

# **Town of Carrboro**

*301 W. Main St., Carrboro, NC 27510*



## **Meeting Agenda - Final**

**Tuesday, September 12, 2023**

**7:00 PM**

**COUNCIL WORK SESSION**

**Council Chambers - Room 110**

**Town Council**

**TOWN COUNCIL WORK SESSION**

*The Council occasionally holds work sessions to allow time for in-depth consideration of certain topics and to provide feedback to the town manager. The Council does not take formal action or receive public comment during work sessions*

**1.     [23-236](#)           Connector Roads Policy Work Session**

**PURPOSE:** The purpose of this Work Session is to provide the Town Council with the opportunity to discuss street connectivity and the Town's Connector Roads Policy.

**Attachments:**   [A - Street Connectivity Memo \(09-08-2023\)](#)  
                          [B - Connector Roads Policy](#)  
                          [C - Connector Roads Chronology \(09-08-2023\)](#)  
                          [D - Policies](#)  
                          [E - Fire Code Regulations & Notes 22-August-2023.docx](#)  
                          [F - Road Connectors Race and Equity Pocket Questions](#)

**2.     [23-235](#)           Traffic Calming Work Session**

**PURPOSE:** The purpose of this Work Session is to provide an opportunity for the Town Council to discuss the residential traffic calming process and how it might be simplified.

**Attachments:**   [A - Staff Memo \(09-08-23\)](#)  
                          [B - Residential Traffic Management Plan](#)  
                          [C - Map of Traffic Calming Installations 2023.pdf](#)  
                          [D - Carrboro Connects - Traffic Calming-related excerpts](#)  
                          [E- Traffic Calming Pocket Questions](#)



## Agenda Item Abstract

File Number: 23-236

---

**Agenda Date:** 9/12/2023  
**In Control:** Town Council  
**Version:** 1

**File Type:** Agendas

---

Connector Roads Policy Work Session

**PURPOSE:** The purpose of this Work Session is to provide the Town Council with the opportunity to discuss street connectivity and the Town's Connector Roads Policy.

**DEPARTMENT:** Planning, Zoning & Inspections

**CONTACT INFORMATION:** Patricia McGuire, Planning Director, 919-918-7327, [pmcguire@carrboronc.gov](mailto:pmcguire@carrboronc.gov) <<mailto:pmcguire@carrboronc.gov>>; Duncan Dodson, Planner, 919-918-7340, [ddodson@carrboronc.gov](mailto:ddodson@carrboronc.gov) <<mailto:ddodson@carrboronc.gov>>; Christina Moon, Planning Administrator, 919-918-7325, [cmoon@carrboronc.gov](mailto:cmoon@carrboronc.gov) <<mailto:cmoon@carrboronc.gov>>

**COUNCIL DIRECTION:**

☐ Race/Equity ☐ Climate ☐ Comprehensive Plan ☒ Other

The Connector Roads Policy is administered through the Land Use Ordinance. Provisions in Article XIV, Streets & Sidewalks, require all streets to connect. Exceptions are allowed only where topography makes such connections impracticable. Among other purposes related to safety and service delivery, the policy is designed to connect development and land uses to give a sense of unity and connectivity throughout the Town.

**INFORMATION:** During the review of three development proposals in the spring of 2023, questions were raised about the connector road policy. Council members requested an opportunity to discuss the policy as part of a work session. A staff memo and supporting materials have been provided (*attachments A - E*).



**TOWN OF CARRBORO • NC**  
PLANNING, ZONING & INSPECTIONS

## Connector Roads Policy Work Session

### BACKGROUND:

During the review of three development proposals in the spring of 2023, (South Green, Jade Creek and 904 Homestead Road), questions were raised about the Connector Roads Policy and the benefits of requiring a full vehicular connection between new development and existing neighborhoods. See the attached supporting materials for background and history:

- B. Connector Roads Policy
- C. Street Connectivity Chronology
- D. Relevant Town, State, and Nearby Municipalities' Policies & Regulations
- E. Memo from Fire Chief Will Potter

### WHAT ARE THE PURPOSES OF STREETS; WHAT ARE THE STANDARDS FOR STREETS?

Streets serve as a principle framework for movement and activity in a place providing for circulation, connection and access on routine basis and in emergencies. Streets physically define areas of Town and connect people with places. Carrboro has long embraced transportation choices and has worked to create spaces that can serve many types of travelers.

Recent Land Use Ordinance (LUO) updates included the addition of a Complete Streets Policy in Section 15-209:

*(1) Complete Streets are designed and operated to provide safe and accessible travel for all modes, including pedestrians, bicyclists, transit riders, motorists, commercial vehicles, emergency vehicles and for people of all ages and all abilities.*

*(b) Based upon the findings set forth in subsection (a), the Council declares that it is not only desirable but essential to implement a Complete Streets policy to construct equitable streets and networks that prioritize safety, comfort and connectivity to destinations for all people who use the street network and to encourage healthy, active living, reduce traffic congestion and fossil fuel use, and improve the safety and quality of life of residents of Carrboro.*

[Article XIV of Carrboro's LUO](#), outlines the Town's standards for streets and sidewalks. It provides street classifications and then design specifications for each street type including minimum right-of-way width, minimum pavement width, provisions for curb and gutter or vegetated ditch/shoulders, and locations and types of bike lanes sidewalks.

Detailed specifications for street design and construction are included [Appendix C](#). The bulk of the dimensional and construction standards were established as a result of residential street design workshops in 1999, with exceptions and amendments that have followed. The Town Code further defines play streets, on which "...no person may drive a vehicle upon such street or part thereof unless they reside there, or have business there..." (Town Code, Sec. 6-12). No street, or portion of a street, in Town has been designated as a "play street."



## HOW POLICIES AND STANDARDS ADDRESS STREET CONNECTIVITY?

### Land Use Ordinance (LUO) [15-214; 15-217; 15-221]

- All streets shall be interconnected (unless topography of land affects practicality).
- Connections facilitate access to neighborhoods and shall be created in a way that do not encourage use by substantial through traffic.
- Provides standards for the creation of a temporary stub to be future development

### NC State Building Code: Fire Code [503; D107]

- Developments exceeding 30 dwelling units are required to have two separate access roads
- Smaller developments can be required to have two or more exits by the fire code official.
- Fire apparatus access roads shall not be obstructed in any manner.

### Connector Roads Policy [last updated 2005]

- Ensure that old and new developments and businesses in the town are connected.
- 1996 policy review clarified to include all new roads (minor, local, subcollector, and collector)
- The policy is administered through the LUO

See Attachment C for detailed language in the LUO, the Connector Roads Policy, the Fire Code, and nearby municipalities' regulations.

Town regulations do not explicitly address the use of bollards, while the Fire Code classifies them as obstructions. The policies are clear in purpose and intent, however the current inconsistency around the installation of permanent but movable bollards needs clarification.

Street interconnectivity serves to support the Town's climate and transportation goals, emergency response and service delivery, and economic development and growth.

- Decreases travel times and vehicle-miles-traveled (VMTs), and subsequent emissions by providing continuous and direct routes.
- Continuity expands to cyclists and pedestrians, supporting multimodal transportation.
- Multiple readily available means of ingress and egress maintain community safety.
  - Fallen trees, gas leaks, and other environmental and infrastructural hazards can block road access/evacuation routes (See Attachment D)
- Connects old and new commercial, residential, and mixed use developments
- Provides a sense of connectivity and unity as the Town grows



## HOW IS STREET CONNECTIVITY IMPLEMENTED?

- Projects are designed to connect to existing street network.
- During construction, barricades may be installed to prevent traffic from passing through hazardous area.
- Upon completion of construction of the development, safety barricades are removed.
- Stub outs for potential future connections feature signage at the dead end of the street indicating “Road may continue in the future.”



*Disclosure sign at the end of Lucas Lane*

## SHOULD THERE BE EXCEPTIONS TO CONNECTING STREETS?

The majority of collector, subcollector, local, and minor residential streets follow the Connector Roads Policy, the LUO, and the State Fire Code. While there are cul-de-sacs and dead-end roads in Carrboro, many of these comply with, or predate amendments to, the Connector Roads Policy and the LUO.

See Attachment B for a chronology of council discussions and resolutions that include decisions on street interconnectivity. A table with relevant or previously discussed connections is provided below.

Relevant Council Decisions with Street Connections		
Road/Neighborhood	Year	Details
Cobblestone & Colfax	1992	Connector Road Policy doesn't include subcollector roads
Autumn Drive/Barington Hills	2003	bollards installed until sidewalk improvements completed
Winmore	2003	3 street connections and two stubs for potential future access
Claremont & Colfax	2009	1 connection, 1 stub, and 1 dead end street
Purple Leaf Pl/South Green	2015	Bollards on Purple Leaf Place sustained for pedestrian, cyclist, and emergency access only
Tripp Farm Rd/Dr. MLK Jr Park	2017	LUO amended for flexible administration on Town-owned properties
Wyndham Dr/Kentfield	2018	1 connection and 1 connection with bollards
Jade Creek	2022	2 connections
Homestead/Lucas Lane	2023	2 connections – Town Council requests work session

Town staff have identified four examples of a street connection with bollards:

- Purple Leaf Place
- Wyndham Drive
- Autumn Drive
- Colfax Drive

During the design and construction of Dr. Martin Luther King Jr. Park, an amendment to the LUO was required to not connect Pathway and Hillsborough via Tripp Farm Rd stating, “On Town-owned properties,



the Town Council may eliminate or reduce the requirements of this section for reservation and/or connection of right-of-way.” (Section 15-221).

Current policy only offers exceptions to connectivity when topography would make this impracticable. The LUO does not specify whether the installation of permanent bollards is considered an exception.

When a decision is made to deviate from the street connectivity policies, the street becomes a nonconforming instance in relation to the Fire Code.

#### **CONSIDERATIONS**

- Further clarity on the timeline and mechanisms for the removal of bollards, barriers, or other obstructions is needed.
- Bollard removal upon the issuance of the first Certificate of Occupancy; preparation of a text amendment to the Land Use Ordinance to accomplish this.



# TOWN OF CARRBORO



## CONNECTOR ROADS POLICY

**ADOPTED BY:  
CARRBORO BOARD OF ALDERMEN, MARCH 18, 1986**

**REVISED: APRIL 2, 1991; FEBRUARY 25, 1992;  
FEBRUARY 8, 1994; AUGUST 19, 1997; MAY 26, 1998;  
OCTOBER 21, 2003; AUGUST 23, 2005**



# **OVERVIEW**

## **BACKGROUND**

In 1986, when the Connector Roads Policy was conceived, Carrboro was just beginning to develop toward the north. The Connector Roads Policy was adopted by the Board of Aldermen as a guide to aid in the construction and maintenance of a sound traffic plan for the town. As stated in the introduction of the plan, the success of Carrboro's growth as a town is "ultimately dependent upon the effectiveness and continued efficiency of its transportation system."

The Connector Roads Policy was designed to guide an ever-changing Board of Aldermen as new projects and developments come before them for approval. The Policy's purpose was to ensure that old and new developments and businesses in the town would be connected to each other, both to disperse newly generated traffic and to give a sense of connectivity and unity to the town as it grows. The roads included on the Connector Roads Plan were intended to provide a backbone for a more intricate grid of smaller connector roads.

## **THE CHARGE**

In the fall of 1996, the Board of Aldermen asked the Transportation Advisory Board to review the Connector Roads Policy to see if it still served the town's needs. The TAB noted during its discussion that the town's failure to connect some of the designated roads prevented the Plan from achieving its full potential. However, the TAB maintains its belief that a Connector Road Policy is a vital part of the town's planning initiative.

## **THE RESPONSE**

Because the Transportation Advisory Board recognized that there had been confusion over the interpretation of the Connector Roads Policy and its guidelines, the TAB modified and abbreviated the wording to state the purpose of the Connector Roads Policy in a single paragraph. The TAB eliminated and changed some of the wording for the sake of clarification. The TAB included in the Policy's purpose not only road classifications which connect arterials, but all new roads (minor, local, subcollector, and collector) which are built for new developments. The roads included on the original Connector Roads Plan were (and will remain) intended to provide the backbone for a more intricate public roadwork system that would incorporate all classifications of roads, all of which work together to connect the town and its communities.

## **I. INTRODUCTION**

In 1986, the Connector Roads Policy was conceived and adopted by the Town of Carrboro to aid the town in planning the construction and maintenance of a sound traffic plan for the town. The success of Carrboro's growth as a town is ultimately dependent upon the effectiveness and continued efficiency of its transportation system. Additionally, Carrboro's transportation system, like any public facility, must keep pace with the increased demands that new development places upon it. Roadway systems must be regularly re-evaluated and upgraded to meet future demands.

## **II. STATEMENT OF PURPOSE**

The purpose of the Connector Roads Policy is to ensure that old and new developments and businesses in our town connect to each other, both to disperse newly generated traffic and to give a sense of connectivity and unity to the town as it grew. It indicates a commitment by the town to work toward this connectivity. The roads shown on the Connector Roads Plan are intended to provide a backbone for a more intricate grid of smaller connector roads. The Connector Roads Policy is designed to guide an ever-changing Board of Aldermen as new projects and developments come before them for approval. As Carrboro's boundaries for development expand, additional areas and "backbone" collector roads will need to be added to these maps to ensure that all of Carrboro connects in ways that are both safe and efficient.

### **III. CONNECTOR ROADS PLAN**

The Connector Roads Plan proposes to meet the demands from full development of the northern development area by construction of a series of connector roads that will link this area with the arterial system to the north and to Estes Drive in the east. The construction of a connector road that parallels Hillsborough Road and North Greensboro Street, and providing access with Estes Drive is vitally important to reduce further congestion on Greensboro Street and the Town Center. Connector roads should also eliminate the disruption of residential neighborhoods to the south of areas under development. Connector roads would also be planned to extend north, permitting access to Homestead Road and to the I-40 interchanges.

The connector roads system in the southern development will provide access to the Laurel Hill Parkway thoroughfare which will loop the Bypass, beginning at Jones Ferry Road and connecting with NC 54 and eventually I-40. Because of the development that has already taken place in this area, the two connectors that are central to the overall system, Berryhill Drive and Rock Haven Road, have been approved for construction. In addition, portions of the Laurel Hill Parkway have also been approved for construction.

### **IV. DESIGN AND CONSTRUCTION STANDARDS**

The Design Standards for connector roads should follow the Land Use Ordinance's guidelines, based on the individual road's classification, and its potential for traffic of all varieties in the future as well as when a development is presented to the board.

**Connector Road Between Merritt Mill Road and Brewer Lane**

The Carrboro Board of Aldermen modified the Connector Roads Policy on August 23, 2005 to add a connector road between Merritt Mill Road and Brewer Lane. The resolution adopting this modification is as follows:

The following resolution was introduced by Alderman Diana McDuffee and duly seconded by Alderman Joal Broun.

**A RESOLUTION ADOPTING A MODIFICATION  
TO THE CONNECTOR ROADS PLAN  
Resolution No.07/2005-06**

WHEREAS, the Carrboro Board of Aldermen seeks to provide ample opportunities for the public to consider modifications to existing policies; and

WHEREAS, it has been proposed that the Carrboro Connector Roads Plan be modified by adding a connector road between Merritt Mill Road and Brewer Lane; and

WHEREAS, Town staff has prepared an illustration of a possible connector road between Merritt Mill Road and Brewer Lane, and have noted that the illustration is schematic in nature and reflects a general corridor for a connecting road, and that the actual location could vary based on factors such as topography, soils, development layout, roadway engineering standards, and intersection design; and

WHEREAS, the Planning Board, Economic Sustainability Commission, and Transportation Advisory Board have reviewed and recommended that the proposed modification to the Connector Roads Plan be adopted; and

WHEREAS, the Board of Aldermen have held a public hearing on the proposed modification to the Connector Roads Plan.

NOW, THEREFORE BE IT RESOLVED that the Board of Aldermen approves adding a connector road between Merritt Mill Road and Brewer Lane to the Carrboro Connector Roads Plan.

FURTHER RESOLVED, the Board of Aldermen confirm that with the development of a connector road between Merritt Mill Road and Brewer Lane, a connection to Guthrie Avenue would need to be maintained.

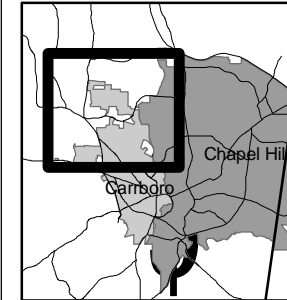
The foregoing resolution having been submitted to a vote received the following vote and was duly adopted this 23<sup>rd</sup> day of August, 2005:

Ayes: Joal Hall Broun, Mark Chilton, John Herrera, Diana McDuffee, Alex Zaffron, Michael Nelson

Noes: Jacquelyn Gist

Absent or Excused: None

## Carrboro Connector Roads - August 2005 (Northern Area)



- Streets
- Carrboro Town Limits
- Connector Roads - 8/05

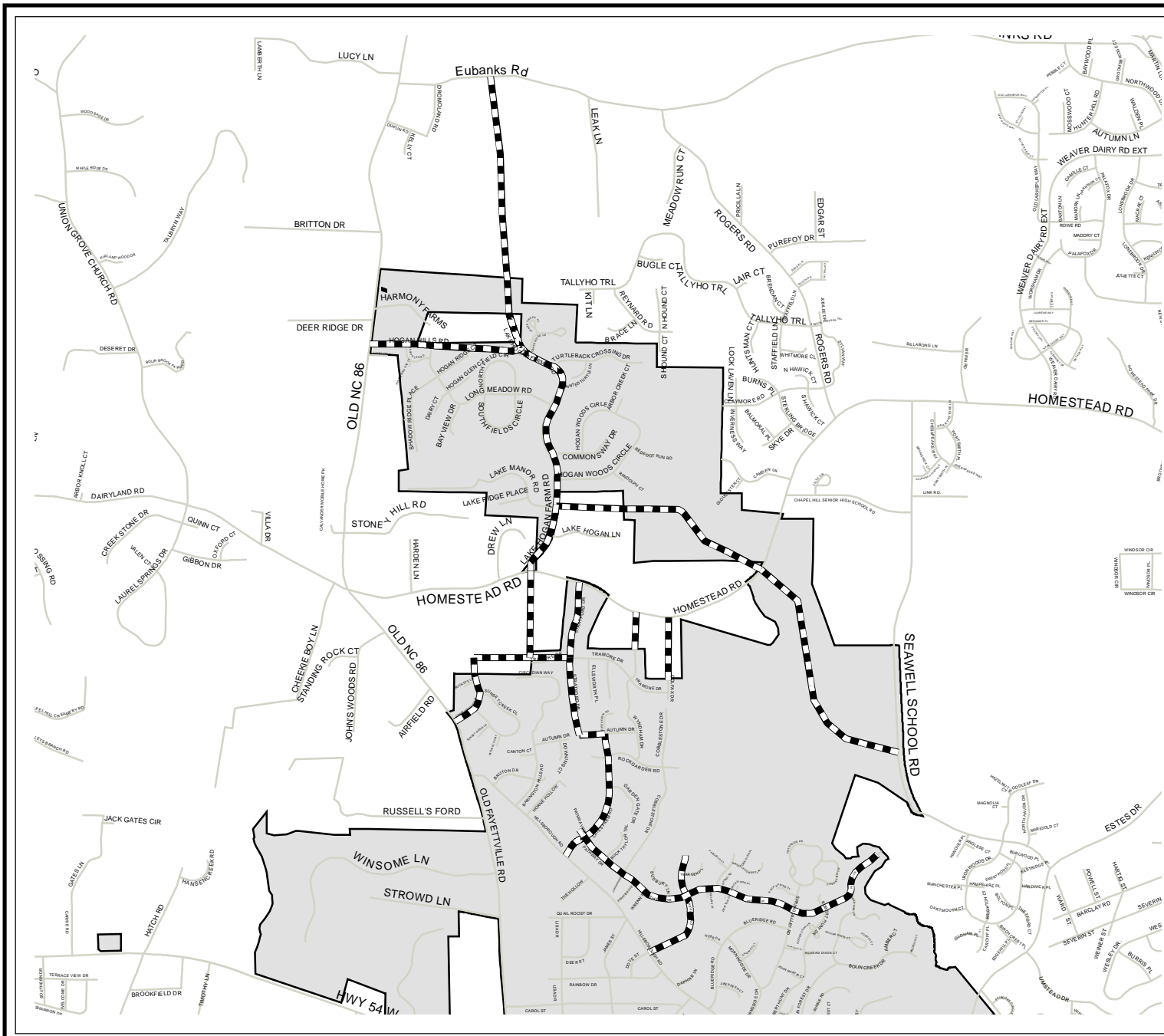
**THIS MAP IS NOT A CERTIFIED SURVEY  
NO RELIANCE MAY BE PLACED IN ITS  
ACCURACY**

The Town of Carrboro assumes no liability for damages caused by inaccuracies in this map or supporting data and makes no warranty, expressed or implied, as to the accuracy of the information presented. The fact of distribution does not constitute such a warranty.

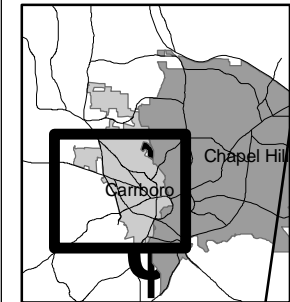


**TOWN OF CARRBORO**  
310 W. Main St.  
Carrboro, NC 27510

September 14, 2005



## Carrboro Connector Roads - August 2005 (Southern Area)



- Streets
- ▭ Carrboro Town Limits
- ▬▬▬ Connector Roads - 8/05

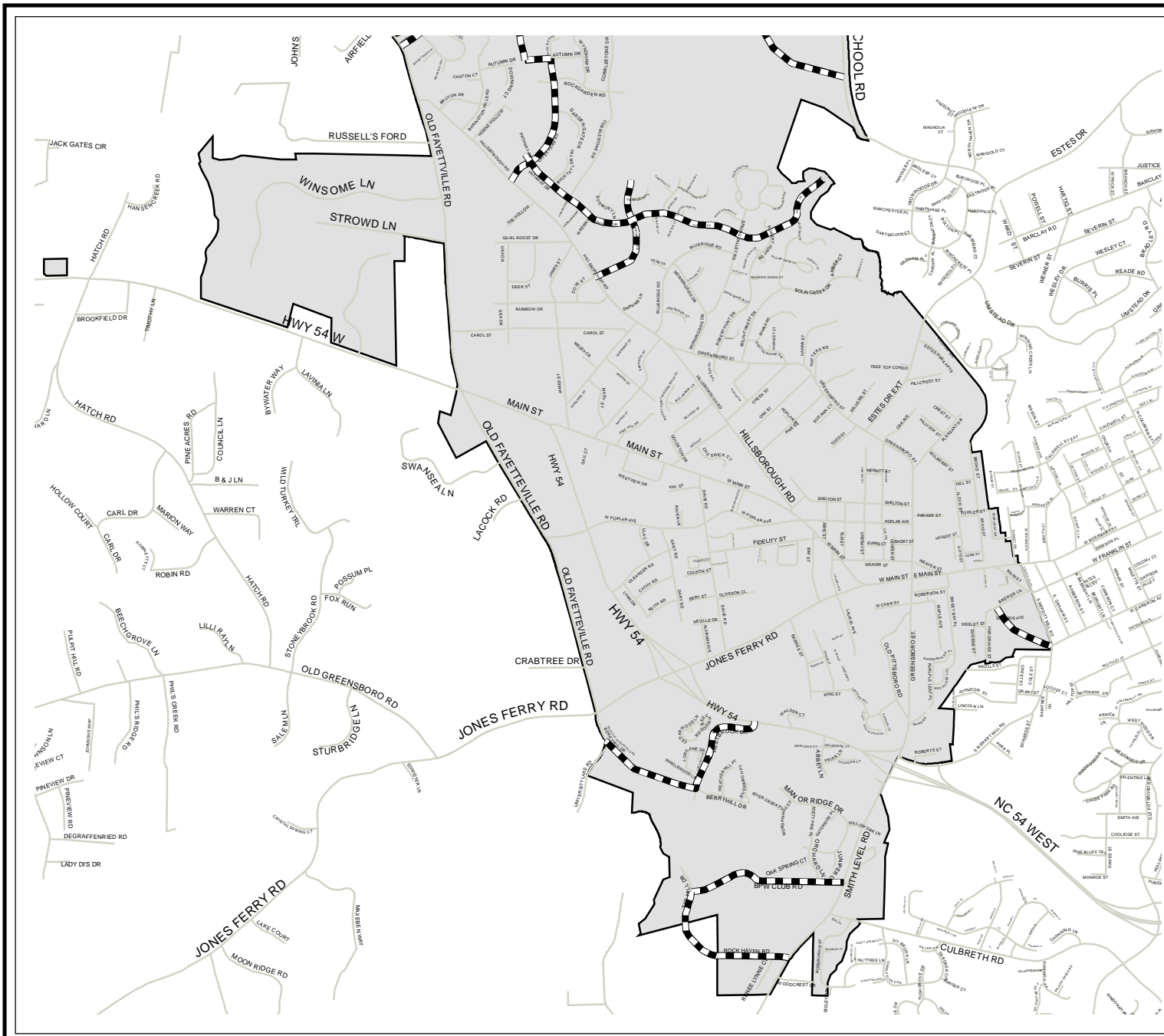
**THIS MAP IS NOT A CERTIFIED SURVEY  
NO RELIANCE MAY BE PLACED IN ITS  
ACCURACY**

The Town of Carrboro assumes no liability for damages caused by inaccuracies in this map or supporting data and makes no warranty, expressed or implied, as to the accuracy of the information presented. The fact of distribution does not constitute such a warranty.



**TOWN OF CARRBORO**  
310 W. Main St.  
Carrboro, NC 27510

September 14, 2005





## **AMENDMENT DATA SHEET**

**Map: Southern Connector Roads Plan - Board-Approved  
April 02, 1991**

**Map: Connector Road Plan Northwest Section - Board-  
Approved February 25, 1992**

**Map: Connector Road Plan Concept - Board-Approved  
February 08, 1994**

**Text & Map: Board-Approved August 19, 1997**

**Map: The Connector Roads Plan for the Northern Area -  
Board-Approved May 26, 1998**

**Map: Removal of Pathway Drive and Tripp Farm Road  
Connections to Horace Williams Tract – Board-  
Approved October 21, 2003**

**Text & Map: Addition of the Merritt Mill-Brewer Lane  
Connector – Board-Approved August 23, 2005**

### ***Street Connectivity Chronology: 1965 - Present***

DATE	ACTION
1965	R.S. Lloyd, Plantation Acres subdivision approved by Board of Aldermen with connections to Old Fayetteville Road, Hillsborough Road, W. Main Street. Streets remain unimproved until early 1980s.
1969	Barington Hills subdivision approved by Orange County with Autumn Drive stubbed out to adjoining property.
1970	Carrboro N.C. Community Facilities and Land Development Plan notes that “enforcement of Carrboro’s subdivision regulations in extraterritorial planning area will lead to improved street alignments in future subdivisions and proper setbacks from these streets.
1975	Carrboro Planning Board prepared letter requesting Orange County Board of County Commissioners allow extension of Carrboro’s extraterritorial jurisdiction to extent authorized by NC General Statutes.
1976	Chapel Hill Planning Proposes Orange Comprehensive Planning Council
1977	Land Use Plan Carrboro, N.C. 1977-2000 calls for street systems to be laid out so that through traffic is minimized, but enough access points to thoroughfares from every neighborhood are provided.”
1979	The original Collector Roads Plan was prepared for the Town. The Plan included northern collectors (Broad Street, James Street) and southern collectors (Berryhill Drive and Davis Drive) as well as crosstown streets (Broad Street or Lloyd Street)
1979	Town of Chapel Hill requests ETJ extension Orange County refuses request and drafts “Joint Planning Goals and Objectives”
1980	Bolin Forest subdivision, Phase I, approved, with Bolin Forest Drive and portions of Bolin Creek Drive. Subsequent phases extended streets to property lines: Bolin Creek Drive stubbed out to Adams’ Tract, Pathway Drive (via Wild Oak Lane) to Bolin Creek itself, and the property line of future Quarterpath Trace subdivision. (MOTION: PATTERSON; SECOND: BOONE; AFFIRMATIVES: DRAKEFORD, SHARER, ROSE, PATTERSON, FOUSHEE, BOONE, WHITE)
1980-1984	Joint planning and water and sewer extension boundary discussions continue; draft agreement is revised.
1982	The Board of Aldermen adopts resolution reiterating request presented in Planning Board letter (1975) to Orange County requesting extension of ETJ.
1983	Tennis Club Estates subdivision approved. Street connection to Odum tract, across Tom’s Creek, included (MOTION: WHITE; SECOND: PATTERSON; AFFIRMATIVES: DRAKEFORD, ROSE, WHITE, BOONE, PATTERSON, CALDWELL, GARRETT).
1984	The Board of Aldermen requests that Orange County adopt Carrboro’s Land Use Ordinance for the ten- and twenty-year transition areas (in Orange County plan) and agree upon a zoning map for the transition areas using classification from the Carrboro LUO. The Board of Aldermen held a public hearing on the Collector Roads Plan. The Board directed staff to revise the proposed northern collectors into a plan for interconnected streets and deferred a decision on the cross-town streets and southern collectors to a future date. Chapel Hill and Orange County entered into Joint Planning Agreement (JPA)
	Spring Valley subdivision approved. Pathway Drive street connectivity provided, as well as principal access via Spring Valley Drive and Blueridge Drive in the Webbwood subdivision.
1985	The Board of Aldermen adopted the Connector Roads Policy on May 14, 1985 and referred the policy to the TAB and staff for preparation of an accompanying plan (MOTION: WHITE; SECOND: ANDERSON; AFFIRMATIVES: PORTO, ANDERSON, BOONE, NORWOOD, WHITE, CALDWELL, GARRETT). Cobblestone subdivision approved. Street connection to Pathway Drive (east and west), and stub out to property line of Cobblestone Drive and Rockgarden Drive (MOTION: BOONE; SECOND: CALDWELL; AFFIRMATIVES: PORTO, GARRETT, CALDWELL, BOONE, WHITE, NORWOOD; NO: ANDERSON) Fair Oaks subdivision approved. Street connection to western terminus of Pathway Drive to Spring Valley no later than final phase of development (MOTION: WHITE; SECOND: BOONE; AFFIRMATIVES: PORTO, NORWOOD, WHITE, BOONE, CALDWELL, ANDERSON, GARRETT)

DATE	ACTION
1985	Highland Hills apartments approved. Street connection to BPW Club Road, Rock Haven connector (MOTION: BOONE; SECOND: CALDWELL; AFFIRMATIVES: PORTO, BOONE, WHITE, NORWOOD, CALDWELL, GARRETT).
1986	The Board of Aldermen adopted the Northern Connector Roads Plan on March 18, 1986. The plan included Pathway Drive, Tripp Farm Road. The alignment of the connector in the vicinity of Cobblestone/Danziger (i.e. Cates Farm) property was referred to the TAB to determine potential development in the area (MOTION: ANDERSON; SECOND: WEGNER; AFFIRMATIVES: BOONE, GURGANUS, ANDERSON, WEGNER, CALDWELL, NORWOOD; ABSENT: PORTO).
	The Board of Aldermen adopted Southern Connector Roads Plan (MOTION: BOONE; SECOND: ANDERSON; AFFIRMATIVES: PORTO, GURGANUS, CALDWELL, ANDERSON, BOONE, WEGNER, NORWOOD).
	Orange County, Chapel Hill and Carrboro entered into a Joint Planning agreement that increased Carrboro's zoning jurisdiction
	Town staff provided courtesy review comments on Homestead Highlands subdivision: Cul-de-sac at Inverness Way eliminated and r/w extended to southwest property line; R/w for Claymore Road increased to 60 feet consistent with future function as collector street when property to the west developed. Subdivision approved by Orange County using NCDOT Rural Roads standards.
1987	The Board of Aldermen held a public hearing on a proposed extension of Pathway Drive west to the Danziger/Riggsbee property line on July 7, 1987. The Board voted against the proposed extension (MOTION: BOONE; SECOND: GURGANUS; AFFIRMATIVES: CALDWELL, BOONE, GURGANUS, NORWOOD; NOES: MARSHALL, PORTO, WEGNER).
	Carrboro joins JPA. Carrboro, Chapel Hill, and Orange County adopt JPALUP. Orange County adopts Carrboro LUO for administration of Town development standards in Transition Areas.
1988	Transportation Advisory Board presented its Downtown Traffic Circulation Plan to the Board of Aldermen for consideration.
	Quarterpath Trace subdivision approved. Street connection of Pathway Drive to Spring Valley and Bolin Forest subdivisions (MOTION WEGNER; SECOND: CALDWELL; AFFIRMATIVES: KINNAIRD, MARSHALL, GURGANUS, CALDWELL, WEGNER, SHETLEY; NOE: BRYAN).
1989	(February) Board of Aldermen received TAB report on Downtown Traffic Circulation and adopted a process for proceeding with reviewing and analyzing the plan.
	(August) Board of Aldermen set a public hearing for review of the TAB's Downtown Traffic Circulation Plan on September 12, 1989.
	(September) Public Hearing on the Downtown Traffic Circulation Plan. The Board of Aldermen voted to delete a number of recommendations from the plan and then voted to table the remaining recommendations.
1990	(June) Following discussion at the Annual Planning Retreat the Board of Aldermen directed that the Lloyd/Broad and Carr/Roberson/Brewer Lane alternatives to the Downtown Traffic Circulation Plan be brought back to the Board of Aldermen for information and discussion and decision as to whether a public hearing should occur prior to further Board action.
	Camden subdivision approved. University access to Horace Williams north tract relocated to street right-of-way/Camden Lane stub-out to property line (MOTION SHETLEY; SECOND: BRYAN; AFFIRMATIVES: KINNAIRD, MARSHALL, GURGANUS, CALDWELL, SHETLEY, GIST, BRYAN)
1991	The developer submitted the initial proposal for the Wexford subdivision. These plans showed Stratford Drive extending from Homestead Road to the southern property line for eventual connection to Hillsborough Road.
	The Carrboro Board of Aldermen voted to approve the Conditional Use Permit (CUP) for the Wexford subdivision. A motion that was unanimously approved for inclusion as a CUP condition specified that Stratford Drive's pavement be extended to the southern property line, and that a permanent sign be erected by the developer stating possible future extension (MOTION: BRYAN; SECOND: GURGANUS; AFFIRMATIVES: KINNAIRD, GURGANUS, CALDWELL, SHETLEY, GIST, BRYAN; ABSENT: MARSHALL).

DATE	ACTION
1992	<p>The Board of Aldermen held a meeting on January 21, 1992 on the Connector Roads Plan and discussed connection of Stratford Drive to Hillsborough Road in relation to the development of the Danziger property.</p> <p>The Board of Aldermen held a public hearing and adopted revisions to the Connector Roads Plan that included the Stratford Drive/Cates Farm Road connector (MOTION: MARSHALL; SECOND: GURGANUS; AFFIRMATIVES: KINNAIRD, MARSHALL, GURGANUS, CALDWELL, SHETLEY, BRYAN; NOE: GIST).</p> <p>The Board of Aldermen held a public hearing on the Cates Farm subdivision and approved the CUP showing the extension of Cates Farm Road to the northern property line and built to collector roads standards so that this road would function as a connector to the Wexford subdivision and beyond to Homestead Road (MOTION: GURGANUS; SECOND: MARSHALL; AFFIRMATIVES: KINNAIRD, CALDWELL, MARSHALL, GURGANUS, SHETLEY, GIST, BRYAN).</p> <p>(May) In response to the application for the OCCHS facility on Lloyd Street, staff requested direction from the Board of Aldermen. The Board of Aldermen requested that staff schedule a discussion of the Lloyd/Parker Street extension as it relates to the health center project.</p> <p>(June) Staff presented alternatives and cost estimates for connecting Lloyd Street to North Greensboro Street, including Parker Street extension, Willard Street extension, and the railroad spur. It was the consensus of the Board to not take any action on this matter.</p> <p>(August) Board member proposed that staff and TAB consider a connection between Lloyd and North Greensboro. The Board took no action on this matter.</p>
1994	<p>The Board of Aldermen adopted the Connector Roads Plan Concept for the Northern Transition Area. The connector road configuration for Wexford remained the same as previously adopted (MOTION: SHETLEY; SECOND: ANDERSON; AFFIRMATIVES: NELSON, MARSHALL, KINNAIRD, SHETLEY; NOES: GIST, BRYAN).</p> <p>The Board of Aldermen approved the CUP for Williams Woods. The Williams Woods subdivision included the extension of Wyndham Drive from Cates Farm to Wexford and the connection of Autumn Drive (MOTION: MARSHALL; SECOND: BRYAN; AFFIRMATIVES: KINNAIRD, NELSON, MARSHALL, ANDERSON, SHETLEY, GIST, BRYAN).</p> <p>Lake Hogan Farms subdivision approved. Includes north-south connector road, street connection to Old NC 86, street stub-outs to east (2) and west (1) to un/underdeveloped properties (MOTION: ANDERSON; SECOND: SHETLEY; AFFIRMATIVES: KINNAIRD, NELSON, MARSHALL, ANDERSON, SHETLEY, GIST, BRYAN).</p>
1995	<p>The Board of Aldermen approved the connection between Stratford Drive and Cates Farm Road with five conditions: town staff to monitor traffic on Cates Farm Road/Stratford Drive and Wyndham Drive, input traffic data into model to validate results of traffic model; traffic speed be closely monitored and enforced by Police Department, with traffic management measures taken to reduce speeds if necessary; town re-evaluate the arterial connector between Old 86 and Homestead Road for inclusion on the state transportation improvement program; the following signs be installed (4-way stop at Pathway and Cates Farm, 3-way stop at Rock Garden and Garden Cates, 4-way stop at Rock Garden and Cates Farm, 4-way stop at Autumn and Cates Farm, 4-way stop at Tramore and Stratford, and 2-way stop at Autumn and Stratford; undulations be installed as follows: 2 on Cates Farm, with one between Pathway Drive and Garden Gate and one between Garden Gate and Autumn Drive, and 2 on Stratford Drive to be located between Autumn Drive and Tramore (MOTION: SHETLEY; SECOND: MARSHALL; AFFIRMATIVES: KINNAIRD, MARSHALL, SHETLEY, ANDERSON; NOES: NELSON, GIST, BRYAN)</p> <p>Representatives of the Wexford neighborhood forwarded to the town a petition for traffic calming devices along Stratford Drive.</p> <p>Sunset Creek subdivision approved. Street connection to un/underdeveloped property to north included (MOTION: MARSHALL; SECOND: SHETLEY; AFFIRMATIVES: KINNAIRD, MARSHALL, SHETLEY,</p>

DATE	ACTION
	ANDERSON, GIST, BRYAN; ABSENT: NELSON)
1996	<p>The Board of Aldermen adopted the Residential Traffic Management Plan on June 11, 1996. The Carrboro Transportation Advisory Board began to discuss revisions to the Connector Road Policy such as design standards and connections between residential, institutional, and commercial uses (November). The Carrboro TAB requested that text amendments to the Land Use Ordinance to clarify the need for consistency with the Connector Roads Policy and Plans. The TAB discussed assimilating a map and list of connector roads in the Town of Carrboro</p> <p>Wexford residents met with town staff and administration to discuss traffic calming devices along Stratford Drive. Petition forwarded to TAB for review.</p>
1997	<p>(January) The TAB discussed amendments to the Land Use Ordinance in the following sections: Article XIV Section 15-214 (c) Coordination with Surrounding Streets; Section 15-217 (a) and (b) General Layout of Streets. Language within these sections required the connection of all residential streets, discouraged the use of curved roads and cul-de-sacs.</p> <p>(February) The TAB discussed language in the Land Use Ordinance that would not allow cul-de-sacs unless it was otherwise impracticable.</p> <p>(March) The TAB recommended amendments to the Land Use Ordinance. The TAB objective was "to ensure that the Board of Aldermen understands that the Land Use Ordinance should be consistent with the Connector Roads Policy."</p> <p>The Board of Aldermen held a worksession to discuss revisions to the Connector Roads Policy and amendments to the Land Use Ordinance. The Board of Aldermen requested a public hearing be set on these revisions.</p> <p>(April) The Board of Aldermen approved traffic calming improvements for Stratford Drive, including: temporary chicanes on "north" Stratford Drive and "south" Stratford Drive, painted crosswalk near the clubhouse, painted crosswalks and multi-way stops at the Stratford/Tramore and Stratford/Autumn intersections. A schedule to monitor for effectiveness was also established. Additional traffic calming was advised, or the closure of Stratford Drive until a second connection (via Wyndham Drive or Colfax, or another street to the west) was made to Homestead Road if any of three conditions occurred related to 85<sup>th</sup> percentile speeds or maximum traffic volume (MOTION: ZAFFRON; SECOND: CALDWELL; AFFIRMATIVES: NELSON, CALDWELL, ANDERSON, BRYAN, GIST, MCDUFFEE, ZAFFRON).</p> <p>(May) The Board of Aldermen discussed draft revisions to the Connector Roads Policy and set a public hearing for August 17, 1997. The Board of Aldermen debated whether cul-de-sacs should be allowed in the Land Use Ordinance. The Board made three suggestions at this meeting: refer to Belmont, North Carolina Land Use Ordinance in regard to specific roadway length requirements, provide clarifying language for "stop" signs that were addressed under the proposed subsection (H) to Section 15-217, and restate 15-217 (b) to say, "To the extent practicable, all roads shall be interconnected. Cul-de-sacs are not encouraged unless topography or adjacent properties does not allow a design that would make an interconnecting road possible..."</p> <p>(June) The Town held a Neighborhood Forum to discuss draft revisions to the Connector Roads Policy, Land Use Ordinance, and Town Code. A number of comments were made at this meeting regarding cul-de-sacs and connectivity.</p> <p>(August) The Board of Aldermen held a public hearing to discuss comments from the Neighborhood Forum and staff recommendations for the Land Use Ordinance. The Board approved revisions to the Connector Roads Policy, which required all new roads to be connected no matter what classification. The Board also sent proposed revisions to the Land Use Ordinance to the Planning Board for their review. These revisions dealt with Section 15-214 (a) and (c) as well as Section 15-217 (b) (MOTION: ZAFFRON; SECOND: SHETLEY; AFFIRMATIVES: NELSON, ANDERSON, CALDWELL, MCDUFFEE, SHETLEY, ZAFFRON; NOE: GIST).</p> <p>The Planning Board recommended adoption of the amendment to the Land Use Ordinance that related to street layouts.</p>

DATE	ACTION
1997	<p>(September) The Board of Aldermen held a public hearing on amendments to the Land Use Ordinance. The Board adopted the following language in Section 15-217 (a) to the extent practicable, all roads shall be interconnected. Cul-de-sacs shall not be used unless the topography of the land does not allow a design that would make an interconnecting road practicable (MOTION: ZAFFRON; SECOND; MCDUFFEE; AFFIRMATIVES: NELSON, ZAFFRON, MCDUFFEE, ANDERSON, SHETLEY; NOES: GIST, CALDWELL).</p> <p>(October) The TAB reviewed the CUP for the Carrboro Greens Project. The site plan showed a cul-de-sac subdivision, with no connections to the east or north. The design would not comply with the newly approved requirements within the Carrboro Land Use Ordinance (Section 15-217{a}) unless the developer could prove that there is no practical means to make a road connection. The TAB delayed a decision until their next scheduled meeting.</p> <p>(November) The TAB discussed how a proposed moratorium on the Northern Transition Area would affect the Carrboro Greens CUP. The TAB voted to table action on the Carrboro Greens Project until the Board of Aldermen lifted the moratorium.</p> <p>After evaluating temporary chicanes, the decision was made to install (3) speed humps along Stratford Drive.</p>
1998	Carrboro Greens subdivision permit application denied by the Board of Adjustment because project does not include street connection to southern property line. Applicant appeals. Town decision is upheld by Superior Court.
1999	<p>(August) Following monitoring of speed/volume, two additional speed humps were installed on Stratford Drive. A monitoring strategy was established.</p> <p>(September) The TAB held a joint review session with the Planning Board and Appearance Commission on the Carrboro Greens CUP and a proposed LUO text amendment. The TAB supported the staff recommendation regarding Carrboro Greens and further supported the change to Subsection 15-217(a).</p> <p>The developer of the Horne Hollow property provides the Town with the latest proposal. The development involves the creation of three lots using the minor subdivision process. The minor subdivision process does not involve the creation of any new public streets; however, the street connections linking the two portions of Autumn Drive can be completed.</p> <p>(November) The staff presented a general report to the Board of Aldermen concerning the Autumn Drive connection and requested to receive guidance on how to address road connectivity within the minor subdivision process. The Board of Aldermen referred this matter to staff, TAB, and Planning Board for further study and analysis to look at alternative traffic scenarios, with and without an Autumn Drive connection, that satisfy the Land Use Ordinance and ameliorate traffic effects.</p> <p>Hanna Ridge subdivision is approved. Street stub-out to the Adams' tract is required (MOTION: MCDUFFEE; SECOND: ZAFFRON; AFFIRMATIVES: NELSON, BROWN, CALDWELL, GIST, MCDUFFEE, SPALT, ZAFFRON).</p>
2000	<p>(January) The TAB held a public meeting with residents who lived in the vicinity of the proposed connection. The TAB requested that staff provide a traffic analysis that included accident and speeding data in the vicinity of the proposed connection.</p> <p>(February) The staff presented the traffic analysis to the TAB at their February 10, 2000 meeting. The TAB made a recommendation following the staff presentation and citizen input. The TAB recommendation was to connect the two Autumn Drives with a bicycle and pedestrian facility until such time the staff completes a comprehensive study of the connection for vehicular traffic. The staff presented a report to the Planning Board at their February 17, 2000 meeting. The Planning Board made a recommendation following the staff presentation and citizen input. The Planning Board recommendation was to support the Autumn Drive connection but delay final action until adequate resolution to pedestrian safety is found.</p>

DATE	ACTION
2000	<p>(March) The Board of Aldermen held a public hearing on the Autumn Drive connection to receive citizens' comments March 7, 2000. The Planning Staff recommended to the Board of Aldermen the following changes to the Autumn Drive connection: a "hooked" neckdown traffic-calming design with a 20-foot pavement cross section, and a five-foot sidewalk along the north side; a three-way stop intersection at Stratford Drive and Autumn Drive, Downing Court and Autumn Drive, Autumn Drive and Barington Hills Drive, and a four-way stop intersection at Barington Hills Drive and Bruton Drive; and the use of traffic calming devices such as speed humps be added to the Autumn Drive connection into the Barington Hills subdivision if traffic speeds warrant the use of such devices based on criteria established with the Board's adopted Residential Traffic Management Plan.</p> <p>The Board of Aldermen voted in support of the Autumn Drive connection at the March 21, 2000 meeting with the following specification: the connection will consist of a "hooked" neckdown traffic-calming device with a 20-foot pavement cross section and a five-foot sidewalk along the north side which will be paid for by the developer of the Horne Tract; that traffic control devices for this connection will include: a three-way stop intersection at Stratford Drive and Autumn Drive, Downing Court and Autumn Drive, Autumn Drive and Barington Hills Drive, and a four-way stop intersection at Barington Hills Drive and Bruton Drive; that traffic-calming devices such as speed humps shall be included in the Autumn Drive connection into the Barington Hills subdivision based on criteria established within the Board's adopted Residential Traffic Management Plan prior to the opening of the connection; that a barricade accommodating emergency traffic be placed to obstruct vehicular traffic on Autumn Drive at the entrance to Barington Hills and the facility be striped as a pedestrian and/or bikeway until adequate pedestrian facilities with least impact are provided in Barington Hills at no cost to Barington Hills residents; and that sidewalks be constructed along Autumn Drive in the Barington Hills subdivision and on Barington Hills Drive with no costs to the residents (MOTION: DOROSIN; SECOND: SPALT; AFFIRMATIVES: BROUN, DOROSIN, MCDUFFEE, NELSON, SPALT, ZAFFRON. NOES: GIST).</p>
2001	<p>Smith Middle School Athletic Fields. Includes reservation for future Seawell school connector road (Motion: SPALT; Second: MCDUFFEE; AFFIRMATIVES: BROUN, MCDUFFEE, GIST, NELSON, SPALT, ZAFFRON, ABSENT: DOROSIN</p> <p>Jones Ferry Park and Ride Lot – Extension of Old Fayetteville Road (Motion: ZAFFRON; SECOND: BROUN; AFFIRMATIVES: NELSON, BROUN, DOROSIN, GIST, MCDUFFEE, SPALT, ZAFFRON</p> <p>Rose's Walk at University Lake (formerly Morgan Ridge). Street connection between Old Fayetteville Road and Berry hill Drive, satisfied by building bridge over Tom's Creek, is required (Motion: GIST; SECOND: BROUN; AFFIRMATIVES: NELSON, BROUN, DOROSIN, GIST, HERRERA, MCDUFFEE, ZAFFRON).</p>
2002	<p>Tramore West approved by the Board of Adjustment at western terminus of Tramore Drive. Street connection to the under/undeveloped property west of this project is included (MOTION: KRUTER; SECOND: MARSHALL; AFFIRMATIVES: COLLINS, KRUTER, ELLESTAD, RING, ISRAELSON, MARSHALL; ABSENT: SHEPHERD, CHILTON, DINGFELDER)</p> <p>Hillsborough Road Park/Dr. Martin Luther King Jr. Park/Text Amendment – technically should have had street connection but Council decided not to, and had to do a text amendment to choose not to connect in specific situations</p>
2003	<p>(October) The Board of Aldermen received a report on the Pathway Drive and Tripp Farm connector roads. The Board voted that the Pathway Drive and Tripp Farm Road Connections to the Horace Williams Tract be removed from the Town's Connector Roads Plan. (MOTION: BROUN; SECOND: ZAFFRON; AFFIRMATIVES: BROUN, DOROSIN, GIST, HERERRAL, MCDUFFEE, ZAFRON, NELSON</p> <p>Winmore VMU approved. Street connections include stub-outs to north (2), south (3) and west (1) (MOTION: GIST; SECOND: BROUN; AFFIRMATIVES: BROUN, DOROSIN, GIST, HERERRA, MCDUFFEE, ZAFFRON NOES: NELSON).</p>
2005	<p>(August) Carrboro Connector Roads Plan is modified by adding a connector road between Merritt Mill Road and Brewer Lane. (Motion: MCDUFFEE; Second: BROUN; AFFIRMATIVES: BROUN, CHILTON, HERRERA, MCDUFFEE, ZAFFRON, NELSON NOES: GIST).</p>

DATE	ACTION
2003	High School # 3 – Connection of Tar Hill Drive to Rock Haven Road. (Motion: ZAFFRON; Second: GIST; AFFIRMATIVES: NELSON, BROUN, GIST, HERERRA, MCDUFFEE, ZAFFRON ABSENT: CHILTON).
2005	Claremont AIS CUP Phases 1-3 Approval – connections to Winmore and Lucas Lane Colleton Crossing review
2006	Jones Property at LHF. Street connection to Hogan Hills Road as well as Lake Hogan Farms Road Extension (MOTION: ZAFFRON; SECOND: HAVEN-O'DONNELL; AFFIRMATIVES: CHILTON, BROUN, COLEMAN, GIST, HERERRA, HAVEN-O'DONNELL, ZAFFRON).
2007	Ballentine subdivision approved. Street connection to Hogan Hills Road, as well as Lake Hogan Farms Road Extension and new street to serve subdivision, Twin Creeks Park and property to the east (Motion: ZAFFRON; Second: BROUN; AFFIRMATIVES: CHILTON, BROUN, COLEMAN, GIST, HERERRA, HAVEN-O'DONNELL, ZAFFRON). Elementary School #10 approved. Street connection/construction of northern terminus of Lake Hogan Farms Road (with Eubanks Road) (Motion: COLEMAN; SECOND: HERRERA; AFFIRMATIVES: CHILTON, BROUN, COLEMAN, GIST, HERERRA, HAVEN-O'DONNELL ABSENT: ZAFFRON). Modification to Ballentine Shoppes at Jones Ferry
2010	Zimmerman subdivision (Litchfield?) AIS CUP Approved with connection and extension of Lucas Lane and additional 3 stub outs for future connections
2012	Claremont South (Phases 4 & 5) Street stub outs and ROW to Carolina North Forest adjacent property. Connection to Colfax will have bollards. No vehicle connection to Colfax Claremont South modifications
2015	South Green (501 S Greensboro) – <i>reopen purple leaf, at base of S Green</i>
2019	Sanderway – condition of permit was Pathway Drive roadway continue southeast and terminate at property line [for future connection] Deer Street
2019	Kentfield AIS CUP approved. - connection to Wyndham Drive made WITH bollards. No car through traffic. T-turnaround built. Lloyd Farm – connector street (Merchant Way) to connect Post Office Dr to Old Fayetteville and Trade Dr Roberson Place
2022	Jade Creek
2023	Homestead Road/Lucas Lane





## Town of Carrboro Guiding Policies & Regulations

### Relevant Fire Code Provisions

Chapter 5, Section 503 contains the specific requirements for Fire Apparatus Access Roads. A few of the key sections are included below.

#### **503.1.2 Additional access.**

*The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions, or other factors.*

#### **503.4 Obstruction of fire apparatus access roads.**

*Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Sections 503.2.1 and 503.2.2 shall be maintained at all times.*

#### **D107.1 One- or two-family dwelling residential developments.**

*Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.*

*Exceptions:*

1. *Where there are more 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.1.3 of the International Fire Code, access from two directions shall not be required.*

*Note: Developments may still be required to have additional fire apparatus access roads based on other requirements, such as the requirements in Section 503.1.2.*

2. *The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.*

### Relevant Land Use Ordinance Provisions

#### **15-214(a)**

*The street system of a subdivision shall be coordinated with existing, proposed and anticipated streets outside the subdivision or outside the portion of a single tract that is being divided into lots (hereinafter, "surrounding streets") as provided in this section.*

#### **15-214(b)**

*Collector streets shall intersect with surrounding collector or arterial streets at safe and convenient locations.*



15-214(c)

*Subject to subsection 15-217(a), subcollector, local, and minor residential streets shall connect with all surrounding streets to permit safe, convenient movement of traffic between residential neighborhoods and to facilitate access to neighborhoods by emergency and other service vehicles. The connections shall be created in such a way that they do not encourage the use of such streets by substantial through traffic. (AMENDED 9/16/97; 5/06/03)*

15-214(d)

*Whenever connections to anticipated or proposed surrounding streets are required by this section, the street right-of-way shall be extended and the street developed to the property line of the subdivided property (or to the edge of the remaining undeveloped portion of a single tract) at the point where the connection to the anticipated or proposed street is expected. In addition, the permit-issuing authority may require temporary turnarounds to be constructed at the end of such streets pending their extension when such turnarounds appear necessary to facilitate the flow of traffic or accommodate emergency vehicles. Notwithstanding the other provisions of this subsection, no temporary dead-end street in excess of 1,000 feet may be created unless no other practicable alternative is available.*

15-217(a)

*To the extent practicable, all streets shall be interconnected. Cul-de-sacs shall not be used unless the topography of the land does not allow a design that would make an interconnecting street practicable. (AMENDED 9/16/97; 9/28/99)*

15-217 (b)

*All permanent dead-end streets [as opposed to temporary dead-end streets, see subsection 15-214(d)] shall be developed as cul-de-sacs in accordance with the standards set forth in subsection (c), unless construction of such cul-de-sacs is not reasonably possible given such factors as steep slopes or right-of-way limitations. Under such circumstances, the town may approve alternative designs that will provide a safe and convenient means for vehicular traffic to turn around (alternatives are suggested in Appendix C, Standard Drawing No. 19). Except where no other practicable alternative is available, such streets may not extend more than 550 feet (measured to the center of the turn-around). (AMENDED 9/27/94, 9/16/97)*

15-220(h)

*Notwithstanding the other provisions of this section, the town may prohibit the creation of a private road if the creation of such a road would avoid the public street interconnection requirements set forth in Sections 15-214 and 15-217(a). (AMENDED 6/25/02)*

15-221(b)

*Whenever (i) a lot is proposed to be developed residentially for more than four dwelling units or non-residentially in such a fashion as to generate more than 40 vehicle trips per day, and (ii) if the lot were to be subdivided, a street would be required running through the lot to provide a connection between existing or planned adjacent streets in accordance with the provisions of Sections 15-214 and 15-217(a), then the developer shall be required to construct and dedicate the same street that would have been required had the property been subdivided. On Town-owned properties, the Town Council may eliminate*



*or reduce the requirements of this section for reservation and/or connection of right-of-way. (AMENDED 6/25/02; 6/06/17)*

## Relevant Town Code Provisions

### Section 6-12. Play Streets

(a) Whenever, pursuant to subsection (b) of this section, a street or any part thereof has been designated a play street and appropriate traffic control devices have been installed clearly giving notice of this fact, no person may drive a vehicle upon such street or part thereof unless they reside there, or have business there, and all persons shall exercise greatest care at all times when driving upon any play street.

(b) The following streets or portions thereof are hereby designated play streets, and the administrator shall install appropriate traffic control devices that clearly give notice of such designations: None

---

## Nearby Municipalities' Relevant Policies & Regulations

### Durham

[Unified Development Ordinance – Durham NC](#)

[Street Connectivity Requirements](#)

#### Section 13.6

An interconnected street system is necessary in order to promote orderly and safe [development](#) by ensuring that streets function in an interdependent manner, provide adequate access for emergency and service [vehicles](#), enhance access by ensuring connected transportation routes, provide access for [people](#) walking and bicycling, and provide continuous and comprehensible traffic routes.

### Hillsborough

[Unified Development Ordinance – Hillsborough, NC](#)

(p 6-84)

6.21.3.6 The proposed street layout shall be coordinated with the existing street system of the surrounding area and with the Hillsborough Thoroughfare Plan. Where possible proposed streets shall be the extension of existing streets. Modification of the existing grid pattern may be allowed to accommodate sitetopography

6.21.3.7 To maximize connectivity for public safety and avoid the requirement for additional right of way width improvement and dedication, block lengths will generally not exceed 400 feet and there will be two points of access for any street containing 30 or more dwellings not equipped with individual sprinkler systems.

6.21.3.9 Cul-de-sacs shall not be used to avoid connection with an existing street or to avoid the extension of an important street



**TOWN OF CARRBORO • NC**  
PLANNING, ZONING & INSPECTIONS

## Chapel Hill

### [Road Connectivity Plan - June 2023](#)

Chapel Hill has been studying their road connectivity policy and the above document was adopted in June 2023. It has yet to show up in the ordinances.

## Town of Holly Springs

### [Unified Development Ordinance -Holly Springs](#)

(p134)

#### 7.3 Connectivity

##### A. Purpose.

In order to provide for the convenient movement of traffic, effective fire protection, efficient provision of utilities or where such connection is in accordance with the Comprehensive Plan, streets shall be arranged so as to: provide for the continuation of collector streets and thoroughfare streets between adjacent subdivisions and development; maximize interconnectivity between and within subdivisions or development; and, minimize the use of cul-de-sac streets.

##### C. Streets to be Interconnected.

All streets shall be designed to form part of an interconnected street pattern. Streets must connect with adjacent street networks to the extent possible. Street designs will be evaluated as to meeting this interconnectivity standard on their ability to: permit multiple routes between origin/ destination point; diffuse traffic; and, shorten walking distance.

##### E. Interconnectivity with Adjacent Projects.

1. Connection to Street Stubs Required. New developments shall connect to any existing street stubs from adjacent properties. Traffic calming measures as allowed in the Engineering Design & Construction Standards shall be included when street stubs between neighborhoods are connected.

## Town of Apex

### [Unified Development Ordinance – Apex](#)

#### Article 7 Subdivision

#### [Section 7.2 Design Standards](#)

##### 7.2.1 Streets

##### (A) Interconnectivity

*1.) In areas where no thoroughfares or collector streets are represented thereon, streets shall be designed and located in proper relation to existing and proposed streets, to the topography of the area, and to natural features such as streams, hills, and stands of trees. Residential streets should further be laid out in such manner as to encourage the flow of through-traffic at slow speeds, except upon major and minor thoroughfares. All proposed street designs shall provide for the appropriate projection of principal streets in surrounding areas to permit reasonable access for surrounding properties, both for current use and future subdivision.*



**TOWN OF CARRBORO • NC**  
**PLANNING, ZONING & INSPECTIONS**

**2.) Points of Ingress/Egress**

*(b) A minimum of one point of ingress/egress shall be connected to an existing public street. Additional connections shall be required when:*

*(iii) More than one point of access is required per [Sec. 7.5.4.E Public Access Requirements](#)*

**7.5.4 E Public Access Requirements**

*A residential development or any portion thereof shall (either by itself or in combination with another existing development through which it accesses the public street system) propose no more than 50 single-family units, 100 multifamily units, or 50 units of single-family and multi-family combined unless it is served by at least two (2) points of access to the public street system. When more than one (1) point is required, one (1) of those two (2) points must be a full movement intersection and both points of access must be constructed to Town of Apex Standards*

**Town of Cary, NC**

[Land Development Ordinance – Cary – Chapter 7 Development and Design Standards](#)

**7.10 Connectivity**

**7.10.3 Standards for Streets/On-Site Vehicular Circulation (p LDO 7-136)**

The following standards shall be met for all development plans and for redevelopment of sites.

**(A) Street Connectivity**

(1) Any residential development shall be required to achieve a connectivity index of 1.2 or greater. In the event that this requirement is modified pursuant to Section 7.10.3(D)(2), a six (6)-foot pedestrian trail shall be provided to link any cul-de-sacs within a residential development in which the required connectivity index has been modified. A connectivity index is a ratio of the number of street links (road sections between intersections and cul-de-sacs) divided by the number of street nodes (intersections and cul-de-sac heads). The following illustration provides an example of how to calculate the index. Street links on existing adjacent streets that are not part of the proposed subdivision are not included in the connectivity index calculation.

(2) For non-residential, multi-family, or mixed used developments of greater than five (5) acres, an organized and complete street network must be provided with an emphasis on connectivity throughout the development and for future adjacent development. Sites, five (5) acres or less, must provide street connections with adjacent properties (i.e., taking into account the future development/redevelopment of these properties).

(a) All access points from public thoroughfares and collectors shown on the Comprehensive Transportation Plan shall be connected with each other through a continuous network of public or private streets. (Non-residential private streets are not required to meet public street standards.) Connections between thoroughfares and collectors shall be direct while maintaining a functional and organized street network. Limited parking in front of buildings along these streets may be provided.



**(B) Street Arrangement**

(1) The proposed public or private street system shall be designed to provide vehicular and pedestrian interconnections to facilitate internal and external traffic movements in the area. In addition to the specific connectivity requirements described above, roadway interconnections shall be provided during the initial phase of any development plan between the development site and its adjacent properties with one (1) roadway interconnection every 1250-1500 linear feet for each direction in which the subject property abuts.....

(2) Any development of more than one hundred (100) residential units or additions to existing developments such that the total number of units exceeds one hundred (100) shall be required to provide for vehicular and pedestrian access to at least two (2) public streets unless such provision is modified pursuant to Section 3.19.1.

(4) In general, permanent cul-de-sacs are discouraged in the design of street systems, and should only be used when topography, the presence of natural features, and/or vehicular safety factors make a vehicular connection impractical.

## **FRD Notes on Connected Streets/Fire Apparatus Access Roads**

### **22 August 2023**

The version of the Fire Code currently adopted in Carrboro is the 2018 North Carolina State Building Code: Fire Code (2015 IFC with North Carolina Amendments.)

Chapter 5, Section 503 contains the specific requirements for Fire Apparatus Access Roads. A few of the key sections are included below.

**503.1.1 Buildings and facilities.** Approved fire apparatus access roads shall be provided for every facility, building, or portion of a building hereafter constructed or moved into or within the jurisdiction.

**503.1.2 Additional access.** The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions, or other factors.

**503.2.1 Dimensions.** Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, excepted for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

**Section 503.6 Security Gates.** The installation of security gates across a fire apparatus access road shall be approved by the fire chief. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed constructed and installed to comply with the requirements of ASTM F2200.

**503.2.2 Authority.** The fire code official shall have the authority to require or permit modifications to the required access widths where they are inadequate for fire or rescue operations or where necessary to meet the public safety objectives of the jurisdiction.

**503.4 Obstruction of fire apparatus access roads.** Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Sections 503.2.1 and 503.2.2 shall be maintained at all times.

**503.4.1 Traffic calming devices.** Traffic calming devices shall be prohibited unless approved by the fire code official.

Appendix D includes additional information on fire apparatus access roads.

**D101.1 Scope.** Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the International Fire Code.

**D107.1 One- or two-family dwelling residential developments.** Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.

Exceptions:

1. Where there are more 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.1.3 of the International Fire Code, access from two directions shall not be required.

Note: Developments may still be required to have additional fire apparatus access roads based on other requirements, such as the requirements in Section 503.1.2.

2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.

**D107.2 Remoteness.** Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

### **Connected Streets General Information**

In order to maintain the safety of the community it is necessary to have multiple readily available means of ingress and egress to all buildings, but especially to areas where there is densely populated housing. Fire, law enforcement, and emergency medical apparatus all require access to areas while responding to incidents in the area. Fire apparatus must have adequate and unobstructed access to allow us to ensure the safety of our community. In order to maintain the safety of the community it is necessary to have multiple readily available means of ingress and egress to all buildings, but especially to areas where there is densely populated housing. Two means of ingress and egress is also important for residents. Two recent situations required closing the main access of an area, such that residents could not enter or leave a development. The first, a gas leak on Jones Ferry Road caused the closure of the singular point of ingress and egress from 105 Jones Ferry Road. Until the gas leak was secured residents were unable to enter or leave the development. The second incident was a gas leak on Roberson Street. We had to close the intersection of Roberson Street and Sweet Bay Place. Residents were unable to return home, and some residents were unable to leave to pickup their children. Eventually, after the incident was stabilized FD units were able to unlock the bollards at Purple Leaf Place and Two Hills Drive. Until we were able to free up units to unlock and remove the bollards, residents were unable to enter or leave the development.

### **Bollards**

Bollards are considered an obstruction of fire apparatus access roads and are prohibited by Section 503.4 of the Fire Code. Previous fire code officials, fire marshals, and fire chiefs have not had the ability to ensure that access is maintained, and bollards were allowed to be installed and remain in place. It is the position of the fire department that bollards should not be allowed on public roadways. At best, bollards significantly increase response times. Stopping to remove a bollard before continuing to an incident could add minutes to our response time. Furthermore, we often work with neighboring fire departments for large scale incidents. Neighboring fire departments would not be able to remove the bollards due to the locks installed on them. Their only option would be to cut the metal and concrete bollard to attempt to gain access. Law enforcement, including CPD units, and emergency medical



apparatus are unable to unlock bollards and would not be able to remove them to access the roadway. Apparatus would be forced to try and turnaround before proceeding to an alternate access point if available. The flip down bollards (like are used for crosswalks) have caused air line damage to two Carrboro Fire apparatus, one of which caused a fire engine to be towed back to the station for repair.

## **Attachment F- Race and Equity Pocket Questions**

**Title & Purpose of this Initiative:** The purpose of this Work Session is to provide the Town Council with the opportunity to discuss street connectivity and the Town's Connector Roads Policy.

**Department:** Planning, Zoning & Inspections

### **What are the Racial and Equity impacts?**

The connector roads policy is administered as part of the Town's development standards articulated in the Land Use Ordinance. Objections to the requirement typically come up during the development review process when residents in an existing neighborhood do not want to be connected to a new development and request an exception to the requirement. Since the adoption of the Connector Roads requirements there have not been any development approvals adjacent to existing historically Black neighborhoods that involved street connectivity. Properties that may pursue development approvals near historically Black neighborhoods include the Buddha property, 315 Jones Ferry Road property adjacent to Lincoln Park, and 100 Alabama Avenue. To date, concerns with the Lincoln Park neighborhood have focused on an increase of on-street parking related to new development.

### **Who is or will experience community burden?**

The current standard is for streets to connect. Therefore residents seeking to limit or prevent that connection must present/convey that request to the Town Council, typically in a public hearing. Residents who are uncomfortable providing comments in a public setting and/or have difficulty attending meetings due to work schedules, limited access to transportation, child or eldercare needs may experience burden participating in the public process. Some residents may not be aware of a development proposal in their vicinity and associated public meetings. Others may not have knowledge of requirements for streets to connect.

### **Who is or will experience community benefit?**

The community benefits when the street network is interconnected and complete—includes infrastructure for all modes and provides for a high level of mobility and access. Local residents living along a connected street network have more direct access to destinations and more travel options. Interconnected networks tend to distribute traffic for all users and often provide better opportunities for pedestrians and cyclists to choose the routes most suited to their preferred travel mode—less traffic or fewer hills.

**What are the root causes of inequity?**

Lack of representation among decision makers, lack of a seat at the table, lack of information about the importance of street connectivity. Working individuals, particularly shift workers, families with young children or caregivers may find it difficult to attend public meetings, may be reticent to speak in a public setting and may have an overall distrust in government and governmental processes, based on personal experiences and/or examples of structural racism in government decisions, particularly those relating to land use.

**What might be the unintended consequences of this action or strategy?**

Disconnected streets lead to increased travel times, potentially delaying emergency services—EMS/Fire/Police when needed. With fewer travel options, remaining routes will see additional congestion. Residents in communities ending in cul-de-sacs may experience longer travel times for all modes, including pedestrians and people on bikes to get to destinations, even for short distances.

**How is your department planning to mitigate any burdens, inequities, and unintended consequences?**

The department will be examining projects, practices and procedures through using racial equity pocket questions and analyses to prevent, limit and mitigate and burdens, inequities and unintended consequences.



## Agenda Item Abstract

File Number: 23-235

**Agenda Date:** 9/12/2023  
**In Control:** Town Council  
**Version:** 1

**File Type:** Agendas

Traffic Calming Work Session

**PURPOSE:** The purpose of this Work Session is to provide an opportunity for the Town Council to discuss the residential traffic calming process and how it might be simplified.

**DEPARTMENT:** Planning, Zoning & Inspections

**CONTACT INFORMATION:** Patricia McGuire, Planning Director, 919-918-7327, [pmcguire@carrboronc.gov](mailto:pmcguire@carrboronc.gov) <<mailto:pmcguire@carrboronc.gov>>; Ben Berolzheimer, Planner, 919-918-7330, [bberolzheimer@carrboronc.gov](mailto:bberolzheimer@carrboronc.gov) <<mailto:bberolzheimer@carrboronc.gov>>; Christina Moon, Planning Administrator, 919-918-7325, [cmoon@carrboronc.gov](mailto:cmoon@carrboronc.gov) <<mailto:cmoon@carrboronc.gov>>

**COUNCIL DIRECTION:**

☐ Race/Equity ☐ Climate ☒ Comprehensive Plan ☐ Other

Strategy/Project 2.2 E, of the Transportation & Mobility Chapter of the Comprehensive Plan provides recommendations for restructuring the Residential Traffic Management Plan (RTMP) with six steps or projects for modifying the plan, including the addition of a new bike-ped safety assessment component.

Similarly, Strategy/Project 3.1A, of the Green Stormwater Infrastructure, Water, and Energy Chapter calls for the integration of green stormwater infrastructure and traffic calming. This is listed as a Priority Project in the Carrboro Connects Implementation chapter.

**INFORMATION:** During the June 27, 2023 public hearing for a conditional rezoning proposal along Homestead Road, members of the Town Council asked to schedule a work session to discuss the Residential Traffic Management Plan (RTMP), how it works, and how it might be simplified ( [Carrboro Residential Traffic Management Plan \(townofcarrboro.org\)](http://www.townofcarrboro.org/DocumentCenter/View/1433/Residential-Traffic-Management-Plan?bidId=>) <<http://www.townofcarrboro.org/DocumentCenter/View/1433/Residential-Traffic-Management-Plan?bidId=>>>). A memorandum providing a brief overview of the history of the RTMP, its implementation, and other supporting information is provided (*attachments A - D*).

Planning Staff completed a Racial Equity Assessment Lens (REAL) on the traffic calming process earlier in 2023. The assessment has been reviewed by the GARE Core Team (interdepartmental staff group). The assessment was presented to the Racial Equity Commission (REC) on September 7<sup>th</sup>. Since the REC's comments have not yet been integrated into the assessment, responses to the Pocket Questions are included below.



## Traffic Calming Work Session

### BACKGROUND:

The safety of residential streets became the focus of many comments during the review of three development proposals in the spring of 2023, (South Green, Jade Creek and 904 Homestead Road). Comments emphasized safety at the interface of new and existing neighborhoods and how and whether traffic calming could be used to mitigate safety concerns. Council members requested work sessions on these topics. This work session on these topics focuses on traffic calming which is partially administered through the Residential Traffic Management Plan (RTMP). See the attached supporting materials for additional information:

- B. Residential Traffic Management Plan (RTMP)
- C. Map of Traffic Calming Installations
- D. Carrboro Connects Traffic Calming Project Excerpt

### WHAT ARE THE PURPOSES OF STREETS; WHAT ARE THE STANDARDS FOR STREETS?

Streets serve as a principle framework for movement and activity in a place providing for circulation, connection and access on routine basis and in emergencies. Streets physically define areas of Town and connect people with places. Carrboro has long embraced transportation choices and has worked to create spaces that can serve many types of travelers.

Recent Land Use Ordinance (LUO) updates included the addition of a Complete Streets Policy in Section 15-209:

*(1) Complete Streets are designed and operated to provide safe and accessible travel for all modes, including pedestrians, bicyclists, transit riders, motorists, commercial vehicles, emergency vehicles and for people of all ages and all abilities.*

*(b) Based upon the findings set forth in subsection (a), the Council declares that it is not only desirable but essential to implement a Complete Streets policy to construct equitable streets and networks that prioritize safety, comfort and connectivity to destinations for all people who use the street network and to encourage healthy, active living, reduce traffic congestion and fossil fuel use, and improve the safety and quality of life of residents of Carrboro.*

[Article XIV of Carrboro's LUO](#), outlines the Town's standards for streets and sidewalks. It provides street classifications and then design specifications for each street type including minimum right-of-way width, minimum pavement width, provisions for curb and gutter or vegetated ditch/shoulders, and locations and types of bike lanes sidewalks.

Detailed specifications for street design and construction are included [Appendix C](#). The bulk of the dimensional and construction standards were established as a result of residential street



design workshops in 1999, with exceptions and amendments that have followed. The Town Code further defines play streets, on which “...no person may drive a vehicle upon such street or part thereof unless they reside there, or have business there...” (Town Code, Sec. 6-12). No street, or portion of a street, in Town has been designated as a “play street.”

## WHAT IS TRAFFIC CALMING?

Traffic calming is the use of physical design or other measures to reduce vehicle speeds and improve safety for users.

## HOW DOES CARRBORO CURRENTLY CALM TRAFFIC?

### New Developments

Section 15-217(e) provides requirements for traffic calming as part of the design for new streets.

*To the extent practicable, portions of subcollector and collector streets that consist of stretches of 800 feet or more uninterrupted by intersections suitable for stop signs shall contain design features intended to discourage speeding and cut-through traffic, including but not limited to one or more of the following:*

*(1) Curves with radius of 800 feet or less; or*

*(2) Design features described in the town’s Residential Traffic Management Plan.*

*(AMENDED 9/16/97)*

### Existing Developments – Residential Traffic Management Plan (RTMP)

In June of 2023, In June 1996, the Board of Aldermen adopted the Residential Traffic Management Plan (RTMP) in response to community concerns about speeding vehicles. The RTMP provides a process for residents to identify concerns related to speeding, excessive traffic volumes and safety on town-maintained residential streets, and to request the installation of traffic calming measures.

Over the years, the Town’s Transportation Advisory Board (TAB) has taken a leading role in reviewing and recommending amendments to the RTMP to reflect changing trends in traffic calming designs and technologies. A brief timeline is provided below:

- 1993 - Townwide staff evaluation of traffic controls and neighborhood protection. Results reported to TAB.
- May 1994 - TAB makes recommendation to Board of Aldermen (Town Council) based on staff evaluation
- June 1996 - Board of Aldermen (Town Council) adopts Residential Traffic Management Plan (RTMP)
- May 1997 - Update to RTMP adopted by Board
- August 2000 - Board of Aldermen requests TAB review of RTMP
- May 2002 - Board of Aldermen requests TAB review of RTMP
- 2004-2005 - TAB makes recommendations to Board of Aldermen
- June 2005 - Updated to RTMP adopted by Board
- June 27, 2023 - Town Council requests work session on traffic calming



The RTMP outlines a number of ways for community members to take action aimed at slowing vehicle speeds on town-owned residential streets, central to which is a community led petition-based process with a 75% threshold for consideration of implementation of traffic calming measures. The process involves several steps as outlined below:

Current Process:

1. Resident reports problem using request form (representative)
2. Staff identifies an Area of Influence (AOI) based on the description of the concern in request
3. Representative collects signatures of 75% of residents in AOI supporting request (petition) thereby documenting neighborhood consensus
4. Data collection/ analysis done by Town staff (this involves multiple departments)
5. Review by Town staff to determine if street is eligible for Stage 1 Traffic Calming alone (primarily education and enforcement measures) or both Stage 1 and Stage 2 (physical modifications of the street) Traffic Calming
6. Neighborhood meeting
7. Staff recommendations – including conceptual design if appropriate
8. TAB review (required mailing to neighbors)
9. Town Council Consideration/Approval
10. Town Engineer prepares construction plans (if applicable)
11. Identification of necessary budget
12. Installation/construction
13. Follow-up evaluation

Since the adoption of the RTMP in 1996, the Town has received approximately 60-70 inquiries into the traffic calming process.

- Some neighborhoods have submitted multiple requests
- Traffic calming measures were installed at approximately 17 locations (can include multiple devices in a single location e.g. Stratfor Dr.)
- The most common device installed has been speed humps or tables.
- See Attachment B for map of existing traffic calming installations around town

**WHAT DOES CARRBORO CONNECTS SAY ABOUT TRAFFIC CALMING?**

- Chapter 5: Transportation and Mobility
  - Strategy 2.2: Continue to create safe streets and trail networks for pedestrians, bike riders, and transit riders (Design to reduce speed)
  - Project 2.2 E): Restructure Residential Traffic Management Plan (RTMP) and incorporate a Bike-Ped Safety Assessment Process
    - *"...This process is piecemeal, in that it only responds to requests as they arise and does not take a systemic approach to assessing traffic calming and safety issues on Town-maintained, residential streets. The current process also has concerning implications for equity, as an update of the plan is needed..."*
    - The full, 6-part project, is included in the attached excerpt (Attachment C)
- Chapter 6: Green Stormwater Infrastructure, Water, and Energy
  - Strategy 3.1: Coordinate transportation and public infrastructure improvements with green stormwater infrastructure.



- Project 3.1 A): \*Priority Project\* Integrate green stormwater infrastructure dual solutions that improve stormwater management practices and traffic calming in transportation infrastructure

#### CONSIDERATIONS FOR POSSIBLE STREAMLINING

- One year moratorium on new traffic calming requests – May be permanent based on guidance.
- Formulate programmatic response to speeding concerns to observe and collect initial data and intervene depending on findings.
- Evaluate street classifications and design standards for alignment with Complete Streets and Vision Zero and Green Infrastructure – text amendments if needed.
- Revise or incorporate RTMP in other processes:
  - Establish a baseline of data on travel behavior town-wide.
  - Engage residents to identify preferences for types of traffic calming, where there are options.
  - Implement traffic calming based on a multi-factor prioritization including racial equity.
  - Evaluate petition approach to determining community interest and add or substitute other engagement methods to check in if data indicates/recommend changes.
  - Determine any updates to list traffic of calming devices based on current best practice; current process leads with a solution and almost always results in a speed table, which can have negative consequences for safety and timeliness of emergency response and service delivery.
  - Include funding as part of streets maintenance.
  - Develop schedule and process for regular monitoring.





# TOWN OF CARRBORO



## **RESIDENTIAL TRAFFIC MANAGEMENT PLAN FOR SPEED AND TRAFFIC CONTROL**

**ADOPTED BY:  
CARRBORO BOARD OF ALDERMEN, JUNE 1996  
REVISED: MAY 6, 1997; JUNE 28, 2005;  
OCTOBER 17, 2006**

## **INTRODUCTION**

Many residents approach the town with concerns about speeding in neighborhoods. The Residential Traffic Management Plan represents a commitment by the Town of Carrboro to promote the safety and livability of residential neighborhoods. The Residential Traffic Management Plan provides a process for identifying and addressing existing problems related to speeding, excessive volumes, and safety on town-maintained residential streets. Based on this policy, proper actions can be taken depending on the severity of the problem.

## **PROCESS AND REQUIREMENTS**

This section describes the process and requirements of the Carrboro Residential Traffic Management Plan.

### **STEP 1 — Report the Problem**

If a resident believes there is a speeding or traffic problem on a residential street, the first step is to report the problem to the Town of Carrboro Planning Department staff at 918-7324 or [plandept@townofcarrboro.org](mailto:plandept@townofcarrboro.org).

Town staff will note the concern and provide a Traffic Calming Request Form. This form is available in Attachment A. When the form is submitted, town staff will evaluate the complaint to determine the nature of the problem, and make sure that the location meets the first traffic calming criteria: the street must be a town-maintained, residential street.

The town will not implement traffic calming measures, or conduct traffic calming studies on arterial streets or on streets that are privately maintained. Staff can work with you to identify other actions if your street is not a town-maintained, residential street.

### **STEP 2 — Neighborhood Consensus**

After the initial report, town staff will request a petition from residents in the neighborhood to verify that there is a widespread concern for the speeding or traffic issue. The petition form is available in Attachment B.

Town staff will identify an “area of influence” in the neighborhood. The area of influence includes properties abutting the street and properties on intersecting streets within a reasonable distance of the problem street. The Planning Department will provide a map and addresses for the area of influence.

The petition must be signed by at least 75 percent of the owners or residents of properties within the “area of influence.” Each property is entitled to one signature. Valid signatures include those from (1) a property owner or spouse, (2) an adult head of household, or (3) an adult renting the property.

After the petition is received it will be reviewed by town staff. Town staff will request that the neighborhood designate someone to serve as the primary contact person between the town and the neighborhood.

### **STEP 3 — Data Collection**

After verifying the validity of a petition, town staff will collect traffic volume and speed data over a two-day period and evaluate other traffic conditions on the street, using the following criteria:

#### **Traffic Calming Criteria**

<b>Criteria</b>	<b>Application</b>	<b>Points</b>
<i>Traffic Volume</i>	<i>Criteria</i> – 5 points for every 20 % of volume that exceeds the expected number of vehicles per day (vpd) on the street, based on the function of the street (75 vpd for minor streets, 200 vpd for local streets, and 800 vpd for subcollector and collector streets).	
<i>85<sup>th</sup> Percentile Speed</i>	<i>Criteria</i> – 2 points for every mph that the 85 <sup>th</sup> percentile speed exceeds the posted speed limit	
<i>Pedestrian Volume</i>	<i>Criteria</i> – 1 point for every 10 pedestrians if the street has a sidewalk, 5 points per 10 pedestrians if no sidewalk. Counts are made in either the peak traffic hour or the hour when students are traveling to or from school	
<i>Bicycle Volume</i>	<i>Criteria</i> – 1 point for every 10 cyclists if the street has bike lanes, 3 points per 10 cyclists if no bike lanes. Counts are made in either the peak traffic hour or the hour when students are traveling to or from school	
<i>Bus Stops</i>	<i>Criteria</i> – 1 point for each transit stop and 2 points for each school bus stop on the street	
<i>Proximity to Pedestrian Generator (Retail and Parks)</i>	<i>Criteria</i> – 5 points if within 0-0.2 miles; 3 points if within 0.21 and 0.4 miles; 1 point if within 0.41 and 0.6 miles.	

**Additional Consideration:** In some situations the residents' concern is for a few drivers greatly exceeding the speed limit. In this case, town staff would also review the 95th percentile speed on the street.

## **STEP 4 — Town Staff Review**

The street will be scored based on the criteria. Using this score and reviewing additional considerations, town staff will recommend whether the street is eligible for Stage 1 Traffic Calming alone or both Stage 1 and Stage 2 Traffic Calming.

In general, streets that receive up to 25 points are eligible for Stage 1 Traffic Calming only. Streets that receive a combined total of at least 12 points in the “Traffic Volume” and “85th Percentile Speed” criteria and more than 25 points total will be eligible for both Stage 1 and Stage 2 Traffic Calming.

For streets eligible for both Stage 1 and Stage 2 traffic calming, town staff may recommend that Stage 1 traffic calming measures be implemented prior to implementing Stage 2 measures. Once Stage 1 Traffic Calming measures are implemented, town staff will wait approximately three to six months and collect traffic speed and volume data and evaluate other traffic conditions on the street. The data would then be analyzed using the Traffic Calming Criteria to determine if the Stage 1 Traffic Calming measures were successful. If the measures were successful, then the traffic calming process will end at this point. Otherwise, town staff will move on to analyze and recommend possible Stage 2 Traffic Calming methods.

### **Stage 1 Traffic Calming**

Stage 1 Traffic Calming does not involve the use of physical controls or impediments on the roadway system. These are primarily education and enforcement measures. These include:

Neighborhood Awareness Campaigns and Education. Many people drive too fast in their own neighborhoods. “Speeders” are not always bad guys from somewhere else – many are neighbors and friends, responsible people who want safe, peaceful neighborhoods. Several creative methods of reducing traffic problems in neighborhoods can be undertaken by residents to remind their neighbors to pay attention to driving habits:

- Write letters to local newspapers or publish articles in neighborhood newsletters.
- Hold a “slow down” block party to get people to think about their driving habits.
- Walk the neighborhood with door hangers and talk to neighbors about neighborhood traffic safety.

Radar Speed Trailer Deployment. This is a temporary device that is primarily used to remind motorists that they may be exceeding the posted speed limit. The trailer uses radar to monitor speeds and a reader board to show drivers how fast they are going but does not photograph vehicles. The use of trailers is contingent on availability.

Traffic Enforcement Actions. This is traditional enforcement activity on the part of Police Department’s traffic enforcement officers. The intent is to modify behavior to result in a safer situation for all drivers and neighbors.

Traffic Signs and Pavement Marking. Town staff will review the traffic signing and pavement markings in the area. If necessary, staff will modify or add traffic signing and pavement markings.

Alternative Transportation Modes. One of the goals of the Town of Carrboro is to promote and provide alternative transportation modes (public transit, walking, and bicycling). Traffic on the project street may decrease if people decide to use these other transportation choices instead of driving.

## **Stage 2 Traffic Calming**

Stage 2 traffic calming methods involve physical modifications of the street intended to control traffic speeds. Possible Stage 2 modifications might include the following:

- Bulbouts / Curb Extensions
- Center island medians
- Chicanes
- Landscape treatments
- Mid-block chokers
- Neighborhood traffic circles
- Pedestrian refuge islands
- Raised crosswalks
- Realigned intersections
- Roundabouts
- Sidewalks
- Speed humps
- Speed tables

Town staff members are available to discuss traffic calming measures with residents. In addition, several publications and web sites provide definitions, descriptions, costs, and design guidelines for traffic calming measures. Residents who are interested in learning more about traffic calming on their own may make use of resources on the internet. For example, the web site for the Institute of Transportation Engineers (ITE) contains excellent information and several links concerning traffic calming at: <http://www.ite.org/traffic/index.html>

The following criteria apply to Stage 2 traffic calming measures:

1. The construction and installation of some traffic calming devices may be expensive. The least costly form of traffic calming should be considered as the primary modification in any specific case. When expensive devices are approved, the neighborhood may need to wait an extended time for installation. Once the actual date of installation is determined, the primary contact person will be notified in writing.
2. The design of traffic calming devices will follow recommended Institute of Transportation Engineers (ITE) or other national recommended guidelines, if available.

3. Streets that have traffic calming devices installed may be excluded from the Snow Removal Plan and street cleaning activities, depending on the type of device installed. Note that devices currently in use in Carrboro would not exclude a street from the Snow Removal Plan.
4. Emergency vehicle access within and through neighborhoods will be carefully considered in the evaluation process and selection of traffic calming devices. Certain traffic calming devices may result in increased emergency response times on some streets and these impacts should be carefully considered.
5. Once installed, traffic calming devices will stay in place for a minimum of three years unless residents pay the full cost of removal. However, at any time following construction completion, if it is determined that traffic calming measures should be removed for public health and safety reasons, the Board of Aldermen will be requested to authorize the removal of one or more traffic calming measures, upon notification of the neighborhood representatives. If the town has no concerns with the project but the neighborhood itself decides that the traffic calming measures should be removed or significantly altered, a petition must be signed by at least 75 percent of the owners or residents of properties within the “area of influence.” The Board of Aldermen will review petitions requesting removal or significant alteration and will be provided a staff analysis and Transportation Advisory Board (TAB) recommendation.

#### **STEP 5 — Staff Recommendation, TAB Review, and Board of Aldermen Approval**

Town staff will develop a recommendation of actions to be taken. This recommendation will be forwarded to the primary contact person of the neighborhood. The following information will be included, as appropriate:

- Information on upcoming Transportation Advisory Board (TAB) and Board of Aldermen meetings at which the staff recommendation will be discussed.
- A discussion of proposed Stage 1 education and enforcement measures.
- For Stage 2 traffic calming, the number, location, and dimensions of proposed traffic calming devices, displayed on a map of the neighborhood.
- A photograph of proposed traffic calming devices and directions to a nearby street with a similar device, if applicable.
- Information about the traffic calming device’s effects on speeds and traffic volumes.

The staff recommendation will be reviewed by the TAB, which will make a recommendation to the Board of Alderman.

The Board of Alderman makes the final decision concerning actions to be taken. The Board will review the residents’ petition, the staff analysis and recommendation, the TAB recommendation, and public comments. The Board may choose to hold a public hearing on the recommendation.

Prior to a Transportation Advisory Board (TAB) or Board of Aldermen meetings at which the staff recommendation will be discussed.

Notice of Public Meetings. When the staff recommendation is to install Stage 2 traffic calming measures, residents within the “area of influence” will be given notice of meetings of the Transportation Advisory Board and Board of Aldermen at which the recommendation will be discussed. Town staff will develop a flyer to notify residents of the meeting. The flyer will include the date, time, and place of the meeting and a description of proposed traffic calming devices. Town staff will mail the flyer to each residence in the “area of influence” at least 10 days before the meeting. For each property that is not owner-occupied, Town staff will also mail the flyer to the property owner of record at least 10 days before the meeting.

#### **STEP 6 — Follow-up Evaluation**

Following the implementation of traffic calming measures, a follow-up evaluation should be performed to ensure that the measures are effective. Town staff will wait approximately three to six months and collect traffic speed and volume data and evaluate other traffic conditions on the street.

## Attachment A -- Traffic Calming Request Form

This form is used to report a speeding or traffic problem on a residential street. When this form is submitted, town staff will evaluate the complaint to determine the nature of the problem, and make sure that the location is a town-maintained, residential street. After the initial report, town staff will explain how residents may put together a petition to verify that there is a widespread concern for the speeding or traffic issue.

1. Contact Information

Name (please print): \_\_\_\_\_

Address, City, and Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

2. Please describe the location of the traffic concern. Attach a map or picture if necessary: \_\_\_\_\_

---



---



---

3. Please describe the nature of the neighborhood traffic problem you are concerned with (attach additional sheets if necessary): \_\_\_\_\_

---



---



---



---



---



---

4. Please list possible solutions to the problem that you would like the Town of Carrboro to consider: \_\_\_\_\_

---



---



---



---



---



---

Please fill out this form and return to:

Town of Carrboro  
Planning Department  
301 W. Main Street  
Carrboro, NC 27510  
FAX: (919) 918-4454



## Attachment B – Neighborhood Petition Form (Page 1)

Please fill out this form and return with attached sheets to:

Town of Carrboro  
Planning Department  
301 W. Main Street  
Carrboro, NC 27510  
FAX: (919) 918-4454

### THE UNDERSIGNED AGREE TO THE FOLLOWING:

1. All persons signing this petition do hereby certify that they own property or reside within the following area:

---

---

---

---

2. All persons signing this petition do hereby agree to the following problem in the defined area:

---

---

---

---

3. All persons signing this petition do hereby agree that the following contact person(s) represents the neighborhood in matters pertaining to items 1 and 2 above:

Name of key contact person # 1 (please print): \_\_\_\_\_

Address, City, and Zip Code: \_\_\_\_\_

Telephone (day): \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Name of key contact person # 2 (please print): \_\_\_\_\_

Address, City, and Zip Code: \_\_\_\_\_

Telephone (day): \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

*Please attach additional pages if necessary to discuss the request.*

Date Submitted: \_\_\_\_\_

## Attachment B – Neighborhood Petition Form (Page 2)

This petition is provided so that residents in a neighborhood may verify that there is a widespread concern for a speeding or traffic issue.

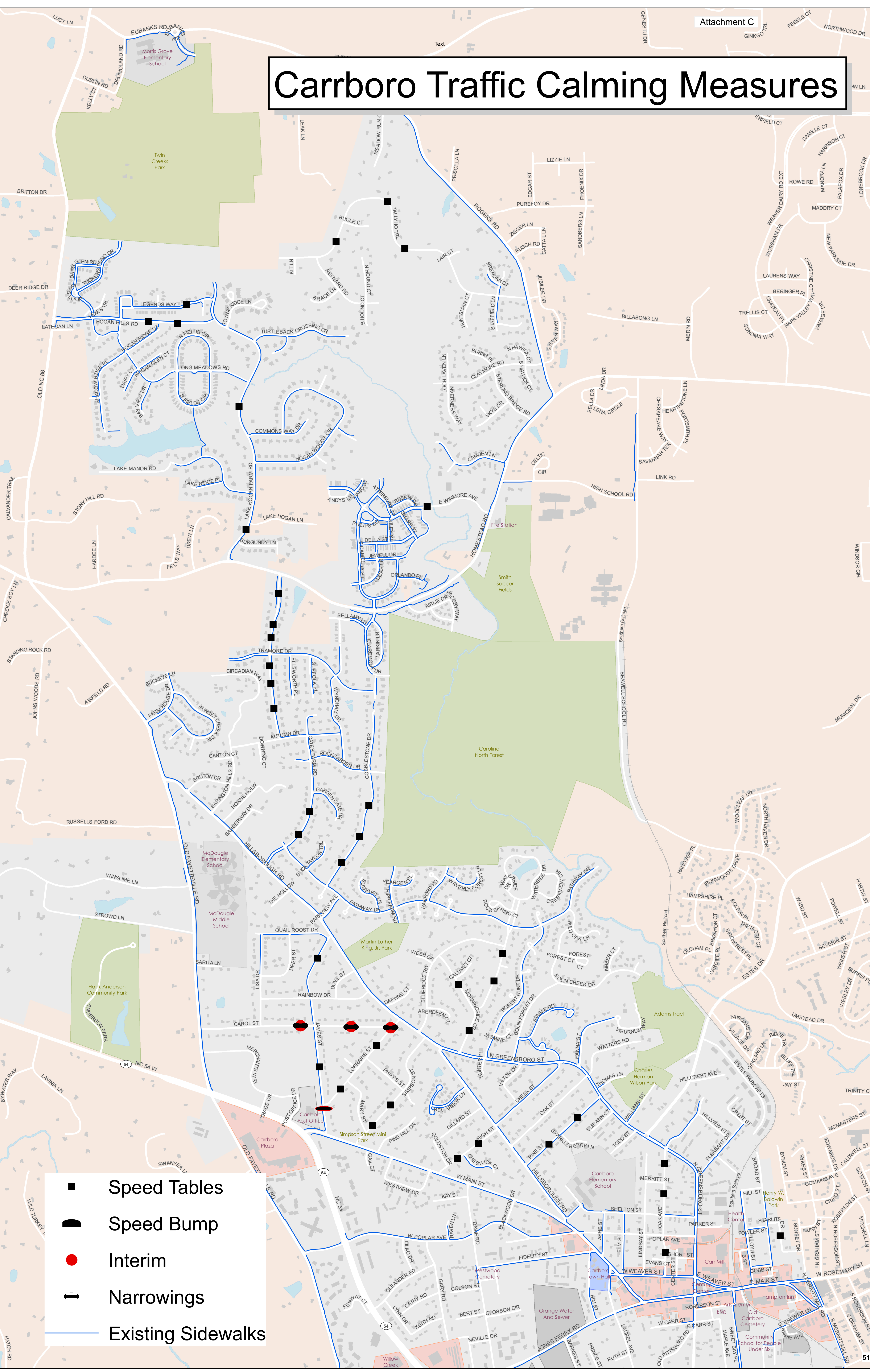
Town staff will identify an “area of influence” in the neighborhood. The area of influence includes properties abutting the street and properties on intersecting streets within a reasonable distance of the problem street. The Planning Department will provide a map and addresses for the area of influence.

The petition must be signed by at least 75 percent of the owners or residents of properties within the “area of influence.” Each property is entitled to one signature. Valid signatures include those from (1) a property owner or spouse, (2) an adult head of household, or (3) an adult renting the property.

[illegible]



# Carrboro Traffic Calming Measures



Speed Tables

Speed Bump

Interim

Narrowings

Existing Sidewalks



**E** Restructure Residential Traffic Management Plan (RTMP) and incorporate a Bike-Ped Safety Assessment Process.

The Town's Residential Traffic Management Plan has been a process by which residents can request traffic calming devices be installed by the Town and includes a petition-based process and data-driven assessment of the traffic conditions on the street. This process is piecemeal, in that it only responds to requests as they arise and does not take a systemic approach to assessing traffic calming and safety issues on Town-maintained, residential streets. The current process also has concerning implications for equity, as an update of the plan is needed to address the following issues:

1. Create a regular, annual timeline with a specific window during which requests and petitions can be submitted OR develop a systemic, town-wide approach to assessing traffic conditions (with associated data collection) and coordinate with neighbors at those locations where there are potential concerns identified.
2. Revise the process to collect data after a request is submitted (and prior to the petition phase).
3. Create processes for Town- and NCDOT-owned streets by which residents can request reducing the posted speed limits on residential streets. If desired, this could be a direct follow-up to a completed traffic calming project. If the follow-up data collection shows the operating speed (85th percentile) is at least 5 MPH below the posted speed, then a reduction in the posted speed limit can be considered.

## Explanation of Federal and State Transportation Funding Process (MPO & SPOT Processes)

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) is the regional lead planning agency that coordinates federal and state transportation funds for projects within the urbanized areas of Durham, Orange and Chatham counties. The DCHC MPO works to develop long range transportation plans, identify transportation projects to receive federal funding, submit projects for state-administered funding prioritization, and assist with project implementation.

**Federal Funds:** Multiple sources of federal funding are distributed by NCDOT (North Carolina Department of Transportation) to the DCHC MPO that can be considered for transportation projects in Carrboro. These federal sources typically require a 20% local match of the total project cost (often referred to as an 80/20 split). The MPO works to prioritize projects for federal funding based on a number of different factors including connectivity, transit access, population/employment density, equity, environmental justice, safety, and emissions/VMT reduction. The MPO accepts applications for funds once per year. Due to requirements on minimum project cost, this is generally a better funding source for larger transportation projects. MPO projects approved for federal funding are programed into NCDOT's State Transportation Improvement Program (STIP).

**State-Administered Funds:** The state administers and distributes both federal and state funds through a competitive process coordinated by NCDOT's Strategic Planning Office of Transportation (SPOT) which occurs every two to three years. A project that scores well enough to receive funding is added to the State Transportation Improvement Program (STIP). The SPOT process involves scoring all roadway, public transportation, bicycle, pedestrian, rail, and aviation projects on a number of criteria. Metropolitan Planning Organizations (MPOs), Rural Planning Organizations (RPOs), and the NCDOT Division offices also contribute by submitting projects for consideration and assigning local priority to projects.

The Strategic Transportation Investments (STI) law sets the distribution of funding between different modes of transportation. Additionally, highway projects (such as roadway capacity or other motor vehicle focused improvements) accepted into the STIP are fully funded by NCDOT but other projects for other modes (such as bicycle or pedestrian) require a local match of 20%.

Due to the competitiveness of this process and the timing of improvements in the STIP, it can be a lengthy process from initial submittal to project completion. Furthermore, it can be difficult to get some projects to score well in the process, so other avenues for implementation should be assessed. In addition to the SPOT process, NCDOT also reserves some funds for other projects/programs, such as safety improvements.

4. Create a process by which BIPOC or other underserved neighborhoods can bypass the labor-intensive petition process. The expectation of this would be that if data collected by Town Staff indicates a location meets the criteria for Stage 2, then staff can reach out to a neighborhood contact directly and gauge interest through a neighborhood meeting rather than the expectation of a formal petition process.
5. Incorporate into this process an assessment of bicycle/pedestrian facilities and sidewalk need. Potential guidance includes the FHWA Small Town and Rural Multimodal networks document ([https://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/publications/small\\_towns/](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/)).
6. Update the list of traffic calming devices under consideration.

**F** Explore and implement engineering solutions to reduce motor vehicle speeds in downtown.

With respect to the areas identified on the Transportation Strategies Map for ‘safety improvements for speed reduction’, a framework is needed to assess existing conditions, make improvements, and measure progress. Conversations with NCDOT with regards to a downtown slow zone (and associated reduction of posted speed limits) have indicated that the operating speed needs to be reduced prior to considering a reduction of the posted speed limit. To impact the operating speed, engineering changes are needed to modify the roadway environment and encourage slower speeds.

## Infrastructure Plans & Improvements

**G** Identify existing, needed, and poor-quality sidewalks to update the existing sidewalks plan, for the purpose of implementation alongside development projects to increase pedestrian safety and decrease traffic speed.

The Town has been actively adding and improving sidewalks through bond referenda, state transportation prioritization and ADA transition work. The Town should conduct a gap analysis/audit of existing sidewalk infrastructure, access for high priority populations (e.g., non-ambulatory residents, low-to-moderate income households), and existing and projected development patterns, and update its framework for prioritizing sidewalk projects accordingly. The installation of sidewalks can be designed to help increase drivers’ cautiousness around residents. Vehicle speeds can be managed by infrastructure, with most attention paid to arterial roads and the downtown.

**H** Continue to implement the Safe Routes to Schools Action (SRTS) plan in coordination with schools.

Implement plans that support safety for all age groups of children, especially those who have less opportunities due to location, ability, and income. Explore and develop partnerships with community organizations seeking to provide healthy and safe transportation options for youth and continue working to establish the SRTS Implementation Committee.



▲ Roberson Street, next to The 203 Project, would be a great opportunity for a shared street that can be used by pedestrians, micro mobility users, and drivers.

## **Attachment E- Race and Equity Pocket Questionss**

**Title & Purpose of this Initiative:** The purpose of this agenda item is to provide an opportunity for the Town Council to discuss the residential traffic calming process (Residential Traffic Management Plan) and how it might be simplified.

**Department:** Planning, Zoning & Inspections

### **What are the racial and equity impacts?**

**What are the Racial and Equity impacts?** The Residential Traffic Management Plan provides a petition-based, data-driven process to evaluate and implement traffic calming infrastructure along residential street(s). Applicants are required to submit a request form with a short description of the concern. Staff prepares a map showing an area of interest (AOI) based on the information in the request and a spreadsheet with the names and addresses of residents living within the AOI and provides both to the applicant. The applicant is asked to gather signatures of at least 75 percent of the owners within the AOI to indicate their support of the application. The request form and process are currently available to all residents. There is no fee associated with submitting or handling these requests.

### **Who is or will experience community burden?**

**Who is or will experience community burden?** The process of collecting signatures for the petition can be onerous. Requests involving a large AOI can require more than 100 signatures which takes time to collect, particularly for residents working long hours, residents who do not know their neighbors, or residents with mobility issues. Applicants living in subdivisions with active listservs or Nextdoor accounts may use those networks as a way to connect with neighbors and garner support for traffic calming. Residents in smaller neighborhoods may find it easier to get consensus going door to door, particularly if residents have lived in the area for a long time.

Once a petition is submitted, traffic counts completed and a conceptual traffic calming plan designed, the proposal is shared with the neighborhood, the Transportation Advisory Board and Town Council. Residents may experience burden if they do not share the majority opinion of the traffic concern and/or proposal solution and have to offer an alternative and/or reject the proposal.

### **Who is or will experience community benefit?**

**Who is or will experience community benefit?** The program provides an opportunity for residents to convey their concerns with vehicular traffic volume and speed within their neighborhood, and to request additional Police patrols and/or the installation of physical

infrastructure such as stop signs or traffic calming measures—thereby improving safety along local streets.

### **What are the root causes of inequity?**

**What are the root causes of inequity?** Lack of representation among decision makers, lack of a seat at the table, lack of information about the RTMP or notice about meetings about the proposed traffic calming plan. Working individuals, particularly shift workers, families with young children or caregivers may find it difficult to attend public meetings, may be reticent to speak in a public setting and may have an overall distrust in government and governmental processes, based on personal experiences and/or examples of structural racism in government decisions, particularly those relating to land use.

### **..What might be the unintended consequences of this action or strategy?**

**What might be the unintended consequences of this action or strategy?** Time and other resources applied to this process might prevent development and implementation of another, possibly more effective strategy for ensuring that Town streets are safe for all users, especially those most vulnerable including youth, persons with physical or mobility limitations, persons who are new to the area and unfamiliar with travel behavior/traffic patterns. Slower vehicle speeds can also result in lower numbers of collisions with the animal population. When a request results in a constructed improvement, unintended consequences can include short-term impacts such as noise, dust, traffic interruptions. Additional infrastructure—traffic calming measures—are not always sufficient to slow vehicular speeds and/or reduce traffic volume. Changes in traffic patterns, pavement markings, signage, and traffic signals can be confusing, even if the installation is in accordance with state standards.

### **How is your department planning to mitigate any burdens, inequities, and unintended consequences?**

**How is your department planning to mitigate any burdens, inequities, and unintended consequences?** Provide clear information with images, when possible, to discuss traffic calming proposals. Try to provide realistic expectations of the effectiveness of the different types of traffic calming devices. Work with the Fire Department to select measures that do not hinder emergency access. Ensure sufficient staff resources/allocation of staff assignments to schedule traffic counts within a standard period of time after the installation to evaluate success. Set up a follow-up meeting with residents to discuss their experiences with the installation. Explore removing petition requirement and establishing an overall approach to assessing speeding/unsafe behaviors and a method for prioritizing and scheduling changes that involves community involvement to specify preferences.