

# The Basic Network & Access Management

The NC 73 Access Management recommendations include the location of intersections as well as their role within the larger network. The portion of NC 73 that is in the study area is organized into two street types: the Boulevard with frontage roads and the Parkway.

## The NC 73 Concept of Boulevard & Parkway

NC 73 has a dual role, serving both as an east-west regional connector and as a thoroughfare for local trips. It is anticipated that NC 73 will need to be widened to 4 lanes in its entirety through the study area; within the next 20 years traffic will increase from a range of 15,000 to 16,000 cars per day (2003) to as many as 38,000 cars per day (2025). Conflicts between through traffic and local trips need to be addressed. As part of the solution, an improved street network is proposed throughout the study area. The intent is to provide an approach for balancing the goals for the development of centers, job creation, open space and the preservation of view sheds. The solution along the 3.4 miles of corridor is multi-tiered:

- 1- Provide a network of streets, trails and walking paths to move through the study area and beyond.
- 2- Provide an access management strategy through identification of key locations for intersections and access.
- 3- Create a Boulevard, a road with frontage roads, where higher density of development is expected.
- 4- Create a parkway with a parallel network of trails and streets in other locations.

## The Design of the Boulevard and Parkway

The Boulevard is proposed at Poplar Center, from Poplar Tent Road westward for approximately 3,000 feet. The Parkway is proposed for all other portions of NC 73.

### A Boulevard at Poplar Center

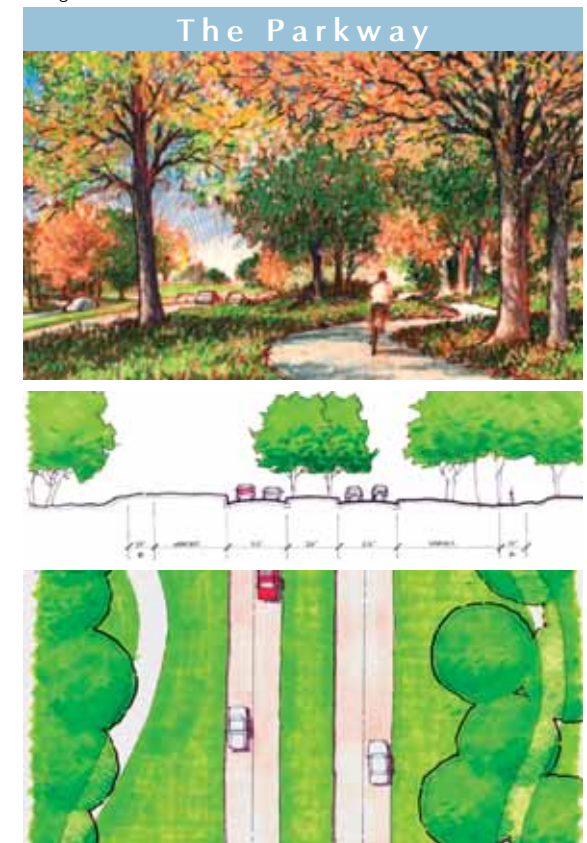
NC 73 and Poplar Tent Road is recognized as the most suitable location for a Central Business District. Situated at the intersection of two regional roads and at the convergence of two counties, this location also has more level terrain necessary for larger office floor plates. In light of the goals such as job creation, walkability, a unique mixed-use environment and access management, a boulevard treatment is proposed.

Boulevards are livable streets. They are efficient from a transportation standpoint, and can also help to create urbane, mixed-use environments.

The center lanes of NC 73 are for the faster through traffic. The median serves as a buffer, from the faster traffic, creating a more comfortable environment. Buildings can meet the street with wide sidewalks, on street parking and travel lane along the frontage road. The medians on boulevards, between the faster moving traffic and the frontage road, are used as linear parks, greenways with bike and walking paths.

### The Parkway with Network of Streets

For the central and western portions of the study area, a parkway is proposed. The parkway would have improved signalized intersections for left and right turns as well as pedestrian-friendly intersections and biking and walking paths. A parallel road network would also be created as part of the new adjacent development. This would include a 2-lane curvilinear road that meanders alongside NC 73.



## Important New Street Alignments and Connections

As part of the Framework, several key streets, connections and alignments should be implemented. The diagram depicts major connections that will help create a cohesive network. Key streets and their roles are listed below.

### 1. East Davidson Center

There is a desire to maintain the rural character of June Washam Road. This is accomplished by several connections:

- Maintain the road width and design of June Washam Road. Do not widen or improve it in any way that would encourage residents to use the road more or speed.
- Create alternative connections besides June Washam Road to get onto NC 73. Several existing stubs may be connected to the new development at East Davidson Center. These connections should be made.
- Realign portions of June Washam Road adjacent to East Davidson Center. Create a route that is less direct than the existing road. Relocate and realign the connection to Davidson-Concord Road.

### 2. Bradford District Park / Bradford Center / Ramah Church Road

There is an opportunity to align two future streets to create an intersection, as well as provide an alternate north south route to Ramah Church Road, by entering through Bradford District Park.

- Extend Shearer Road and align the entrance of Bradford District Park to create an intersection.
- Extend the road through Bradford District Park and create an east-west and north-south connections through the park onto Ramah Church Road.

Bradford District Park is currently in the design stage. Development to the north, adjacent to the park, will be seeking site plan approval in the near future. This alignment and these connections have several benefits. The signalized intersection will allow residents who live to the north to safely walk to the park. The two connections help alleviate the projected traffic that would impact Ramah Church and Ramah Church Road. (The Study for the alignment of Prosperity Church Road is currently underway. This Bradford District Park Alignment should be considered an option as part of the planning effort.

### 3. Parallel Road to Parkway

A continuous east west road along the north side of NC 73 is not possible in the short term. However there is the opportunity to establish such an east-west alignment as part of immediate development. This would include an east-west street:

- At Summers Walk; a stub is already proposed.
- At Bradford Center; east-west streets are proposed.
- At East Davidson Center; the east-west road defines the edge of the development.

### 4. Northern Connection to Shiloh Church Road

There is an opportunity to create an east west connection from Shearer Road to Shiloh Church Road. This is accomplished by connecting the developments of River Run Phase V, Summers Walk and finally through Shiloh Village.

### 5. Alternate North South to Poplar Tent Road / Shiloh Church Road

As part of the development area that is east of Summers Walk and west of Shiloh Church / Poplar Tent Road, a new north south road connects from Huntersville-Concord Road at the south. This road would be located to meet the new Shiloh Church Road Connection.

### 6. East West Connection to New Alternate Road

A new street creating a connection from Poplar Tent Road to the South Poplar Neighborhood Center.

### 7. Frontage Roads as Part of the Boulevard

At the portion of NC 73 that is designated as Poplar Center, a single direction frontage road with a median, on-street parking, and sidewalks would be created. This frontage road would be built as part of site improvements for development.

### 8. New Greenway Streets Parallel to Open Space

New streets which are part of the greenway system run parallel to Rocky River and other portions of the greenway system. These roads are single-loaded (buildings and development on one side only) to allow continuous visibility and access to the greenways.

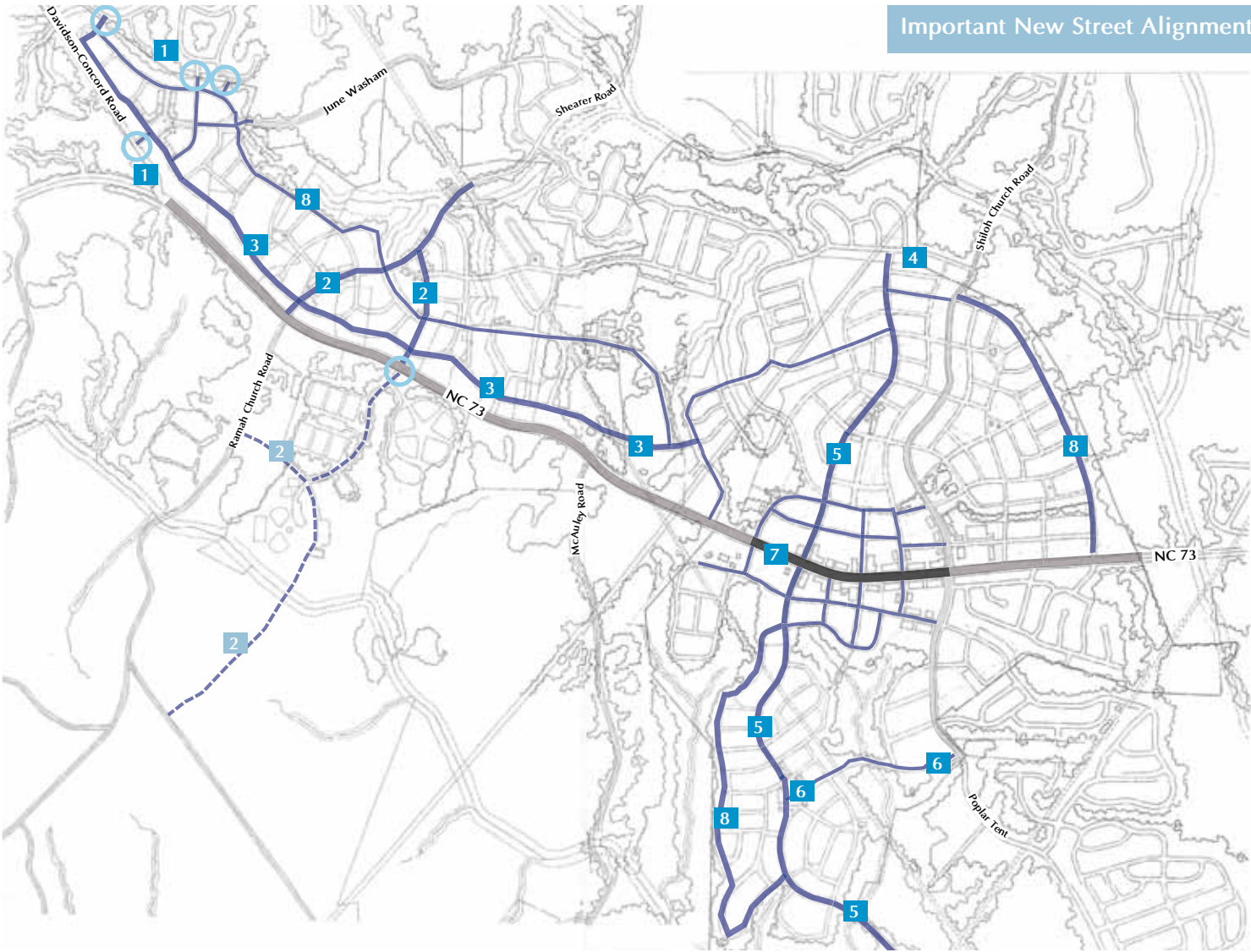
## An Efficient Network of Streets

Contrary to the commonly-held belief that wider roads carry more cars and hence are more efficient, a network of smaller roads is actually more efficient. The network provides a greater capacity to carry cars than one multi-lane road. Adding lanes to create a wider road may increase the capacity of that road, but the increased car capacity of each new lane is actually less than the original lane. In short, two 2-lane roads are more efficient than one 4-lane road, an inherent value of a network of streets.

A network of streets also takes the burden off of NC 73 through more efficient vehicular flow and increased route choices. A more efficient vehicular flow is created by the separation of short local trips from longer regional trips. The network and frontage roads that are part of the boulevard concept helps to reduce traffic friction that currently occurs on NC 73. Drivers using NC 73 for short local trips have a different mind set; they tend to drive slower and make left turn and right turns, slowing down the through traffic drivers. An increased number of routes are created through a well-connected, two-lane network. As a result, providing drivers with more than one route option between their origin and destination reduces reliance on NC 73.



# Important New Street Alignments and Connections



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## Access Management along NC 73

Acknowledging that monies for road improvements are limited, the approach is to improve the network, create more options for movement and reduce reliance on NC 73. At the same time, this approach improves the efficiency of key intersections and designs them in a pedestrian manner.

As part of the Access Management strategy, a series of intersections has been identified. This includes existing intersections, proposed alignments to future roads, as well as new streets altogether. Intersections that are part of proposed Centers should be reviewed and implemented under the North Carolina Department of Transportation's Traditional Neighborhood Development Guidelines. This includes intersection number 1 at East Davidson Center, intersection numbers 2 and 3 at Bradford Center, and intersections number 5, 6 and 7 at Poplar Center. (Specific recommendations for Bradford Center are also located at the end of the chapter.) The improvements at these intersections can coincide with improvements when development comes online.

### 1 - The Intersection of Davidson-Concord and NC 73

There is an existing signal where the two roads meet. That signal should be maintained. The intersection should be made tighter, so as to discourage speeding and encourage a more comfortable environment for bicyclists and pedestrians.

### 2 - Ramah Church Connection

This location is a future connection where a signal may be necessary.

### 3 - Bradford Park Road

Bradford Park Road should be aligned to the north-south road that would be created on the Jacobus property to the north, which would connect to Shearer Road to the North. This intersection should be signalized and have clearly defined crosswalks, so residents would feel comfortable walking to the park.

### 4 - Summers Walk Development

This is a "T" intersection and is not intended to require a signal. A deceleration and/or stacking lane may be required to enter this development.

*More details on the intersections which are part of Poplar Center are provided at the end of the chapter.*

### 5 - New North-South Street

This is the location of the new street which would run north south, west of Poplar Tent / Shiloh Church Road. This street would be an important new road that would connect from Huntersville Concord Road and continue northward. A full intersection is proposed at Poplar Center and would include the Boulevard with frontage roads. This signalized intersection should have full left turns. The road would continue northward.

### 6 - New Poplar Center "Pedestrian Crossing"

This intersection is not at a major north south road. The intent is to provide an intersection that is designed with an emphasis on creating a safe pedestrian crossing. This intersection would not allow left turns, or only allow them at peak hours. The design of the streetscape and other visual cues would visually pinch the intersection.

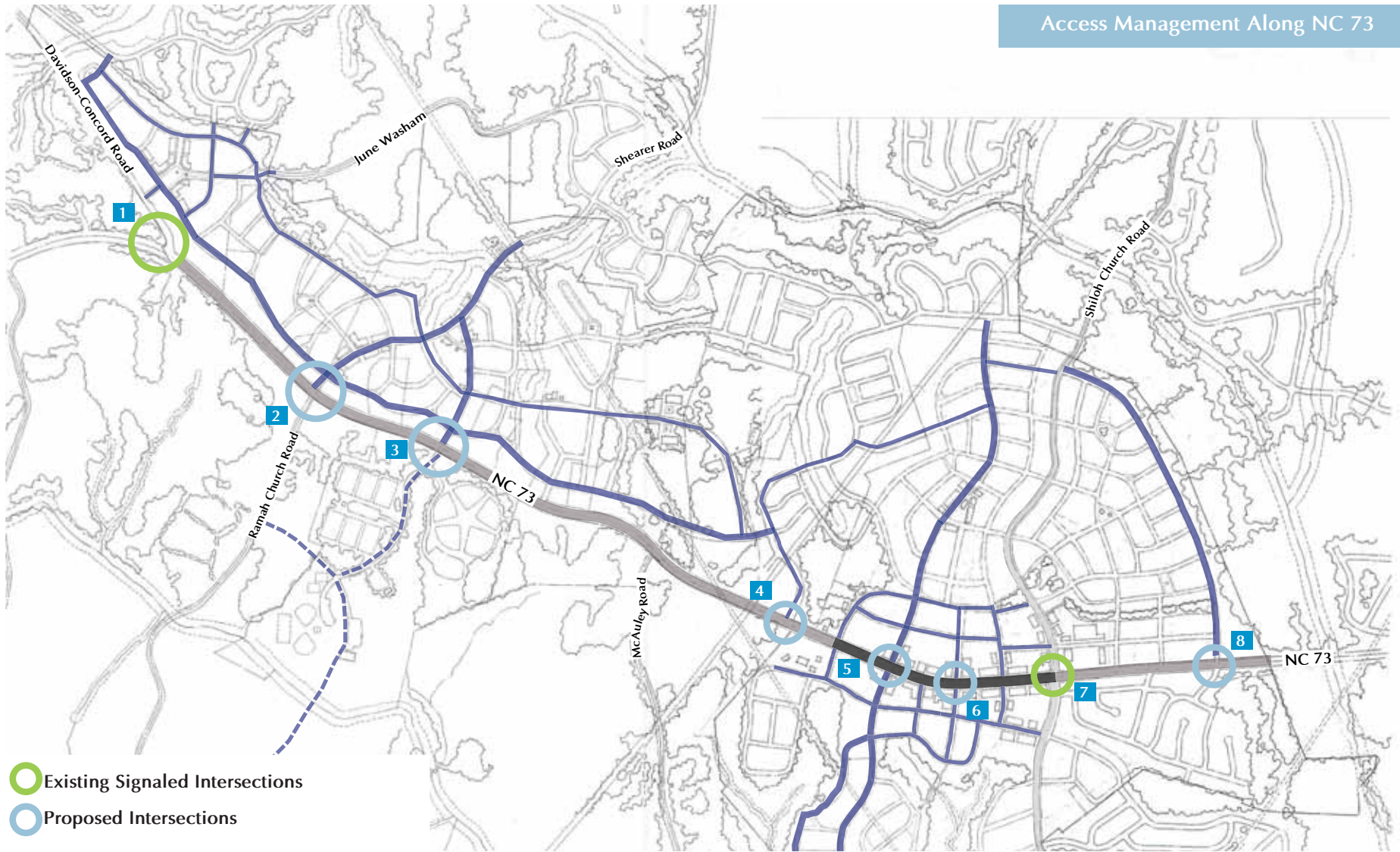
### 7 - Poplar Tent / Shiloh Church Road

This is the existing signal and intersection. As new development comes online, additional improvements to make the intersection more pedestrian friendly would be required.

### 8 - New Rocky River Drive

A greenway is proposed along Rocky River. The intent is to keep this edge accessible with a public drive. This road would continue along the edge of the greenway and connect to Shiloh Church Road to the north. The goal is create an intersection with new development to the south. This intersection may require a signal in the long term.

# Access Management Along NC 73



- Existing Signaled Intersections
- Proposed Intersections

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**5a** Intersection 5a is a new major north-south road. It is designed to accommodate north-south movement and left hand turns. This road can remove reliance on Poplar Tent Road.

**5b** Intersection 5b is not at a major north-south road. The intent is to provide an intersection that is designed for pedestrians to move comfortably from one side of Poplar Center to the other. This intersection would not allow left turns, or would allow them only at peak hours. The design of the streetscape and other visual cues would visually pinch the intersection.

**6** Intersection 6 is limited access, not allowing motorists onto the center thoroughfare. Motorists would have a stop sign. Crosswalks and signage would give pedestrians priority to cross onto the median.



5a & 5b



6



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