Dix Park

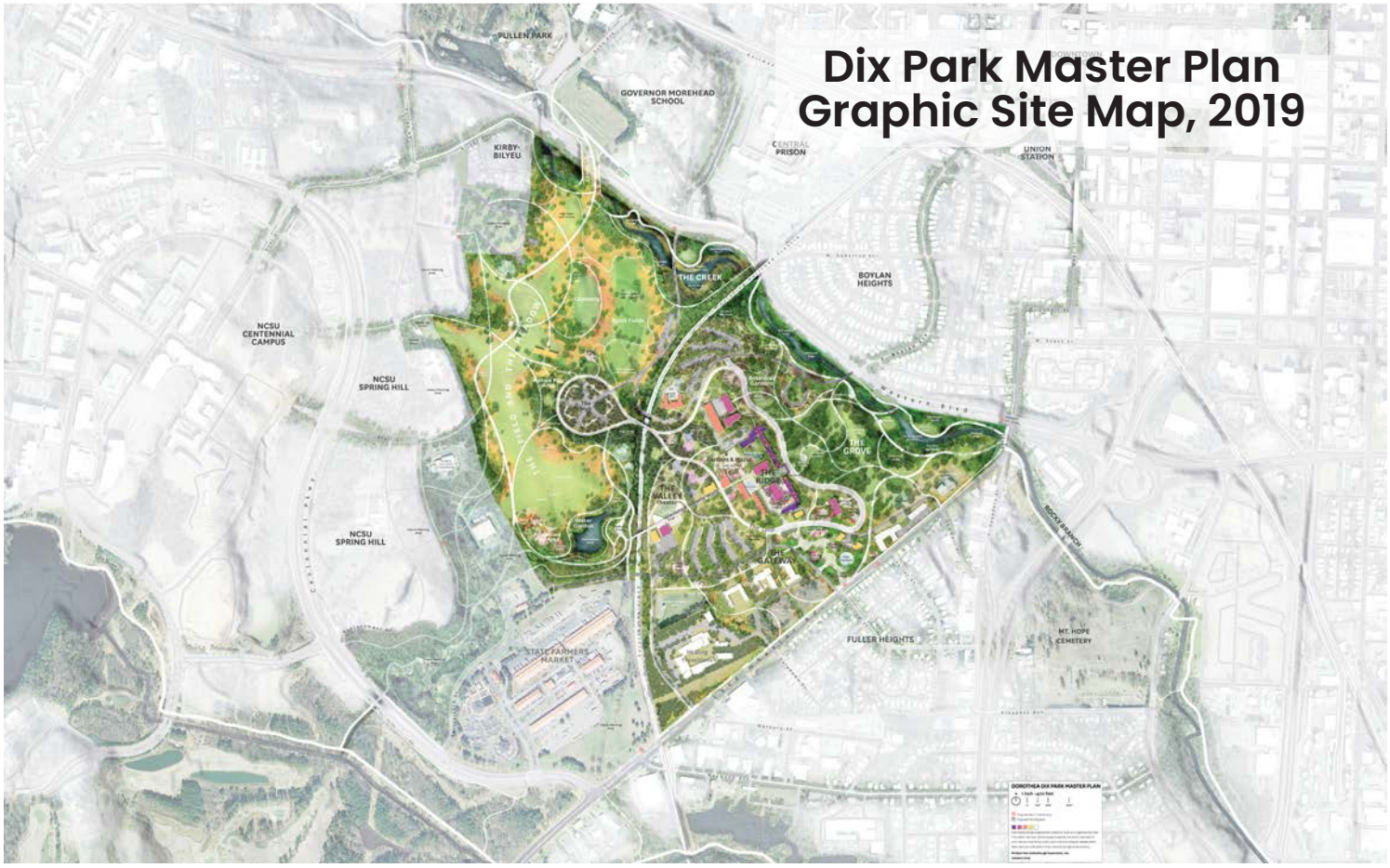
Building + Infrastructure Study
Executive Summary Report

DRAFT

Table of Contents

Background

In July 2015, the City of Raleigh purchased the Dorothea Dix property from the State of North Carolina for $52 million. The purchase of the 308-acre site included 85 buildings, which total approximately 1.2 million square feet of building space. In July 2017, the city hired Michael Van Valkenburgh Associates to lead a Master Plan process, in partnership with the community, to guide the park's future development. After 22 months of planning and community engagement, on February 19, 2019, the Raleigh City Council voted unanimously to approve the Dorothea Dix Park Master Plan and directed staff to develop an implementation plan for the first phase of projects. Council also amended the City's Strategic Plan to reflect this next phase of work; ACR 3.1: "Work with the Community Partners to implement the Master Plan for Dorothea Dix Park."



Staff developed an implementation plan in 2019 (updated in 2021) and identified a collection of capital projects that connect the park to the greater community, repair and enhance the unique landscapes and structures that exist today and create a variety of spaces to offer multiple experiences for all park users. The implementation plan also identified a set of supporting plans and studies needed to ensure the city is a good steward of the park asset, address issues identified but not resolved in the Master Plan process and set the City up for future success. In September 2019, Council endorsed the implementation plan and accepted a donation from the Dix Park Conservancy to kick-start the design of the first major project, Gipson Play Plaza.

Implementation work continued through the pandemic. Dix Park Conservancy, with the support of the City, renovated and opened the Greg Poole, Jr. All Faiths Chapel. The City also initiated two significant planning and feasibility studies, the Rocky Branch Enhancement Project (creek and landfill feasibility study) and the Building and Site Analysis.

Purpose of the Building and Site Analysis

In July 2025, the City will take over responsibility for all buildings comprising of 1.2 million square feet of building space, which is currently occupied and maintained by the Department of Health and Human Services. Currently, DHHS spends about $10.5M annually on the basic maintenance and operations of the campus under lease back. This cost burden shifts to the City at the time of transfer.

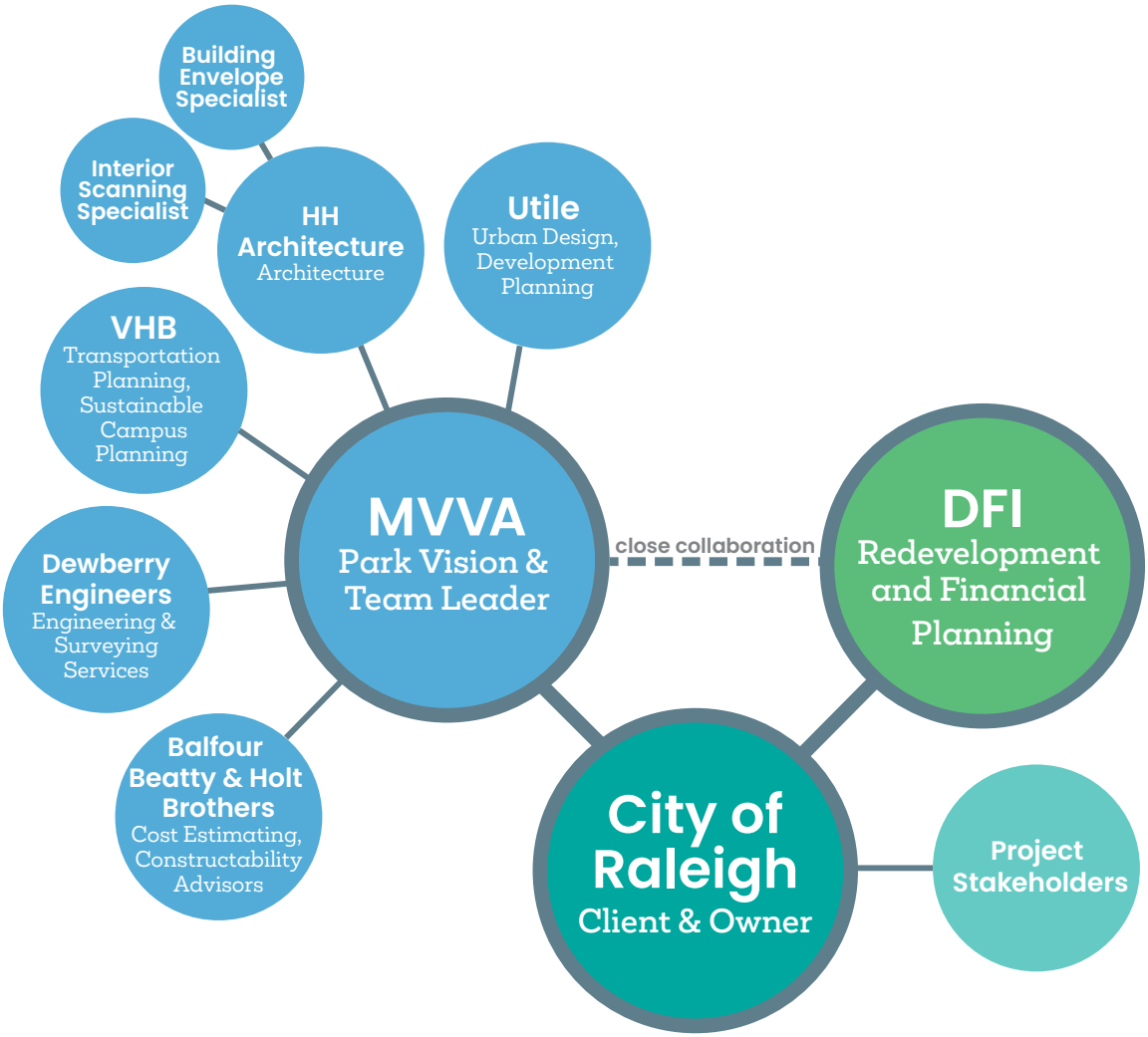
While the Master Plan provided criteria for a series of recommendations on building removal and reuse, it did not determine the exact plan for demolishing, preserving, and adapting buildings. More information was needed to better understand the costs associated with rehabilitation and the opportunities for adaptive reuse. As a result, the scope of work for the Building and Site Analysis (BSA) was developed. The purpose of the BSA is to review and advance the recommendations of the Master Plan through an assessment of the existing conditions of the buildings, including an analysis of all the infrastructure and utilities supporting the built environment.

McBryde Building

Consultant Team

The City formally advertised a request for qualifications (RFQ) for this scope of work. RFQ responses were received in the fall of 2021 and an interview process and reference checks were completed in early 2022. Staff from multiple departments collaborated on the review process. The consensus from staff recommended the contract be awarded to Michael Van Valkenburgh Associates (MVVA). MVVA partnered with local firms including HH Architecture, Dewberry Engineers, VHB Transportation Consultants, and a joint venture between Balfour Beatty and Holt Brothers Construction.

The City also engaged the Development Finance Initiative (DFI) in the UNC Chapel Hill School of Government to work in collaboration with this effort to develop a market analysis and financial feasibility of building reuse that complements the core principles and vision outlined in the Master Plan. Together, the work of the MVVA team and DFI refined and advanced the recommendations of the Master Plan to inform the demolition, reuse and renovation of buildings on the property.



Existing Conditions Summary

One of the major components of the study was to document the existing conditions of all the buildings and utilities at the park. The major findings from this analysis of existing conditions are as follows:

- All buildings will require some level of intervention to meet current codes and standards.
- A full hazardous materials study is needed for all buildings and utility systems prior to removal/renovation.
- There are significant accessibility issues site wide.
- Overall, the existing utility systems are at the end of their usable life and require replacement.
- Decommissioning the central heating and cooling systems will result in cost and resource savings over time.
- Some of the existing systems do not meet current requirements for life/safety. For example, flow for fire protection is inadequate based on current standards and codes.
- Interim solutions will be required to support ongoing operations while long-term improvements are planned, design and constructed.

Dix Park Campus + Downtown Raleigh

In addition, DFI completed a market study of development activity around Dix Park. Several major developers of adjacent projects were interviewed. Major findings from the market study are as follows:

- In the Lake Wheeler Road corridor several high density mixed-use, multi-phase developments are either under construction or in planning and design stages. The total tax assessed value for these developments is estimated to be greater than $1.3B.
- A few of the projects include, The Weld, The Rockway (formerly known as Park City South) and the recently rezoned Baker Roofing property assemblage.
    - According to interviews with the developers, permits from the City of Raleigh and articles regarding these projects, the potential development along Lake Wheeler Road in the coming years could bring over 3,500 new residential units, and over 1.7M square feet of commercial space.
- The developers interviewed described Dix Park as a key amenity and asset to their projects and relayed that the development of the park is a critical factor for their desire to invest in this area of Raleigh.

Adjacent Development Activity

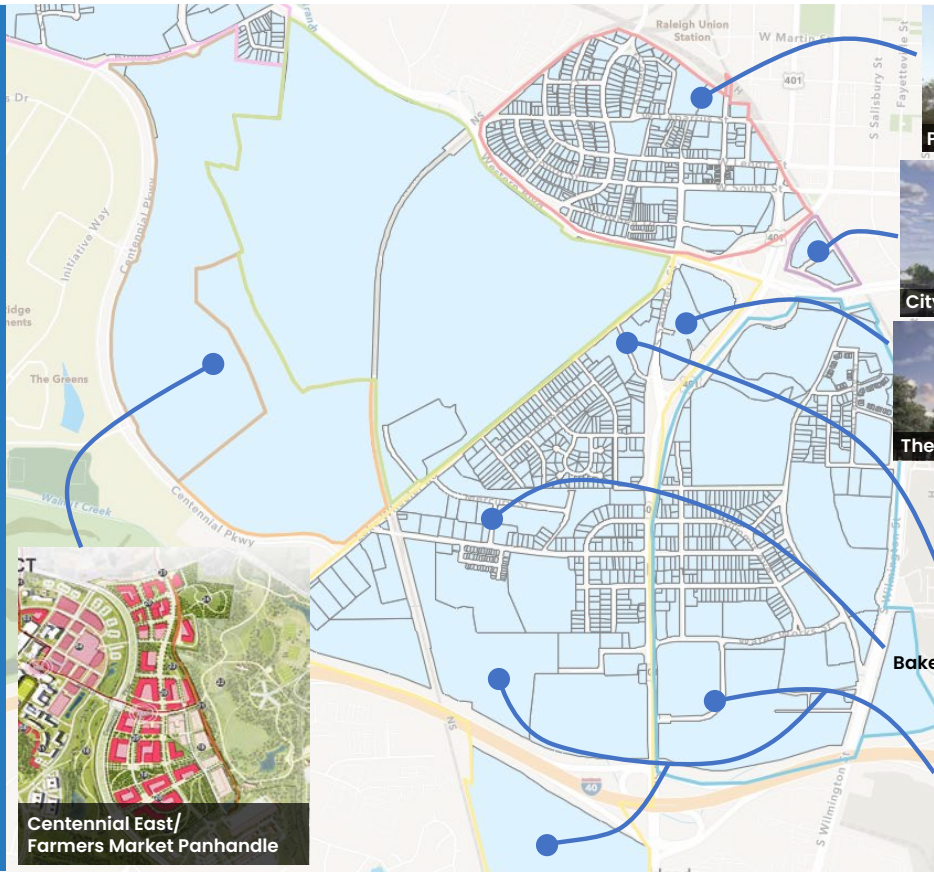
8,000+
Residential units

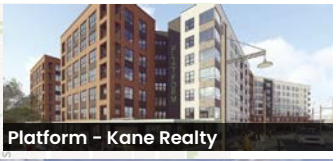
1000+
Hotel keys

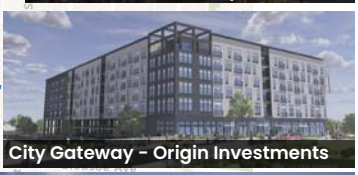
~5 M
Commercial sq ft

(Doesn't include program at NC State University Centennial Campus East, Dix Park, or State Farmers Market)

Source: Triangle Business Journal, Developer Deal Books, Conversations with Developers



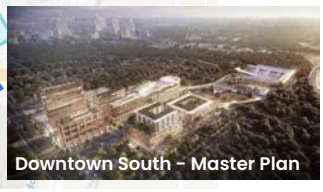

Platform - Kane Realty


City Gateway - Origin Investments


The Rockway - Kane Realty


The Weld - SLI Capital

Baker Roofing Rezoning - 20 Stories


Downtown South - Master Plan

Centennial East/
Farmers Market Panhandle

Key Findings Summary

Based on these findings, the consultant team reviewed and refined recommendations related to demolition, phasing, project finance, adaptive reuse concepts, urban design, transportation, and utilities. It is important to note that most of the following recommendations are only feasible once DHHS vacates the park. However, staff has identified a series of short-term implementation efforts that maintain park development momentum and set-up future success.

The overarching recommendations of the study are as follows:

- Mobilize major demolition once.
- Initiate site-wide design for infrastructure systems.
- Plan and build complete park areas.
- Prioritize the adaptive reuse of existing buildings.
- Develop a range of funding options to support park operations.

Mobilize Major Demolition Once

The Master Plan recommended the removal of 53 buildings on campus. This study recommends adding the buildings along Lake Wheeler Road (Taylor, Anderson, Clark and Broughton) to the list to be demolished for the following reasons:

- **Costs to Rehabilitate-** The assessment of existing conditions for Taylor, Anderson, Clark and Broughton buildings revealed that there are significant repairs and upgrades required to meet current building codes and city standards for adaptive reuse including the replacement of most major systems (e.g., mechanical, roof, windows) and significant building circulation and accessibility upgrades (e.g., regrading, addition of elevators).
- **Fit for Reuse**- The buildings were originally built as patient dormitories. That configuration of small, individual rooms makes these buildings difficult to retrofit for contemporary uses. Demolition of portions of existing structure to enlarge compartmentalized spaces would be necessary.
- **Conflict with Future Lake Wheeler Road**- Both Taylor and Anderson Buildings sit within Duke Energy's easement and the future Lake Wheeler Road right-of-way. By removing these two buildings, better bicycle and pedestrian connections can be built to support the park and surrounding communities.
- **Fit for the Park**- An early effort in the Building and Site Analysis was to evaluate the feasibility for a potential cultural institution anchor (e.g., children's museum) in the park. That study evaluated the park's physical (topography, location, view corridors, etc.) and infrastructure (roads, utilities, parking, etc.) capacity. The analysis resulted in test-fit scenarios that evaluated the benefits and constraints of various sites in the park. The study recommended that the most ideal sites for a new construction cultural institution would be along Lake Wheeler Road.

Cultural Institution Anchor Site Suitability Analysis

Children's Museum Feasibility Study Site Analysis | MVVA

In total, 57 of the 88 existing buildings (665,000 square feet) have been identified for demolition, with the remaining 31 (535,000 square feet) identified for adaptive reuse and/or preservation. The study recommends one mobilization of demolition/deconstruction activities once DHHS vacates the campus. The benefits of one-time mobilization are as follows:

- **Cost Savings**- By mobilizing once, the City can expect significant cost savings by reducing escalation and inflation risks in addition to resource efficiencies of one mobilization versus multiple. In addition, the City would avoid the annual cost for basic maintenance and operations (mothballing) of the buildings to be demolished, estimated at $2.75M annually.
- **Net Increase in Park Space**- By following the demolition plan as presented, the City can expect an increase of 82-acres (46%) in high quality open space for public use. This also results in a decrease of 19-acres (58%) in impermeable surfaces (parking lots and roads).

+ 82 Acres

46% Increase in High Quality Open Space for Public Use

− 19 Acres

58% Decrease in Impermeable Surfaces

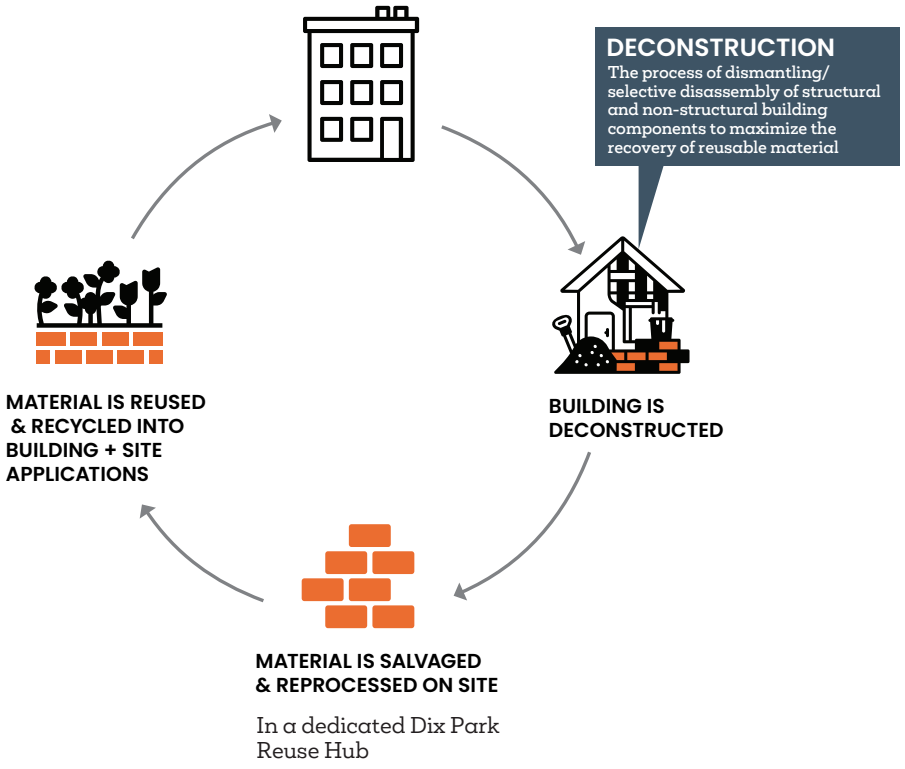
- **Accelerate Adaptive Reuse**- The opportunities for adaptive reuse (and associated revenue) of the remaining buildings would also be realized sooner.
- **Avoid Nuisance and Associated Maintenance Challenges**- By removing these structures, the city reduces the challenges and costs associated with maintaining unoccupied buildings (e.g., vandalism, rapid deterioration).

There are a few considerations with this strategy including the upfront funding required to complete this work. Early cost estimates for building abatement and demolition, a portion of the work required, range from $15-20M. The full scope of work, including abatement, demolition, temporary utilities, and building preparation are estimated to be $30M. It is assumed that potential partners for specific redevelopment projects would have the financial capacity to take on demolition and abatement costs related to those projects.

In addition, the study recommends evaluating the potential to salvage and reuse some of the deconstructed building materials in park development. For example, many of the buildings to be demolished are brick. The deconstructed bricks could be reused for gabion walls for stormwater filtration, retaining walls, seating, or other site applications. Benefits of this strategy include reducing the amount of material transported to landfills, avoidance of landfill tipping fees, etc.

In addition, to prepare for this period of demolition, this study also recommends updating the hazardous materials study and obtain better cost estimates.

Deconstruction & Material Reuse



Dorothea Dix Park Building & Site Analysis | MVVA | 2023

Short Term Implementation

In advance of the full transfer of buildings from DHHS to the City, there is an opportunity to work with the State to identify currently vacant buildings that are slated for future demolition to begin the work now. In 2022, the City demolished seven small buildings and now has plans to work with the Dix Park Conservancy and Interfaith Food Shuttle to create a community garden in the newly created park space.

The City has identified an additional 11 small buildings for removal. Each structure is less than 1,000 SF. All have documented asbestos-containing materials, and all are disconnected from the larger campus utility system. Based on this, staff recommends approval of the request to DHHS to release these small buildings for abatement and removal. Funding is available in the 2023 Parks Capital Improvement Program budget to support this work.

Proposed Next Round of Demolition

Initiate Site-Wide Design for Infrastructure Systems

The consultant team investigated all the infrastructure systems at the park including water, sanitary sewer, storm water, gas, electric, thermal, and telecommunications. Overall, most of the systems are at the end of their usable life. Key findings of the major systems are as follows:

- **Water**- Most of the water mains were installed pre-1974 and have reached the end of their usable life. Fire flow protection and fire hydrants do not meet current requirements or code. Low water pressure across the park suggests leaks and inadequate sizing of pipes.
- **Stormwater**- Most of the stormwater system is also aged. The consultant team found clay, metal, and plastic pipes with limited usable life. Large tree roots and dense vegetation threatens pipes and conveyance capacity of outfalls. Slope failures, erosion and excessive sediment and litter accumulation observed at storm inlets in the Rocky Branch channel.
- **Sanitary Sewer**- Most of the sanitary sewer system and manholes were installed in the 1950s and have reached the end of their usable life. Major trunks of the systems are vitrified clay pipes and require replacement.
- **Thermal Infrastructure**- Existing buildings on campus are served by centralized chilled water and steam plants. Both systems are nearing the end of their usable life per current requirements. Both systems run through a daisy-chain of buildings in concrete tunnels (which are in good structural condition). Demolishing buildings along the chain will impact buildings 'downstream.' Interim heating and cooling solutions will be needed.

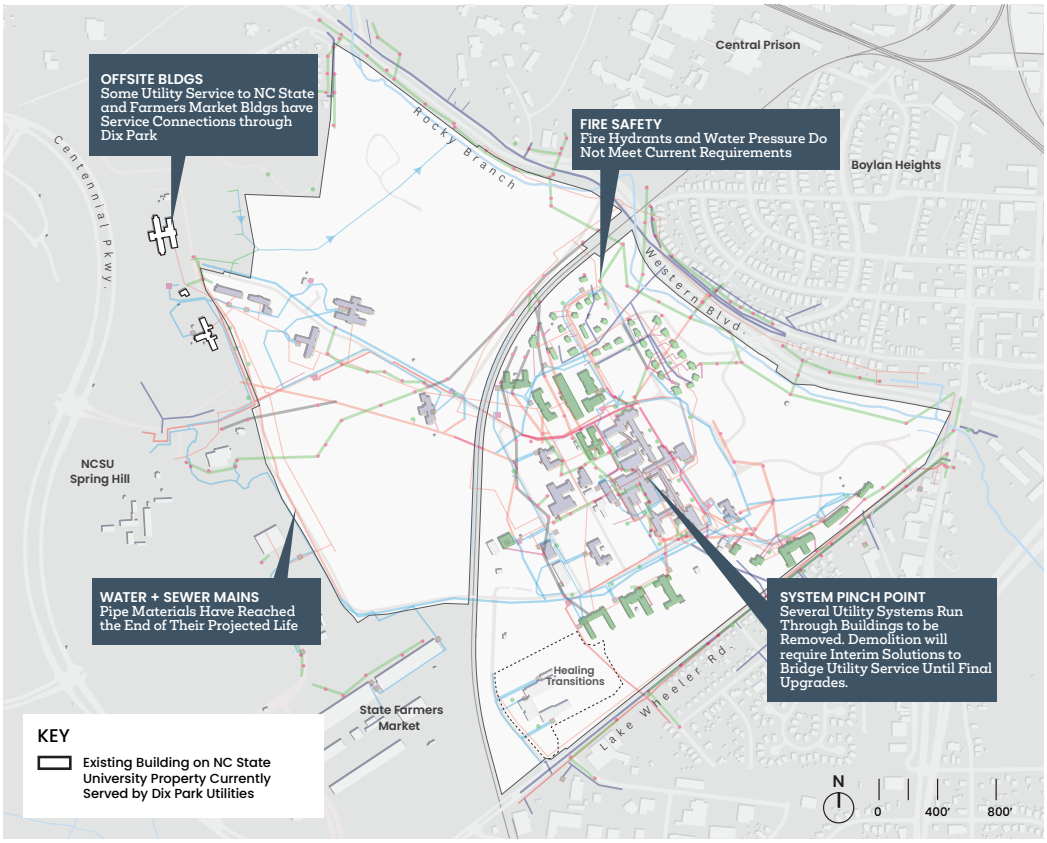
The study recommends replacing all infrastructure on campus and coordinating the building demolition plan so that the buildings at the 'end of the line' are demolished first so that utilities can be abandoned, and overall operating costs reduced.

Steam Plant

Short Term Implementation

In the short-term, the study recommends defining the scope and timeline for the City's takeover of the water, sewer, and storm systems in the park. In parallel, the study recommends initiating the schematic design for utilities to support the long-term vision established in the Master Plan. By doing so, the City can identify opportunities for cost-avoidance in the short term while planning for longer-term decommissions of existing systems including the centralized healing and cooling systems. Staff will come back to Council with additional information and a proposed scope of work in 2024.

Existing Utilities Takeaways



1. Overall - the Park's existing utility systems are at the end of their usable life and require replacement
2. Short Term: Identify opportunities for cost avoidance and improving efficiency (end unneccesary services; gradually "turn down" central heating/cooling to match reduced demand)
3. Long Term: Decommission central heating/cooling systems for cost and resource savings
4. Next in Planning: Site-wide schematic design for utilities to support long term / Master Plan vision.
5. Next in Planning: Define scope and timeline for potential City ownership of specific utility systems inside Dix Park (water, sewer, storm)

Dorothea Dix Park Building & Site Analysis | MVVA | 2023

Plan and Build Complete Park Areas

The study recommends a simpler phasing plan than what was originally envisioned in the Master Plan. As a reminder, the original phases in the Master Plan were organized geographically and could proceed in any order based on opportunity to allow construction in one area without impacting other areas of the park. The main updates to the phasing plan are as follows:

- **Phase 1**- Builds on the momentum of projects already underway (Gipson Play Plaza, renovation of Stone Houses, renovation of Dix Park Chapel) and shifts the majority of the adaptive reuse projects to the first phase. The major projects in Phase 1 are: Dix Park Chapel (complete), Gipson Play Plaza (in progress), Stone Houses (in progress), Grove, Creek (feasibility study in progress), Loop, opportunities associated with the adaptive reuse of buildings and one major parking area.
- **Phase 2**- Focuses on the west side of the campus. The major projects in Phase 2 are the multipurpose fields and sports courts, enhancement of the Big Field and cemetery and the creation of an additional major parking area.
- **Phase 3**- Creates a major performance venue in the park. More study is needed to determine the appropriate size and scale of a venue in Dix Park. The other major projects in Phase 3 are the water garden at the base of the Big Field and an additional major parking area.

Short Term Implementation

Funding was set aside in the 2022 Parks Bond to support the next phase of design projects at Dix Park. Staff recommends two projects to fund: the continuation of the Rocky Branch Enhancement Project and the planning and design for the Grove. Staff will come back to Council with additional information early in 2024.

Existing Rocky Branch

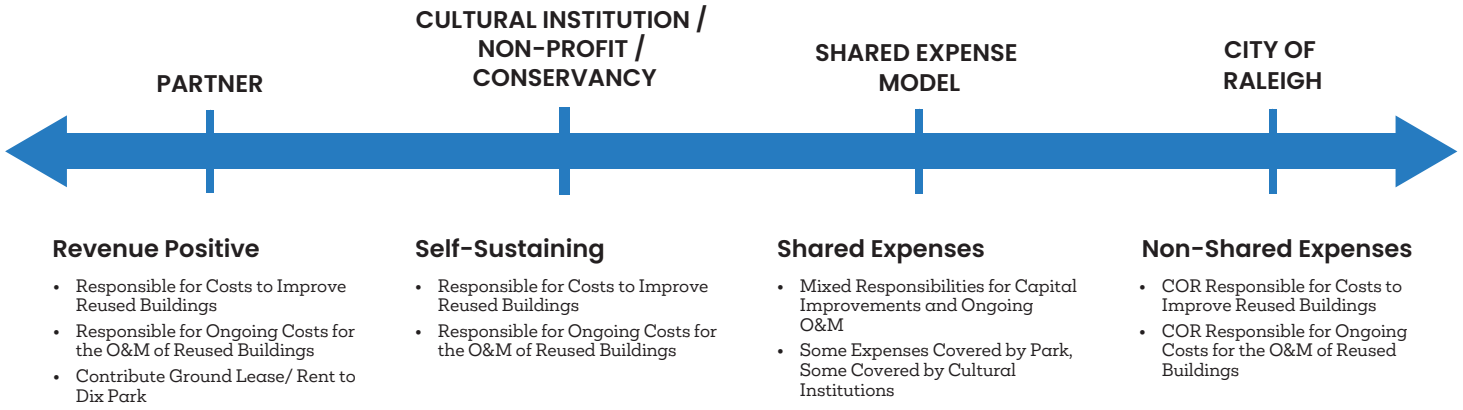
Existing Grove Landscape

Prioritize the Adaptive Reuse of Existing Buildings

During the Master Plan process, there were several discussions on the value of keeping existing buildings. Public input varied from wanting to remove all buildings to wanting to preserve all buildings, with most input falling in between. Ultimately, the Master Plan recommended a balanced approach to building retention and removal. The plan suggested that selective investment and demolition would provide the park with a balance of indoor and outdoor amenities, preserve the most historic structures, and facilitate the development of major park elements including the expansion of the Big Field, expansion of the Grove, creation of a series of green spaces and gardens, and development of the Loop.

This study reinforces this recommendation and takes it a step further by suggesting both a financially realistic and sustainable approach to adaptive reuse. The key recommendations for adaptive reuse are as follows:

- **Multi-Tenant Strategy**- The city should seek a range of operating partners to support a diversity of uses that benefit the park and the community. A mix of tenants is essential to creating a variety of programs that support the park both programmatically and financially.



- **Cost Avoidance and Revenue Generation Opportunities**-Costs for adaptive reuse should be covered by operating partners, with the potential for some to be revenue positive for the park.
    - For example, a ground lease paid by a developer to the City to develop a central hospitality and public amenities complex in the park is estimated to generate $1.1M in revenue each year once the lease is initiated. An additional $500,000 would be generated in City of Raleigh property taxes each year once the improved property is operational. Finally, by turning the operations of those buildings over to the developer partner, the City would save an additional $1.5M in avoided maintenance and operations costs each year. Taken together, the cost avoided, and revenue generated from this opportunity would deliver at least $2.6M per year in value to the City.

[1] Based on analysis by the Development Finance Initiative. The property tax revenue would be reduced in the first five years due to brownfields tax exclusions.

Short Term Implementation

The City has identified the following two short-term adaptive reuse projects:

- **Lineberger Building**- Staff has identified the Lineberger Building as the future location for Dix Park operations. In the interim, the City also needs to provide a space for operations currently located in Smoky Hollow including mounted patrol.
- **Brown Building**- Staff has identified Brown Building to support Gipson Play Plaza with space for additional restrooms, concessions, and office. The adaptive reuse of Brown also presents a public-private partnership opportunity with Dix Park Conservancy.

Staff recommends approval of the request to DHHS to release Brown and Lineberger Building. Funding is available in the 2022 Parks Bond, to support the design feasibility of these buildings. In addition, staff recommends authorization to develop a process to evaluate and solicit a range of operating partners to support a diversity of uses that benefit the park and the community.

Develop a Range of Funding Options to Support Park Operations

This study also estimated that the total projected annual operations and maintenance costs at full park build-out is $16M which includes $15M for the park and ~$1M for city-operated buildings. Large, destination parks, like Dix Park, fund their operations and maintenance through a mix of sources including the following:

- Public funding
- Contributed income (e.g., donations and grants)
- Earned income (e.g., concessions, event rentals, fees)
- Value capture (e.g., real estate proceeds, special assessment districts)

The mix of sources provides funding flexibility and stability to adjust to various economic and political conditions. Over time the funding mix will change as the park and the surrounding communities also evolves.

Operations and Maintenance

SHORT TERM 1-5 YEARS

PUBLIC FUNDING

General Fund

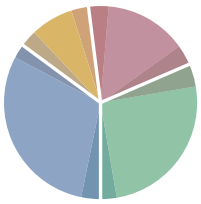
CONTRIBUTED INCOME

Grants
Donations
Membership Fees

EARNED INCOME

Events
User/Rental Fees

MID TERM 5-10 YEARS



PUBLIC FUNDING

General Fund

CONTRIBUTED INCOME

Grants
Donations
Membership Fees
Naming Rights

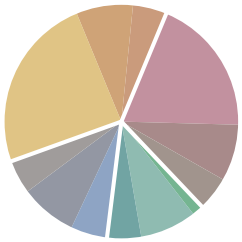
EARNED INCOME

Events
User/Rental Fees
Concession Sales

VALUE CAPTURE

Special Assessment District
On-Site Real Estate Development
Parking Fees

LONG TERM 10+ YEARS



PUBLIC FUNDING

General Fund

CONTRIBUTED INCOME

Grants
Donations
Membership Fees
Naming Rights

EARNED INCOME

Events
User/Rental Fees
Concession Sales

VALUE CAPTURE

Special Assessment District
On-Site Real Estate Development
Parking Fees

All the cost information, revenue estimates and phasing assumptions developed through this study are centralized in a comprehensive financial model. The model can be used to analyze the park's capital, operating revenues and expenses year-by-year over the lifetime of the project to help inform decision-making.

Short Term Implementation

One of the potential funding sources identified is a Municipal Service District (MSD). A MSD is a defined area where the city levies an additional property tax in order to provide enhanced services or projects that most directly benefit the properties in that district. DFI analyzed the existing and future tax revenues projected in the neighborhoods being developed around the park and estimated that over $5.6B of taxable development is projected in the area around the park in the next 20 years and depending on the boundary of the district, a $0.10 MSD tax rate could generate between up to $1.2M to $5.1M annually at full build out.[2]

Establishing a new MSD requires several steps starting with direction from City Council to complete a feasibility report. Staff recommends Council direct staff to complete a feasibility report to establish an MSD around Dix Park.

[2] This rate could increase and/or decrease depending upon the determined MSD rate set by the City of Raleigh. The overall MSD revenue generated from the buildouts is not accounting for the potential brownfields agreements that are in place that would decrease the tax revenue generated for the first 5 years the property is put back in service.