

College Park

College Drive and Breckenbridge Street

The Board of Trustees of Lynchburg College sold College Park to the City of Lynchburg on February 16, 1962. The parcel of land, consisting of five (5) acres and located at College Drive and Breckenbridge Street was sold to the City for five dollars. Carl C. Gillespie, Chairman of the Board of Trustees at Lynchburg College presided over this sale. The resolution of the City Council reads,

A Resolution

Whereas, Lynchburg college, formerly

Virginia Christian College, has by deed dated Feb.6, 1962, conveyed to the city of Lynchburg the Parcel of land bounded by Richmond, Amelia and Breckenbridge Streets and College Drive; and

Whereas, while said deed does not contain Any condition, the college has advised Council That it was the intention of the College in Donating the property for \$5.00 and other valuable Considerations that the City should use the Property for park and playground purposes;
NOW, THEREFORE, BE IT RESOLVED
BY THE COUNCIL OF THE CITY OF LYNCHBURG:

That said deed from Lynchburg college To the city of Lynchburg, dated February 16, 1962, Be and the same is hereby accepted upon Condition that said parcel shall be used for Park and playground purposes by the city; and That the Clerk of Council cause a duly attested copy of this Resolution to be recorded in the Lynchburg clerk's Office Along with said deed.

Ow L. Bradford
Clerk of Council

Overall Goal

Create a linear park space for neighbors to enjoy, while retaining, but renovating the existing storm water management areas into an active flowing natural system.



College Park



panorama view of College Park

Overview

College Park suffers from a lack of identity. Several area citizens did not even realize that it is city park when asked about the area. The park's location, adjacent to Lynchburg College, is prominent, however, the park's long narrow rectangular shape limits development potential. Sometime in the late 1970's or early 1980's, a storm water detention component was added to the park. From a city-wide perspective, storm drainage is an important feature for the watershed and hydrologic system, however, from a neighborhood point of view, the current system causes problems.

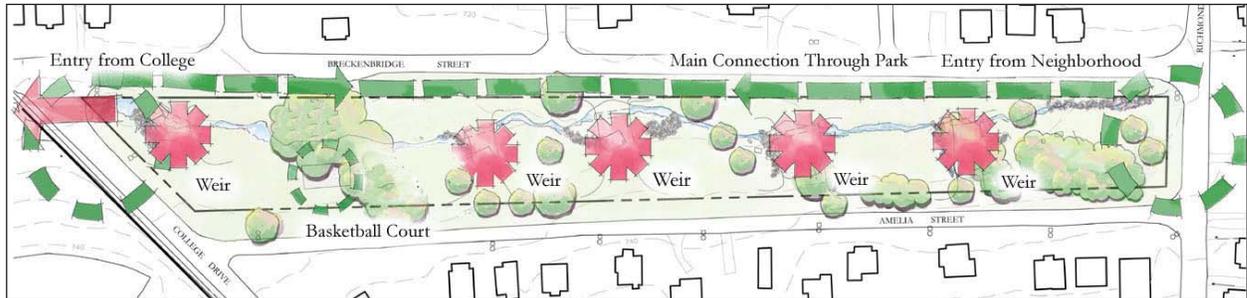


spillway and detention area

Current Condition

College Park is a very long and narrow parcel that is approximately three acres in area. The park is bounded entirely by four streets, Breckenridge Street on the northeast, Amelia Street on the southwest, Richmond Street on the southeast and College Drive on the northwest. Baltimore, Cary and Macon Streets dead-end into the park at Breckenridge Street. A ravine running the length of the parcel is the major topographic feature and defining element in the park. The edges are generally steeply sloped, flattening out to a low drainage course in the middle.

The major built features of the park are the storm water spillways and detention areas. Storm water in urban environments is a major problem as water has fewer opportunities to enter into the ground, as it would in a farm field. Water runs off areas of hard surfaces, including roof tops, parking areas, and streets and concentrates in low areas. Increases in runoff burden urban streams



analysis of the College Park site

forced to carry more water. The increased volume causes erosion. Erosion increases silt discharge in larger watercourses and lakes. In addition to silt, urban drainage ways contain water that has higher levels of contaminants including, petroleum products, metals, and suspended solids. The use of the park as a storm water management area is a commendable goal. The improvements to date, however are an eyesore. A series of five earthen dams span the low flat areas. Concrete spillways bridge over the dams and convey water to rock-lined swales between the storage areas.

The structure and design of the stormwater management area causes some maintenance problems. The area is hard to mow or trim around because there are so many uneven edges. Steep slopes on the edge of the park are also hard to mow.

In addition some neighbors complain about mosquitoes in the summer time. The current storm system creates areas for water to stagnate and makes ideal mosquito breeding ground.

The recreational amenities in the park are limited to a basketball court.

There is a badminton net, put there most likely by neighbors, on a small flat area, but other opportunities for open field recreation simply do not exist.

Neighborhood connections in and around the park are also limited. There are no sidewalks on either side of the park property or the homes adjacent to the park making it hard for neighbors to reach the park via a safe route. In addition, once neighbors reach the park, there are no walkways in the park for people to use.

Public Input

The public input received at meetings focused on improving the appearance of the park and stormwater management system.



view of rock drainage

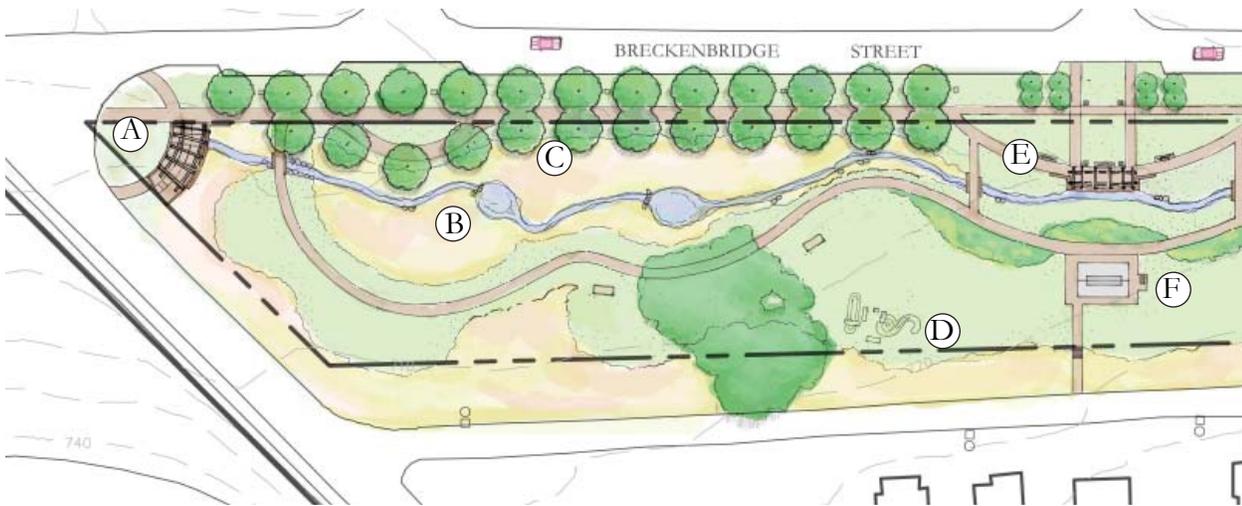
"I never knew it was a park"

"The existing play equipment is very unsafe and too close to the water."

"College Park has a curb appeal issue."

"Improve the area so that people can use it more."

"In the summer time, you cannot even sit on your porch because of the mosquitoes."



Overall Improvements

The improvements to College Park center around the stream restoration, improved maintenance through native planting, and the promenade. Better neighborhood connections are also recommended. Improvements shall be ADA accessible and park identification and rules signage should be added at entry points.

A Entry

Improved entries on either side of the park will create a more welcoming feeling for pedestrians and vehicles alike. The major entry point, across from Lynchburg College could serve as a small plaza. A trellis structure would accentuate the edge and offer shade from hot summer exposure. Place a park sign at each entry. Place a park rules sign at the overlook.

B Stream Restoration

The stream's appearance needs improvement. The existing concrete weir system should be removed and an urban stream restored. The restored stream will have storm water management principles integrated into the design. Through more subtle grading, a more natural appearance could be restored to the area. The restoration will also allow for educational opportunities through signage and interpretation of urban run-off and ecology.

C Promenade

A strong pedestrian promenade will parallel Breckenridge Street. A tree-lined promenade would strengthen the edge and offer pedestrians a walking path across the park. As part of the promenade, add on street parking on Breckenridge Street. Define parking spaces with "curb bump-outs" which also are traffic calming measures.

D Creative Play Area

The creative play area is a space where children can use their imagination to create forts, castles, cities or limitless possibilities. Unlike structured play equipment, this play area would have fewer planned activities. The space could be rocks placed to look like ruins of a building or foundation, mounds of earth, or a sculptural piece for children to play on and around.



an example of a creative playground in Los Angeles



E Overlook Area

The overlook, aligned with Cary Street will become a major node of activity in the park design. Create a plaza area in which people can watch the revitalized stream and get close to the water safely. The overlook area should connect across the park to Amelia Street. Place a park rules sign in this area.

F Shelter

Construct a picnic shelter for use by neighborhood residents.



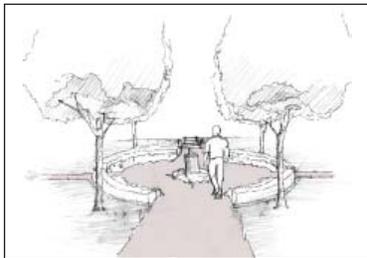
an example of a craftsman style shelter

G Garden

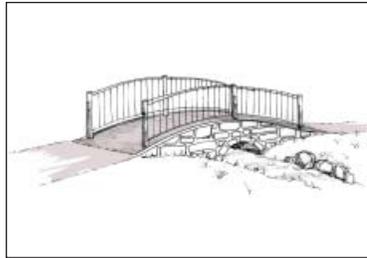
Plant a small perennial garden for the enjoyment of the neighborhood.

H Lawn Area/ Grass Vegetation

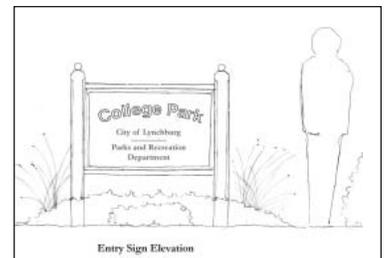
This park offers an excellent opportunity to try alternative maintenance techniques that focus efforts in areas that are easier and safer to maintain, and reduces it in areas that are difficult or dangerous. Traditional lawn areas should be limited to areas that are flat and alongside walking trails. Along the storm water areas and on steep slopes, native cool and warm season grasses should be planted. These grasses only need to be mowed twice a year, and will grow to 12” to 18” tall. This creates a distinct difference between the traditional lawn areas and the less formal (and problematic maintenance) areas. As part of these plantings, include interpretive signage to explain the maintenance.



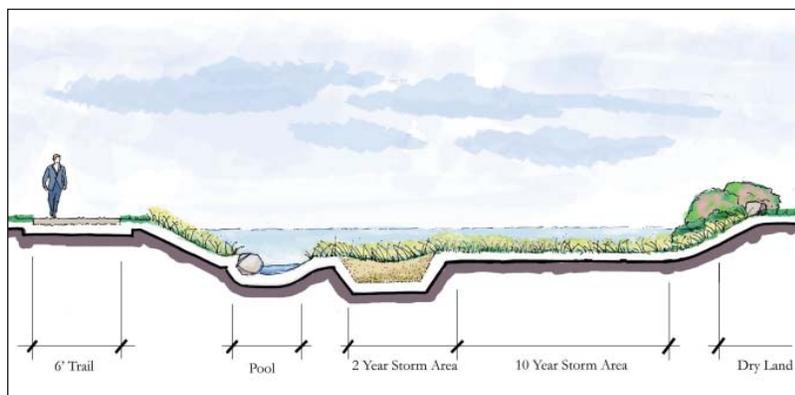
sketch of garden



proposed bridge to cross stream



proposed entry sign



Stream Restoration

Existing Stream Conditions

College Park is a linear park approximately 1200 feet long and 80 feet wide. It is bounded to the north by Breckenridge Street and to the south by Amelia Street. The site slopes steeply from south to north and gently from east to west down the stream valley. A stream flows from east to west through the park and has been channelized through all of the reach. The channel begins as a stormwater outfall from a 30" diameter pipe at Richmond Street.

Additionally, 5 areas in the park were constructed to detain storm flows. Berms with small diameter pipes carrying stream baseflow were constructed to back up water in shallow detention areas. Riprap and/or concrete spillways were constructed across the berms to pass high flows. This channelization and storm water management was likely installed to reduce peak flows to the Lynchburg College property immediately downstream of College Drive. There is no information regarding stream flow, design discharge or detention requirements for this system on record with the Lynchburg Department of Public Works.

The watershed draining to the culvert at Richmond Street is approximately 29 acres. Land cover is predominately small lot single family residential. The drainage area increases to approximately 35 acres at the stormwater outfall from Baltimore Street to the north. The drainage area for the stream leaving the park at College Drive is approximately 59 acres. Acreages are approximate because the actual routing of the stormwater system up-gradient is unknown without completion of a detailed drainage study.

Design Parameters for Stream Restoration and Stormwater Management

The Rational Method was used to calculate the discharge for the 2, 10 and 100 year storms. The acreages noted above were used for the contributing watershed. The land cover condition was assumed to be residential; lots of 100,000sf (Source: VDOT) $C=0.50$. The time of concentration was calculated to be 5.2 minutes (using the formula for shallow concentrated flow in TR-55, $T_t \text{ (hrs)} = L/3600V$ where $L= 1200$ linear feet, $V=3.8\text{fps}$ (watershed slope assumed to be 5.7%, unpaved; Figure 3.1; TR-55).

For the Rational Method, the time of concentration is equivalent to rainfall intensity on the Intensity-Duration-Frequency Curve for Lynchburg (VA state stormwater Manual). The discharge volume for the two watershed acreages is shown below for the design storms listed.

| | 35 acres | 59 acres |
|------|------------|------------|
| Q2 | 96.25CFS | 162.25 CFS |
| Q10 | 124.25 CFS | 209.45 CFS |
| Q100 | 168.88 CFS | 284.68 CFS |

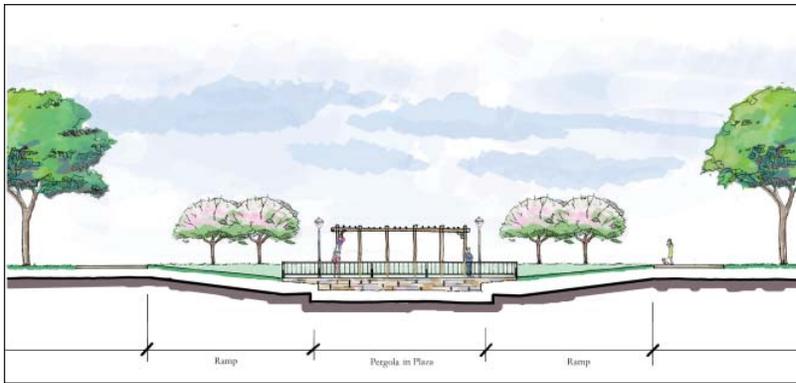
These discharges were used for the concept design. 35 acres seemed to be a logical breakpoint for an increase in channel cross section due to the small size of the contributing sub-watersheds downstream. Prior to detailed design of the channel or the stormwater features proposed with this concept, a more detailed hydrologic analysis will be required.

Conceptual Design

Construction of a natural channel, unimpeded by low flow pipes, berms, concrete and riprap would provide a significant amenity for College Park. Using sound principles of fluvial geomorphology developed by Leopold, Rosgen and others, a natural channel design is proposed. With a valley slope through the park, which exceeds 2.5%, a series of step/pools and riffle/runs is appropriate.

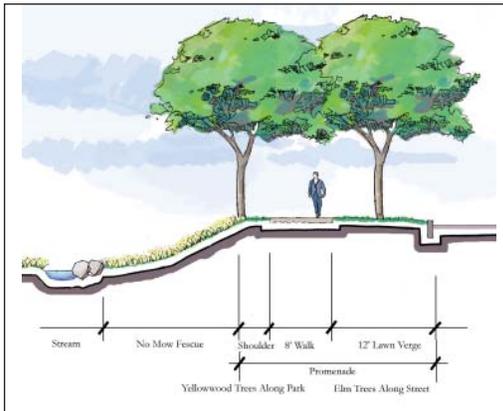
The step/pools are composed of boulders so they are very stable and aesthetically pleasing, functioning as plunge pools to slow down storm flows so they are not erosive. Over time small fish and amphibians will inhabit the pools. The riffle/runs are composed of cobbles and provide habitat for macro invertebrates.

Floodplain areas can be created to attenuate storm flows thus reducing the volume of water to the downstream area. Native plants attractive to wildlife can be planted in this riparian corridor to enhance the visitor’s experience in the park. The bioretention/pocket wetlands will filter the pollutants from the first flush of stormwater runoff. They can be planted with wild flowers and native shrubs resembling landscape planting beds, while functioning to uptake excess nutrients from the runoff.



Overlook Elevation

The overlook will be aligned with Cary Street in the center of the park. The plaza could be used for watching the stream and becomes a major node of activity in the park design. The shade trellis should be in a craftsman style to match the neighborhood housing. Place a park rules sign in this area.



Promenade Section

The promenade should deal with the grade change along the edge of the park while providing a safe and aesthetic walkway. Move the curb line on Breckenridge Street to allow more flat land for the promenade. Use traffic calming measures such as curb bump-outs to create designated on-street parking for the park.

Project Priorities

- Restore stream system
- Build the promenade, on street parking and overlook
- Add walking trails in the interior of the park
- Build shelter and garden
- Add a creative play space