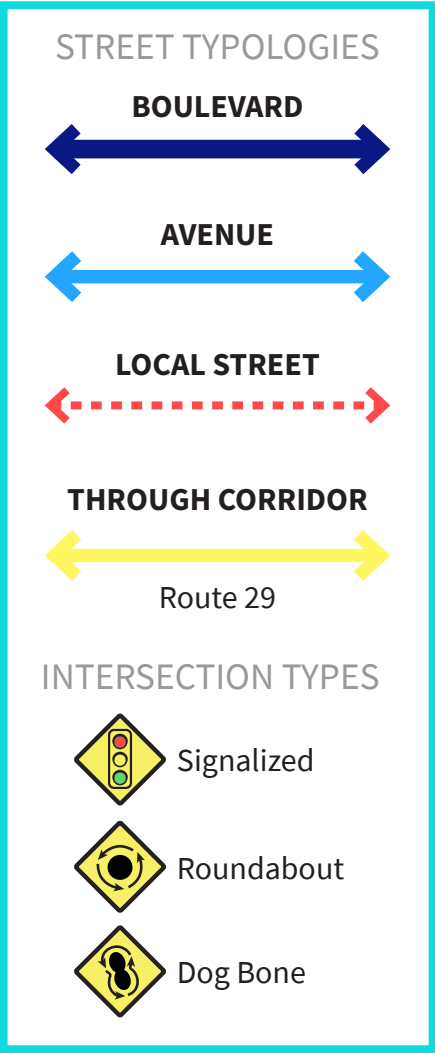
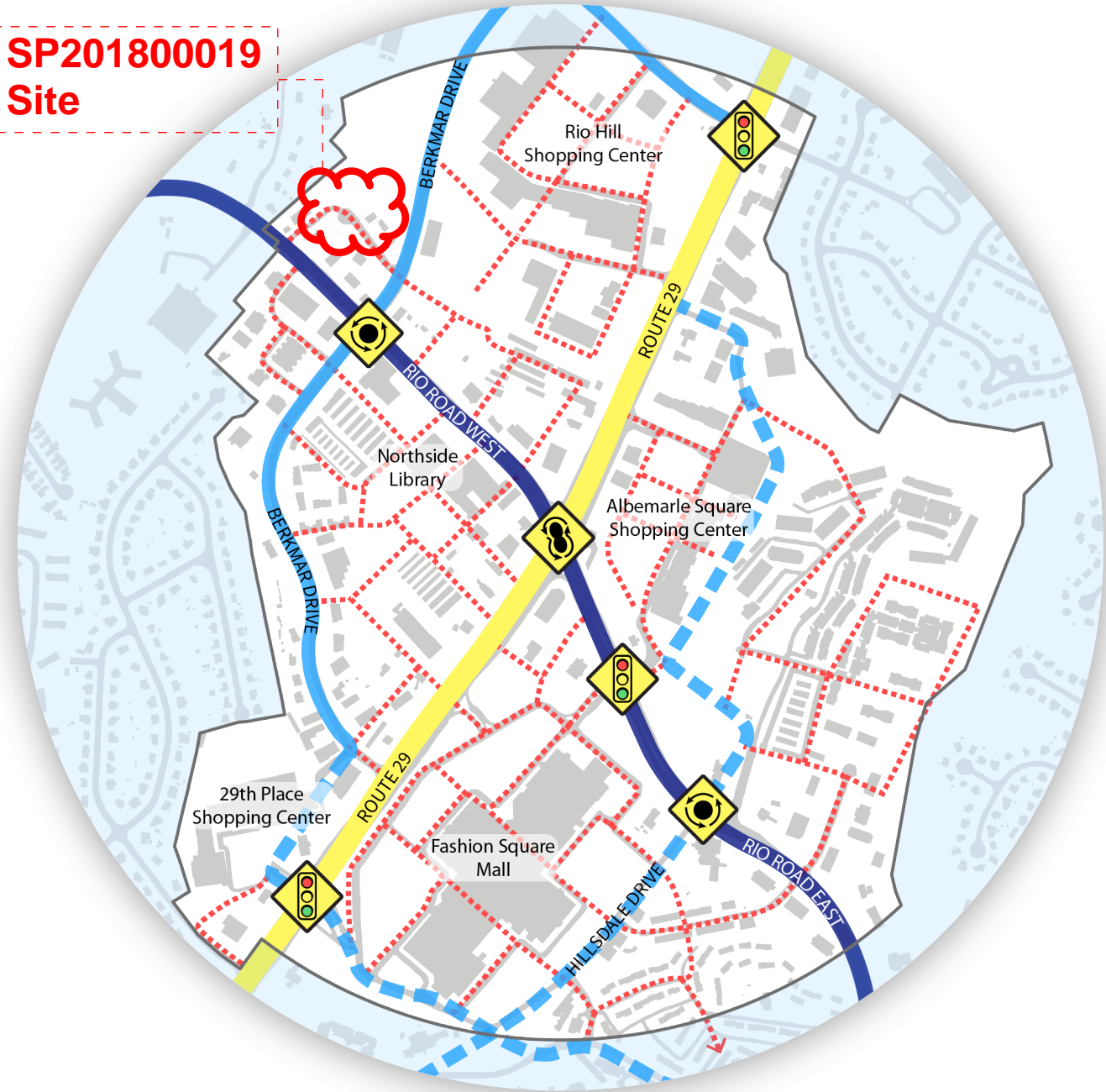


Connectivity Plan

FUTURE STREET NETWORK

The Connectivity Plan proposes a grid-like street network for Rio29. A connected grid can better connect existing and future residents on the periphery of the Plan to Rio29's center of activity (ie. the "Core" area, which is detailed in the next chapter). A connected grid can also connect neighborhoods to one another without diminishing the quality or the character of the neighborhoods within or around Rio29. Proposed streets should be designed for motorists, pedestrians, bicyclists, and transit riders. The grid network provides more direct routes to destinations that will allow people to more easily walk, bike, or drive to locations within Rio29.

SP201800019
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Streets shown in the Connectivity Plan that are dotted convey the approximate street locations. The Street network overall shows a conceptual plan that achieves the Plan's goals for connectivity. Redevelopment and new development in Rio29 will determine the exact placement of streets.

STREET DESIGN AND SCALE

The Connectivity Plan proposes a hierarchy of streets based on street capacity (how many people, cars, bikes, and buses it can accommodate) and function. The scale and design of streets should be both a reflection of a street's capacity as well as a street's role in the network.

As an example, a street that is designed to hold a high amount of traffic can traverse through different areas of the community and serve different functions along its length. One segment can be designed to carry traffic quickly through an area and another segment of the same street can be designed as a main street, serving as a destination for the community, while still maintaining the same capacity through both segments.

In Rio29, the boulevard (Rio Road) is an example of a street serving these different functions. The boulevard is the highest capacity street that connects traffic from outside Rio29 to Rio29's activity center. Within this center, or "Core" area of Rio29 (detailed in the Character chapter), Rio Road should be designed as a main street with slower traffic speeds so that all modes of transportation can interact safely. When designed appropriately, the boulevard can maintain its high capacity through the Core without altering the neighborhood character.

The street design and function can also impact what uses are appropriate along a street. Many businesses seek busier streets that provide drive by-traffic and therefore they often prefer to be located on a high capacity street within the slower-speed Core area. Residents, however, do not want cars driving quickly through their neighborhoods, and may choose to locate in the Core along roads where speeds are slower. The resulting street could have a mix of uses and become an activity center for the area.

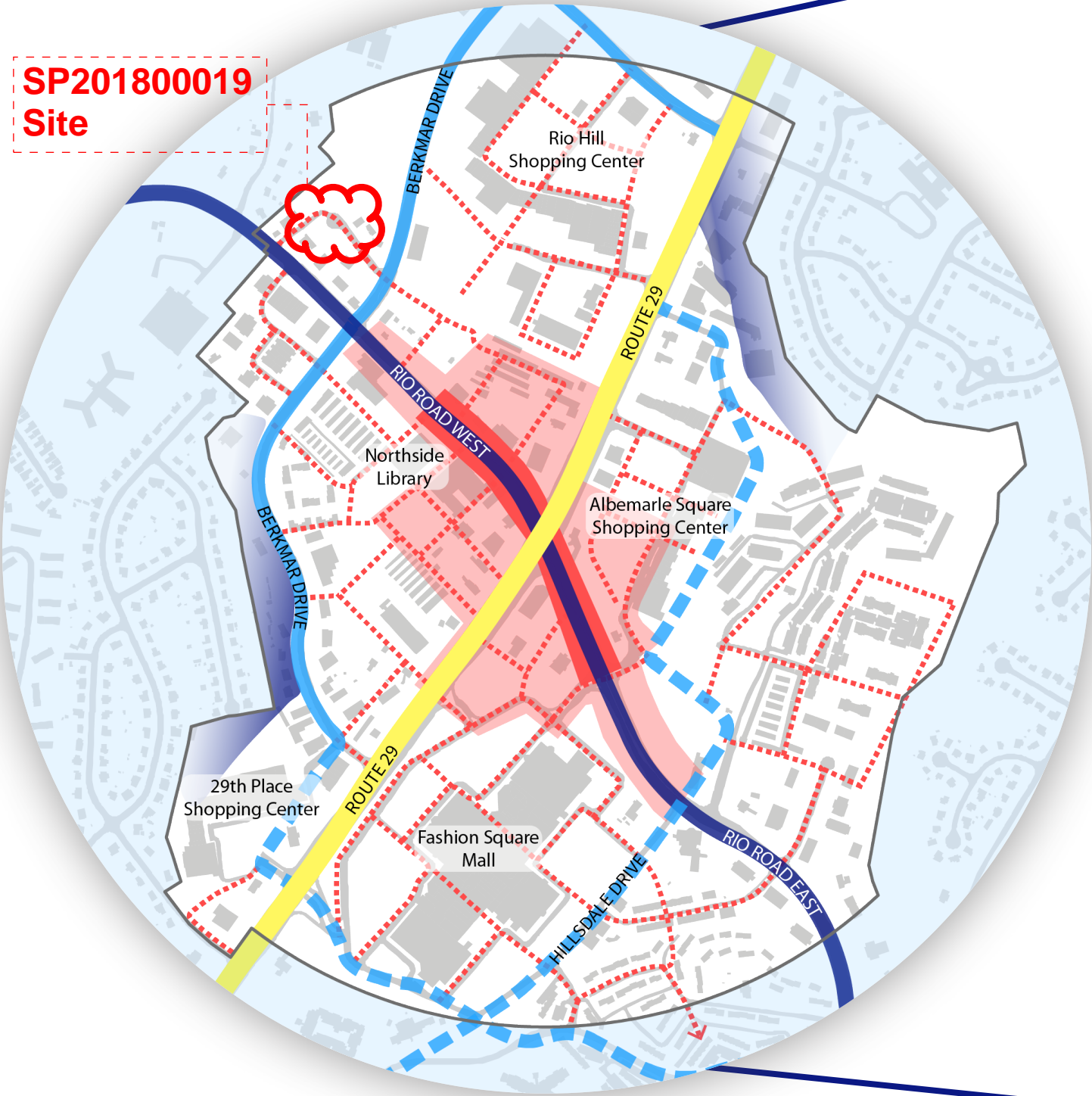
Alternatively, some residents may not wish to live along the high capacity streets but still want easy access to the Core area. Local streets can provide quieter streets with

NOTE: Street sections shown on the next several pages were developed using guidance from the Virginia Department of Rail and Public Transportation's Multimodal System Design Guidelines, The National Association of City Transportation Officials Urban Street Design Guidelines, and The Virginia Department of Transportation's (VDOT) Road Design Manual. Best practice recommendations from these guidelines were adjusted to reflect existing conditions and local preferences.

Cross sections depict "optimal" dimensions or a range of allowable street element dimensions. Variations and reductions to widths may be permitted to accommodate special circumstances, such as existing streets with constrained rights-of-way, and where an equivalent alternative can be provided. Appropriate transitions to adjacent properties must be provided where width reductions are permitted. Reductions in road width may be permissible, where deemed appropriate by VDOT. Furthermore, flexibility needs to be provided to allow for streets to evolve over time as needed. All public streets are subject to VDOT approval.

Character Plan

FUTURE PLACE TYPES IN RIO29



PLACE TYPOLOGIES

**Urban
Core**

Core

Flex

Edge

STREET TYPOLOGIES

BOULEVARD

AVENUE

LOCAL STREET

THROUGH CORRIDOR
Route 29



The **Core** is intended to have the highest intensity of development and the tallest buildings, which are offset by **stepbacks**. Buildings facing the streets in the **Urban Core** should have active first floor uses.



The Flex area is intended to have the highest amount of flexibility in building form and use. Buildings can have a range of heights and uses, but buildings should be designed to make pedestrians comfortable.

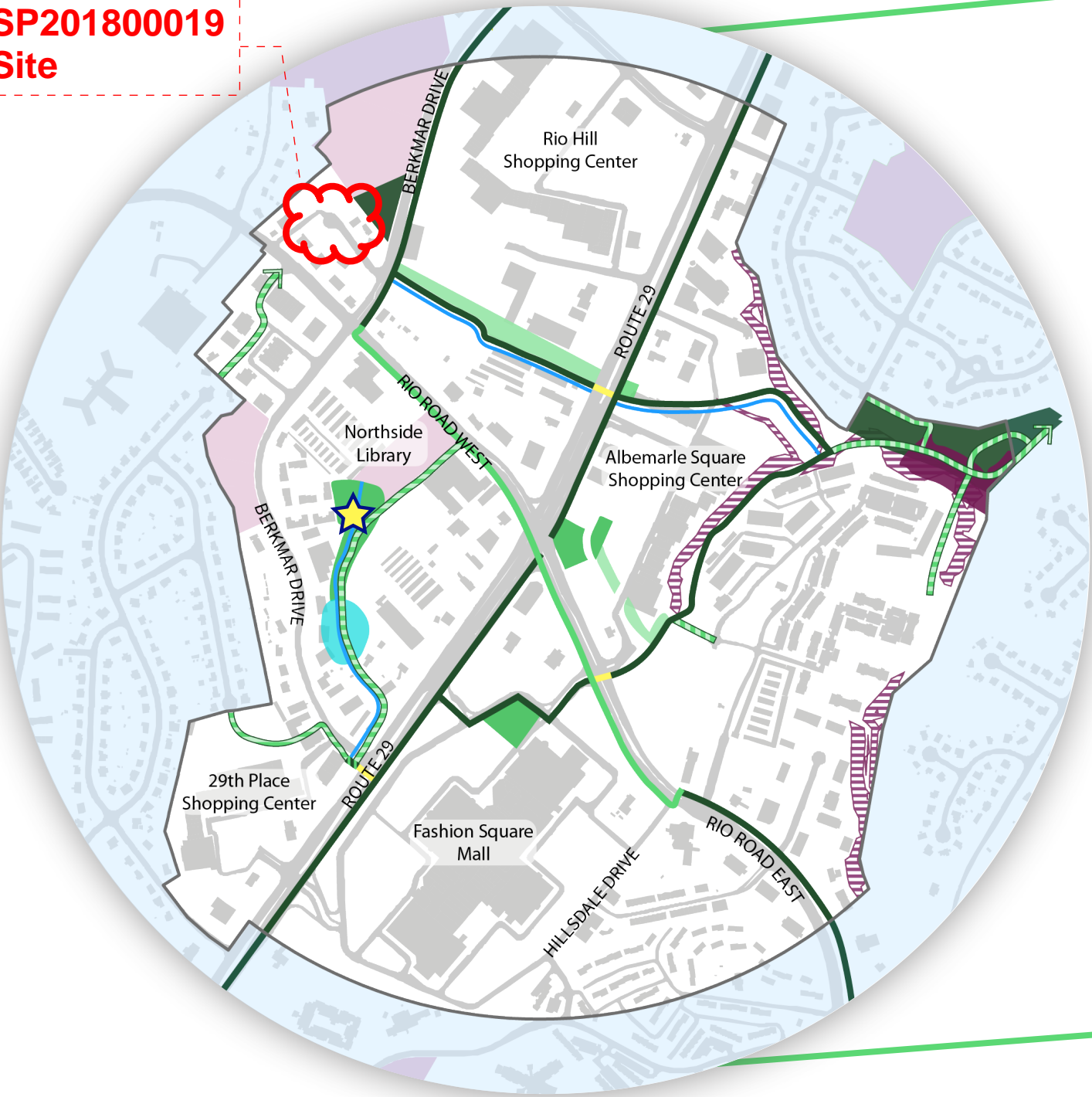


Edges are areas of less-intense development next to existing neighborhoods. Buildings are expected to have lower heights and smaller building footprints.

Conservation Plan

FUTURE CONSERVATION NETWORK

SP201800019
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TRAIL TYPOLOGIES

**SHARED-USE
PATH (SUP)**



TRAIL



**TWO-WAY CYCLE TRACK
OR SUP**



PUBLIC AMENITY SPACES

- LINEAR PARK
- PLAZA/GREEN
- NATURAL AREA
- FLOODABLE PARK
- COUNTY-OWNED LAND
- ★ THE SQUARE*
- PEDESTRIAN CROSSING
- EXPOSED STREAM

CRITICAL RESOURCES

- PRESERVED SLOPES
- 100' STREAM BUFFER

* The final location for the Square will be determined based on how the area redevelops, but it is anticipated that one of the identified plazas/greens will serve as The Square (see Page 35).

ABOUT THE CONSERVATION NETWORK

County-owned property and critical resources provide the foundation for the Conservation Plan. The Plan highlights how underutilized County-owned properties can be re-imagined as key public amenity spaces, while also providing important ecosystem services to the surrounding area. The Conservation Plan shows a Conservation Network that is made up of Public Amenity Spaces, Trails, and Critical Resources. The Conservation Network is expected to be developed (and, in some cases, preserved) through a combination of public investment and private redevelopment activities.

The Plan recommends the protection of existing critical resources. Currently, all of the critical resources are within the northeast quadrant of Rio29. These consist of several preserved slopes along the northern and eastern periphery of the plan boundary, as well as a perennial stream just south of the Woodbrook Neighborhood. These areas should be protected with future development.

The Plan also recommends outdoor public amenity spaces within each quadrant of Rio29. Three of the four quadrants (northeast, northwest, and southwest) contain County-owned properties that provide stormwater treatment for adjacent development. The Plan envisions how these publicly-owned properties can be redesigned to become public amenity spaces for active, passive, and/or social recreational opportunities, all while continuing to treat stormwater runoff.

The Conservation Plan proposes a Linear Park in the Northwest quadrant and Plazas/Greens within the other three quadrants. There are two Natural Areas recommended in the northern quadrants and a Floodable Park proposed in the southwest quadrant.

One of the Plazas/Greens should serve as the Square or central amenity space for Rio29. The Square is intended to provide a space that can accommodate large gatherings and events, and should be associated with a civic facility such as a library or a school.

Another potential element of the Conservation Network is the green street. All streets in Rio29 are expected to include street trees, but some streets could be designed to have additional green amenities. Green streets are those that give priority to pedestrian circulation, open space, and/or stormwater treatment. Though specific streets are not identified on the plan as green streets, developers and the County should be encouraged to pursue green street designs where possible. Green streets could take the place of identified trails, shared use paths, or required open space, if these facilities are adequately incorporated into the design of the street.

Transformative Projects



Catalyst Projects: 0 to 5 Years

- A** Library Plaza Phase #1
- B** Berkmar Shared-Use Path (SUP)
- C** Woodbrook Natural Area Design
- D** Rio Road Streetscaping
- E** Hillsdale Drive Extension & Realignment
- F** Rio and Route 29 Commuter Bus Stop

Future Projects: 5+ Years (Dependent on Buildout)

- G** Library Plaza Phase #2
- H** Rio Shared-Use Path/Bicycle Lane
- I** Woodbrook Natural Area Construction
- J** Rio Rd. Streetscaping Improvements Phase #2
- K** Rio Rd. Streetscaping Improvements Phase #3
- L** Hillsdale Dr. Extension & Realignment Phase #2
- M** Hillsdale Dr. Extension & Realignment Phase #3
- N** Route 29 Shared-Use Path
- O** Floodable Park & Greenway
- P** Linear Park & Stream Daylighting
- Q** Route 29 Pedestrian Underpass
- R** Berkmar Realignment
- S** Circulator Bus
- T** Bike/Ped Bridge at Berkmar
- U** Dogbone Roundabout at Rio
- V** Transit Plaza
- W** Rio29 Transit Station
- X** Berkmar/Rio Roundabout
- Y** Fashion Square Plaza

LEGEND

- Civic Spaces
- Trails, Paths, & Parks
- Road & Intersection Improvements
- Public Transit
- Catalyst Projects
- Long Term

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