$108.2	\$196.9
Facilities Operational Spending		\$36.9	\$39.4	\$43.2	\$47.5	\$50.9	\$54.1	\$79.1
Total Direct Spending		\$83.2	\$90.5	\$109.0	\$130.4	\$142.4	\$162.3	\$276.0
Economic Impact (\$ Million)								
Direct Spending		\$83.2	\$90.5	\$109.0	\$130.4	\$142.4	\$162.3	\$276.0
Indirect and Induced Spending	0.796	66.2	72.0	86.7	103.8	113.3	129.1	219.6
Total Spending		\$149.3	\$162.4	\$195.7	\$234.2	\$255.6	\$291.4	\$495.6
Increased Earnings	0.586	\$48.7	\$53.0	\$63.8	\$76.4	\$83.4	\$95.1	\$161.7
Employment (Estimated Supported # of Jobs)	12.946	985	1,010	1,147	1,294	1,331	1,473	1,865
Fiscal Impact (\$ Million)								
Sales Tax	8.10%	\$3.7	\$4.1	\$5.3	\$6.7	\$7.4	\$8.8	\$15.9
Hotel/Motel Tax	5.00%	0.3	0.3	0.4	0.5	0.5	0.6	1.1
Total		\$4.0	\$4.4	\$5.7	\$7.2	\$7.9	\$9.4	\$17.1

Source: Johnson Consulting

As shown, in Year 1, the economic and fiscal impact of the proposed Lake Springfield Entertainment District development is estimated to include \$149.3 million in total spending, \$48.7 million in increased earnings, 985 jobs supported, and \$4 million in sales tax and hotel/motel tax revenues. In Year 5, the economic and fiscal impact of the proposed development is estimated to include \$195.7 million in total spending, \$63.8 million in increased earnings, over 1,100 jobs supported, and \$5.7 million in sales tax and hotel/motel tax revenues. In Year 10, the economic and fiscal impact of the proposed development is estimated to include \$291.4 million in total spending, \$95.1 million in increased earnings, close to 1,500 jobs supported, and \$9.4 million in sales tax and hotel/motel tax revenues.

IMPACT OF CONCEPT B - ADVENTURE HUB DEVELOPMENT

This subsection discusses the estimated impact of the development when built as an Adventure Hub (Concept B) at). Again, serving as the basis for the economic and fiscal impact estimates are the development's projected visitation volume and room nights. They are developed from the event demand and attendance as described in the previous section. Further, the estimated impact reflects the proposed phasing of the development, with the development assumed to be fully built out in ten years.

Visitor-Days

Visitation volume is measured in the number of visitor-days. The table below shows the projected visitor-days at the proposed Lake Springfield Adventure Hub development. As shown, they are projected to total approximately 200,640 visitor-days in Year 1; approximately 337,900 visitor-days in Year 5, and approximately 645,300 visitor-days in Year 10, when the proposed Adventure Hub development is fully built.

		Estimated Visitation Concept B - Adventure Hub							
		Year 1	Year 2	Year 3	Year 5	Year 7	Year 9	Year 10	Year 20
Visitation	<i>Opening Year</i>								
North Activity Area	Year 1	126,000	128,520	131,090	159,118	189,195	196,839	225,872	305,930
Park	Year 1	106,800	108,936	111,115	134,871	160,366	166,844	191,454	259,312
Lake	Year 1	18,000	18,360	18,727	22,731	27,028	28,120	32,267	43,704
Amphitheater/Bike Park (South Activity Area)	Year 5	-	-	-	105,700	125,680	130,758	150,045	203,226
Recreation (Power Station)	Year 10	-	-	-	-	-	-	171,000	231,609
Conference Center	Year 10	-	-	-	-	-	-	36,000	48,760
Total		250,800	255,816	260,932	422,420	502,269	522,561	806,638	1,092,542
Possible Visitation Overlap	20%	(50,160)	(51,163)	(52,186)	(84,484)	(100,454)	(104,512)	(161,328)	(218,508)
Net Total		200,640	204,653	208,746	337,936	401,815	418,049	645,311	874,034

Source: Johnson Consulting

Room Nights

The following table shows the projected room-nights generated by the attendance to the proposed Lake Springfield Adventure Hub development. They are derived from the number of visitor-days, assuming that certain percentages of them would be out-of-town visitors and stay overnight at hotels/motels. As shown, the attendees to the proposed development are projected to generate approximately 2,500 room nights in Year 1; approximately 7,400 room nights in Year 5, and approximately 26,400 room nights in Year 10, when the proposed Adventure Hub development is fully built.

Estimated Room Nights Concept B - Adventure Hub									
Assumptions	Year 1	Year 2	Year 3	Year 5	Year 7	Year 9	Year 10	Year 20	
Room Nights									
North Activity Area	1%	1,260	1,285	1,311	1,591	1,892	1,968	2,259	3,059
Park	1%	1,068	1,089	1,111	1,349	1,604	1,668	1,915	2,593
Lake	1%	180	184	187	227	270	281	323	437
Amphitheater/Bike Park (South Activity Area)	4%	-	-	-	4,228	5,027	5,230	6,002	8,129
Recreation (Power Station)	3%	-	-	-	-	-	-	5,130	6,948
Conference Center	30%	-	-	-	-	-	-	10,800	14,628
Total		2,508	2,558	2,609	7,395	8,793	9,148	26,428	35,795

Source: Johnson Consulting

Direct Spending, Economic Impact, Fiscal Impact

Based on the visitation volume and room nights shown in the previous two tables, the following table shows the estimated direct spending, economic impact, and fiscal impact of the proposed Lake Springfield Adventure Hub development.

Estimated Direct Spending, Economic Impact, and Fiscal Impact Concept B - Adventure Hub									
Assumptions	Year 1	Year 2	Year 3	Year 5	Year 7	Year 9	Year 10	Year 20	
Direct Spending (\$ Million)									
Visitors Spending									
On Lodging	\$151.66	\$0.4	\$0.4	\$0.5	\$1.4	\$1.7	\$1.9	\$5.7	\$10.4
On Food and Beverage	50.91	14.0	14.7	15.4	26.4	33.4	36.8	58.5	106.6
On Transportation Expense	49.01	0.1	0.1	0.1	0.4	0.6	0.6	1.8	3.4
On Retail	15.00	4.1	4.3	4.5	7.8	9.8	10.9	17.3	31.4
Total Visitors Spending	\$251.58	\$18.6	\$19.6	\$20.5	\$36.1	\$45.5	\$50.2	\$83.4	\$151.7
Facilities Operational Spending									
		\$15.2	\$15.7	\$16.2	\$23.2	\$25.3	\$27.0	\$43.7	\$63.4
Total Direct Spending		\$33.8	\$35.3	\$36.8	\$59.2	\$70.8	\$77.2	\$127.1	\$215.1
Economic Impact (\$ Million)									
Direct Spending		\$33.8	\$35.3	\$36.8	\$59.2	\$70.8	\$77.2	\$127.1	\$215.1
Indirect and Induced Spending	0.796	26.9	28.1	29.3	47.1	56.3	61.4	101.1	171.2
Total Spending		\$60.8	\$63.4	\$66.1	\$106.4	\$127.1	\$138.6	\$228.1	\$386.3
Increased Earnings	0.586	\$19.8	\$20.7	\$21.6	\$34.7	\$41.5	\$45.2	\$74.4	\$126.0
Employment (Estimated Supported # of Jobs)	12,946	401	406	411	624	702	722	1,154	1,454
Fiscal Impact (\$ Million)									
Sales Tax	8.10%	\$1.5	\$1.6	\$1.7	\$2.9	\$3.7	\$4.1	\$6.8	\$12.3
Hotel/Motel Tax	5.00%	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.5
Total		\$1.5	\$1.6	\$1.7	\$3.0	\$3.8	\$4.2	\$7.0	\$12.8

Source: Johnson Consulting

As shown, in Year 1, the economic and fiscal impact of the proposed Lake Springfield Adventure Hub development is estimated to include \$60.8 million in total spending, \$19.8 million in increased earnings, 400 jobs supported, and \$1.5 million in sales tax and hotel/motel tax revenues. In Year 5, the economic and fiscal impact of the proposed development is estimated to include \$106.4 million in total spending, \$34.7 million in increased earnings, 624 jobs supported, and \$3.0 million in sales tax and hotel/motel tax revenues. In Year 10, the economic and fiscal impact of the proposed development is estimated to include \$228.1 million in total spending, \$74.4 million in increased earnings, 1,150 jobs supported, and \$7 million in sales tax and hotel/motel tax revenues.

COMPARISON OF CONCEPT A AND CONCEPT B DEVELOPMENT IMPACT

The following table compares key measures of the economic and fiscal impact of the two development options for Lake Springfield, as an Entertainment District and an Adventure Hub. The year to compare is in Year 10 when the Adventure Hub development is assumed to be fully built.

Comparison of Year 10 Economic and Fiscal Impact			
		Concept A - Entertainment District	Concept B - Adventure Hub
Development Costs (\$Million)		\$1,237.3	\$1,059.4
Activity Volume			
Net Visitation		783,455	645,311
Room Nights		56,398	26,428
Direct Spending (\$ Million)			
Visitor Spending		\$108.2	\$83.4
Facilities Operational Spending		54.1	43.7
Total Direct Spending		\$162.3	\$127.1
Economic Impact (\$ Million)			
Direct Spending		\$162.3	\$127.1
Indirect and Induced Spending	0.796	129.1	101.1
Total Spending		\$291.4	\$228.1
Increased Earnings	0.586	\$95.1	\$74.4
Employment (Estimated Supported # of Jobs)	12,946	1,473	1,154
Fiscal Impact (\$ Million)			
Sales Tax	8.10%	\$8.8	\$6.8
Hotel/Motel Tax	5.00%	0.6	0.3
Total		\$9.4	\$7.0

Source: Johnson Consulting

As shown either alternative makes a very substantial economic contribution. They are similar in general but distinguish themselves on the activities that drive the venues.

They are generally very close in terms of economic contribution, and both match the needs within the community.

ONE-TIME CONSTRUCTION IMPACT

The construction budget will also cause substantial economic and fiscal impact analysis. We have used the total budgets as prepared by the SWT. The following two tables summarize the estimated one-time construction impact of Concept A and Concept B development.

Estimated Construction Cost and One-Time Construction Impact Concept A - Entertainment District			
	Assumptions	Constr. Yr. 1	Constr. Yr. 2
Construction Costs			
	<i>Opening Year</i>		
North Activity Area	Year 1	\$16.7	\$16.7
Park & Lake	Year 1	123.7	123.7
South Activity Area	Year 1	80.7	80.7
Power Station	Year 1	397.6	397.6
Total		\$618.6	\$618.6
Impact on Construction Jobs			
Labor Costs	55%	\$340.3	\$340.3
# of On-Site Construction Jobs	\$35,000	9,440	9,160
Economic Impact			
Material Costs	45%	\$278.4	\$278.4
% Spent Locally	80%		
Direct Construction Spending		\$222.7	\$222.7
Indirect and Induced Spending	0.796	177.2	177.2
Total Spending		\$399.9	\$399.9
Increased Earnings	0.586	\$130.5	\$130.5
Employment (Estimated Supported # of Jobs)	12,946	2,799	2,718
Fiscal Impact (\$ Million)			
Sales Tax	8.10%	\$32.4	\$32.4
Total		\$32.4	\$32.4

Source: Johnson Consulting

The following figure summarizes the estimated one-time construction impact of Concept B development, reflecting the proposed phases: North Activity Area, Park, and Lake opening in Year 1, South Activity area opening in Year 5, and Power Station zone opening in Year 10.

Estimated Construction Cost and One-Time Construction Impact Concept B - Adventure Hub					
	Assumptions	Constr. Yr. 1	Constr. Yr. 2	Year 1	Year 2
Construction Costs					
	<i>Opening Year</i>				
North Activity Area	Year 1	\$16.3	\$16.3	\$0.0	\$0.0
Park & Lake	Year 1	123.2	123.2	0.0	0.0
Amphitheater/Bike Park (South Activity Area)	Year 5	0.0	0.0	0.0	0.0
Recreation (Power Station)	Year 10	0.0	0.0	0.0	0.0
Total		\$139.5	\$139.5	\$0.0	\$0.0
Impact on Construction Jobs					
Labor Costs	55%	\$76.7	\$76.7	\$0.0	\$0.0
# of On-Site Construction Jobs	\$35,000	2,130	2,070	0	0
Economic Impact					
Material Costs	45%	\$62.8	\$62.8	\$0.0	\$0.0
% Spent Locally	80%				
Direct Construction Spending		\$50.2	\$50.2	\$0.0	\$0.0
Indirect and Induced Spending	0.796	40.0	40.0	0.0	0.0
Total Spending		\$90.2	\$90.2	\$0.0	\$0.0
Increased Earnings	0.586	\$29.4	\$29.4	\$0.0	\$0.0
Employment (Estimated Supported # of Jobs)	12.946	631	613	0	0
Fiscal Impact (\$ Million)					
Sales Tax	8.10%	\$7.3	\$7.3	\$0.0	\$0.0
Total		\$7.3	\$7.3	\$0.0	\$0.0

Source: Johnson Consulting



Estimated Construction Cost and One-Time Construction Impact Concept B - Adventure Hub							
	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Construction Costs							
North Activity Area	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Park & Lake	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amphitheater/Bike Park (South Activity Area)	41.7	41.7	0.0	0.0	0.0	0.0	0.0
Recreation (Power Station)	0.0	0.0	0.0	0.0	0.0	460.8	460.8
Total	\$41.7	\$41.7	\$0.0	\$0.0	\$0.0	\$460.8	\$460.8
Impact on Construction Jobs							
Labor Costs	\$22.9	\$22.9	\$0.0	\$0.0	\$0.0	\$253.5	\$253.5
# of On-Site Construction Jobs	560	550	0	0	0	5,390	5,230
Economic Impact							
Material Costs	\$18.7	\$18.7	\$0.0	\$0.0	\$0.0	\$207.4	\$207.4
% Spent Locally							
Direct Construction Spending	\$15.0	\$15.0	\$0.0	\$0.0	\$0.0	\$165.9	\$165.9
Indirect and Induced Spending	11.9	11.9	0.0	0.0	0.0	132.0	132.0
Total Spending	\$26.9	\$26.9	\$0.0	\$0.0	\$0.0	\$297.9	\$297.9
Increased Earnings	\$8.8	\$8.8	\$0.0	\$0.0	\$0.0	\$97.2	\$97.2
Employment (Estimated Supported # of Jobs)	167	163	0	0	0	1,598	1,552
Fiscal Impact (\$ Million)							
Sales Tax	\$2.2	\$2.2	\$0.0	\$0.0	\$0.0	\$24.1	\$24.1
Total	\$2.2	\$2.2	\$0.0	\$0.0	\$0.0	\$24.1	\$24.1

Source: Johnson Consulting

IMPLEMENTATION PLAN



REALIZING THE VISION

To change the future of Lake Springfield, it is important to take an active role in identifying next steps and actions to shape the final vision for the planning area. The momentum and support garnered for this plan during this process, set the project up for success in the implementation phase. Developing this vision in a collaborative way, with a focus on diversity of lived experiences, results in the vision of a Lake Springfield for all. New adventure awaits, and everyone is welcome at Lake Springfield.

This implementation chapter is structured around the goals of the planning process, with specific projects and timeline for consideration identified under these goals. The purpose of this structure is to provide the community with measurable outcomes. While there may be many necessary outcomes to achieve the overall goal, the city, and important implementation partners, can track progress and success along the way. Measuring success on a regular basis will ensure the project maintains momentum moving from plan, to concept, to construction.

HOW TO READ THE IMPLEMENTATION CHAPTER

The momentum built around the Lake Springfield plan demonstrates true collaboration and consensus building around the site. The love for this area became quickly apparent as the plan started, and the final site concepts recommended here are the result of intentionally designing with nature to develop the area as an asset to the larger Springfield community. Implementation actions are already starting, and this chapter outlines specific projects to continue implementation momentum.

The projects in this chapter are separated by project goals, the six defined goals of the EDA grant that funding the Lake Springfield Plan. Within each goal are specific projects identified for next steps. The projects are further segmented by public realm investment and private realm investment. Each project includes the identification of what the project is, the timeline for project completion, and responsible party to move that project forward. Total program phasing is identified by 1-, 5- and 10-year milestones. At each of these milestones various elements of site design are to be in progress for project completion.

The timeline for each project is indicated by the 📅 icon and is followed by a visual timeline. For example, the following depicts a project that should be completed between years 2-3.



The responsible party for each project is indicated by the 👤 icon.



■ GOAL #1

ECONOMIC DEVELOPMENT & RESILIENT JOB CREATION

PUBLIC

Define an Ownership Model

The first step is to define an ownership model for the site plan development. As City Utilities is the landowner, that agency is charged with this task. The ownership model may change throughout the project life cycle, but a strong foundation is critical to project success. Also included in this step is to hire a project manager.

Recommended: A non-profit leads the ownership effort to catalyze fundraising efforts and receive grant dollars. This should start immediately.

📅 Within 12 Months (By April 2025)



👤 City Utilities

Implement a Fundraising Entity

A critical path item is to establish a non-profit organization or fundraising entity to raise philanthropic dollars and apply for grants that will help catalyze public realm investment. This should happen immediately so the non-profit can be set up to raise funds within the next 12-months.

📅 Immediate (Fundraising Should Start By April 2025)



👤 City Utilities

Tourism District Formation

Recognizing the area as a tourism district is a component to further public realm investment that will help catalyze private development interest. The Tourism District designation comes with strategies and funding resources that will help advance public realm needs and spur private interest. Additional components of this a comprehensive wayfinding and signage study to be implemented as plan components take shape. Wayfinding and signage should be scalable to different users and contexts, and support people with disabilities.

📅 2 – 3 Years



👤 City Utilities & City of Springfield

PRIVATE

Market Feasibility of Site Programming Proposals

The first three steps in this category should generate some private development interest in the site. Initial forecasts have been completed at the concept level, but to ensure development will achieve the goals of the area, more refined analysis is necessary.

📅 After Initial Project Steps Completed (2 – 3 Years)

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👤 City Utilities

Marketing & Branding Of The Site

The project executive, and the foundation charged with leading the project implementation, will need to develop a marketing and branding campaign for the Lake Springfield area. This marketing and branding campaign should build off the collaborative approach to the area plan that garnered significant interest and support. This campaign should be developed in conjunction with the tourism district designation to promote a cohesive look, feel and brand of the entire area.

📅 Initial Path Item after Foundation Formation and Project Executive Appointment (1 – 2 Years)

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👤 Project Owner

Formation of a Special Purpose Corporation

The formation of a special purpose corporation, in association with City Utilities will allow development work to commence. This formation will require a partnership with legal counsel to finalize this agreement. This will serve as a foundational item to align the mission and vision of the project, and help build the bones of the final development.

📅 Initial Path Item After Foundation Formation And Project Executive Appointment (2 - 3 Years)

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👤 Project Owner & City Utilities

PUBLIC PRIVATE

Develop a Process to Receive Developer Inquiries

This process of developing an RFQ or an RFP to solicit interest from potential developers or benefactor partners should be overseen by the project executive. This developer agreement would begin as a standard agreement and can evolve with legal complexities over time and be supported by legal counsel. The development of this process is a good place to consider the role of a public-private partnership in site buildout.

📅 TBD Depending on Developer Interest, but Will Be an Integral Part of Site Redevelopment

👤 Project Executive



GOAL #2

SUSTAINABLE WATER QUALITY & GREEN INFRASTRUCTURE

PUBLIC

Meet the Lake’s Current Use Water Quality Criteria to Protect Warmwater Aquatic Habitat

Conduct continuous monitoring of the Lake for algal toxins with robust sampling frequency to provide greater insight into climate conditions and temporal variations and nutrient concentrations and trends, throughout the recreational season. Upon completion of satisfactory data collection, implement a nutrient reduction plan/strategy for the Lake to achieve the level of protection needed for “warmwater aquatic habitat”.

📅 1 – 3 Years

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👤 City Utilities

Preserve the Lake’s Current Use Numeric Water Quality Criteria for Whole Body Contact-B.

Begin conducting continuous monitoring of the Lake for bacteria (Escherichia Coliform or E. Coli) in the recreational seasonal to understand baseline concentrations of E. Coli in the Lake. Upon completion of satisfactory data collection, implement a water quality treatment strategy to reduce E. Coli to less than 206 colony-forming units (CFU) per 100 milliliters, in order to maintain the “Whole body Contact -B” use.


📅 1 – 3 Years

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👤 City Utilities

Restore Human Health Criteria Set in Place to Limit Fish Consumption on a Long-Term Basis and Protect Recreators from Harmful Water Quality Conditions.

Conduct a detailed sediment investigation to collect samples from deeper sediment horizons and analyze for polychlorinated biphenyl (PCB) and other contaminants to obtain insight into the bioaccumulation of PCBs in fish tissues. Upon completion of satisfactory data collection, implement a sediment management strategy to clean contaminated sediments and restore the lake bottom.


 1 – 3 Years

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 City Utilities

Provide for and Enhance Continuity of the James River to Improve Sediment Supply/Transport and Regulate Temperature for the Benefit of the Aquatic Habitat Ecosystem.

Conduct a detailed sediment investigation to collect samples from deeper sediment horizons and analyze for polychlorinated biphenyl (PCB) and other contaminants to obtain insight into the bioaccumulation of PCBs in fish tissues. Upon completion of satisfactory data collection, implement a sediment management strategy to clean contaminated sediments and restore the lake bottom.


 2 – 4 Years

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 City Utilities

Provide for Kayak Passage and Fish Ladder

Conduct a detailed sediment investigation to collect samples from deeper sediment horizons and analyze for polychlorinated biphenyl (PCB) and other contaminants to obtain insight into the bioaccumulation of PCBs in fish tissues. Upon completion of satisfactory data collection, implement a sediment management strategy to clean contaminated sediments and restore the lake bottom. Modify the Dam components and restore and stabilize the downstream reaches of the James River.

 2 – 4 Years

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 City Utilities

FUNDING

Seek External Funding to Augment City Efforts

A combination of any of the above actions may be implemented based on the community’s priorities in and available local, state, and federal government funding opportunities. Few relevant funding programs and their eligible uses through the Inflation Reduction Act are listed below for consideration:

- **Watershed and Flood Prevention Operations.** Flood Prevention, Watershed Protection, Public Recreation, Public Fish and Wildlife, Agricultural Water Management, Municipal and Industrial Water Supply, or Water Quality Management.
- **Clean Water State Revolving Fund.** This program is a Federal-State partnership that provides communities low-cost financing for a wide range of water quality infrastructure projects. Under the Bipartisan Infrastructure Law, 49 percent of Clean Water State Revolving Fund funds shall be eligible to be grants or 100 percent principal forgiveness loans. The Clean Water State Revolving Fund program provides capitalization grants to States, which will provide a long-term source of State financing for construction of wastewater treatment facilities and implementation of other water quality management activities.
- **Fish Passage:** Restoring fish passage by removing in-stream barriers and providing technical assistance pursuant to section 117 of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (16 U.S.C. 1891a).
- **Landscape Scale Restoration Water Quality and Fish Passage.** This program improves fish and wildlife habitat connectivity and helps to recover Endangered Species Act-listed or Endangered Species Act candidate species that depend on National Forest System lands.
- **Rehabilitation of High Hazard Potential Dams:** Eligible activities include repair, removal, or any other structural or nonstructural measures to rehabilitate an eligible high hazard potential dam. The Federal Emergency Management Agency Rehabilitation of High Hazard Potential Dams grant program provides technical, planning, design, and construction assistance for eligible rehabilitation activities that reduce dam risk and increase community preparedness.



GOAL #3

ADAPTIVE REUSE STRATEGY

PUBLIC

Update Site Zoning

Specialized zoning will need to be considered for this project, and specifically the sites where new uses are considered with the existing concept. Necessary zoning code changes should be completed to align with the Lake Springfield Plan vision that is adopted as a part of this plan. Updating any zoning changes, or the use of a potential overlay district, is important to ensuring development proposals are in line with the intended uses to match the overall vision of the site.

📅 Immediately Following Plan Adoption (Zoning Updates Completed by May 2025)

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👤 City of Springfield Planning Department

PRIVATE

Develop Official Process to Receive Developer Inquiries

An RFP or RFQ should be developed to accept official inquiries from private developers and generate interest from potential partners. This process should begin with a standard development agreement and evolve with complexities that should be supported by legal counsel. In developing this official process, a strategy for a public-private partnership may also be considered.

📅 Immediately Following Plan Adoption (Zoning Updates Completed by May 2025)

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👤 Project Executive



GOAL #4

TRANSPORTATION ENHANCEMENTS

PUBLIC

Briar Roadway Improvements

For traffic to the lake and park, Briar is an important connection from National Ave. While the lake and park are not the focus of trip generation, enhanced amenities, including a marina, expanded boathouse, and destination nature play, will increase existing trips to the park. Briar updates will need to be completed to ensure safe access for everyone. The City of Springfield is the project owner, and the next phase is to complete a concept plan to identify preferred design, as well as an estimate of costs.

📅 2 – 5 Years

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👤 City of Springfield

Lake and Park Roundabout Entrance

Improvements to Briar will necessitate the improvement of the entrance at the Lake and Park. A roundabout here is a priority project to increase wayfinding and park entry, while at the same time updating a skewed intersection with poor site distance for exiting traffic. The City of Springfield will be the primary owner, but coordination with City Utilities the The Park Board will be important as the improvement will have an impact on the site. Additionally, the private residential drive will need to be accounted for and early discussions with that property owner are important. The next phase is a concept study to determine design feasibility as well as an estimate of costs.

📅 3 – 5 Years

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👤 City of Springfield

Kissick Linear Park

Once vehicular improvements have been made on new access roads, the closure of Kissick across the Lake to vehicular traffic becomes a possibility. Re-imaging the current vehicular bridge as a space for people will be an important component of better connecting the power station site and south activity area to the Lake. The City of Springfield is the primary owner as the responsible party for the vehicular bridge. Next steps in this process include neighbor coordinate to build buy-in and support for the idea, as well as concepts around how to incorporate park style or placemaking elements on the bridge.

📅 8 – 10 Years

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👤 City of Springfield

Republic Road Trail Connection

Because this project does not focus on moving heavy trips associated with the new plan, the priority falls lower in terms of the overall site. However, the scale of the project may cost less for more pedestrian trips, and can be completed in a quicker timeline if funding is available. With several dedicated sources to pedestrian funding, including a significant increase in Transportation Alternative Program funding under the current IIJA, this project may be an easier to achieve project. The City of Springfield will be responsible for this project but should partner with City Utilities (public transit) and Ozark Greenways. These partners are critical to a cohesive look and feel of active transportation facilities across the region. The next phase is to make a conceptual plan to finalize trail alignment, identify design challenges/needs, and estimate the costs to get the project complete.

📅 5+ Years



👥 City of Springfield & Other Trail Partners

North Activity Area Trail System

Increasing trail connectivity within the planning area is a priority, and thus the full buildout of this internal trail system, including a bridge connecting to the boathouse, is important to project success. While future trail buildout can come in phases, an immediate priority is a site trail study, to finalize trail alignments and phase design and construction.

📅 2 - 4 Years



👥 City of Springfield & Other Trail Partners

PRIVATE

Lake Springfield Drive

Another vehicular access priority is Lake Springfield Drive. This eastern portion of the East West arterial is already listed in the Long-Range Transportation plan, but will need to be regionally elevated as a priority, which can spur economic growth. The City of Springfield will be the primary owner of this project and will need to coordinate with both the Missouri Department of Transportation, as well as Greene County, who both have adjacent roadways that will tie into Lake Springfield Drive. The next phase of this project is to extend the ROW preservation ordinance and move into a conceptual planning study building off the previous alignment. Federal funding will be required to build a roadway of this magnitude.

📅 6 - 8 Years



👥 City of Springfield & Necessary Implementation Partners

Southwest Gateway

The southwest Gateway is the primary connection to the new mixed-use district and is an important priority to ensure development success. This project will include partnership with the City of Springfield. The next phase in the development of the Southwest Gateway will be a conceptual planning study to determine final alignment and magnitude of costs. Coordination with OTO will be necessary to put the project on an updated project list for the Long-Range Transportation Plan. The scale of the project will require federal funding, and thus the placement on the Long-Range Transportation Plan is important.

📅 6 - 8 Years



👥 City of Springfield & Necessary Implementation Partners

Kissick Improvements to Farm Road 188 & Roundabout at Farm Road 188

Kissick is an important north/south route that will move traffic from Lake Springfield Drive to the South Activity Area, and the power station site. New improvements will be required to connect traffic via Lake Springfield Drive on Kissick to the South Activity Area. The City of Springfield will be the primary owner of this project. The next phase in this effort is to complete a concept plan for the final design and identify an estimate of costs for implementation for implementation. The roadway improvements and the roundabout with site entry should be completed as one project.

📅 4 - 6 Years



👥 City of Springfield



■ GOAL #5

ACTIVE & PASSIVE RECREATIONAL OPPORTUNITIES

The success of the future of Lake Springfield relies on the understanding that a path to implementation needs to provide additional and sufficient support to the existing parks and recreation system. Previous planning documents and system-wide assessments have indicated a need to enhance financial, operational, and staffing support to continue to provide vital community assets. Recognizing that a robust public sector commitment can serve as a catalyst for private investment, both within the public realm and as an economic driver, is key for implementation

PUBLIC

Develop Lake Springfield Park Site Plan

Public realm investments are going to be critical to success of the private investments identified for the Power Station site and South Activity Area. A final site plan, with concepts and cost estimates should be completed for the Lake Springfield Park area. Developing the park to this level of detail will better identify associated costs with park upgrades and added amenities. This level of detail will be required to move to final site design, as well as identify any funding opportunities.

📅 Within 12 Months

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🐾 Springfield Greene-County Park Board

Trail Feasibility Study

While this plan identifies potential trail connections internal to the Lake Springfield site, further investigating potential alignments, costs associated with these alignments, and end of trip facilities is important for further demonstrating public investment and support of this project. The trail feasibility study should be a partnership of the City Utilities as the landowner, the Ozark Greenways, the Springfield Greene-County Park Board, and include the Missouri Department of Conservation as a key stakeholder to connect to the Nature Center Trail System. While other public realm investments and more critical path items to ensure private development are important up front, this element is an initial item, but not a critical path.

📅 Within 24 Months

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🐾 Collaborative Study with Multiple Partner Agencies

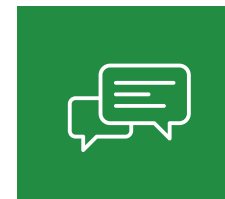
Further Investigate Public-Private Models to Park Enhancements that Accompany Private Development

An active pursuit and showcase of successful public-private partnerships in the parks sector could help leverage the interest of private developers. When private entities collaborate with the public sector, to improve park facilities, organize events, sponsor amenities and more, they are not only enhancing the sense of community, but demonstrating feasibility and benefits to potential private investors. Collaboration with local businesses, event organizers, and cultural institutions provide further community enrichment, but also provides opportunities for private entities to invest in and advertise their products or services. Public-private partnerships can help ease some of the financial burden of managing parks and other public amenities. Incentives to encourage private sector investments, such as tax incentives, naming rights opportunities, or streamlined permitting processes, can foster robust partnerships between parks and private entities.

📅 Immediate – Develop Public Private Partnership Plan Within 18-Months

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🐾 Springfield – Greene County Park Board



■ GOAL #6

DIVERSE & INCLUSIVE ENGAGEMENT

PUBLIC

Develop a Community Relations Plan Phased by Site Development Phases

The proposed total project phase is over to occur over 10 years, and be specific by zone, as identified in the next section. To ensure the high level of collaboration and inclusive engagement that occurred during the planning process is achieved during the implementation process, the project executive should work with a team of community relations professionals to develop a strategic community relations plan to last over the timeline of implementation. The plan should be updated and monitored regularly. Goals should be clearly identified in the plan that set forward clear objectives for inclusive representation and wide-reaching participation both in the Springfield community, and in the greater Springfield region. The community relations plan should be developed within the project branding, so that regular updates can be published publicly, creating a high level of transparency around site development.

📅 Develop In 1 – 2 Years, Regular Update, Monitor and Report

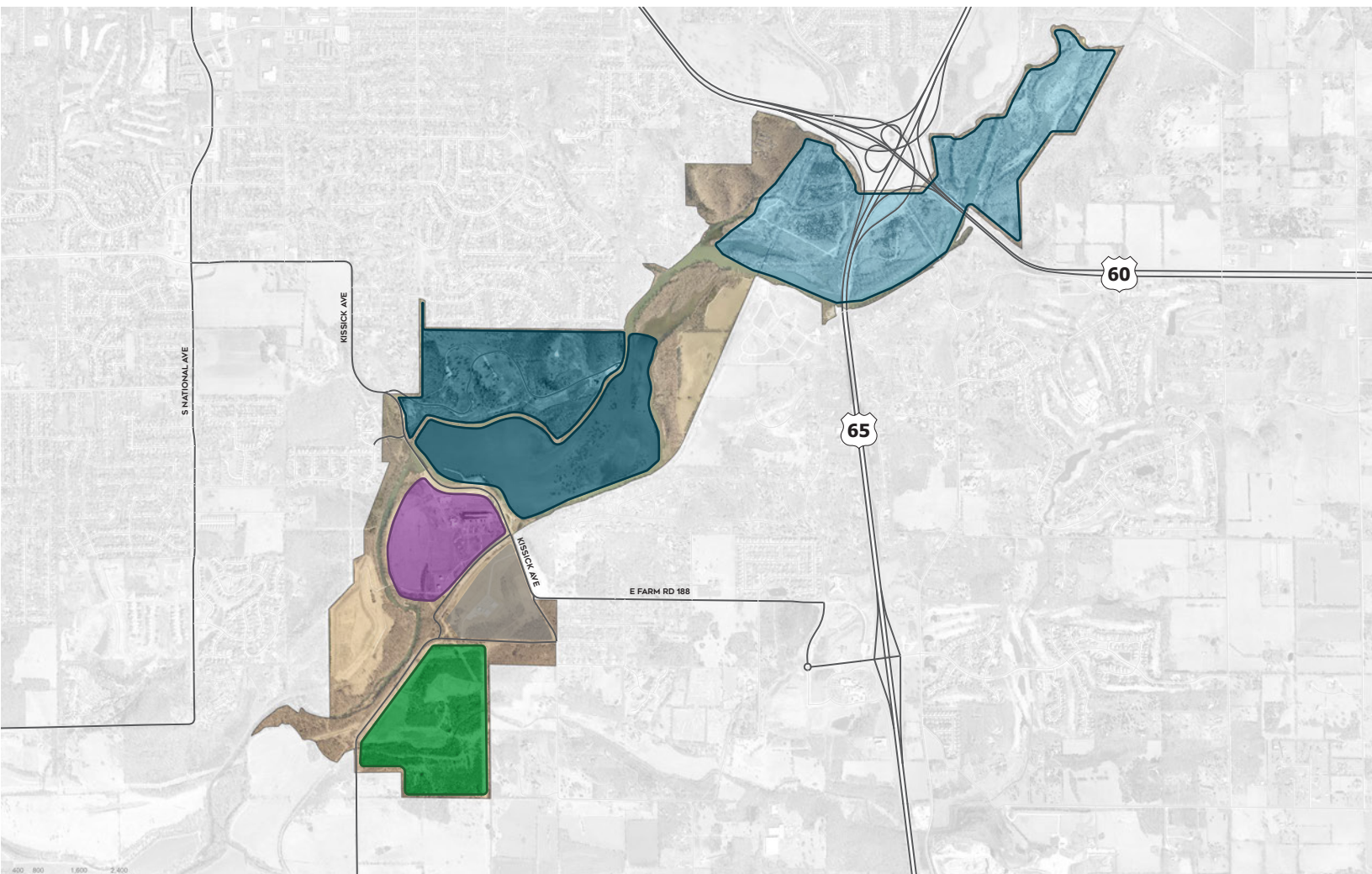
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🐾 Project Executive

PROJECT PHASING

The project is expected to take 10 years to build and will come in phases. Public realm investment will largely draw private interest in the site. The projected phasing is as follows:

North Activity, Lake and Park Area



MAGNITUDE OF COSTS

The magnitude of cost for this project is roughly 2-billion dollars for full build and for all 10 years of phasing. Significant strategies should be considered for funding resources, private development partners, and project prioritization as outlined here. It should be noted these are high level magnitude of cost estimates, that will be further refined during the next phases of projects such as feasibility studies, conceptual and preliminary plans, and refined site development concepts. See **pages 225-227** for detailed cost estimates.

The success of Lake Springfield is an important project for a community that is focused on enhancing quality of life for all residents. Parks and outdoor spaces play a pivotal role in the health and well-being of a place, while at the same time offering spaces for opportunities to engage with other community members, building civic pride and place attachment. Additionally, these free spaces, that are designed for everyone, represent the type of social infrastructure that seeks to strengthen community bonds and enhance social capital.

Parks play an important role in economic development and improved infrastructure. Well-designed parks contribute to increased property values, stimulate local businesses, and attract tourism. Investments in park infrastructure not only enhance the quality of life for residents but also foster economic growth and encourage private investment. Public realm investment is a critical path item to advance the totality of the Lake Springfield project, and create a local, regional, and even national tourism destination. Recognizing Lake Springfield as a vital community asset with significant economic development potential, will not only improve the quality of life for residents and visitors but position the Springfield community as an attractive destination for private investors, creating a sustainable and vibrant ecosystem for years to come.