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.

STREET TYPOLOGIES

BOULEVARD

AVENUE

LOCAL STREET

THROUGH CORRIDOR

Route 29

INTERSECTION TYPES

Signalized

Roundabout

Dog Bone

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 onon 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 approcal.