



# ERINSBROOK PARK

## Master Plan

Final Report  
May 2017



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## *Prepared For:*

The City of Raleigh Parks, Recreation and Cultural Resources Department  
Attention: Elizabeth Houck, Project Manager

## *Prepared By:*

obs landscape architects  
Brian Starkey, PLA, Principal, Landscape Architect  
Jon Blasco, Project Manager  
Michael Alderman, Project Designer  
  
Weatherill Engineering  
Mike Zaccardo, PE, Project Engineer

---

## *City of Raleigh Mayor and City Council*

Nancy McFarlane, Mayor  
Russ Stephenson, At Large  
Mary-Ann Baldwin, At Large  
Richard A. “Dickie” Thompson, District A  
David N. Cox, District B  
Corey D. Branch, District C  
Kay Crowder, District D  
Bonner Gaylord, District E

# ERINSBROOK PARK MASTER PLAN REPORT

## *City of Raleigh Parks, Recreation and Cultural Resources Staff*

Name	Title
Diane Sauer	Director
Stephen Bentley	Assistant Director
Shawsheen Baker, PLA	Capital Projects Administrator
Elizabeth Houck, PLA	Landscape Architect, Project Manager
Luke Wallenbeck	Senior Planner, Project Assistant
Laura Kordulewski	Planning Tech
Cassie Schumacher-Georgopoulos	Senior Planner
Wayne Gibson	District Crew Supervisor
Brian Johnson	Assistant Parks Superintendent
David Shouse	Natural Resource Administrator
Brian Smith	Land Stewardship Program Director
Cara McLeod	Marketing Communications Coordinator
Kellee Beach	Marketing Communications Administrator

## *Citizen Planning Committee*

Member	Affiliation
James Bowen	Woodlawn
Tommy Dalton	Harrington Grove
Josh Eaton	Leesville Hollow
Yoki Feliz	Dominion Park
Lee Hilts	Woodlawn
Brandy Jabkiewicz	Oak at Harrington Grove
Sandra Liles	Woodlawn
Forrest Parker	
Catherine Penilla	Woodlawn
Chailendra Perry	Charleston Homes at Alexander Place
Katherine Quinn	Commons at Harrington Grove
Jim Read	Woodlawn
Kim Soklow	Leesville Hollow
DeShelia Spann	Woodlawn
Kathryn Strickland	Leesville Ridge
Suzette Harrington	NWCAC
Patrick Buffkin	PRGAB

## *City of Raleigh Parks, Recreation and Greenway Advisory Board*

Richard Bostic  
 Patrick Buffkin  
 Christopher Dillon  
 Kendall Harris  
 Dexter Herbert  
 Jennifer Hoverstad  
 Brad Johnson  
 Carol Love  
 Clodagh Lyons-Bastian  
 Shane Mellin  
 David Millsaps  
 Amy Simes  
 Dave Toms  
 Charles Townsend  
 Jennifer Wagner

## *Abbreviations*

CPC: Citizen Planning Committee  
 CAC: Community Advisory Committee  
 PRGAB: Parks, Recreation, Greenway Advisory Board  
 PRCR: City of Raleigh Parks, Recreation and Cultural Resources Department  
 DRT: Design Review Team

# 2 EXECUTIVE SUMMARY



obs landscape architects, in conjunction with Weatherill Engineering, is pleased to present this Master Plan Report for the future Erinsbrook Park. The park master plan is a product of a community engagement process and is intended to fit their needs for decades to come.

The development of the Erinsbrook Park Master Plan took place over the course of 11 months. Using a collaborative and consensus-seeking process, obs landscape architects, the selected design consultant, worked closely with City of Raleigh Parks, Recreation and Cultural Resources staff, a Citizen Planning Committee (CPC), and the general public to develop a master plan for this future park in Northwest Raleigh. The inclusive process ensures that the future park will meet the needs of the City and the surrounding community.

The process was structured into three distinct phases. Conducting initial site analysis and selecting a CPC were the two major tasks comprising Phase One. The Situation Assessment, a summary of the analysis collected and the proposed community involvement, was adopted by City Council in July 2016. The second phase consisted of concept development. The design team worked closely with the CPC to conduct the planning process, beginning with program development and ending with a final draft master plan and report. Finally, the third phase consisted of presenting the final draft plan and report to the CPC, the North West Citizen's Advisory Council and the Parks, Recreation and Greenway Advisory Board. The last step was to present the final master plan and report to City Council for adoption.

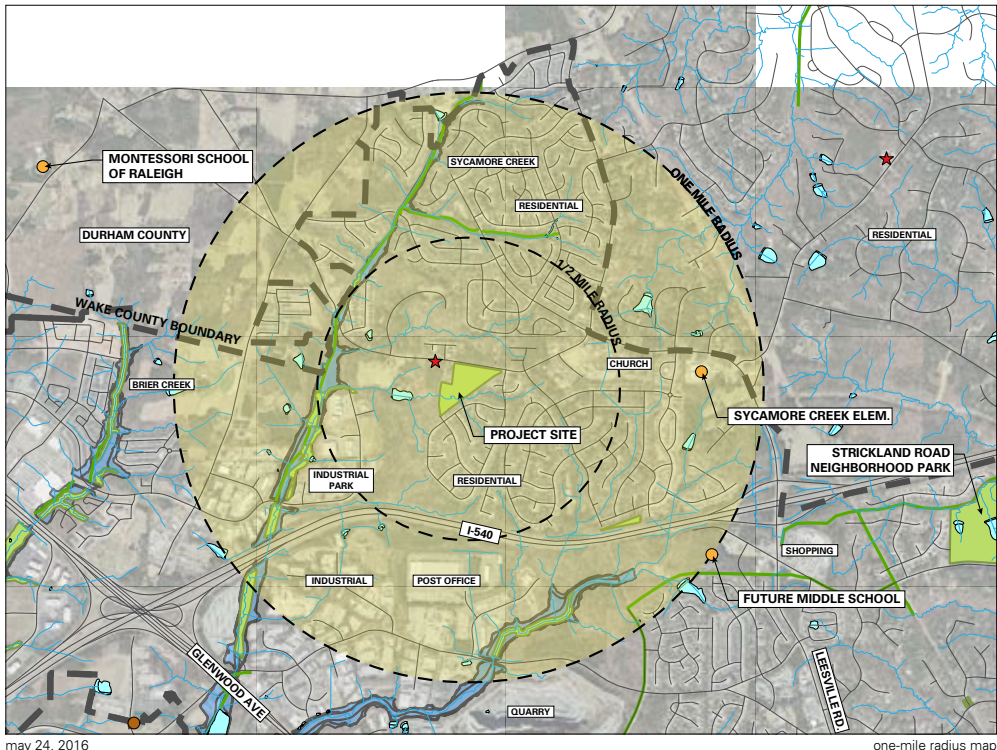
The park design takes advantage of the site's natural character, featuring active play space and parking in the most developable areas of the site as well as passive recreation opportunities in the more sensitive areas. A trail network loops through the site providing access to the stream, creates external connections, and links recreation spaces. There are ample opportunities for directed and imaginative play, as well as a variety of gathering spaces aimed at accommodating a diverse range of visitors.

In keeping with the City of Raleigh's mission towards sustainable solutions, it was critical to protect the sensitive natural features of the site, including the stream and the old-growth trees. Low impact design strategies, such as sustainable stormwater mitigation and appropriate trail surface selection, are promoted throughout the plan and report. The use of these types of solutions present an opportunity to educate visitors on the importance of protecting resources and how the park demonstrates that mission.

Through the public engagement process, a sense of ownership has been instilled in the community. Further public input will be important as the park moves into the implementation phase. This will help maintain and promote that ownership, which will be critical to the longevity of the park. After all, this is the community's park.







may 24, 2016

one-mile radius map

- ★ FIRE STATION
- SCHOOL
- STREAM
- FLOODPLAIN
- EMS STATION
- OPEN SPACE
- GREENWAY
- WATER

## Introduction

The City of Raleigh Parks, Recreation and Cultural Resources Department and landscape architects, in conjunction with Weatherill Engineering, collaborated with the local community to develop a Master Plan for the future Erinsbrook Park located at 11921 Leesville Road in North Raleigh.

The site for the future Erinsbrook Park is a 13.3 acre plot of vacant land immediately surrounded by residential land use. The site abuts the Woodlawn neighborhood and is directly adjacent to several neighborhoods on the north side of Leesville Road, including Dominion Park. A new neighborhood is planned for the west side of the future Englehardt Road extension, which is the western edge of the Erinsbrook Park site.

The consensus-seeking design process was buoyed by a public engagement process, building a sense of ownership of the park. A community-based advisory committee (Citizen Planning Committee) was formed and consulted throughout the master plan process. The design team met with the advisory group four times and also held three separate public workshops, reaching the wider community. As part of public engagement, the plan and process were presented to the Northwest Citizen’s Advisory Council, the Parks, Recreation, Greenway Advisory Board and the Raleigh City Council. The design of the park is a direct result of working with the community and City of Raleigh staff, as described in the following section.

# ERINSBROOK PARK MASTER PLAN REPORT

## ERINSBROOK PARK MASTER PLAN

Project Schedule (rev. Dec. 13, 2016)

Meeting	Task / Discussion	Date	Time	Location
CPC #1	Introduction / Analysis / Program Development	Thurs, Sept. 8, 2016	6:30 PM	St. Francis / Cupertino Room
Public Workshop #1	Analysis / Site Walk / Initial Program Ideas	Sat., Sept. 24, 2016	10:00 AM	On-site / St. Francis / Cupertino Room
DRT #1	Review analysis and input from CPC/Public Workshop	Thurs, Oct. 20, 2016	10-11AM	PRCR/RMB 609
CPC #2	Program Confirmation / Review Alternative Master Plan Concepts	Tues., Oct. 25, 2016	6:30 PM	St. Francis / Fellowship Hall
Public Workshop #2	Present Alternative Master Plan Concepts	Thurs., Nov. 10, 2016	6:30 PM	St. Francis / Cupertino Room
CPC #3	Review Draft Master Plan	Tues., Dec. 13, 2016	6:30 PM	St. Francis / Cupertino Room
Park Planning	Review Draft Master Plan	Wed., Dec. 14, 2016	1pm	RMB 303
Development Services	Review Draft Master Plan w/ staff (review city code implications)	Mon., Dec. 19, 2016	11AM	OEP Rm 701
DRT #2	Review Draft Master Plan and input received	Thurs., Jan 5, 2017	10AM	RMB 609
Public Workshop #3	Review Draft Master Plan	Tues., Jan. 17, 2017	6:30 PM	St. Francis / Cupertino Room
DRT #3	Review Draft Master Plan, Report, and input received from CPC #3 and public workshop #3 (email only)	Tues, Jan. 24, 2017	N/A	Email to DRT
CPC #4	Present Final Draft Master Plan	Tues., Feb 7, 2017	6:30 PM	St. Francis / Cupertino Room
NWCAC	Present Final Draft Master Plan	Tues., Feb 14, 2017	7PM	Lake Lynn Community Center
PRGAB	Present Final Draft Master Plan	Thurs., March. 16, 2017	6PM	TBD
PRGAB	Action on Final Draft Master Plan	Thurs., April 20, 2017	6PM	TBD
City Council	Present Final Master Plan	Tues., May 2, 2017	1PM	Council Chambers

Phase 2

Phase 3

### LEGEND

CPC : Citizen Planning Committee

DRT : Design Review Team (City of Raleigh Parks, Rec, Cultural Resources staff)

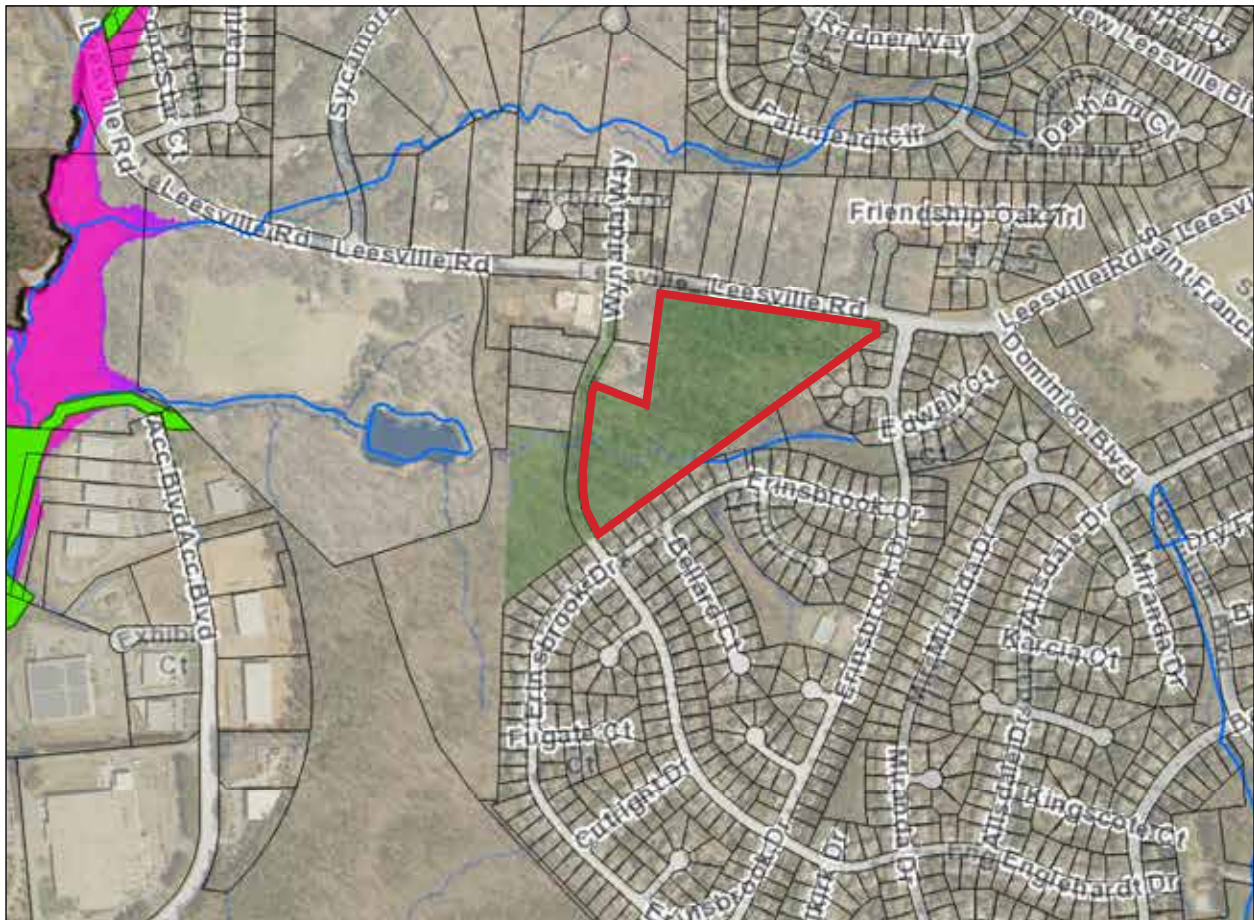
PRGAB : Parks, Recreation, Greenway Advisory Board (City of Raleigh advisory board)

NWCAC : North West Citizen's Advisory Council

RMB: Raleigh Municipal Building

OEP: One Exchange Plaza





## *Project Schedule*

The master planning for this park was approximately a 11-month process and it was divided into three distinct phases. The first phase consisted of preparing a Situation Assessment, selecting a Citizen Planning Committee based on the standards set forth by the City of Raleigh Parks, Recreation and Cultural Resources Park Planning process and conducting an analysis of the site's opportunities and constraints for development.

Developing a concept plan through a consensus-seeking process was the main focus of the second phase of the master planning project. This process involved working with the Citizen Planning Committee, the public at large and the Design Review Team (representatives of several different departments within the City) to develop a program statement and concept that was inclusive of the community's desires while fitting into the Parks, Recreation and Cultural Resources System Plan, adopted in 2014.

The third and final phase of the master planning process consisted of obtaining approvals of the final draft master plan, including adoption by City Council. The full project schedule is shown on the previous page.

# ERINSBROOK PARK MASTER PLAN REPORT

## *Situation Assessment*

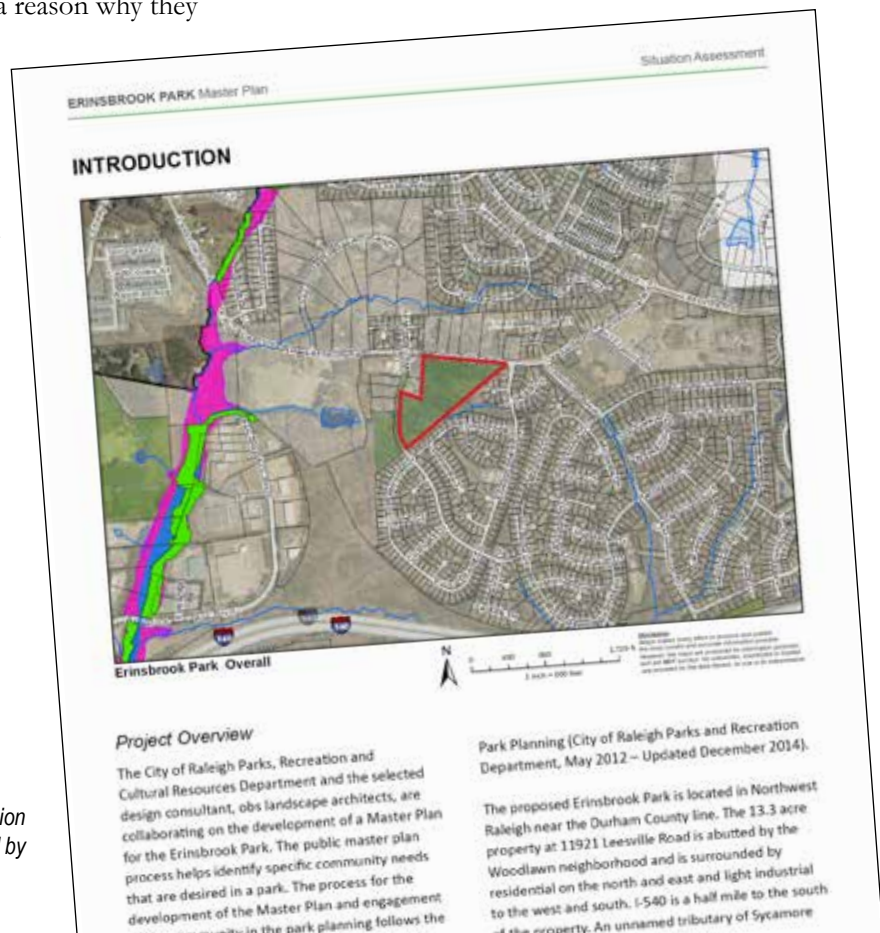
Before any concept was drawn on paper or stakeholder meeting was held, a Situation Assessment was prepared for the project. This was a joint effort between the City of Raleigh and the design team. The Situation Assessment involved initial site analysis by the design team, summarizing initial site analysis by the City, gaining an understanding of the community framework, and developing a schedule for the project. As part of the process a written survey of nearby residents was performed in order to begin to understand some of the desires and needs of the community.

The survey indicated that trails and playgrounds were the most desired elements for the new park. The community also indicated that providing shade at the playground was extremely important and that the lack of shade was a reason why they might not use nearby City of Raleigh parks. Survey respondents closely matched the demographics of the surrounding neighborhoods with 95% being between the ages of 25-55 and mostly white.

The design team presented to the Northwest CAC to inform the community group of the upcoming project, to solicit general comments on the future park and to encourage residents to join the Citizen Planning Committee (CPC) for the project.

The Situation Assessment was presented to the City of Raleigh Parks, Recreation and Greenway Advisory Board for approval. The Board unanimously recommended that the Situation Assessment go in front of City Council for final approval. City Council unanimously voted to approve it, with only one condition: that the team attempt to include a disabled person or someone who was familiar with concerns/issues related to being disabled on the Citizen Planning Committee.

*A page from the Situation Assessment prepared by the design team.*





Members of the Citizen Planning Committee look at a map while on a site walk.

## *Citizen Planning Committee*

The Citizen Planning Committee (CPC) was comprised of 14 residents from the surrounding neighborhoods with a bias toward the Woodlawn neighborhood, which abuts the park property, a representative from the Northwest Citizen's Advisory Council and a representative from the Parks, Recreation and Greenway Advisory Board. The group played an advisory role for the design team by providing input and direction during park programming and the concept development portions of the project.

As part of the initial survey sent to the community, residents responded whether or not they were interested in participating in the design process. Those who responded that they were interested were evaluated by a host of criteria, including demographic analysis, interest in park planning, and proximity to the future park site, with the goal of selecting a diverse group of people that represented several of the surrounding neighborhoods as well as the overall community.

The CPC followed a consensus-seeking process, including the adoption of a charter that governed how the group would operate. It was agreed that the CPC would meet with the design team a minimum of four times throughout the master plan process and the group was encouraged to provide additional input by attending public meetings and communicating with the design team outside of the meetings. They also were asked to promote the park planning process within their neighborhoods and to publish informational posts on social media, which included the distribution of concept plans and meeting minutes. The CPC was able to reach a wide group of people easily and efficiently.

### **CITIZEN PLANNING COMMITTEE MEMBERS**

James Bowen  
Tommy Dalton  
Josh Eaton  
Yoki Feliz  
Lee Hilts  
Brandy Jabkiewicz  
Sandra Liles  
Forrest Parker, III  
Catherine Penilla  
Chailendra Perry  
Katherine Quinn  
Jim Read  
Kim Soklow  
DeSheila Spann  
Kathryn Strickland  
Suzette Harrington (NWCAC)  
Patrick Buffkin (PRGAB)

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Presentation of the final master plan at the Northwest CAC

## *Approval Process*

The approval process for the final draft master plan was the third and final phase of the project, consisting of about 3 ½ months. In early February of 2017, the draft master plan was presented to the CPC for approval. The CPC unanimously voted in favor of the master plan. With the CPC's approval, the draft master plan was presented to the Northwest Citizens Advisory Council (NWCAC). The project site falls within the geographic boundaries of the NWCAC.

Following the presentation to the Northwest CAC, the draft master plan was presented to the City of Raleigh Parks, Recreation and Greenway Advisory Board (PRGAB) on March 16, 2017. PRGAB evaluated the Master Plan and Report before recommending at their April meeting on the 20<sup>th</sup> of the month that the plan and report go in front of the Raleigh City Council for final approval.

On May 2, 2017, the Raleigh City Council voted [XX-X] to adopt the final plan and report.

### **SENSE OF OWNERSHIP**

A consensus-seeking community engagement process was critical to the success of the plan. The process instilled a sense of ownership in the park plan, resulting in a smooth and successful approval process. After all, the park will belong to the community, not the designers.



A stream winds through the Erinsbrook Park site.

## System Integration Plan

An initial component of the public park master plan process is the System Integration Plan (SIP). This involves public review and participation from partner agencies and is developed with input and oversight from the City of Raleigh Parks, Recreation and Greenway Advisory Board.

Cover of the System Integration Plan for Erinsbrook Park



The System Integration Plan – Erinsbrook Drive Property was prepared by the City of Raleigh in May 2011 for the original 18 acre parcel in Northwest Raleigh. The SIP documents existing site conditions by beginning the process of site inventory for natural and cultural resources, provides recommendations for interim site management and evaluates the impact of the City’s comprehensive plan on the site.

## Site Analysis

### Context

The 13.3 acre Erinsbrook Drive property, located adjacent to the Woodlawn neighborhood off Leesville Road, is an undeveloped parcel. When the City purchased the property, it was approximately 18 acres. However, they completed a land swap for a portion of the site, reducing it to its current 13.3 acres. Within a mile radius existing and new neighborhoods are to the east and north while light industrial land uses are to the west and south. The property is zoned R-4, as is the Woodlawn neighborhood. Adjacent properties are zoned either R-6 or Industrial Mixed Use. The property also is located within an Airport Overlay District and within

# ERINSBROOK PARK MASTER PLAN REPORT

the vicinity of several Raleigh Durham Airport flight paths.

The property is located along Leesville Road, which currently is a 2-lane road and has a 60' ROW. The City of Raleigh's Thoroughfare Plan calls for the future widening of Leesville Road to four lanes with a median and a 104' ROW. When the park is built, the City will be required to dedicate 22' of ROW along Leesville Road.

When the property was purchased by the City in 2003, Englehardt Road was planned to connect Erinsbrook Drive with Leesville Road, bisecting the site. Through a land swap with a developer, the City subdivided the parcel, which created the current property line along the Englehardt Road extension and reduced to total area to its now 13.3 acres.

A 12-home subdivision is planned for a tract of land on the west side of Englehardt Road. That developer will be responsible for building approximately 60% of Englehardt between the new development and Erinsbrook Drive. When the park is constructed, the project will most likely be responsible for the completion of Englehardt Road, unless more development occurs between now and then.

The Raleigh Comprehensive Plan calls for Englehardt Road to have a three lane section with six foot sidewalks on a 60' ROW. The proposed neighborhood is required to provide a greenway easement along its northern property line. However, there is concern about constructibility of a greenway connection due to severe topography change.

Several properties on Erinsbrook Drive abut the property, as do two properties on Englehardt Road. Woodlawn HOA also owns a piece of property that abuts the park, which could be a strong pedestrian should the HOA pursue it.



*The Erinsbrook Park site is mostly wooded, consisting of hardwoods and pines. An unnamed stream bisects the site.*



*The City of Raleigh's Comprehensive Plan calls for Leesville Road to be widened to four lanes with a median and a 104' ROW.*

## Existing Conditions

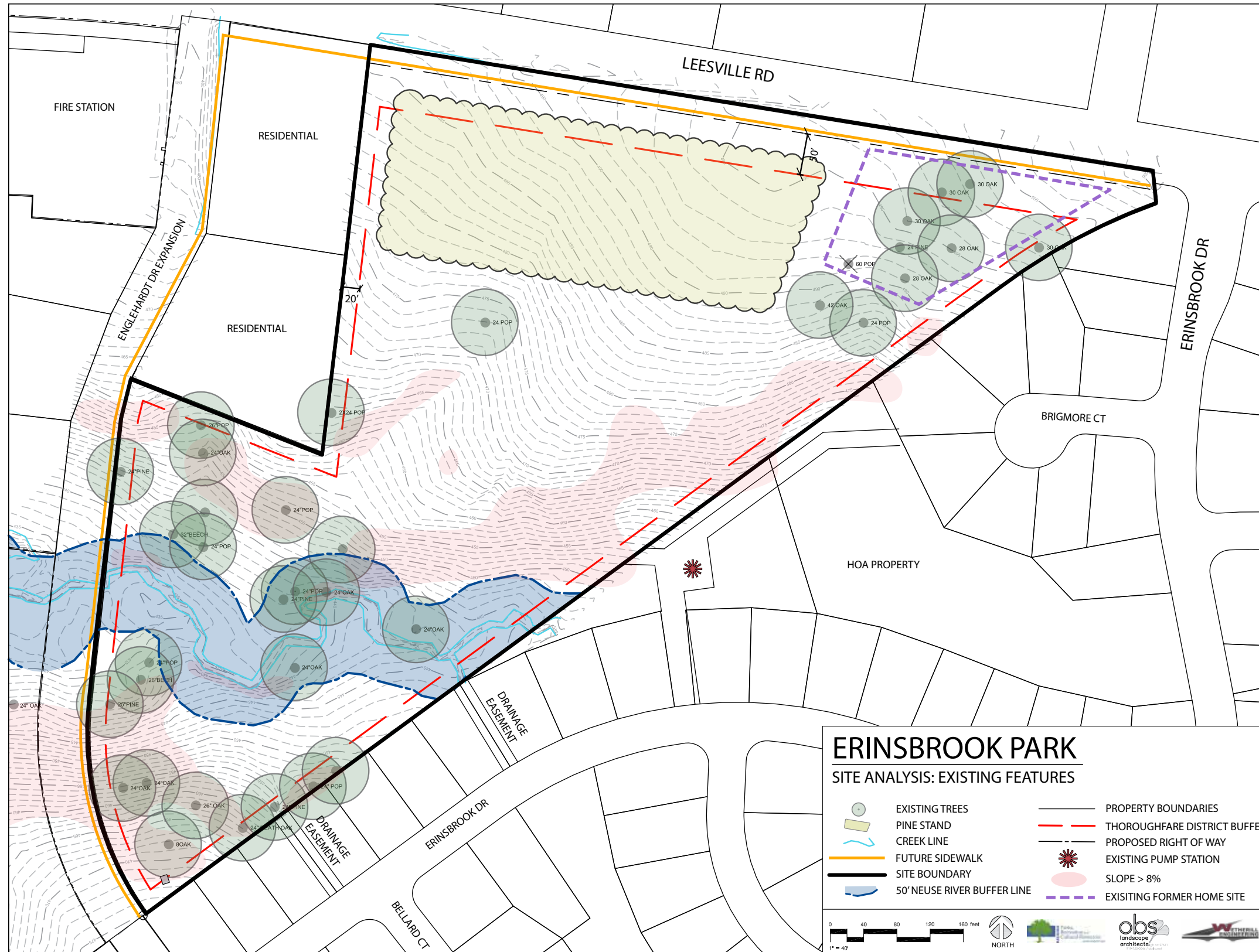
The property is fully wooded with pines and hardwoods. Pines occupy the higher elevations of the site. Large mature oak trees are common in the middle section and American beech trees are prevalent in the lower portion of the site. The large specimen trees should be protected when possible. Understory vegetation is fairly sparse, but does include some ferns, sedges and other shade-loving plants. Tree conservation, per the City's UDO, will be required when the property is developed. Some invasive plant species, such as garden iris, periwinkle, English ivy and honeysuckle, are creeping into the property from nearby properties.

An unnamed perennial stream bisects



## SITE ANALYSIS

- Slope >8%
- Thoroughfare District Buffer
- 50' Stream Buffer
- Pine Stand
- Existing Specimen Trees
- Existing former home site requires further investigation



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*Potential former homestead site*

the property and is a dominant feature of the site. The stream flows east to west and connects with a pond on an adjacent property before tying into the Sycamore Creek a half mile away. A 50' riparian buffer will be required. Several low areas filled with ponded water have been observed to contain amphibians.

During a site walk, an apparent former homestead site was discovered in the northeast corner of the site. The City of Raleigh investigated the site and found the remnants of two early 20th century foundations, evidence of outbuildings and livestock structures. Staff determined that further study of the area was needed to identify other features, such as the potential presence of grave sites, wells, etc., and to determine if there is any historical significance to the site. They recommended avoiding development in this area. Staff also recommended a Phase 1 review per NEPA to activate Historic Preservation Act 106, which will determine if the subject has enough cultural material to warrant further review and/or mitigation to comply with NEPA, Section 4. Furthermore, a

CPC member alerted the design team to a potential Indian Trail Tree on the site. Further investigation and possible documentation and mapping is recommended.

## *Community Framework*

### **Demographics**

In order to gain a meaningful demographic analysis a study area of households located within a mile radius of the property was used. The demographics for this report were provided by the City of Raleigh PRCR's GIS section using ESRI Community Analyst 2015.

In 2015 there were 1,195 households and the number of households is projected to grow to 1,279 by 2020. Nearly 90% of the homes are owner-owned and the median value of the area homes was \$289,165. Little growth in the quantity of homes or value of homes is expected by 2020. Median household income was \$108,364 with a large majority of the adults working in white collar jobs. The median age in this area is 36.6, with less than 10% of the

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population over the age of 65. 63% of the population is married and nearly 50% have obtained a bachelor's degree while 22% have earned graduate degrees. 80% of the residents are white, 10% are black, 6% are Asian and 5% are Hispanic.

## Nearby Neighborhoods

Woodlawn is the only neighborhood that abuts the future Erinsbrook Park. A new neighborhood, Old Oak Autumns, is under construction across Leesville Road from the Woodlawn neighborhood. A site plan for the development of a new neighborhood is on file with the city, but construction has yet to begin.

Several other neighborhoods are located within a one mile radius of the project site:

- Leesville Hollow (within a 1/2 mile)
- Leesville Forest (within a 1/2 mile)
- Dominion Park (within a 1/2 mile)
- Old Oak Commons (within a 1/2 mile)
- Harrington Pointe
- Leesville Downs
- Sedgefield
- Farmbridge
- Harrington Grove

Access to the park site from the neighborhoods noted above is mostly by car. Only the closest of neighborhoods will have pedestrian access to the park. Sidewalks currently do not exist along Leesville Road in this area.

## Nearby Parks

There are no City of Raleigh parks within a one mile radius of the proposed Erinsbrook Park. The nearest park is Strickland Road Neighborhood Park, which is between 1.5 and 2 miles from the project site.

Strickland Road Park was built in 2010 and encompasses 36 acres in Northwest Raleigh. The park contains two ponds,



*Strickland Road Neighborhood Park is the nearest park. Photo courtesy of the City of Raleigh.*



*Sycamore Creek Elementary School is about 3/4 mile from the proposed park. Photo courtesy of Wake County Public School System.*

two playgrounds and nature trails that meander through the park. The 2009 Master Plan calls for a future neighborhood center, youth multi-purpose field, half-court basketball area, restrooms, a picnic shelter and additional trails.

A future greenway will extend north and south following the Sycamore Creek, which is west of the project site. The proximity of the future greenway will provide a potential connection to the future Erinsbrook Park.

## Nearby Schools

Sycamore Creek Elementary School is the only school within a mile of the project site. The school opened in 2008 and it is on a year-round calendar with approximately 1,100 students. The demographic makeup of the school closely resembles that of the surrounding area.

## *Utilities*

The future utilities required for the construction of the Erinsbrook Park will consist of sanitary sewer and water services as well as an electric service. The electric service will be provided by Duke Energy via the existing lines within the Leesville Road Right-Of-Way. A transformer will be placed near the new ROW line of the Park and will feed the new facilities' rest room and site lighting.

The development of the site will also require the installation of a new public fire hydrant located along Leesville Road at the new ROW line near the main entrance to the site. In addition, to support the proposed rest room building and water misters, we estimate that a 2" domestic water service will be required complete with a meter box and back flow preventer located at the new ROW line.

For sanitary sewer service, gravity sewer is available in the Woodlawn subdivision just east of the site. Along the western boundary of the Woodlawn subdivision, there is a gravity sewer system which flows southwest adjacent to the parks' property line to a City of Raleigh public sewage pump station (see plan). There are two existing sanitary sewer manholes available to the park for connection purposes. The park's sewage will flow via gravity from the proposed rest room building to the southernmost existing sewer manhole. In conversations with the City of Raleigh's Public Utilities Department, this 4" sanitary sewer line would be considered a service lateral and the project would not require an 8" public sewer main extension. Therefore, the service lateral would not require an easement, but would require clean-outs every 75' along the service line.

## *Stormwater*

There are flood prone soils and Neuse Riparian Buffers on the site along the existing stream. The site will be subject to all current City of Raleigh stormwater regulations. A flood study would also have to be provided setting the regulatory flood protection elevation pursuant to the regulations in Chapter 1 of The City of Raleigh Stormwater Design Manual.



*An example of LID / bio-retention stormwater treatment in a parking lot.*

The Park will manage the proposed stormwater quantity and quality via the use of bioretention basins or rain gardens as shown on the Master Plan. The largest basin will be roughly located in the center of the park just below the proposed Natural Playground and Overlook. This basin will be sized to handle the new impervious surfaces proposed from the Leesville Road entrances south to the basin which would include the parking lot, buildings, and all walking surfaces/trails.

Small bioretention cells or rain gardens might be needed near the stream along the walking trails to handle the stormwater runoff generated from the new trails. These basins could be located on both the north and south side of the stream, if needed.

## *Road Improvements*



*Looking east along Leesville Road. The park property is on the left.*

The proposed Erinsbrook Park will require off-site roadway improvements along Leesville Road across the northern boundary of the park and along Englehardt Drive Extension adjacent to the western property line of the park. Leesville Road is an NCDOT State maintained roadway which is identified in the City of Raleigh's 2030 Comprehensive Transportation Plan to eventually become a 4 lane divided highway with a 76- back-of-curb to back-of-curb (B-B) width and a 104' Public Right of Way. Leesville Road currently is a 22' wide shoulder section roadway within a 60' ROW. Englehardt Drive Extension is currently a dead end off of Leesville Road and is a City of Raleigh maintained road.

### **Leesville Road Improvements**

A new residential project will be located along the north side of Leesville Road across from the proposed Erinsbrook Park. This residential subdivision will have a full access drive approximately 550' east of the present Leesville Road / Englehardt Drive / Wynalda Way in-

tersection. This new subdivision will be required to extend the three lane section of Leesville Road from the Leesville Road / Englehardt Drive / Wynalda Way intersection east to the subdivision's entrance, and then taper back to two lanes just west of Erinsbrook Drive, providing for a left turn lane into the new subdivision from the west.

This new subdivision's widening work will most likely be performed before Erinsbrook Park is constructed, therefore, when the Erinsbrook Park is constructed, it will be required to complete it's half of a 41' back-to-back curb and gutter roadway section along the frontage of the park property. The Erinsbrook Parks' western entrance has been aligned directly across from this street which will allow the Park to have full access movements from the east and west. In this scenario, the Park will then be responsible for the additional asphalt pavement, curb and gutter, restriping, and a temporary asphalt sidewalk to complete their half of a 41' B-B roadway section.

When traffic counts warrant the full widening of Leesville Road to the 4-lane, median divided 76' B-B section, vehicular access to the park only will be right-in and right-out; no left turns will be allowed. Any access to the park from the east will be via a u-turn at Englehardt Road. This final proposed traffic scenario was verified with NC-DOT in a November 2016 meeting. The full widening project is expected to occur well after the development of Erinsbrook Park, therefore, requiring the Park project to provide a fee-in-lieu for the future road improvements.

## **Englehardt Drive Extension Improvements**

The Erinsbrook Park, will be required to build the balance of one half of a 36' B-B road improvement along its western property line. Similar to the new development proposed across from the Park along Leesville Road, a new residential subdivision is currently in the planning stages west of the park along Englehardt Drive Extension with an entrance planned onto Englehardt Drive south of the unnamed perennial stream which bisects the property.

Assuming this new residential subdivision is constructed prior to the Park, the Erinsbrook Park project will be responsible for completing the remaining roadway improvements for a 36' B-B road section from Erinsbrook Road to its connection with Leesville Road. These improvements will include a stream crossing, additional asphalt pavement, curb and gutter, a 6' sidewalk and street trees.

## *Tree Conservation*

The Erinsbrook Park site is zoned R-4, which requires a minimum of 10% Tree Conservation Area, per the City's UDO, adopted in 2013. The site is located in a Special Highway Overlay District 2 (SHOD-2), which requires a 25' buffer between site development and Leesville Road. The SHOD-2 protective yard is considered a Primary Tree Conservation Area and must be saved to meet the conservation requirements. The plan maintains a 50' buffer between the ROW and any development on the site, more than what is required. This buffer is approximately 42,200sf or 7% of the site.

Zone 2 of the Neuse River Riparian Buffer also must be saved to meet the City's Tree Conservation requirements, even if doing so exceeds the minimum requirements. The required amount of riparian buffer to be saved is approximately 20,000 sf or 3.5% of the site.

Total required tree conservation area for the Erinsbrook site equals approximately 10.5% of the site. This area must be recorded as Tree Conservation Area before any development can occur. While this is the minimum required Tree Conservation, the master plan aims to protect a large portion of the site. Any additional tree cover that is saved does not need to be recorded.







*The Erinsbrook Park site is wooded with very little understory vegetation.*

### *Vision Statement*

The Vision Statement, correlated with the City of Raleigh’s Parks and Recreation parks vision and agreed upon by the CPC and the City staff, is a culmination of the community’s values and desires that guides the master planning process for Erinsbrook Park. The Vision Statement provides direction during conceptual design and is used as a check to ensure commitment to the process.

“To develop a park where its natural character is celebrated while providing play, exercise and gathering opportunities for neighborhood families of all ages and abilities.”

## *Concept Development*

The final master plan is result of several planning meetings with the selected Citizen Planning Committee (CPC), members of the surrounding community and City of Raleigh Parks, Recreation and Cultural Resources staff. Throughout the planning process the design team conducted four CPC meetings and three public workshops, gaining valuable insight, input and direction from the community. Through a consensus-seeking process the CPC was tasked with developing a vision statement for the park and ensuring that the desired amenities and program elements were included in the final master plan.

## *CPC Meeting #1*

The first CPC meeting was not about design, but rather about gathering information. The design team presented initial site analysis and let the CPC fill in the gaps or correct wrong assumptions. They informed the design team about a potential former homestead on the site, which will require further cultural and historical investigation by the city. They told stories of how neighborhood kids currently use the site for exploration and for play. And they expressed their desires to preserve the beauty of the natural wooded character provided by a mix of several old growth oak and beech trees and young hardwood trees across the site.

The process of program development was started at this meeting. The CPC discussed amenities and features they wanted to see in the future park. And they talked about things they didn't want to see, such as excessive removal of trees and mass disturbance or athletic fields.



*A small stream crossing at Brookhaven Park in Raleigh.*

### **PROGRAM IDEAS:**

- Greenway connections
- Pedestrian connections into the park, especially from Leesville Road
- Treehouses / Ewok Village
- Splash pad
- Universal / Accessible design is very important
- Kids play area(s)
- Possibly enclosed / gated / contained to make it easy to keep an eye on kids
- Natural play areas
- Open field
- Fort building area
- Mud splash pad
- Connection with stream
- Incorporate trees into play space
- Restrooms
- Picnic shelter
- Community Center / track-out activities
- Zip line
- Tire swing(s)
- Informal trails in the southwest corner – nice part of the site
- Community flower / herb garden
- Dog park

## Public Workshop #1



Members of the community and CPC discuss features of the future park site with the design team during the first Public Workshop.

On a warm September Saturday morning, the design team conducted a public workshop. A quick introduction of the project and the team was given at St Francis Church before the group carpooled to the park site. About two dozen community members, including several kids, and the design team walked the site for about 90 minutes, taking note of natural features that were special to the community. Discussions during the site walk were reflected in the meeting minutes and through photographs. Upon completion of the site walk, the design team and community members reconvened at the St. Francis for a discussion about the site walk and possible program elements. The following were identified as potential program elements for the park:



Kids were immediately drawn to the creek that runs through the southern portion of the site.



The design team leads a group of community members into the future park site.

### PROGRAM IDEAS:

- Sledding run
- Interpretative signage along creek/trails
- Connection to Harrington Grove trail network
- Don't duplicate activities in Harrington Grove
- Disc golf
- Benches/seating along trails
- Open field for open play
- Hangout space
- Quiet space
- Pickleball courts
- No multi-court or basketball courts
- Single-track trails (18") – mountain biking, hiking, running
- Advocacy group will help design and build trails at no or little cost
- Pump track
- Safe bike / ped paths
- Tree houses (similar to Durham Museum Life and Sciences Museum)

# ERINSBROOK PARK MASTER PLAN REPORT



*obs landscape architects presented multiple concepts at the second CPC meeting.*

## *CPC Meeting #2*

The first two meetings (CPC #1 and Public Workshop #1) were intended to provide insight on the desired program for the park and to begin to formulate a vision statement. The intent of CPC #2 was to confirm the program in order to begin a discussion on priorities and arrangements of the desired program elements.

Also, a vision statement was defined at this meeting:

**“To develop a park where its natural character is celebrated while providing play, exercise and gathering opportunities for neighborhood families of all ages and abilities.”**

A development diagram along with three concept plans were presented to the CPC at this meeting. Each concept contained many of the same program elements, but given different arrangements and priorities. The intent of this exercise was not to land on a specific solution, but to encourage discussion.

### **MOST DESIRED PROGRAM ELEMENTS**

Walking trails  
Restroom and shelter facilities  
Traditional and natural playgrounds  
Splash pad / water play  
Open space  
Quiet / hangout space  
Dog park  
Accessibility



## Development Diagram

The northern portion of the site consists mostly of young pine trees and is the flattest part of the site. This is the most developable area.

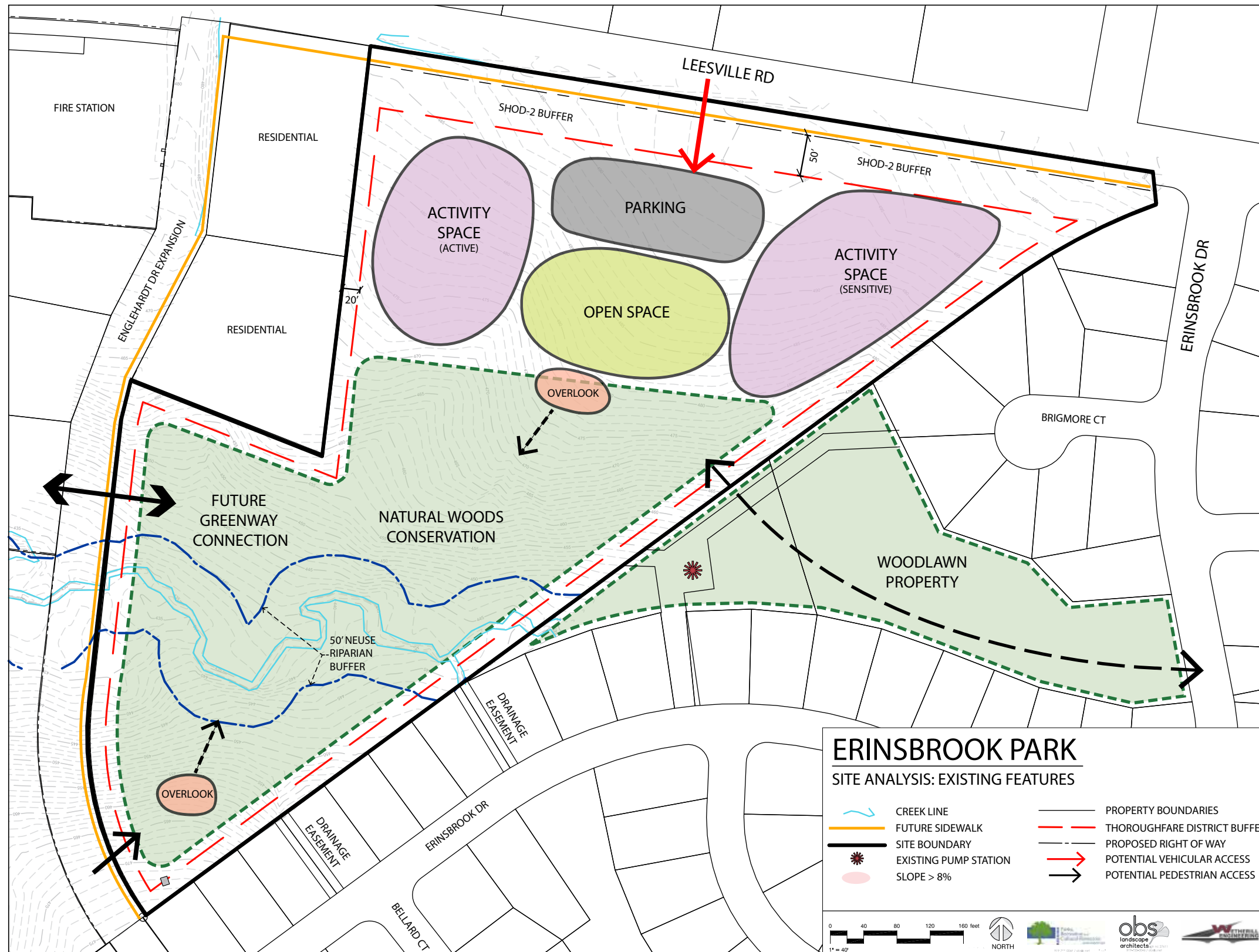
There are several old growth oak trees and a potential former homestead in the north-east corner of the site. This section should be preserved and presents an educational opportunity.

Slopes are greatest in the southern and middle portions of the site ranging between 8% and 15%, making this area less suitable for development. Accessibility is also a challenge in this section of the site. Several large beech and poplar trees dot the southwestern portion of the site. Great care should be taken to preserve these specimens.

A creek bisects the site in the southern portion and should be protected. It provides an educational opportunity and should be experienced. Consider mulch trails and/or bridges over the creek.

The very southern portion of the site presents opportunities for overlooks given the steep slopes.

Tree conservation will be required along the Leesville Road frontage as part of the SHOD-2 buffer, and along the creek as part of Zone 2 of the Neuse Riparian Buffer.

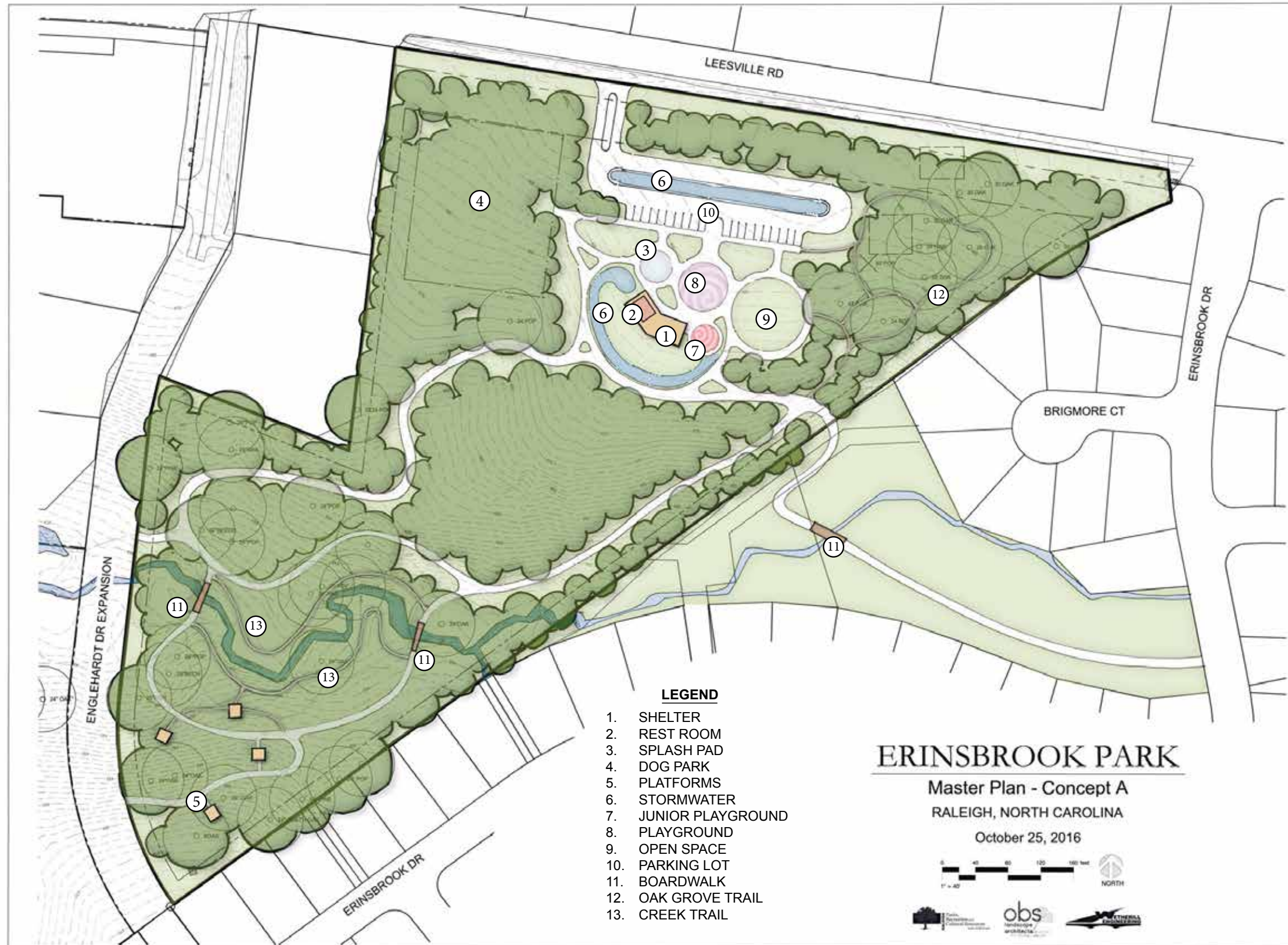


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## Concept A

This concept focused development in the northern section of the site, including a parking lot with a singular entrance/exit. Key components are a combined restroom and shelter at the rear of the developed area, a splash pad, modest open space, two age-separated playgrounds, dog park, a looped trail network with hangout platforms and a Low Impact Development (LID) strategy for stormwater management. Also included are mulch trails along the stream and in the oak grove.

The CPC favored the looped trail network, which contains pedestrian circulation to the confines of the site and provides multiple entry points into the park. They also liked the LID stormwater management approach. While the open space was a priority for them, they felt it was not big enough in this concept. In this concept, the high-intensity use areas remain completely accessible (less than 5% slope) while the trail network reacts to the natural grade with some slopes as steep as 14%. One overlook platform is accessible from Englehardt Road.



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## Concept B

This plan features a large open space, a singular play area, a hard court, a parking lot with separate entrance and exit drives, a combined restroom and shelter, an overlook, a trail system that cuts through the park and a stormwater pond. Also included is a mulch trail near the creek and tree houses in the oak grove.

In this scheme, all pathways are accessible (less than 5%). The treehouses in the oak grove and large open space gained the most positive feedback from the CPC. The proximity of the restroom/shelter to the playground and parking lot also received positive feedback from the group.

However, the hardcourt received very little support and the group suggested that space be used for a dog park instead. The group also did not react favorably to the trail system. In order to complete a loop pedestrians would have to leave the park and use the sidewalk. The group preferred that the trail system stay internal to the site.



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## Concept C

This concept considers a driveway entrance off Englehardt Road instead of Leesville Road. The group was extremely opposed to this solution due to the proximity of the drive to residential property and other park elements, the steep slope of the driveway and the required removal of trees and amount of earthwork needed to construct the driveway.

Other features of this concept include natural and traditional playgrounds, a tree-top overlook, tree houses near the creek, and an accessible path (less than 5%) to the creek. Mulch trails around the specimen beech and poplar trees and around the oak grove also are included.

The group reacted positively to the natural playground as well as the tree houses. While this concept, like the others, includes a restroom and shelter, these two items are separate entities rather than a combined unit. The CPC did not have a strong opinion about whether or not the shelter and restroom should be combined in one structure or not. The CPC also was not in favor of a trail system that required pedestrians to leave the park in order to complete a loop, just as in Concept B.

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## *Public Workshop #2*

At the second public workshop Concept A and Concept B were presented, along with precedent images to help explain the type and scale of program elements that were being proposed. Concept C was not presented because it received no support from the CPC. Community attendance at this meeting was minimal. Of the 16 people in attendance, only two were not affiliated with the project in any way (not on the CPC or part of the design and planning team).

In Concept A, the dog park, LID storm-water approach and looped trail network received positive feedback. Attendees indicated the platforms could be nice, but needed further clarification on what they would look like. The splash pad did not receive much support with the argument that it would not be usable for much of the year. It was suggested that the money to construct and maintain a splash pad could be better spent elsewhere in the park. It was suggested that misters could

be integrated into the playground area to maintain some form of water play. It also was suggested to combine the youth playground with the older kid playground into a unified space rather than two separate entities.

In Concept B, the group preferred the parking configuration and the natural play structures received positive feedback. No one seemed to like the idea of incorporating hard courts into this park – it was noted that the surrounding neighborhoods have hard courts and they were seldom used. The group suggested eliminating the hard court and replacing it with a dog park and suggested that the open space could get a little smaller in order to accommodate a larger space for dogs. However, preference should be given to the open space as a place to play and picnic. Smaller elements, such as telescopes and educational signage, should be incorporated along trails and at any sort of overlook area.

## *Park Planning staff review*

Throughout the process of meeting with the CPC and hosting public workshops, the design team also met with various City of Raleigh Parks, Recreation and Cultural Resources (PRCR) staff members to discuss the process and the input received from the community. Generally, the PRCR staff was on board with the direction of the park plan. They were agreeable to most elements and their relationships to each other.

While the city did not have a strong opinion of whether the shelter should be combined with the restroom building or not, they preferred to have the facility close to the parking lot, allowing police to drive through and easily observe the facilities. The City was hesitant to approve

a splash pad and encouraged the design team and the CPC to consider alternate options. A splash pad, they argued, would be expensive to build and maintain, taking away money that could be spent on other program elements in the park. However, if the CPC felt strongly enough about including the splash pad they would have been agreeable to it. And finally, the City was not in favor of building tree houses in the park, whether connected to trees or the ground. Staff was concerned about the safety of the structures – there was concern about the lack of visibility into the structures and potential liability issues should someone get hurt. City staff encouraged the design team to look at alternate solutions that would create similar user experiences.

## *CPC Meeting #3*

obs reviewed the three concepts presented at the second CPC meeting and the second Public workshop along with the comments received from the two groups. obs then presented a singular plan that was a combination of the preferred elements from the three original plans that each group identified. The plan included the following changes from the previous plans:

- Stronger link between playground and natural play.
- Condensed oak grove trail.
- Boardwalk loop location adapted to protect existing specimen trees.
- Reduced the size of open space turf area to incorporate a dog park.
- Hard court changed to dog park.
- More picnic areas and benches not shown at this scale but are recommended for the park.
- Misters replace splash pad. Concern that splash pad only active in summer.

Overall, the plan was well-received. That said, there was some lively discussion from the group about a few of the elements. The dog park was the most discussed piece in the new site plan. While a dog park was generally preferred, there was concern about its proximity to the playground and how the dog park would be accessed. Some of the CPC members disliked having a dog park adjacent to the playground, citing potential issues with kids who might be afraid of dogs as well as noise issues. A robust planted buffer that still allowed visibility between the dog park and the playground as well as a direct path to the dog park from the parking lot and trail system were deemed by the group acceptable solutions that allayed any additional concerns.

The other element that garnered the most discussion was the mister area. A portion of the group was championing a splash pad for the park, but due to cost, maintenance and usability issues, it was removed from the program. A mister zone was proposed as a compromise as it could be used for more months of the year and it required less maintenance and initial infrastructure, along with having fewer health regulations (splash pad requires recirculation of the water along with chemical treatments whereas the misters do not have those same restrictions). While the group was open to the idea of including misters at the park they felt that the space devoted solely to misters took up too much space for too little impact and could be better used for other elements and achieve the same benefit of a water play element. The group suggested including several misters throughout the playground areas and expanding the traditional playground into the area occupied by the mister zone. It was suggested that the playground expansion could provide age-separated play.

obs was tasked with revising the playground section of the master plan and making a few small adjustments prior to the final CPC meeting, where the CPC would vote yes/no on the final plan.



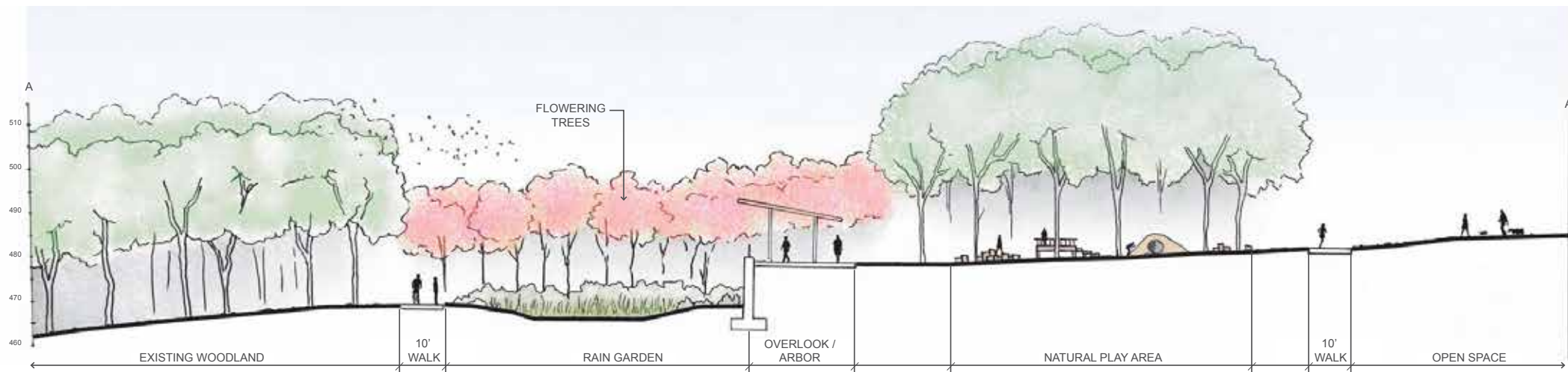


## PARK ELEMENTS

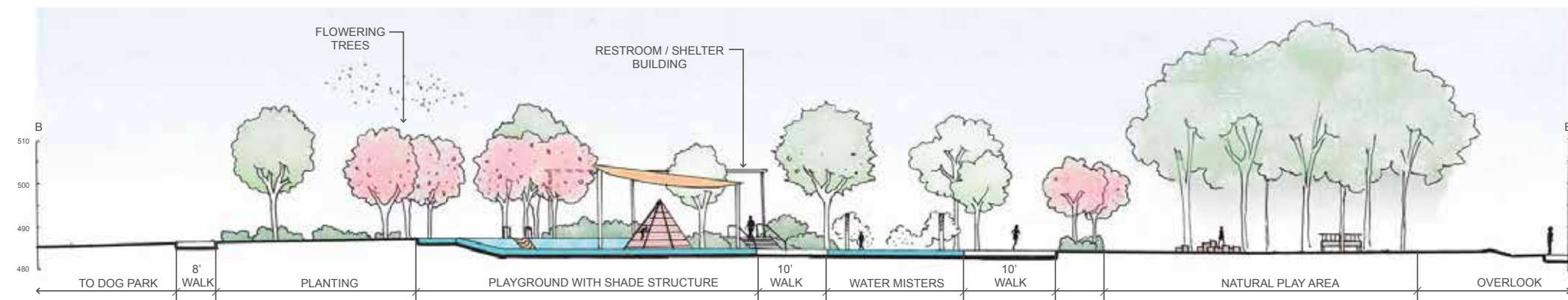
1. Shelters
  - Approx. 700 sf. Overlooks playground areas, located on visual vantage point.
  - Approx. 600 sf. Overlooks open space lawn area. Visible from parking lot.
2. Restroom. Approx. 700 sf., with family facilities.
3. Water misters. Approx. 2,000 sf. 3-6 standalone vertical misters approx. 6 ft high. Active between April –October.
4. Dog Park. Approx. 1/2 acre. 5 ft tall chain-link perimeter fence. Double gate entry. Dog waste disposal bags and bins. Informational signage.
5. Platforms. 3 timber deck structures, varying heights and styles. Approx. 15x15 ft. Handrails, seating, educational signage integrated.
6. Rain Garden. Approx. 2,500 sf. Low impact storm water treatment collecting run off from impervious surfaces. Native grasses and shrubs attracting pollinators.
7. Natural Playground. Approx. 1/4 acre. Log steppers, balance beams, timber climbing structures.
8. Playground with 15' shade sail. Approx. 3,500 sf. Traditional play equipment, poured-in-place rubber play surfacing. Slides along embankment.
9. Open Space. Approx. 14,000 sf. Lawn area allowing for recreational activities, picnicking.
10. Parking Lot. 48 spaces. Asphalt surfacing. ADA accessible spaces located close to entry.
11. Boardwalk. Raised timber walk above flood level. Connects trail loop to the southern side of property.
12. Oak Grove Trail. 5ft mulch trail winding through old growth oak stand. Opportunity for educational signage.
13. Overlook. 6-8 ft tall retaining wall provides a scenic view of flowering trees, rain garden and existing woodland. Shelter and benches create rest point.

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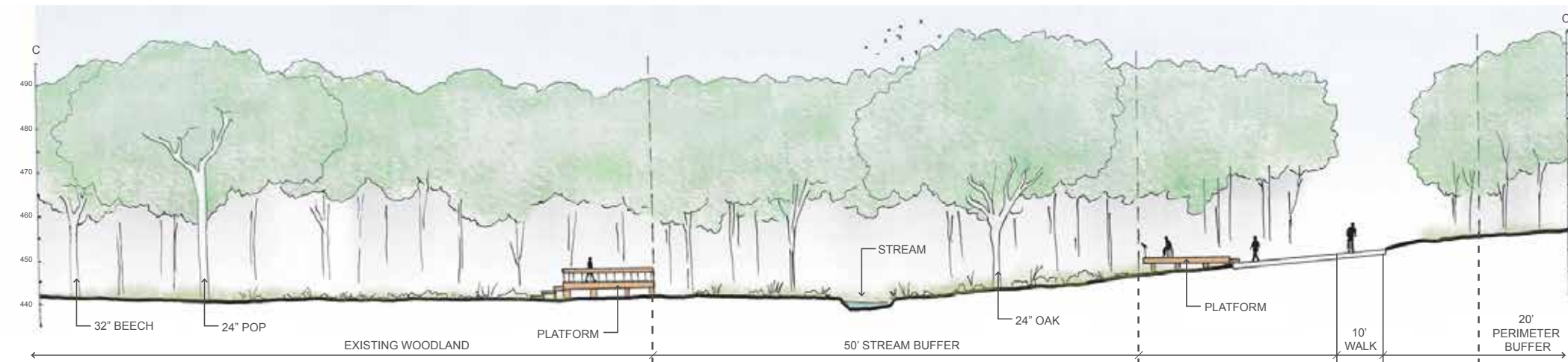




**SECTION A - Upper Park**  
NE - SW



**SECTION B - Upper Park**  
NW - SE



**SECTION C - Lower Park**  
NW - SE



December 13, 2016

**ERINSBROOK PARK**  
RALEIGH, NORTH CAROLINA

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## *Public Workshop #3*



*The design team fields questions from members of the community during the third and final public workshop.*

The third and final public workshop was well-attended by the community. The design team presented the same plan and sections that were presented to the CPC at their third meeting. Overall, the proposed plan received positive feedback from the group. No one in attendance provided any negative feedback on the plan. However, some suggestions did come out of the meeting:

- Make a pedestrian connection(s) to Leesville Road
- Connect the loop paths on the east side of the park so walkers/runners don't necessarily have to go through the playground area
- Include accessible play equipment/opportunities
- Do not direct any additional stormwater toward surrounding properties and, if possible, reduce amount of current stormwater runoff towards surrounding properties.

## *CPC #4*

The fourth and final CPC meeting was well attended. Nine CPC members attended, as well as 4 additional residents of adjacent neighborhoods who were interested in the project. The design team revisited the program, vision statement and development diagram before presenting the final draft plan. The CPC confirmed the vision statement and program. The CPC endorsed the plan (as seen by the voting tally) and the comments were mostly focused on specific language that should be included in the master plan report.

Using the five-finger method to determine consensus as defined in the CPC charter, obs polled the group on approval of the plan:

- 1: (8) people fully supported the plan
- 2: (2) people supported the plan with minor point of contention (would prefer the dog park to be further separated from the playground, possible second entry to keep dogs and kids more separate
- 3: (0) people agreed with the plan with minor reservations
- 4: (0) people stood aside with major reservations
- 5: (0) people wanted to block the plan

There also was discussion about the construction document process. The design team suggested that there should be some form of public input in the early stages of schematic design, giving the community an opportunity to make suggestions on playground equipment and other design choices. In order to promote continuity of process and decision making, it is suggested that the CPC be represented in any future public input sessions.



## *Final Concept Plan*



### **Introduction**

The final concept plan illustrates the community's vision for their neighborhood park through the thoughtful arrangement of carefully selected park elements. Connectivity, accessibility and enjoyment of the natural landscape are the backbone of the master plan and create the strength of the concept plan. The following pages paint a picture of how the community envisions their park functioning and looking.

### **Parking**

Ample parking is provided for the park, even though the current Raleigh UDO does not require any parking. (The UDO only requires parking spaces for occupied buildings, such as classrooms, offices and meeting rooms. Restroom buildings and shelters are not considered occupied buildings, per the UDO.) Despite the lack of a specific parking requirement, the CPC and the planning team felt it was important to accommodate vehicular parking. The plan accommodates 35 total parking spaces, at least 2 of which should be accessible. Additional spaces can be added in the future

if the City determines there is a need for more parking. As part of the Englehardt Road extension, parallel parking spaces will be required along the length of the road, accommodating additional vehicular traffic.

Given that Erinsbrook Park will be a neighborhood park, it is assumed that a large user group will be traveling from adjacent neighborhoods to the park by foot or bicycle, reducing the need for even more parking. Multiple bike racks should be provided throughout the park, particularly near the restroom and shelters.

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Rendering of the upper portion of Erinsbrook Park.

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## PARK ELEMENTS

1. Shelters
  - Approx. 700 sf. Overlooks playground areas, located on visual vantage point.
  - Approx. 600 sf. Overlooks open space lawn area. Visible from parking lot.
2. Restroom. Approx. 700 sf., with family facilities.
3. Junior playground with shade sail. Approx. 1,500 sf. Traditional playground equipment for ages 2-5
4. Dog Park. Approx. 1/2 acre. 5 ft tall chain-link perimeter fence. Double gate entry. Dog waste disposal bags and bins. Informational signage.
5. Platforms. 3 timber deck structures, varying heights and styles. Approx. 15x15 ft. Handrails, seating, educational signage integrated.
6. Sustainable stormwater management. Approx. 2,500 sf. Low impact storm water treatment collecting run off from impervious surfaces. Native grasses and shrubs attracting pollinators.
7. Natural Playground. Approx. 1/4 acre. Log steppers, balance beams, timber climbing structures.
8. Playground with 15' shade sail. Approx. 3,500 sf. Traditional play equipment for ages 5-12, poured-in-place play surfacing. Slides along embankment.
9. Open Space. Approx. 14,000 sf. Lawn area allowing for recreational activities, picnicking.
10. Parking Lot. 30-35 spaces. Asphalt surfacing. ADA accessible spaces located close to entry.
11. Boardwalk. Raised timber walk above flood level. Connects trail loop to the southern side of property.
12. Oak Grove Trail. 5ft mulch trail winding through old growth oak stand. Opportunity for educational signage.
13. Overlook. 6-8 ft tall retaining wall provides a scenic view of flowering trees, rain garden and existing woodland. Shelter and benches create rest point.
14. Potential parking expansion. Room for an additional 10 spaces if demand warrants.
15. Potential former homestead site. Educational opportunity, requires further investigation.

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*Traditional playground structure at Crowder Park in Apex, NC*

## Play experiences

Play experiences were the number one request from the CPC for Erinsbrook Park. Throughout the process multiple approaches were considered. In the end, the group decided that traditional play experiences and natural play experiences should be incorporated into the park. The final park concept features a traditional playground that is age-separated and a natural playground focusing on natural materials and elements.



*Shade sail at Library Story Park in Wilmington, NC*

The traditional playground is adjacent to the restroom/shelter facility as well as the parking lot for easy access and is age separated (ages 2-5 and 5-12), totaling about 5,000 sf in size. Through the public input process, suggestions for playground equipment were provided.

One of the elements that received support early in the public input process was the inclusion of a splash pad. However, the idea of a splash pad fell out of favor as the design was solidified due to a number of reasons already discussed in this report. Even though a splash pad was not the best option for this park, the CPC still felt strongly about a water play element. The solution was to include mister stations

### EQUIPMENT SUGGESTIONS

- Accessible swings
- Parent-child swings
- Slides
- See-saws
- Climbing elements
- Interactive electronic panels

# ERINSBROOK PARK MASTER PLAN REPORT

throughout the playgrounds, giving kids an opportunity to cool off on a hot summer day. As the playground design is finalized, 3-5 mister stations should be provided in the traditional playground. Misters require a much less intensive infrastructure than a splash pad and the water treatment requirements are less strict.

A poured-in-place rubberized surface should be incorporated into the playground. The playground surfacing could cover the entire playground area if the budget allows or it could be incorporated in key spots such as the entrance to the playground, at the end of slides and/or in other high-traffic areas or fall zones. The cost estimate assumes wood fiber mulch comprising the majority of the playground surfacing, with some poured-in-place surfacing at key locations.

Shade sails over the traditional playgrounds will be needed to provide relief from the summer sun. The lack of shade was one of the top reasons why residents don't use other nearby parks. Incorporating shade was identified as a key component in this park. Shade trees will need to be installed, as well, but they will not be able to provide enough shade until they are mature.

A 6,000 sf natural playground is located centrally in the park and provides a connection between the traditional playground and the Overlook through multiple access points. The natural playground is intended to provide a variety of play experiences that spark the imagination of the user.

## NATURAL PLAY

- Equipment made with natural materials
- Stepping logs
- Mounded Earth with tunnels
- Sand play
- Log walls
- Bamboo huts
- Water collection and movement



*Natural play at White Deer Park in Garner, NC.*



*Natural play at White Deer Park in Garner, NC.*

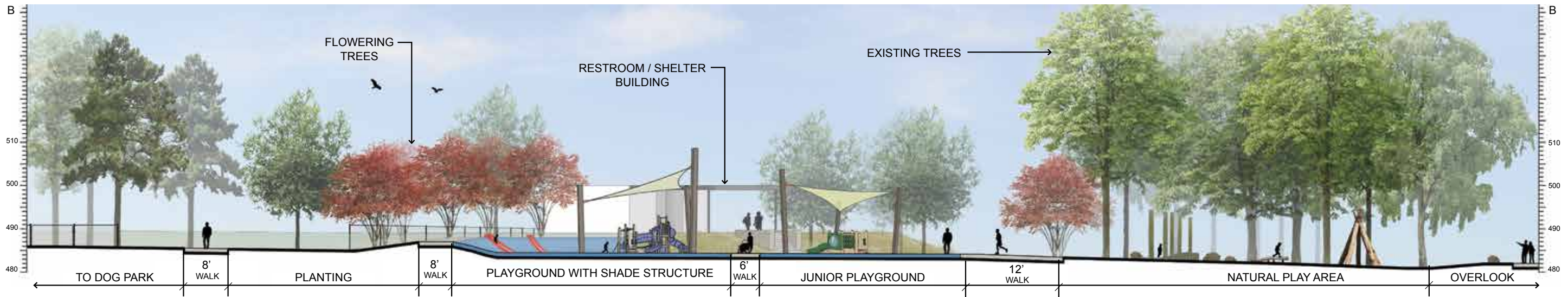


*Stepping logs in a natural playground.*



*Example of a misting station.*





**SECTION B - Upper Park**  
NW - SE



*Rendering of the playgrounds and restroom/shelter building*

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*A combination restroom and shelter building at Church Street Park in Morrisville, NC.*

## Restroom and shelter

The park features a restroom and shelter combination building adjacent and central to the playground, open space and dog park, providing a centralized gathering space. The restroom and shelter combination building should include a family facility. Any mechanical equipment for the misters, storage for maintenance operations and data connections required by the City should be housed in this struc-



*Standalone shelter at Isabella Cannon Park in Raleigh*

ture. The shelter portion of this structure should accommodate 4 standard picnic tables, with at least one being wheelchair accessible.

The standalone shelter sits on the eastern edge of the park on the axis of the open

space. This shelter is intended to be larger than the one combined with the restroom and should accommodate 6-8 picnic tables. The shelter is located near the parking lot, making it easier for visitors to haul coolers and other picnic supplies into the space.

## Open space

The community had a strong desire to include open space in the park. A half-acre field is located in the northeastern portion of the site, adjacent to the parking lot and playgrounds. A trail wraps around the open space, providing easy access to the area. The open space should be buffered from the parking lot by a heavily planted landscaped area.

## Trail system

An important aspect of the park is a trail system that is internal to the park. This was one of the main program elements requested for by the community. The CPC very much valued the ability to offer exercise opportunities within the park. The trail network is broken up into three distinct loops that connect to each other. The upper loop is about a 1/3 of a mile

# ERINSBROOK PARK MASTER PLAN REPORT



*Paved trail at Leesville Community Park in Raleigh.*

long. The upper loop focuses more on circulation than exercise by connecting the playgrounds, the overlook, the open space, the parking, the restroom and the shelters.

The lower loop, also about a 1/3 of a mile in length, takes visitors from the more active space into the wooded portion of the park and to the stream, which offers more passive recreational opportunities. This path has connections to Englehardt Road, allowing multiple access points into the park. The lower loop crosses the stream twice and provides easy access to the multiple platform decks on the southern end of the site.

The third loop, the Oak Grove Trail, is a small, non-paved trail that loops around the grove of older growth oak trees in the northeast corner of the site.

Pedestrian access will be a major way nearby residents get to the park. The trail network also includes critical connections to Leesville Road and

Englehardt Road, allowing for non-motorized access. A potential greenway spur connection to the future Sycamore Creek Greenway could tie into the park along Englehardt Road, allowing a connection from Leesville Road and neighboring communities. The Woodlawn HOA owns property on the east side of the park, which could provide a natural access point from the Woodlawn neighborhood. However, this connection through the HOA-owned property is outside of the City's scope and would need to be pursued by the HOA.

There is a distinct hierarchy of path sizes within the park. The upper trail should consist of asphalt trails a minimum of 10' wide. The lower loop trail should be designed to accommodate multiple mobility types while reducing the impact to the sensitive environment. The portion of the lower loop trail that connects the northern Englehardt access point to the upper trail should be a 10' or 12' wide asphalt trail that meets the City's greenway standards, as this could be considered a greenway connection. Other portions

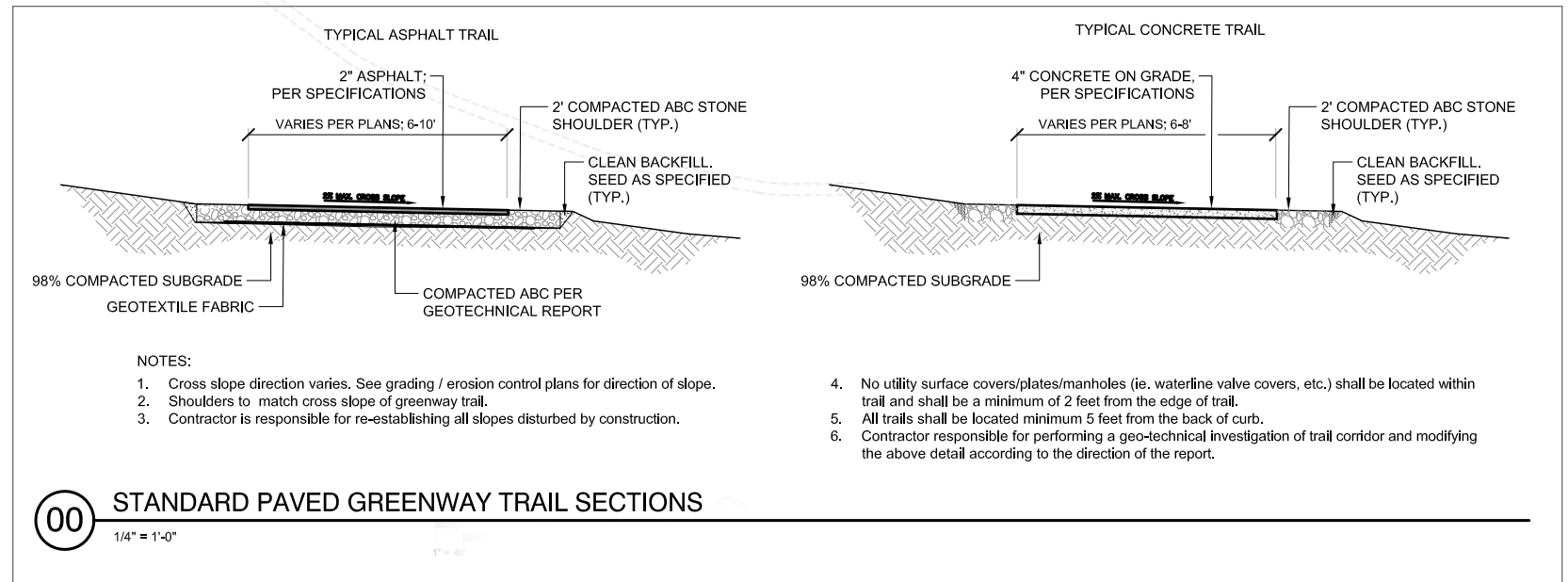




## TRAIL DIAGRAM

### LEGEND

- ADA Accessible / Slopes < 5%
- Non-ADA Accessible / Slopes > 5%
- Standard 6' Sidewalk (Concrete)
- Natural Surface Trail
- 6' Paved Trail (Concrete or Asphalt)
- 6' Mixed-surface (paved + natural)
- 10' Paved Trail (Concrete or Asphalt)



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*Natural surface trail at Leesville Community Park in Raleigh.*



*Boardwalk over sensitive floodplains should be considered.*

of the lower loop trail should be no more than 6'-8' wide and various trail surfaces should be considered where appropriate, including asphalt, concrete, crushed stone, decomposed granite or mulch.

Low-impact trail construction methods will be critical during the development of Erinsbrook Park in order to protect sensitive areas near the creek as well as several specimen trees. Trail widths should be seriously considered and narrower widths should be used when feasible. Narrower widths will reduce the impact to the ground, limit impermeable surfaces and reduce the amount of vegetation clearing. Throughout the Lower Loop trail, clearing should only occur along the extents of grading and trail construction requirements. To the greatest extent possible, care should be taken to limit impact on tree roots, erosion and excessive storm-water runoff.

Thoughtful consideration will need to be given to the choice of trail surfacing. Finding a balance between durability, initial cost, maintenance requirements, and impact to the site will be critical. Asphalt

trails are not recommended in the most sensitive areas of the site because they require more excavation than other material choices and there is concern about runoff picking up toxic chemicals. While concrete is one of the more expensive options, it can be installed on grade limiting impact to tree roots and it is extremely durable, lasting up to 20 years.

Many times natural materials, such as mulch, decomposed granite, or crushed stone, appear to be the best low-impact trail surface, having a lessened impact at the time of construction. However, when these materials are installed in floodplains or on steep slopes they have a tendency to wash and erode during heavy rains. They also require yearly maintenance and replenishment. Natural materials are best suited for high ground and flat areas, such as the Oak Grove trail.

In the sensitive floodprone areas, boardwalks should be considered to help protect the vegetation. Boardwalks can be constructed with minimal impact by using pier footings and long spans between posts.



Rendering of the Overlook and natural playground.

## The Overlook

One of the key elements that came from the CPC was the ability to experience and enjoy nature at this park. One way to accomplish that was to create the Overlook. The Overlook is at the southern end of the active recreational area where the natural grade starts to steepen. With some grading and the construction of a retaining wall an area was created to get the visitors off the ground and “into the trees.”

The Overlook provides a unique gathering space and provides a transition between active and passive recreation on the site. Unlike the lower portion of the site, the Overlook is completely accessible for all abilities. Seating options and an arbor structure to provide shade complete the space. From this vantage point, visitors can look out over the lower portion of the site and will be able to see the creek.

At the base of the wall, a sustainable stormwater management device is proposed. Runoff can be collected and treated here while providing an attractive habitat for wildlife with seasonal change. Further detailed design incorporating



The Overlook

unique and sustainable materials will be required for the wall, arbor and seating.

## Dog park

The community showed a strong interest in including a dog park at Erinsbrook Park. Included in the plan is a half-acre dog park bounded by a chain-link fence. The dog park is smaller than the typical City of Raleigh dog park, which is intentional. The community did not want to attract dog owners from the far reaches of the county, so the area devoted to dogs is intentionally small with the intent of only being able





**SECTION A - Upper Park**  
NE - SW



*A rendering of the Overlook, looking up from the Lower Loop Trail.*

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*Platform decks at Brookhaven Park in Raleigh.*

to accommodate local dog owners. Some CPC members, however, expressed concern about the close proximity of the dog park to the playground. The agreed-upon compromise was to include a healthy landscaped buffer between the two distinct uses, but still allow visual permeability.

The dog park is to be bounded by a 5' vinyl-coated chain-link fence. Two separate double-gated entries into the park are to be accounted for – one near the parking lot and one on the southern end connecting to the Lower Loop trail. Double-gated entries with concrete pads are important in order to keep dogs from inadvertently escaping the enclosed area. The entrance adjacent to the parking lot is designed to be accessible. The western edge of the dog park should be heavily planted with evergreen plantings to create a buffer between it and the adjacent property. Also, a potable water source is required. A yard hydrant will be sufficient for filling up water bowls and hosing down small concrete pads. Site furniture, such as benches, chairs and dog waste stations should be included, as well.

## **Platforms**

One of the program elements discussed by the CPC was quiet space or hangout



*Platforms in the lower part of the site.*

space for older kids or adults – a place to enjoy the natural features of the park without being near the playground. The solution was to place multiple platform decks on the southern portion of the park along the trail network where the natural topography is the steepest. The platforms are meant to be easily accessible from the paths and allow the visitor to look over the woods from a higher vantage point. Built-in seating options and/or railings should be considered during schematic design. It is assumed that these platform decks would be built out of pressure-treated lumber with concrete footings. Care should be taken to limit disturbance of the existing vegetation during design and construction of these elements.

## Sustainable approaches to stormwater management and creek crossings

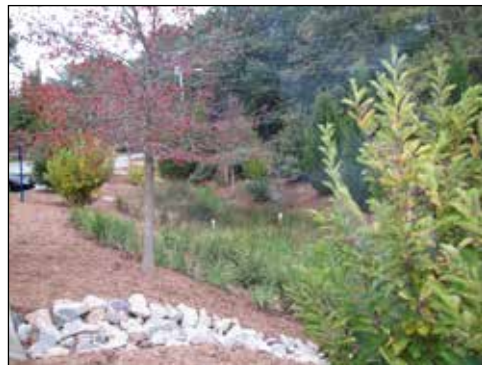
The City of Raleigh is committed to the use of sustainable materials and methods and actively supports the conservation and preservation of the air, water, and land. Sustainability was a driver in the master plan process and should be a driver in the development of construction document as well. Protecting the natural environment and reacting to the sensitivity of the creek is critical on this site. Every effort should be made to include sustainable stormwater management practices.

The master plan proposes the use of rain gardens and bio-infiltration management devices. Rather than solely collect and treat stormwater in one central retention facility, there is an opportunity to incorporate multiple smaller stormwater interventions throughout the site that would direct any overflow into a larger device. All stormwater management facilities are intended to be attractive and offer educational opportunities. These devices should be planted with a mix of ornamental grasses and pollinator-friendly perennial plants. Low impact development (LID) stormwater facilities have the ability to sustainably treat stormwater while creating habitat for wildlife. A common misconception of rain gardens and bio-cells are that they are breeding grounds for mosquitoes. These devices are to be designed to be free of any standing water within 24-48 hours of a rainfall, eliminating opportunities for mosquitoes to breed.

Protecting the creek is a high priority for the city on this project. Aside from LID stormwater management, care should be taken when Englehardt Road is widened as part of this project. The Englehardt Road extension project will require crossing the creek. Every effort to protect the



*Parking lot rain gardens at White Deer Park in Garner, NC.*



*Bio-infiltration cell at Walnut Street Park in Cary, NC.*

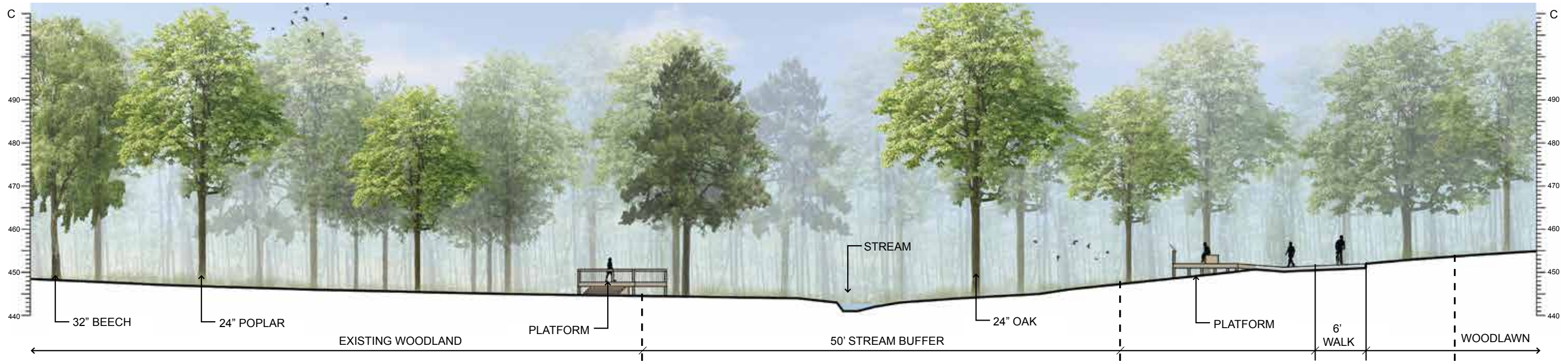


*Small footbridge crossing the stream at Brookhaven Park in Raleigh.*



*Eco-friendly stream crossing.*





**SECTION C - Lower Park**  
NW - SE



Example of a platform deck at Eno River State Park in Durham.



Rendering of the platforms and path network along the southern portion of the park site.

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creek should be made, including the consideration of using eco-friendly culverts or bridging the creek to avoid disturbing the natural creek bottom and to allow uninterrupted flow of the water.

As part of the trail network, there are two stream crossings. Bridges and/or boardwalks are important and intended to give visitors access to all parts of the site. Care should be taken in the design of the bridges to limit impact on the stream. In order to accommodate a variety of users, one bridge should be built to City of Raleigh greenway standards and the other should have a much smaller footprint, which would accommodate fewer users. The detailed design of the bridges should consider the use of recycled materials and sustainable construction methods (pier footings, for example). Also, further design and engineering will be required to determine proper bridge placement based on current flood elevations.

As the stormwater collection and treatment system is further developed, care should be taken to not direct additional stormwater runoff toward neighboring homes. And if feasible, existing drainage patterns should be adjusted to reduce the amount of stormwater currently flowing toward neighboring homes.

## Interpretive Educational Opportunities

Not shown on the plans, but should be incorporated into the park, are interpretive educational components. There are several opportunities throughout the park to place signs and other interpretive elements that teach about the site.



*Park ecology educational sign.*



*Possible Indian Trail Tree.*

## EDUCATIONAL OPPORTUNITIES

Potential Indian Trail tree in the western portion of the property near where three paths come together

Former homestead in the northeast corner of the site

Stream health and water quality along the stream as well as at the stormwater management device

Plant identification – small signs indicating the genus and species of specific plants, with a focus on specimen trees and unique plants

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Members of the community participate on a site walk as part of Public Workshop #1.

### *Recommended Priorities and Phasing*

It is very likely that when Erinsbrook Park will be built, it will be built in its entirety. The site is small enough that it does not explicitly warrant phasing to keep construction costs under control. However, given the uncertainty of when the project will be built and the factors at play during that time (unknown construction costs, local economics, budgeting, etc.), the park can be built in separate phases if desired. Prioritizing park components to be phased in should be a public input process that occurs during schematic design.

### *Public Engagement*

As Erinsbrook Park is implemented, public engagement should continue to a part of the process. During schematic design, input from the local community should be sought in order to verify that the findings of this master plan are still valid. An effort to seek out some members of the CPC assembled as part of the master plan process and to include them during schematic design should be a priority.

During implementation there is an opportunity to engage the community in the construction of the park. Various volunteer opportunities include community and/or corporate volunteer days (planting days, cleanup days, playground installation) and Eagle Scout projects for bench or trail construction. Giving the community an opportunity to participate in construction builds a lasting sense of ownership, which is critical to maintaining the health of the park.

## *Estimate of Probable Construction Costs*

Below is the designer's estimate of probable construction costs. It should be noted that construction costs were compiled using data from 2016/17 and that costs were constantly in flux throughout the time period that this report was compiled and completed. Given the uncertainty of when this park might be funded and built it is recommended that probable construction costs be re-evaluated based on the current construction market and local economics prior to final budgeting and funding. A detailed estimate of probable construction costs can be found in the Appendix.

### **ESTIMATE OF PROBABLE CONSTRUCTION COSTS**

Demolition / Clearing .....	\$21,000
Site Work .....	\$1,072,000
Utilities .....	\$102,000
Road Widening - Leesville Road .....	\$214,000
Road Widening - Englehardt .....	\$58,500
Buildings .....	\$430,000
General Conditions .....	\$403,000
Contingencies .....	\$460,000
<b>TOTAL COST .....</b>	<b>\$2,760,500</b>



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