

# South Carolina



## Planning Education Advisory Committee

Committee Members:

May 2, 2016

Stephen G. Riley, Chairman  
Representing MASC  
Term Expires: 2017

Leah Youngblood, Senior Planner  
City of Rock Hill  
155 Johnston Street  
Rock Hill, SC 29732

Phillip L. Lindler  
Representing SCAC  
Term expires: 2019

Re: *Transportation Update*

Cliff Ellis  
Representing Clemson  
University  
Term expires: 2016

Dear Ms. Youngblood:

Dennis Lambries  
Representing USC  
Term expires: 2016

On April 18, 2016 I received the Program Materials you submitted for accreditation of the Continuing Education Course detailed above. . Upon receipt of your application, I sent an email to confirm receipt by all Committee members and set a deadline for comments.

Wayne Shuler  
Representing SCAPA  
Term expires: 2018

The Committee met via telephone conference on May 2, 2016 to consider the Program Materials you submitted for accreditation and your request has been approved. Your signed "Notice of Decision" is attached.

Thank you for your efforts to help make this program a success.

Sincerely,

A handwritten signature in black ink, appearing to read 'Stephen G. Riley'.

Stephen G. Riley, ICMA~CM  
Chairman

cc: Phillip Lindler, Cliff Ellis, Dennis Lambries and Wayne Shuler

**NOTICE OF DECISION**

**City of Rock Hill – *Transportation Update***

**12. The following action has been taken by the SCPEAC on this application:**

ACCEPTED WITHOUT OBJECTION      Date: May 2, 2016

REVIEWED BY FULL COMMITTEE      Date:

a)   X   ACCREDITED for   1.5   CE credits

b) \_\_\_\_\_ DENIED ACCREDITATION

i. Reason: \_\_\_\_\_

c) \_\_\_\_\_ RETURNED for more information

**13. If accredited:**

a) Authorized Course No.: 2016-05

b) Date of accreditation: 05-02-2016

Signature of SCPEAC Representative:  \_\_\_\_\_

**For further information, contact Mr. Stephen Riley, Chairman,  
843-341-4701 or [steve@hiltonheadislandsc.gov](mailto:steve@hiltonheadislandsc.gov)**

## APPLICATION FOR ACCREDITATION OF A CONTINUING EDUCATION PROGRAM

Note: This certification form, together with the required information referenced therein, shall be submitted to the Committee. If no objections are raised by a member of the SCPEAC within 10 working days of receipt, the continuing education program shall be considered accepted. If an objection is raised, a teleconference meeting shall be scheduled, with appropriate public notice, as soon as reasonably possible, to review the application.

Applications are due no later than 30 days prior to the first scheduled presentation of a program or class. The Committee will consider extenuating circumstances where the 30 day deadline cannot be met.

### 1. Name and address of organization providing or sponsoring the orientation program:

- a. Organization Name: CITY OF ROCK HILL
- b. Address: 155 JOHNSTON ST
- c. City: ROCK HILL
- d. State: SC
- Zip Code: 29731
- e. Telephone: 803.329.5569
- f. Email: leah.youngblood@cityofrockhill.com

### 2. Contact Information:

- a. Name of Contact Person: JANICE MILLER
- b. Title: HISTORIC PRESERVATION SPECIALIST
- c. Telephone: 803.817.5129
- d. Email: janice.miller@cityofrockhill.com

### 3. Information on orientation program:

- a. Title of Program:  
TRANSPORTATION UPDATE
- b. Date(s) and Location(s) of Program:  
MAY 10, CITY HALL, 155 JOHNSTON ST, ROCK HILL SC
- c. Brief description of the program and its content:

SUMMARY OF TRANSPORTATION PROJECTS & ENTITIES INVOLVED

### 4. Method of presentation (check all that apply. All sessions must have a Coordinator present):

- a. Presentor(s) in room with participants



- b. Live presentation via close circuit TV, video conferencing, or similar; Coordinator present
- c. Videotape or CD/DVD presentation; Facilitator present
- d. Webinar or similar; Coordinator present
- e. Other (describe) \_\_\_\_\_

**5. Description of materials to be distributed (check/fill in all that apply):**

a. Powerpoint handout: <input checked="" type="checkbox"/>	number of slides:
b. Other handouts: <input type="checkbox"/>	total pages:

c. CD/DVD:

d. Other (describe) \_\_\_\_\_

e. None:

**6. When are materials distributed?**

a. Sent before the program:

b. Handed out at the program:

c. Other (describe) \_\_\_\_\_

**7. Required attachments (5 copies distributed as described below):**

- a. Course description and outline including estimated time per section
- b. Brochure, if available
- c. Course Presenter(s) and credentials (include brief resumes and qualifications)
- d. Copies of all handouts and course materials
- e. Evaluation Form and method of evaluation (each program must be evaluated)

**8. Instruction Time:**

a. Indicate the total minutes of instruction time: 1.5 hrs

**Note:** Breaks, meals and introductions should not be counted. A reasonable period of Q and A should be included and counted.

**9. Method of Advertisement:**

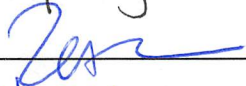
a. Describe the ways in which you intend to let potential attendees know about this orientation program:

POSTCARDS, EMAIL, MEETING REMINDERS

**10. Certification. By Submitting this application, the applicant agrees to:**

- a. Allow in-person observation, without charge, of the Program by the SCPEAC Committee members. Any food, travel or lodging costs will be the responsibility of the Committee member(s).

b. The applicant acknowledges that its approval for this Program may be withdrawn for violations of the regulations or failure to comply with the agreements and representations contained herein and as may be required by the SCPEAC.

- i. Name of Organization: CITY OF ROCK HILL
- ii. Name of Representative: LEAH YOUNGBLOOD
- iii. Title: SENIOR PLANNER
- iv. Phone: 803 329.5569
- v. Email: leah.youngblood@cityofrockhill.com
- vi. Signature: 
- vii. Date: 4/18/2016

**Application and all Materials may be submitted in one of the following means:**

- 1. Electronic submission to each of the committee members listed below via email; or
- 2. Hardcopy via U. S. Mail, 1 copy each to each committee member; or
- 3. Electronic submission of the application via email to all committee members, and submit hardcopy supporting materials via U.S. Mail to each member, if materials not available electronically.
- 4. Please cc all applications to the Chairman's assistant, Vicki Pfannenschmidt at [vickip@hiltonheadislandsc.gov](mailto:vickip@hiltonheadislandsc.gov)

To access committee members email and postal addresses visit the link below:  
<http://www.scstatehouse.gov/scpeac/members.htm>





Transportation Outline for Continuing Education  
May 10<sup>th</sup>, 6:00 PM  
Presenter: Clifton Goolsby, P. E., Transportation Manager

- I. Area Growth
- II. Road Improvements
  - A. Project Process
    - 1. SCDOT
    - 2. RFATS
    - 3. County (Pennies for Progress)
    - 4. Local Government (City of Rock Hill)
      - Rock Hill Traffic Commission
  - B. Timing/Schedule
  - C. Existing Projects
  - D. Future Projects
- III. Operations
  - A. Safety
  - B. Efficiency
  - C. Signal Systems/Timing
  - D. Delay
  - E. Access
- IV. Questions/Answers

# Clifton Goolsby, P.E.

2838 Oakhurst Drive • Rock Hill, SC 29732 • clifton.goolsby@gmail.com • 803-322-4590

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## SUMMARY OF QUALIFICATIONS

### Education

- MS in Civil Engineering (Transportation Engineering), Clemson University
- BS in Civil Engineering, Clemson University

### History

- Professional Engineer (SC) since 2012.
- City of Rock Hill - Transportation Manager for 6 months
- South Carolina Department of Transportation - Engineer with 3 years 8 months as Associate Traffic Engineer in District 4 and 1 year 2 months as Assistant Resident Maintenance Engineer in York County.
- Kimley-Horn & Associates - Analyst with 1 year in roadway design group.
- Clemson University - Research Assistant/Teaching Assistant for 16 months.

### Technical Skills

- Experienced with Synchro, AutoCAD, Microstation, Auto Turn, and GIS software.
  - Proficient with Microsoft Office including Word, Excel, PowerPoint and Access.
- 

## PROFESSIONAL ORGANIZATIONS

- Member of Institute of Transportation Engineers - South Carolina Section.
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## PROFESSIONAL EXPERIENCE

### **City of Rock Hill, South Carolina** **2015 – Present**

#### Transportation Manager – Planning and Development Department

- Coordinate Traffic Commission to address citizen issues and concerns within the City of Rock Hill.
- Participate in regional planning as a representative for the City of Rock Hill on the RFATS Technical Team.
- Review proposed development plans with respect to transportation/access related topics.
- Conduct traffic operation studies including site reviews, collision history analyses, and traffic volumes counts.
- Oversee Transit Services for City of Rock Hill to ensure Federal Transit Authority requirements are met.

### **SCDOT, South Carolina** **2010 – 2015**

#### Associate Traffic Engineer – District 4 (Chester, SC)

- Coordinated District 4 engineering review and response for traffic impact analyses and projects including, but not limited to, Pennies for Progress projects, LPA projects, and CMAQ projects.
- Participated in Rock Hill Traffic Commission and RFATS Technical Team to address concerns and develop SCDOT recommendations and responses.
- Conducted traffic operation studies including site reviews, collision history analyses, pedestrian and vehicle counts, speed studies.

- Prepared correspondence and reports to document study findings and convey recommendations.
- Applied SCDOT Engineering standards to identify and evaluate traffic control operations and safety problems and develop recommendations for improvements.
- Developed/Revised Signal Plans.

Assistant Resident Maintenance Engineer – (SCDOT) York County

- Assisted Resident Maintenance Engineer on projects and with daily operations (planning, organization, supervision, and inspection).
- Supervised the following crews
  - York County Chip Seal Crew used district-wide (7 counties)
  - York County Sign and Pavement Marking Crew
  - York County Ditching and Shoulder Crew
  - Western York County Section Crew
- Worked with Maintenance foremen in areas of planning, scheduling, and discipline.
- Represented SCDOT when meeting with the general public, contractor personnel, and city and county officials.
- Assisted in the planning for and supervision of inclement weather response.

**Kimley-Horn and Associates, Inc., Charlotte, NC**                      **2008 - 2009**

Analyst – Roadway Design Group

- Worked in a team environment on civil engineering design projects with input throughout entire life cycle, including permitting and approval processes.
- Designed and drafted residential land and roadway development improvement plans.
- Created vertical and horizontal conceptual roadway designs.
- Presented project designs in the form of plan sets.
- Gained experience in construction phasing, traffic control, and erosion control.
- Analyzed existing drainage conditions, designed and sized closed drainage systems, culverts, driveway pipes, and ditches.
- Performed detailed estimates of project costs.

**Clemson University, Clemson, SC**

**August 2006 - December 2007**

Research/Teaching Assistant

- Helped with data collection in work zone speed study.
- Managed pedestrian safety project and created GIS database of pedestrian/vehicle accidents.
- Taught Geomatics Lab (GPS, GIS, and Surveying).

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## EDUCATION

**Master of Science in Civil Engineering**

**2006 - 2007**

Clemson University                      Clemson, SC

*Emphasis in Transportation Engineering*

GPA: 3.81

Activities: Graduate Research/Teaching Assistant

**Bachelor of Science in Civil Engineering**

**2002 - 2006**

Clemson University                      Clemson, SC

GPA: 3.34



Transportation Outline for Continuing Education (May 10<sup>th</sup> @ 6:00 PM)

Presenter: Clifton Goolsby, P. E.

Position: Transportation Manager

I. Planning

A. Growth Trends and Corresponding Traffic

B. Existing/Planned Developments

1. York County

2. Fort Mill

3. Tega Cay

4. Rock Hill

C. Groups Involved/Funding

1. SCDOT

2. RFATS

3. Pennies for Progress

4. York County

5. Local Municipalities

D. Example Projects

1. Completed

2. Upcoming

3. Future

II. Engineering

A. Operational Efficiency

1. Intersections/traffic signals

B. Safety

1. Accident history

2. Accident types

3. Implemented Changes

4. Conflict Points

III. Questions/Answers

Welcome

Transportation  
York County

May 10, 2016

Clifton Goolsby, P.E.

Transportation Manager

[Clifton.Goolsby@cityofrockhill.com](mailto:Clifton.Goolsby@cityofrockhill.com)

Phone # (803) 329-8722

## I. Planning

I. Growth

II. Groups Involved/Funding

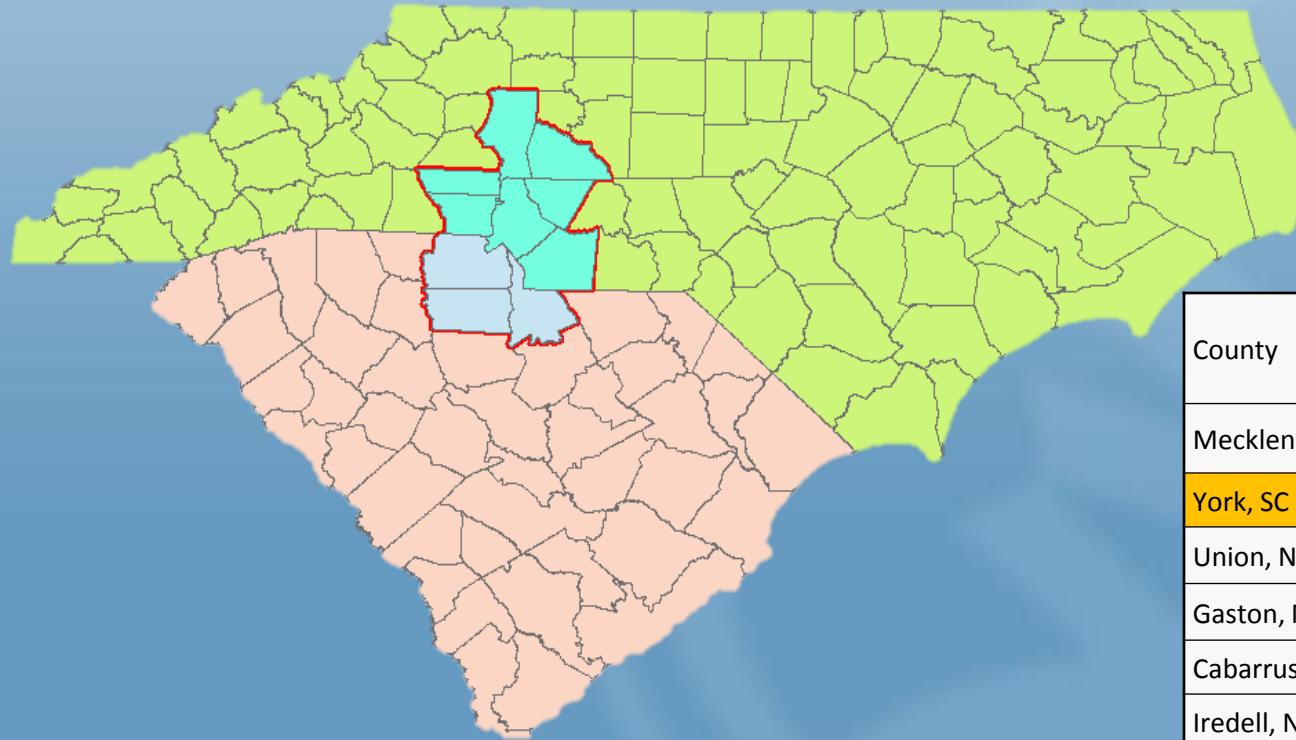
III. Planned Projects

## II. Engineering

I. Operational Efficiency

II. Safety

## The Charlotte Metropolitan Statistical Area (Metropolitan Statistical Areas)



County	2015 Estimate	2010 Census	Change
Mecklenburg, NC	1,034,070	919,628	12.44%
York, SC	251,195	226,073	11.11%
Union, NC	222,742	201,292	10.66%
Gaston, NC	213,442	206,086	3.57%
Cabarrus, NC	196,762	178,011	10.53%
Iredell, NC	169,866	159,437	6.54%
Rowan, NC	139,142	138,428	0.52%
Lancaster, SC	85,842	76,652	11.99%
Lincoln, NC	81,035	78,256	3.55%
Chester, SC	32,267	33,140	-2.63%
<b>Total MSA</b>	<b>2,426,363</b>	<b>2,217,003</b>	<b>9.44%</b>

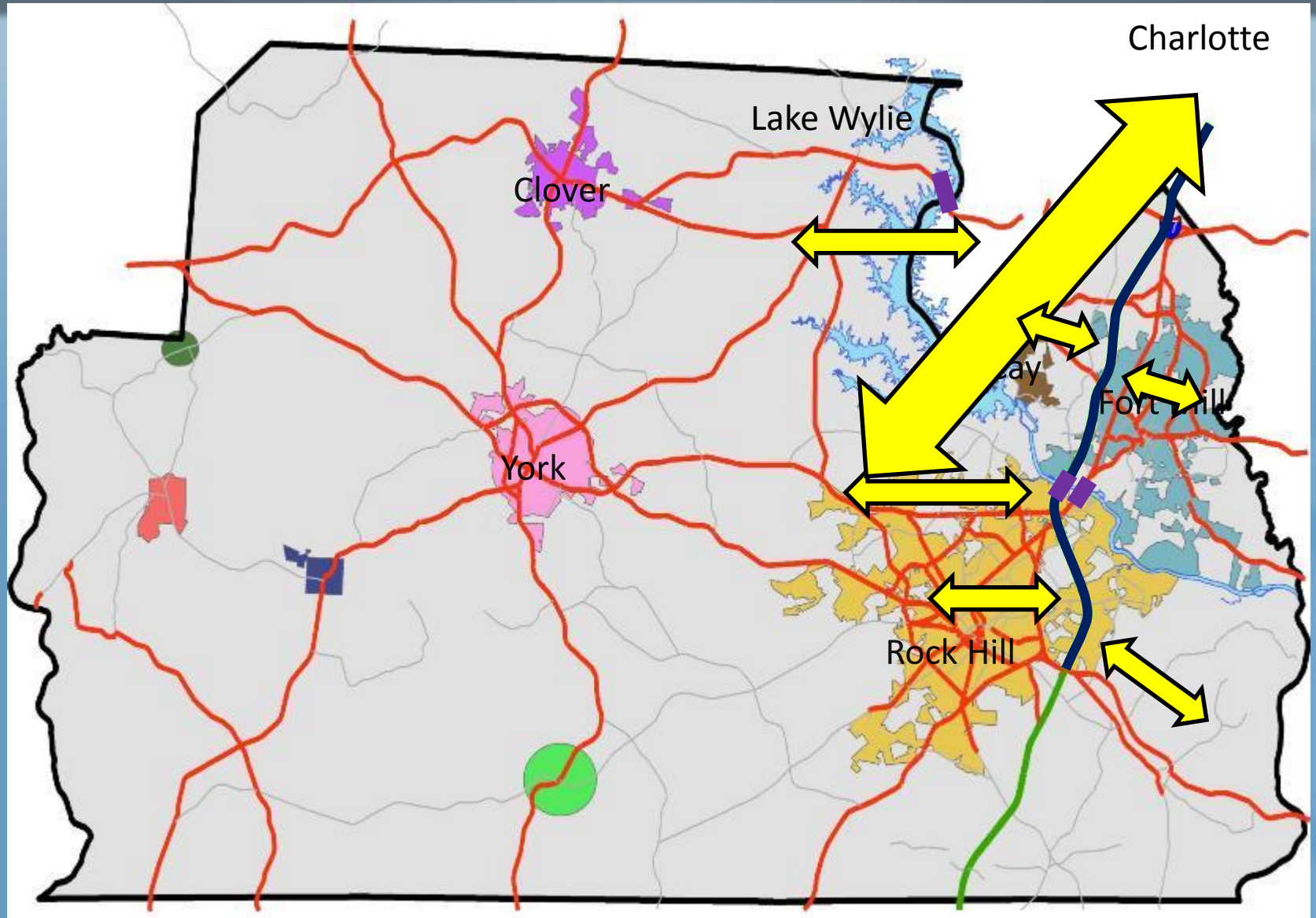
City	2014 Estimate	2010 Census	Change
Rock Hill, SC	69,967	66,154	5.76%
Fort Mill, SC	13,087	10,811	21.05%
Tega Cay, SC	9,120	7,620	19.69%

# Reasons for Growth

- Good Schools
- Low Taxes
- Lower Cost of Living
- Proximity to Charlotte

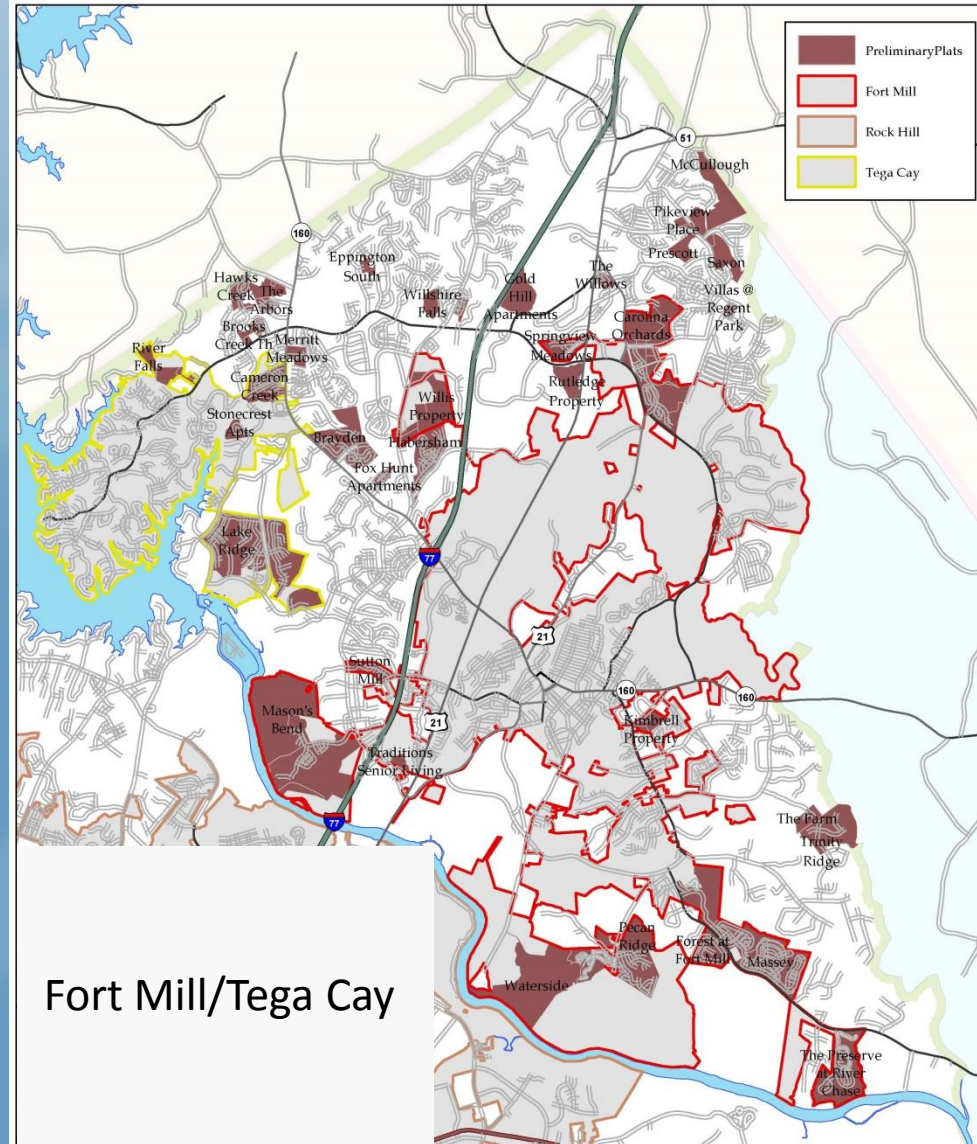
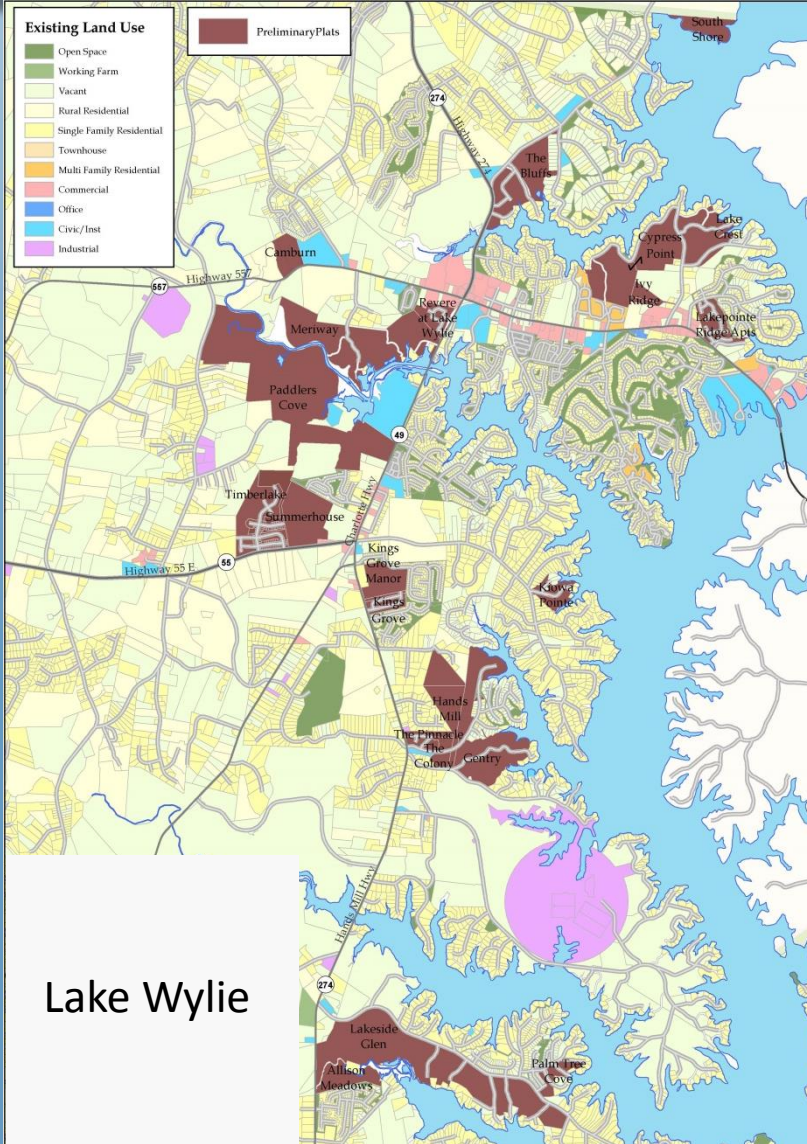


# Traffic Related to Growth



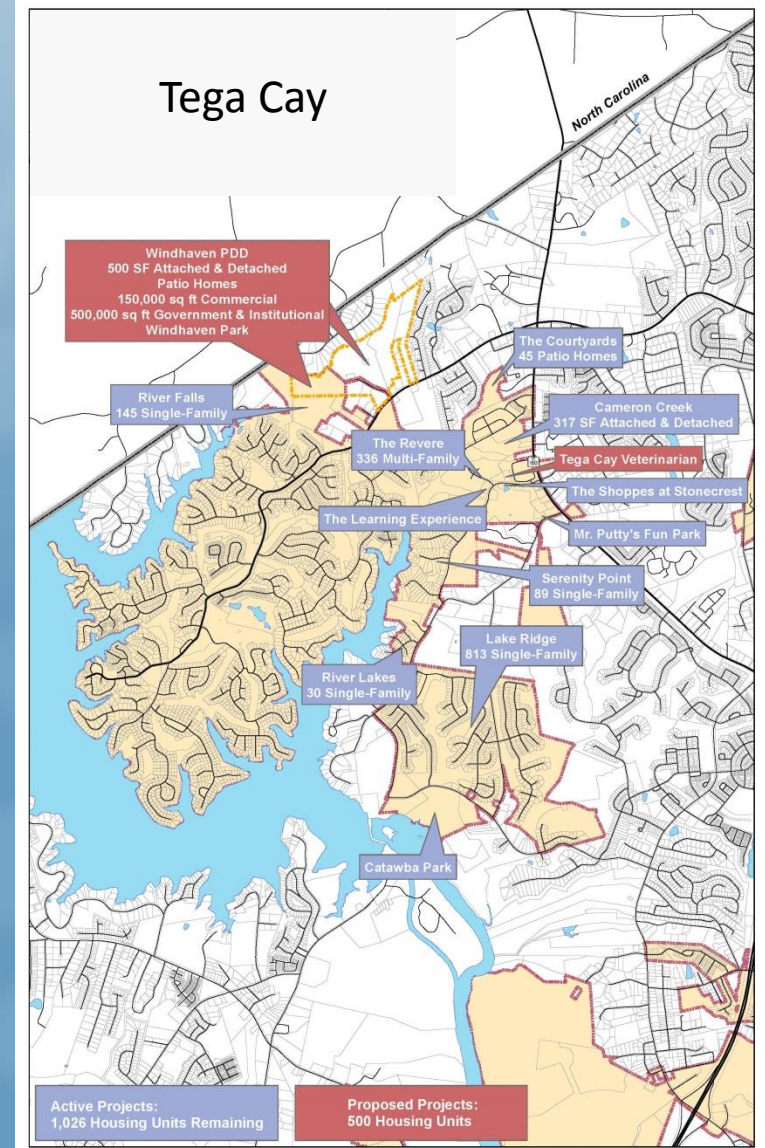
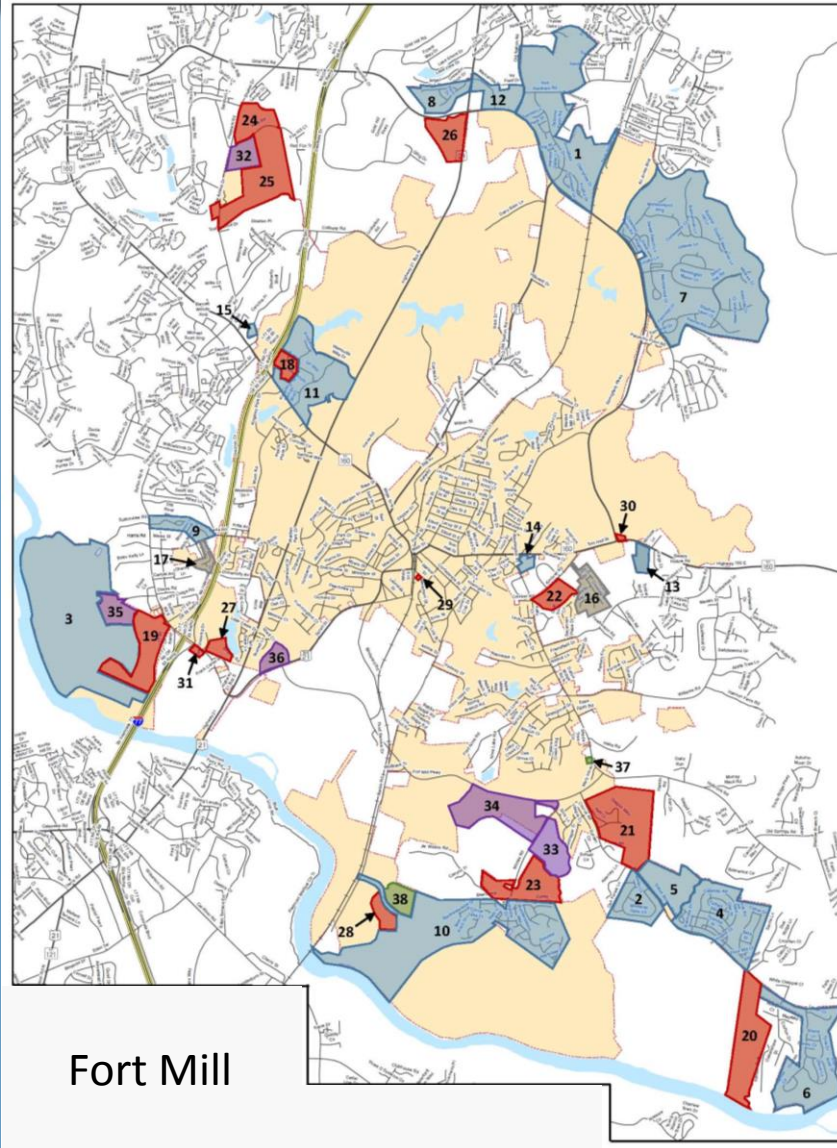


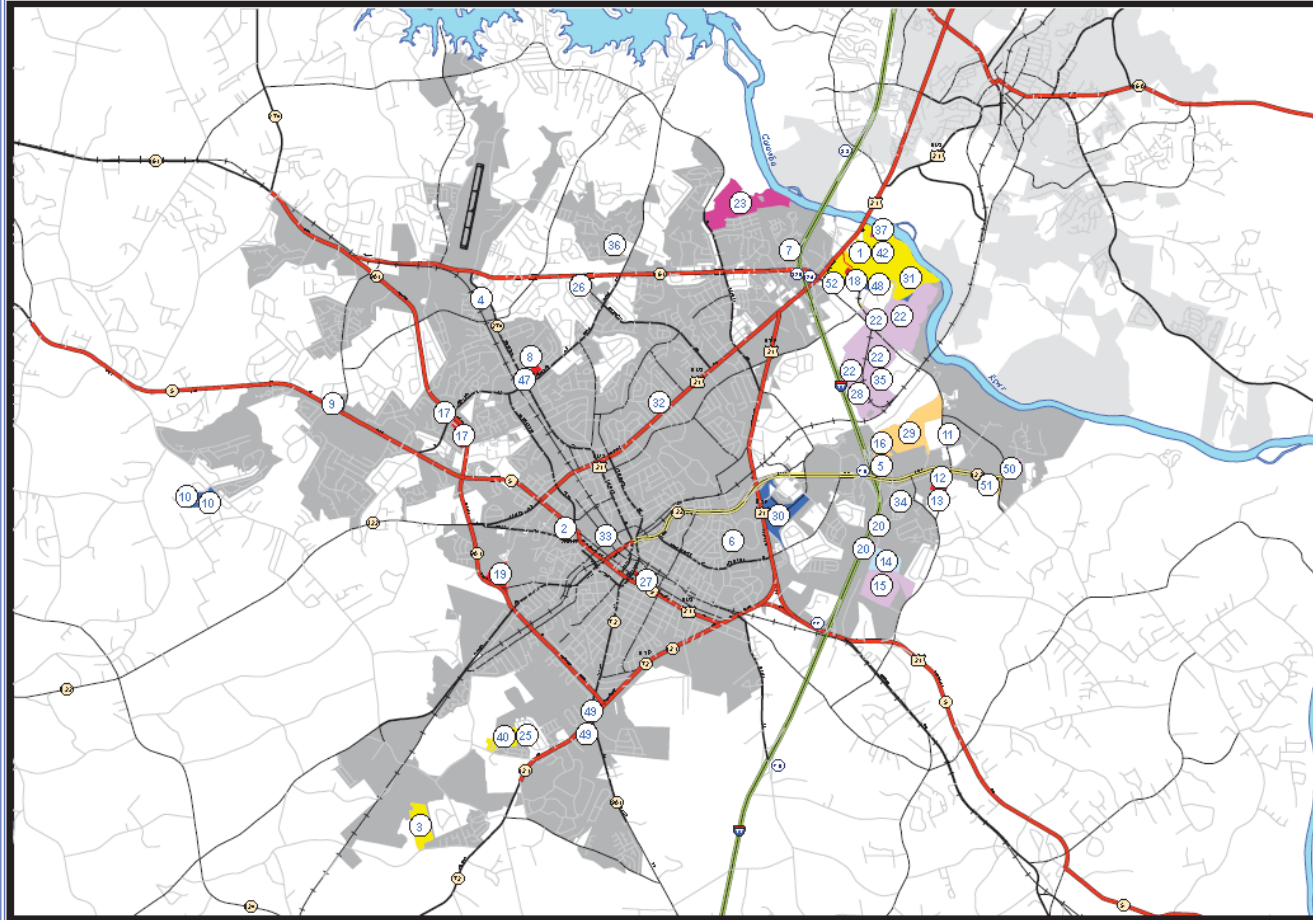
# Developments





# Developments





**LEGEND**

**Proposed Land Use**

- Public & Institutional
- Industrial
- Commercial
- Mixed-Use
- Multi-family Residential
- Office
- Single-family Residential

Note: Parcels are shown according to parcel location on the line easement.

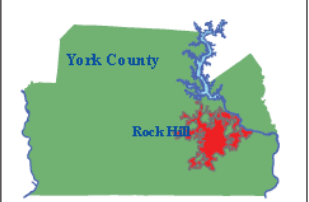
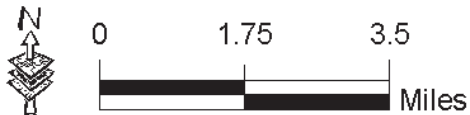
**City Limits**

- Rock Hill
- Fort Mill
- Catawba River

**Roadway**

- Interstate
- Other Freeway/Expressway
- Other Prin Arterial
- Minor Arterial
- Major C collector
- Local
- Railroad

**LOCATOR MAP**

**APPROVED MAJOR SITE PLANS,  
PLANNED DEVELOPMENTS & SUBDIVISIONS  
2010 - 2015**



SOURCE: CITY OF ROCK HILL  
PLANNING AND DEVELOPMENT DEPARTMENT  
June 2015

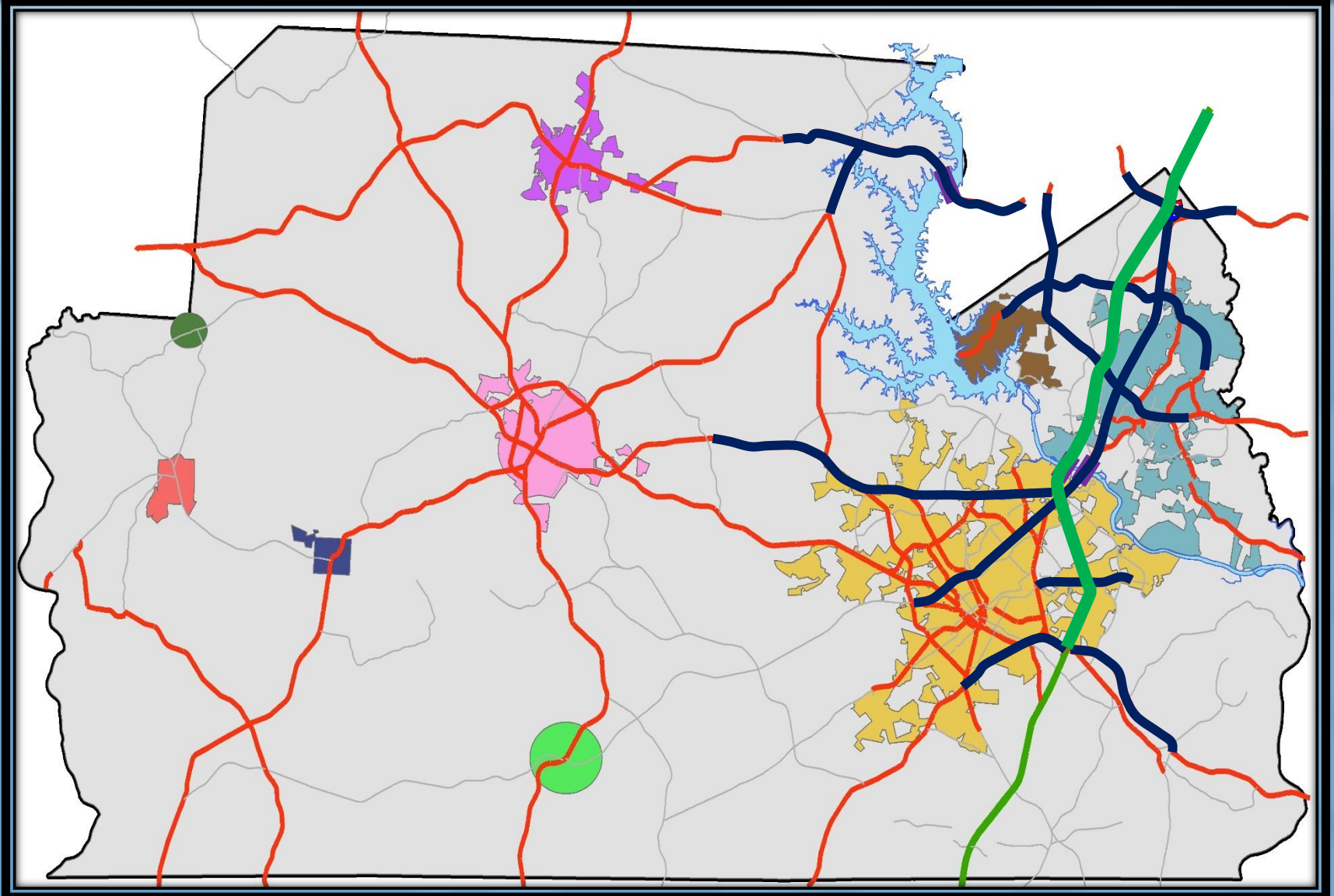
THE CITY OF ROCK HILL AND ITS MAPPING CONTRACTORS DO NOT WARRANT THE ACCURACY OF THE DISPLAYED INFORMATION AND SPECIALLY DISPLAY ANY WARRANTY FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

# Results of Growth

\*Table of traffic volumes associated with population growth.



# Existing Road Network



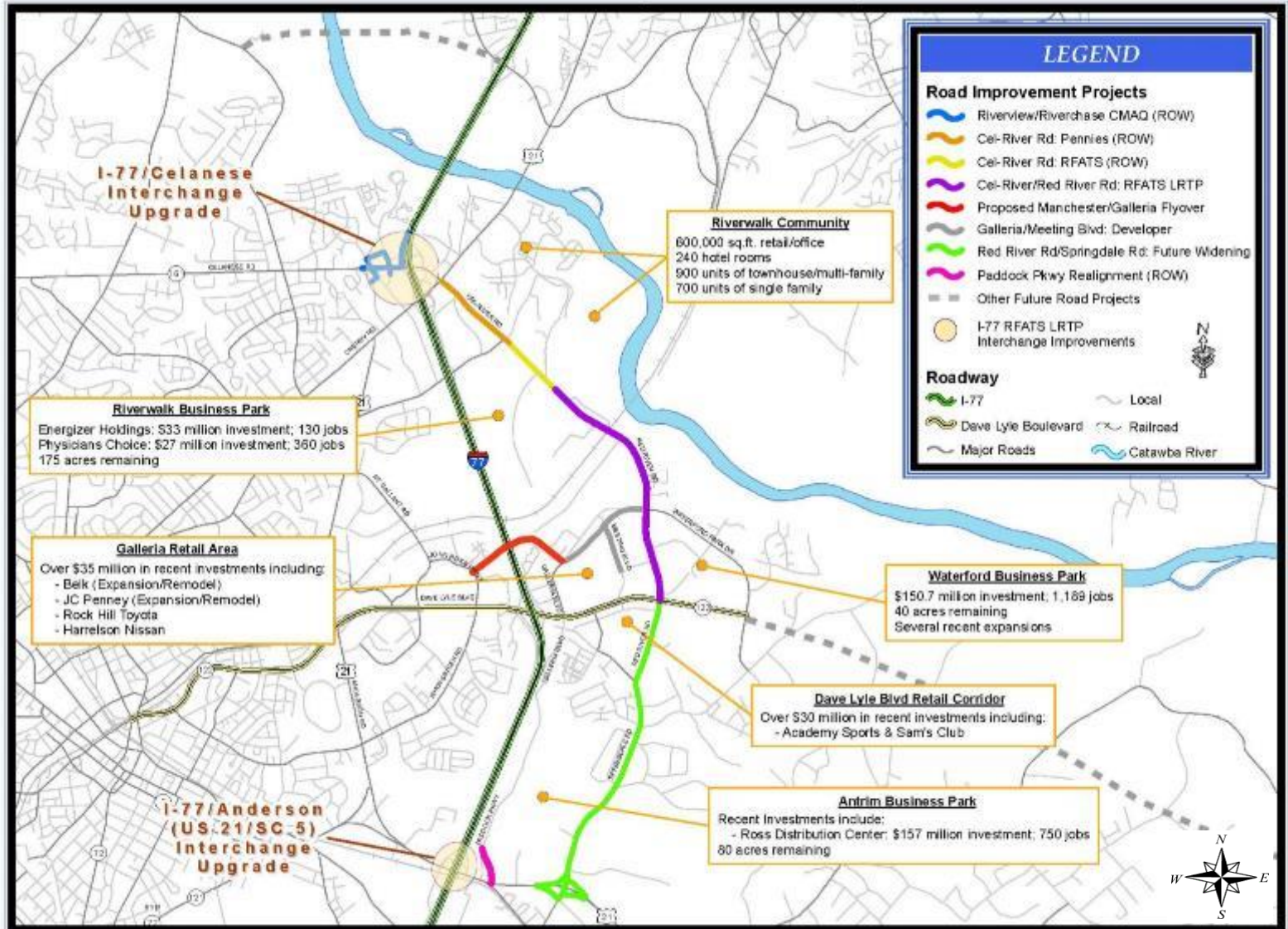




# Projects in the I-77 Corridor

- County Projects along I-77

# Projects in the I-77 Corridor



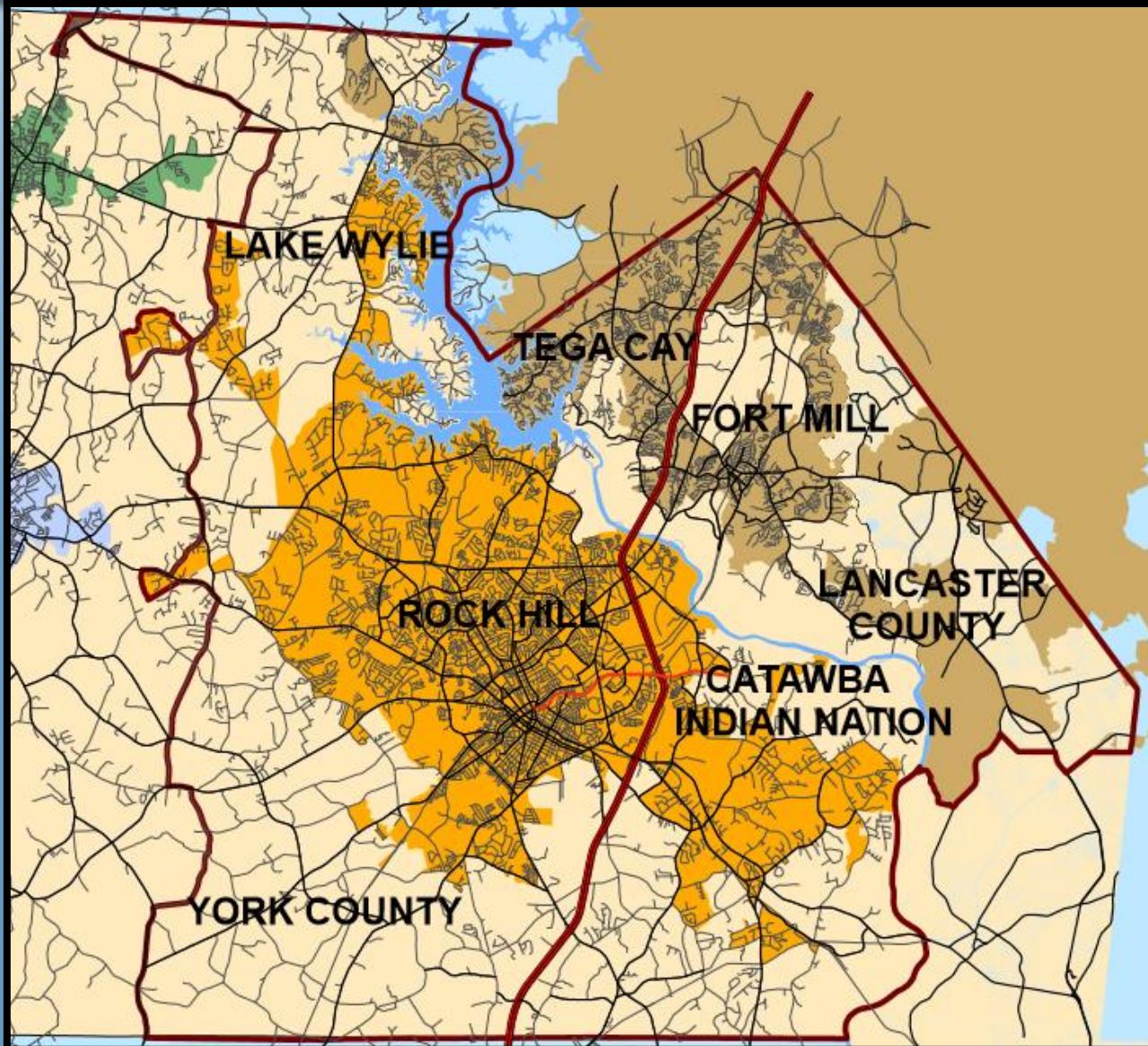


- SCDOT: South Carolina Department of Transportation
- RFATS: Rock Hill – Fort Mill Area Transportation Study
- Pennies for Progress
- York County
- Local Municipalities
  - Fort Mill
  - Tega Cay
  - Rock Hill

# Urbanized Area Funding

- RFATS - (Metropolitan Planning Organization, MPO)
  - Urbanized Area  $\geq$  50,000 (140,000 in 2010)
  - Expanded in 2013 to include Indian Land, Lancaster County
  - Federal Funding
    - Guideshare - \$5M/year
    - CMAQ (Congestion Mitigation and Air Quality) Projects - \$2M/year
      - Riverview/Riverchase
      - White St/Main/Firetower
      - Princeton/Springsteen
      - India Hook & Celanese
      - Carowinds & Pleasant

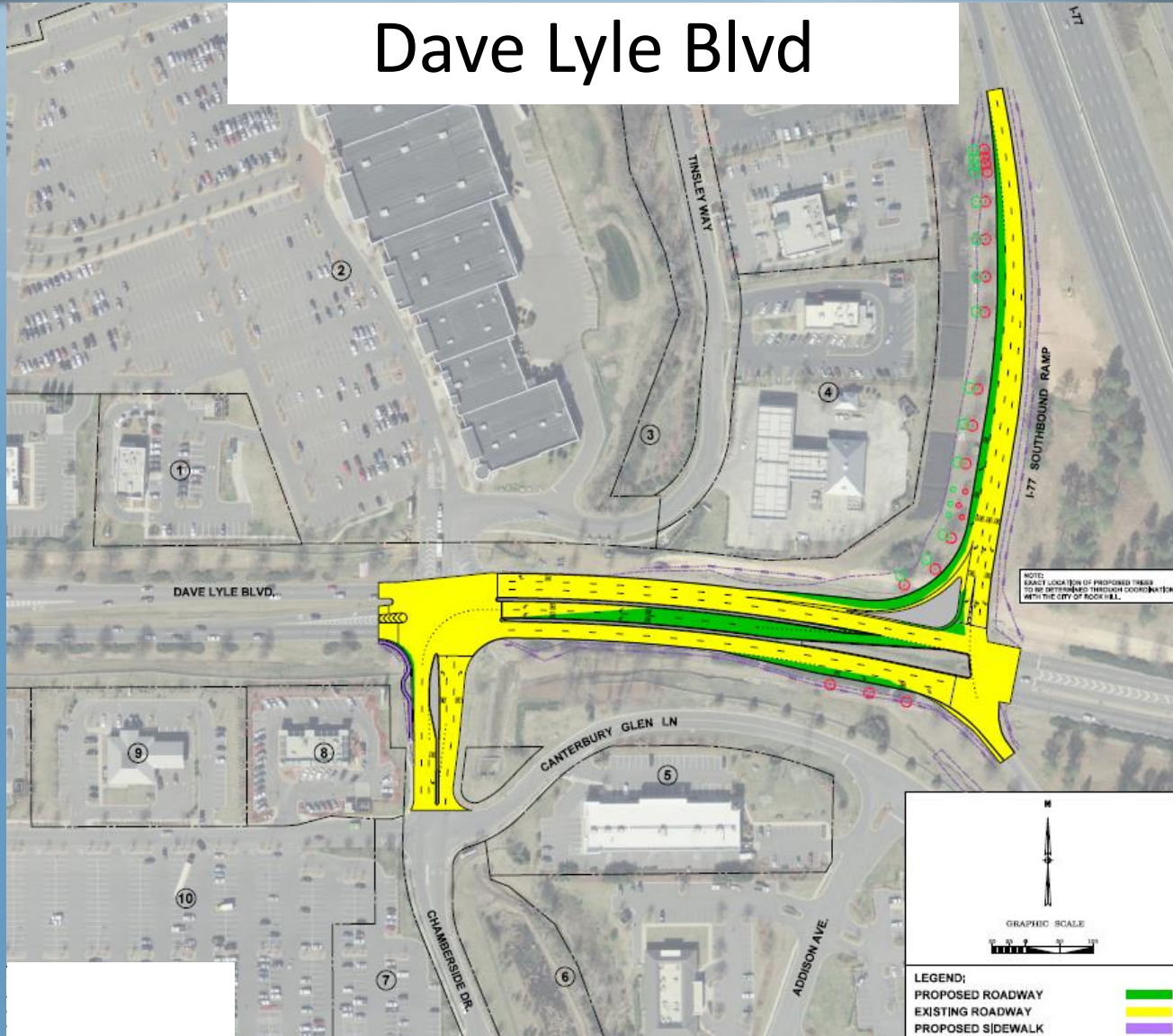
# RFATS Study Area





# Completed CMAQ Project

## Dave Lyle Blvd



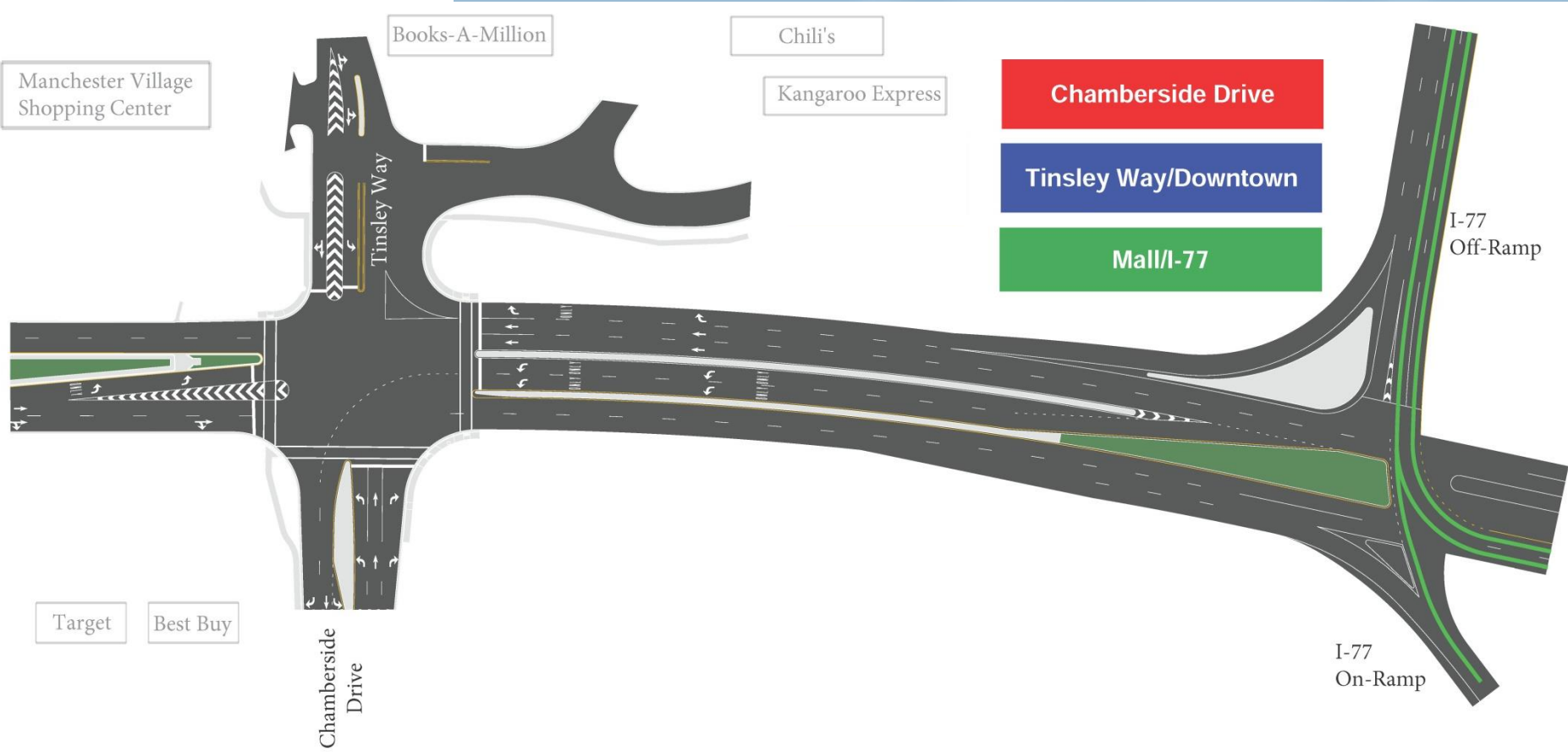


# CMAQ Project in Construction



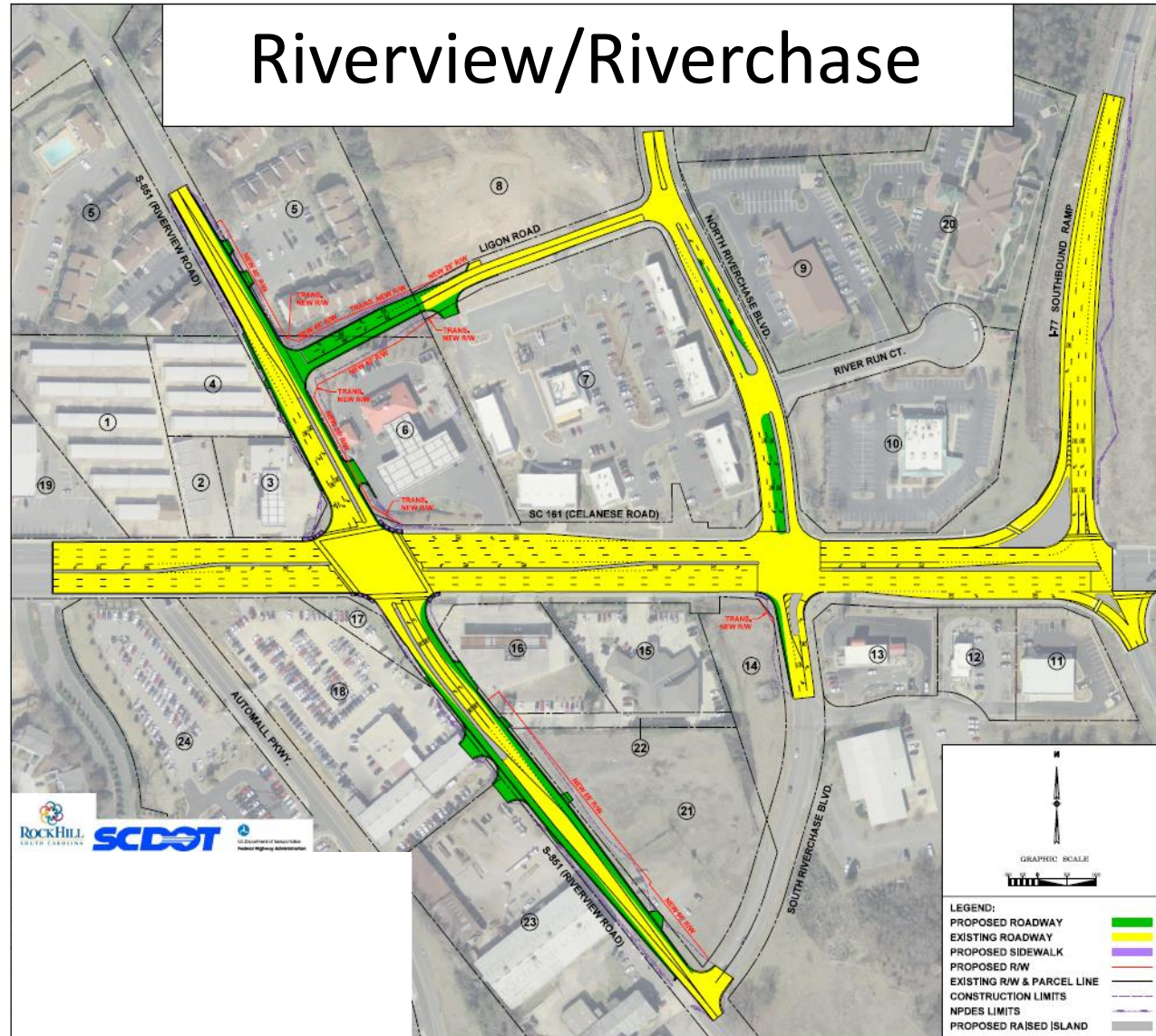
# Completed CMAQ Project

## Dave Lyle Blvd





## Riverview/Riverchase



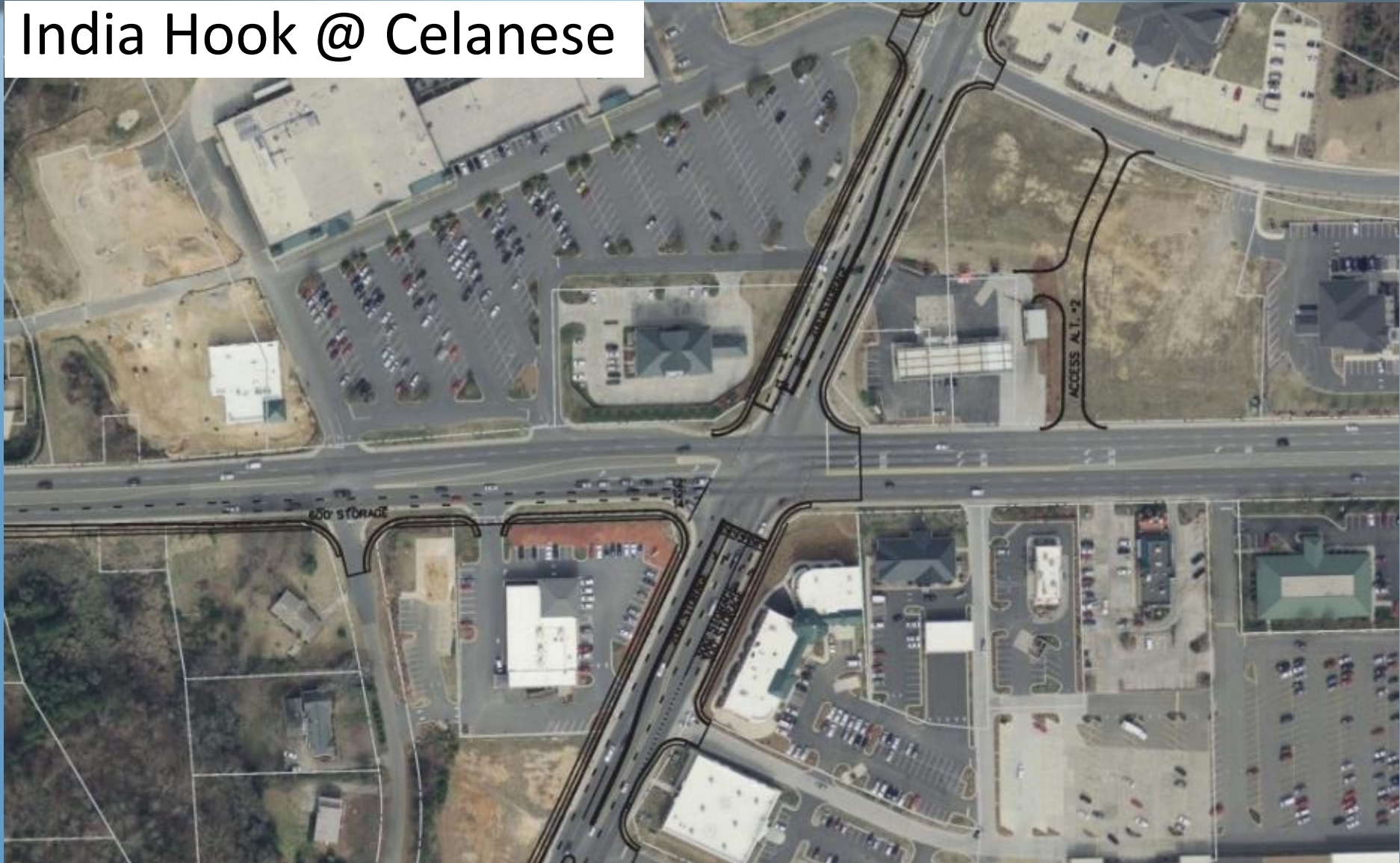


## India Hook @ Celanese





## India Hook @ Celanese



# Potential CMAQ Projects

- Mt. Gallant at Cherry
- I-77/US 21 South Interchange Improvements
- Celanese Improvements (per RFATS study)
- Signal Timing/Coordination
- Ebenezer @ Herlong
- Mt. Gallant @ Anderson
- Dave Lyle @ Springsteen/John Ross

- Pennies for Progress: Programs 1 – 3

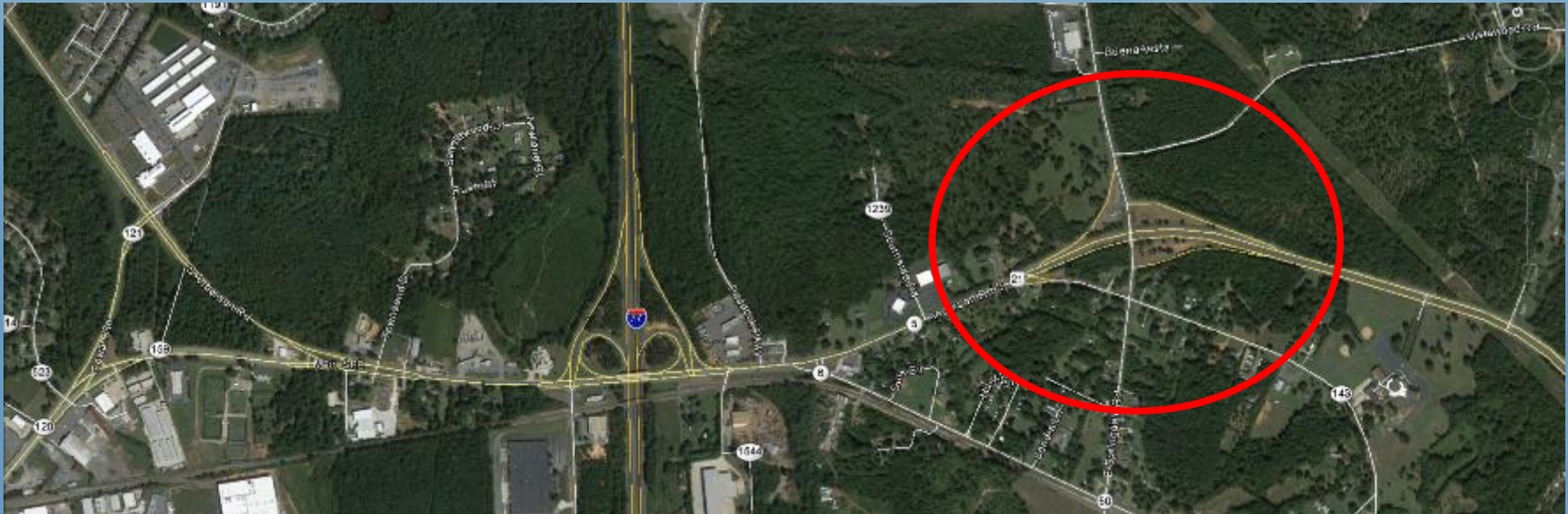
Program	Referendum Passed	Tax Expired	Budget	Spent as of January 2016	Number of Projects
1	Nov-97	6 Years	\$190,307,450	\$189,754,776	14
2	Nov-03	7 Years	\$172,000,000	\$124,852,040	25
3	Aug-11	Apr-18	\$161,000,000	\$39,809,200	14

- Pennies for Progress (4): Estimated \$225M over 7 Years
  - Sales Tax Commission has started its work
  - In the listening phase
  - Program developed later this year
  - Finalized by early 2017

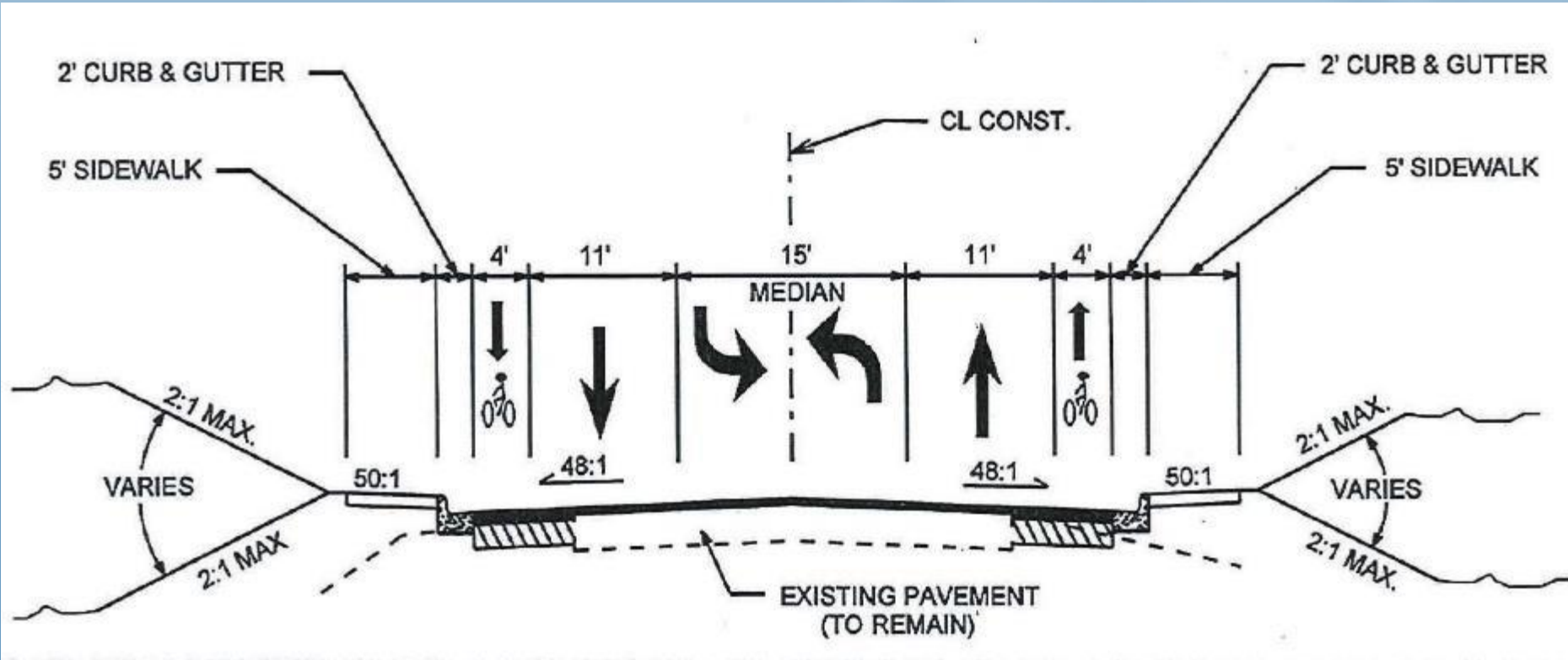


Currently in LRTP (RFATS), unspecified schedule

- Cel-River Road – Riverwalk to Dave Lyle
- I-77/US 21 South interchange improvements



- Ebinport Rd







# Potential New Projects

- Manchester/Galleria Flyover





# Potential PFP-4 Projects

1. Ebinport Rd
2. Cel-River/Red River
3. Eden Terrace
4. I-77 Flyover
5. US 21/Springdale Interchange
6. Celanese Corridor Improvements
7. Mt. Gallant - 5 Lanes
8. Ebenezer Rd
9. Main & Constitution & Black & Allen
10. India Hook Rd Widening
11. Paragon Way Connector
12. Twin Lakes Rd
13. Neely @ Rawlsville (SPH)
14. Crawford @ Neely
15. Neely Road

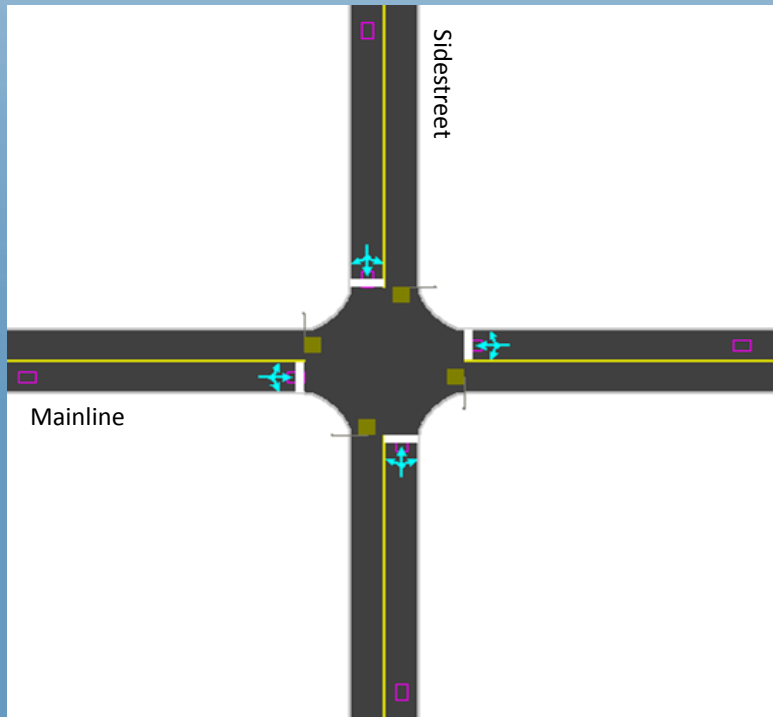


\*Congestion along a corridor often is a result from intersections

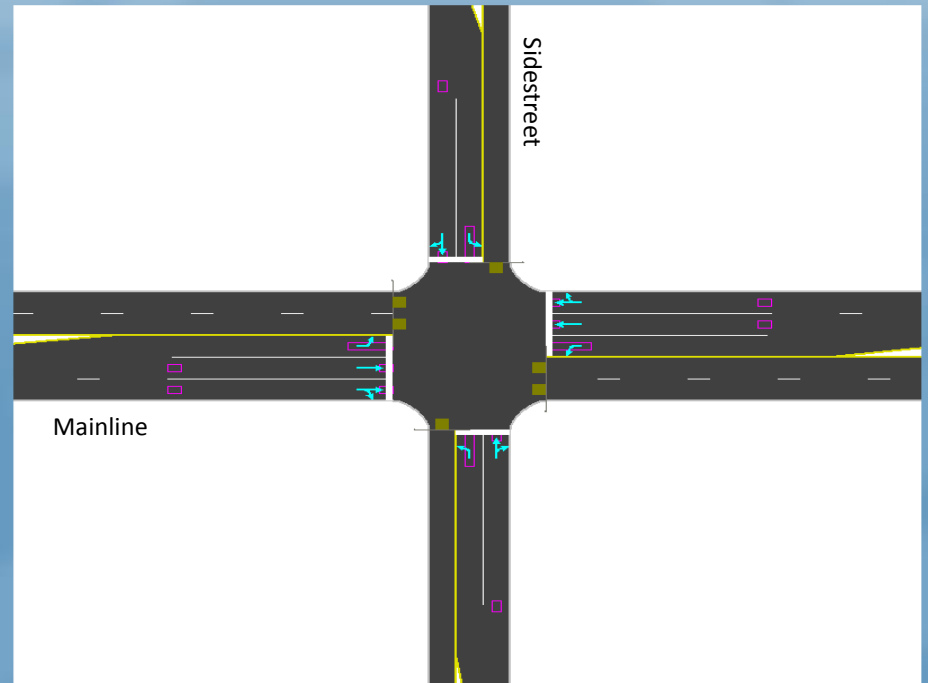
- **Traffic Signals:** (Serves some traffic by delaying/stopping other traffic)
  - **Progression of an intersection**
    - Need for a traffic signal
    - Need for left turn lanes

# Progression of an Intersection

## 4 Phase Signal

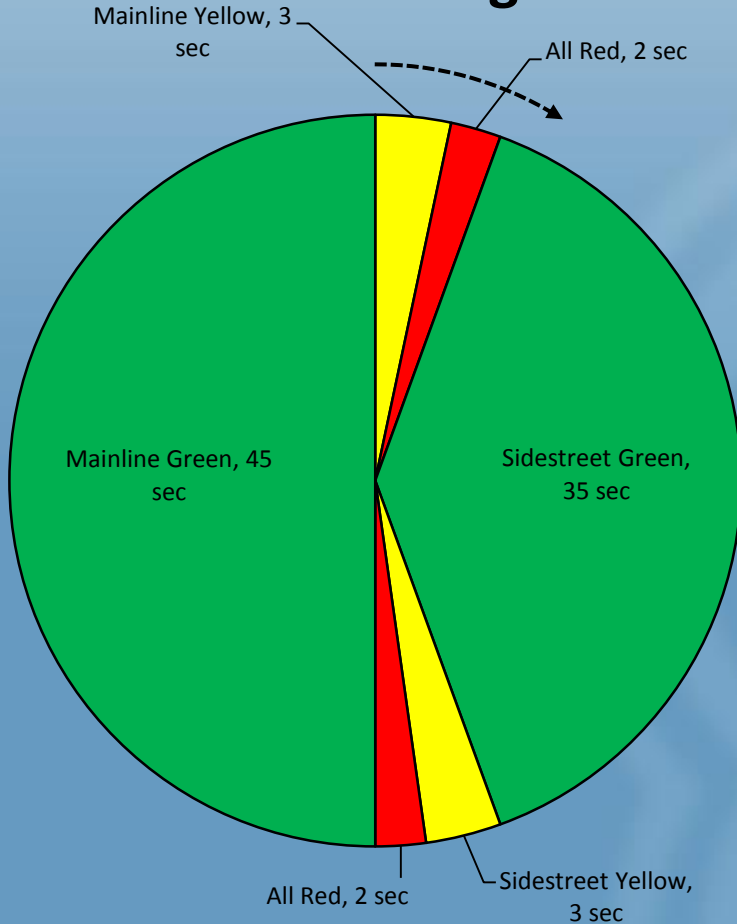


## 8 Phase Signal

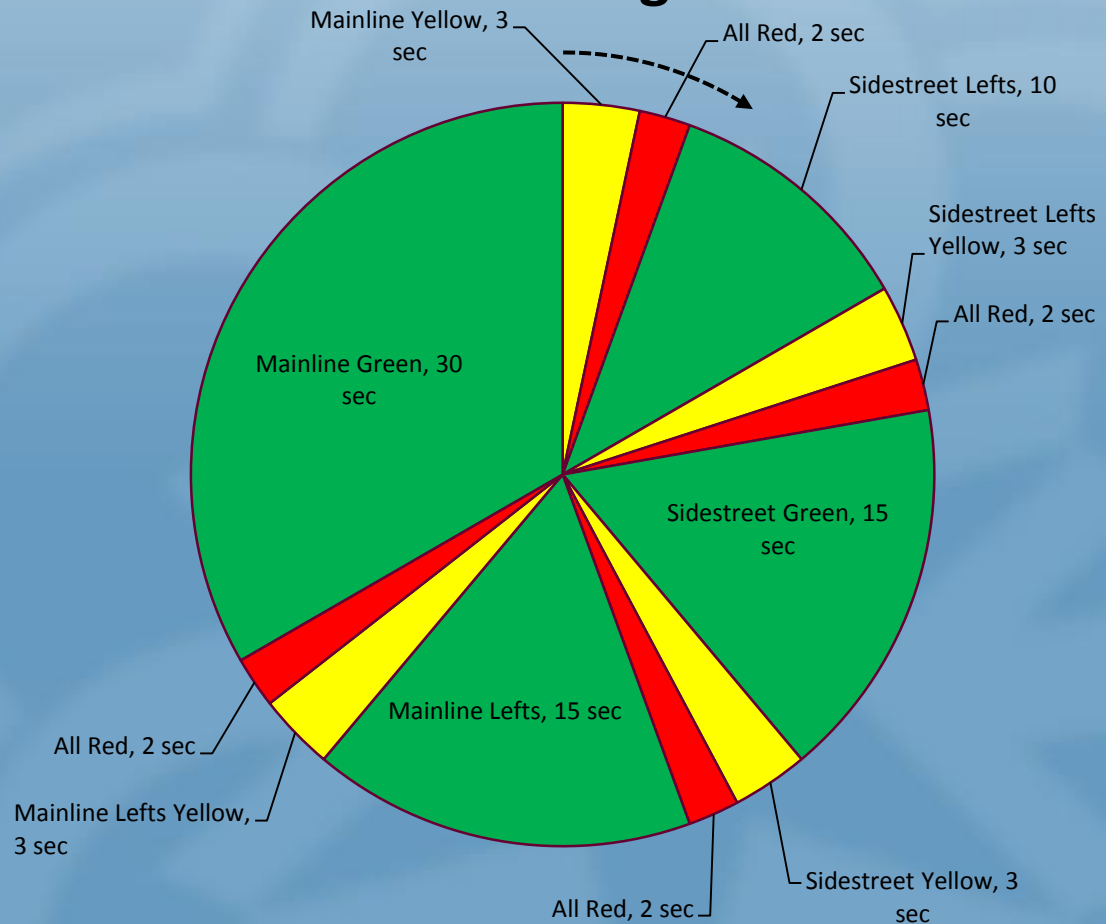


## 90 Second Cycle

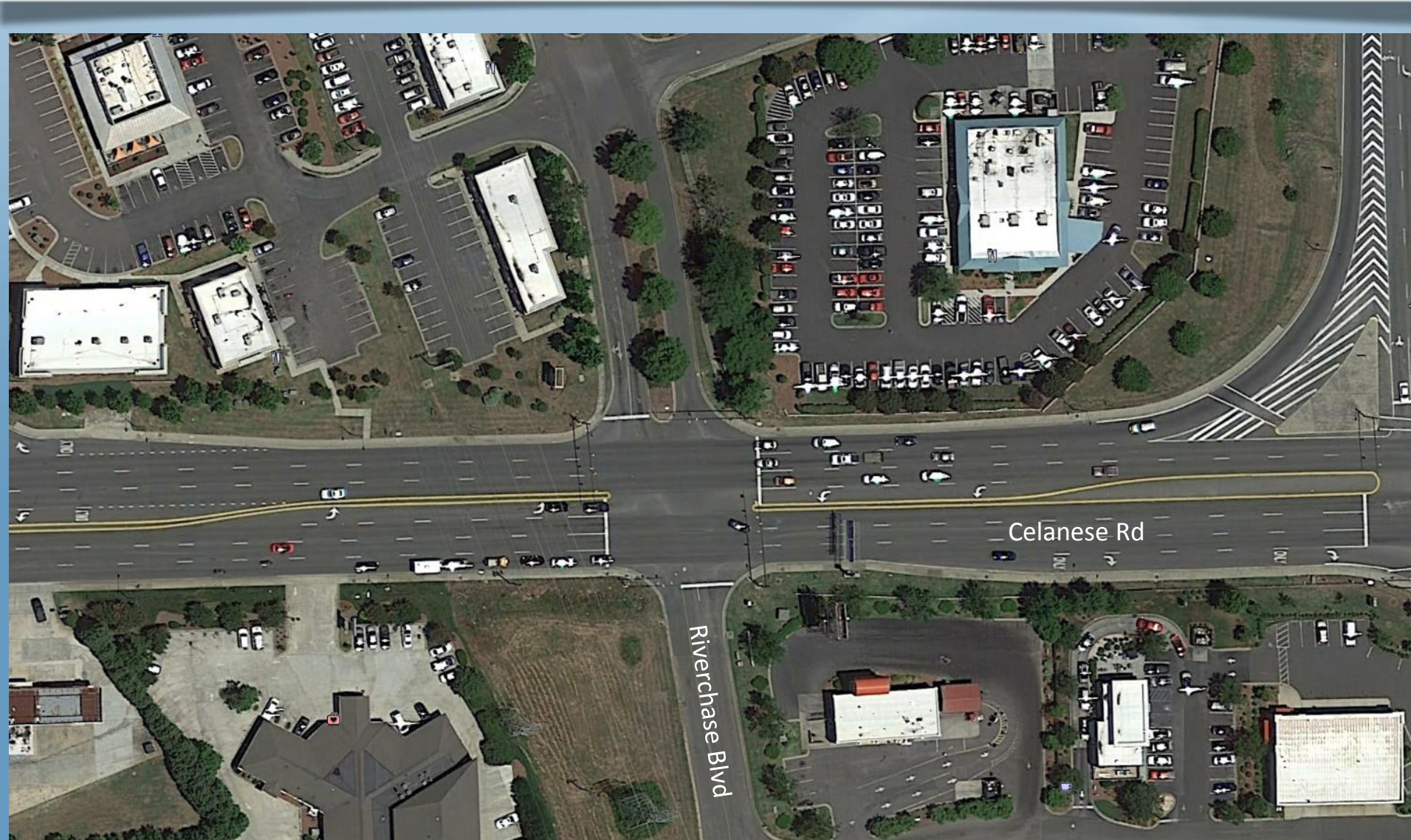
### 4 Phase Signal



### 8 Phase Signal



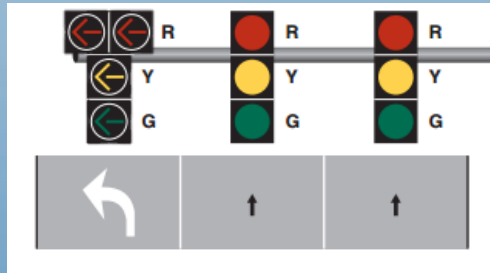
# Movements: Celanese/Riverchase



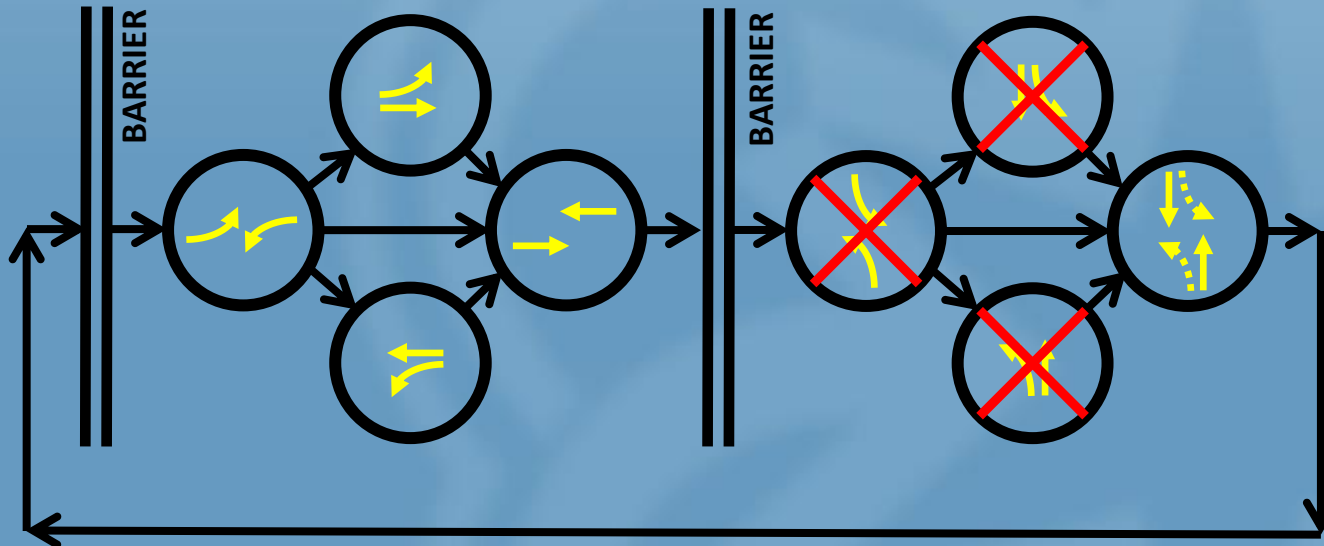
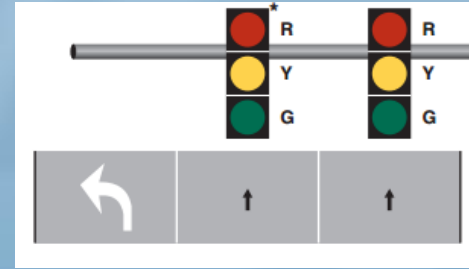


# Existing Celanese/Riverchase

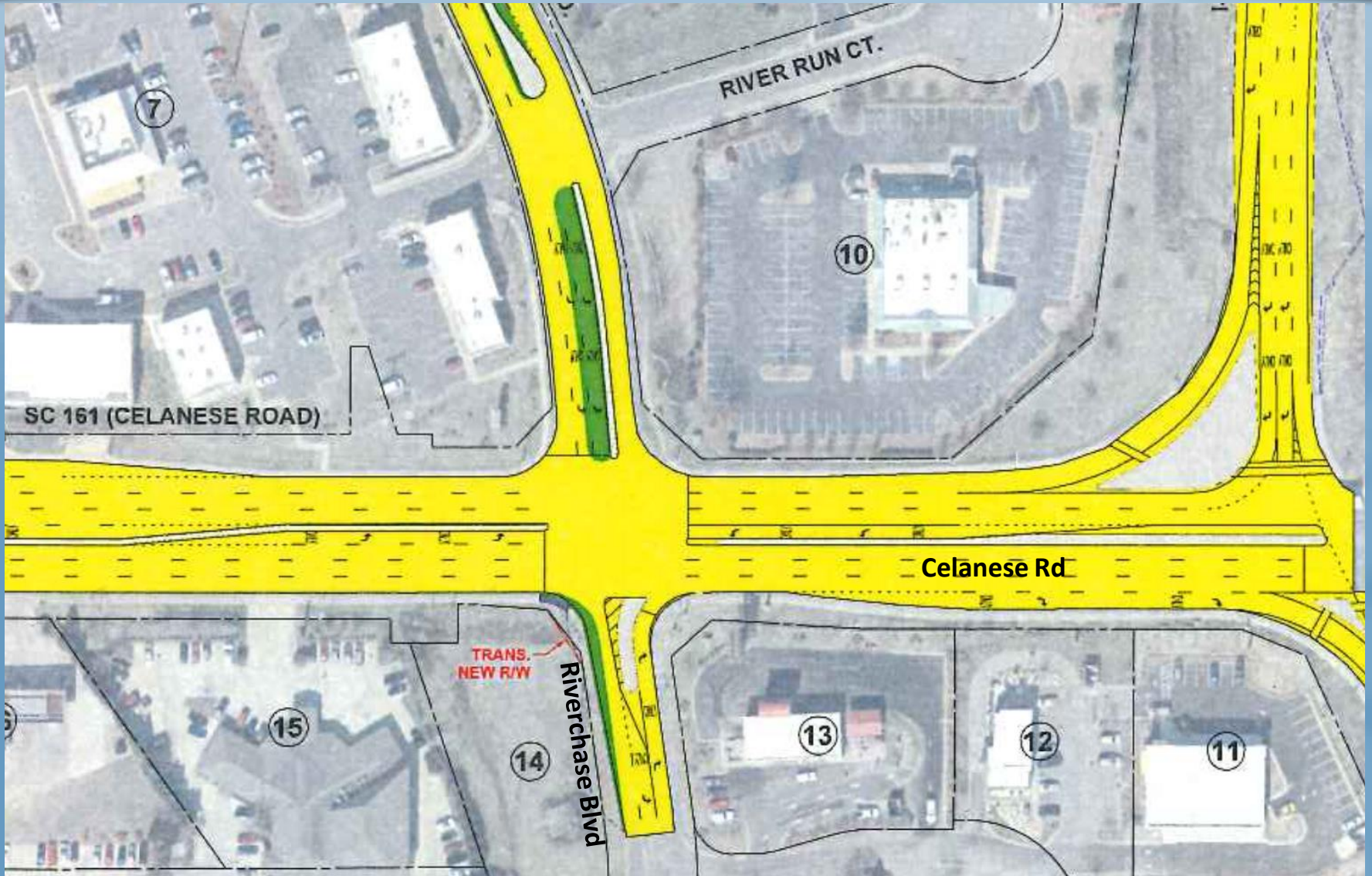
Celanese Rd



Riverchase Blvd

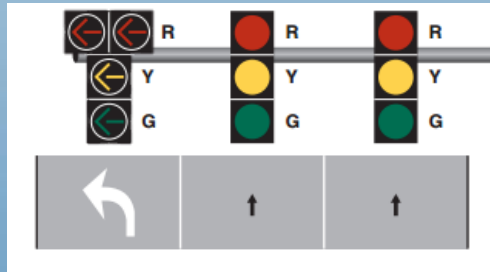


# CMAQ Improvement Project

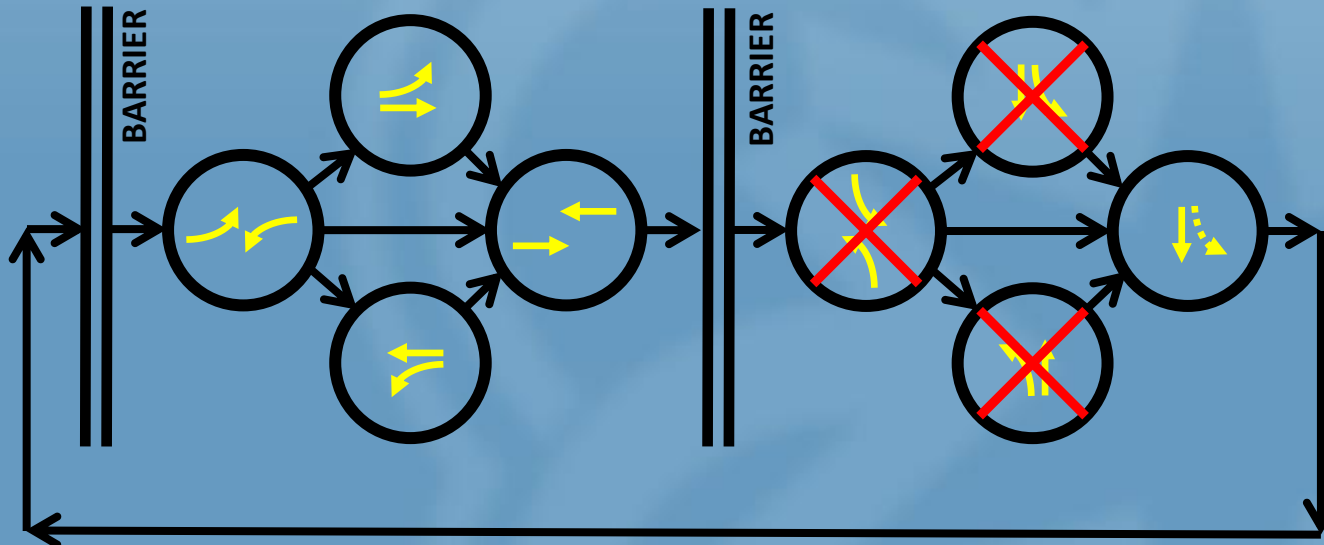
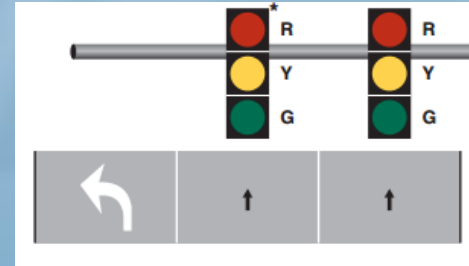


# Future Celanese/Riverchase

Celanese Rd



Riverchase Blvd



- How safe are the existing conditions?
  - What are existing safety concerns?
  - What can be done to improve the safety concerns?
  - How bad are the existing conditions?
- How effective will changes improve safety?
  - What unsafe situations can be improved?
  - How effective will potential improvements be?
  - \*Will planned improvements be detrimental to safety?

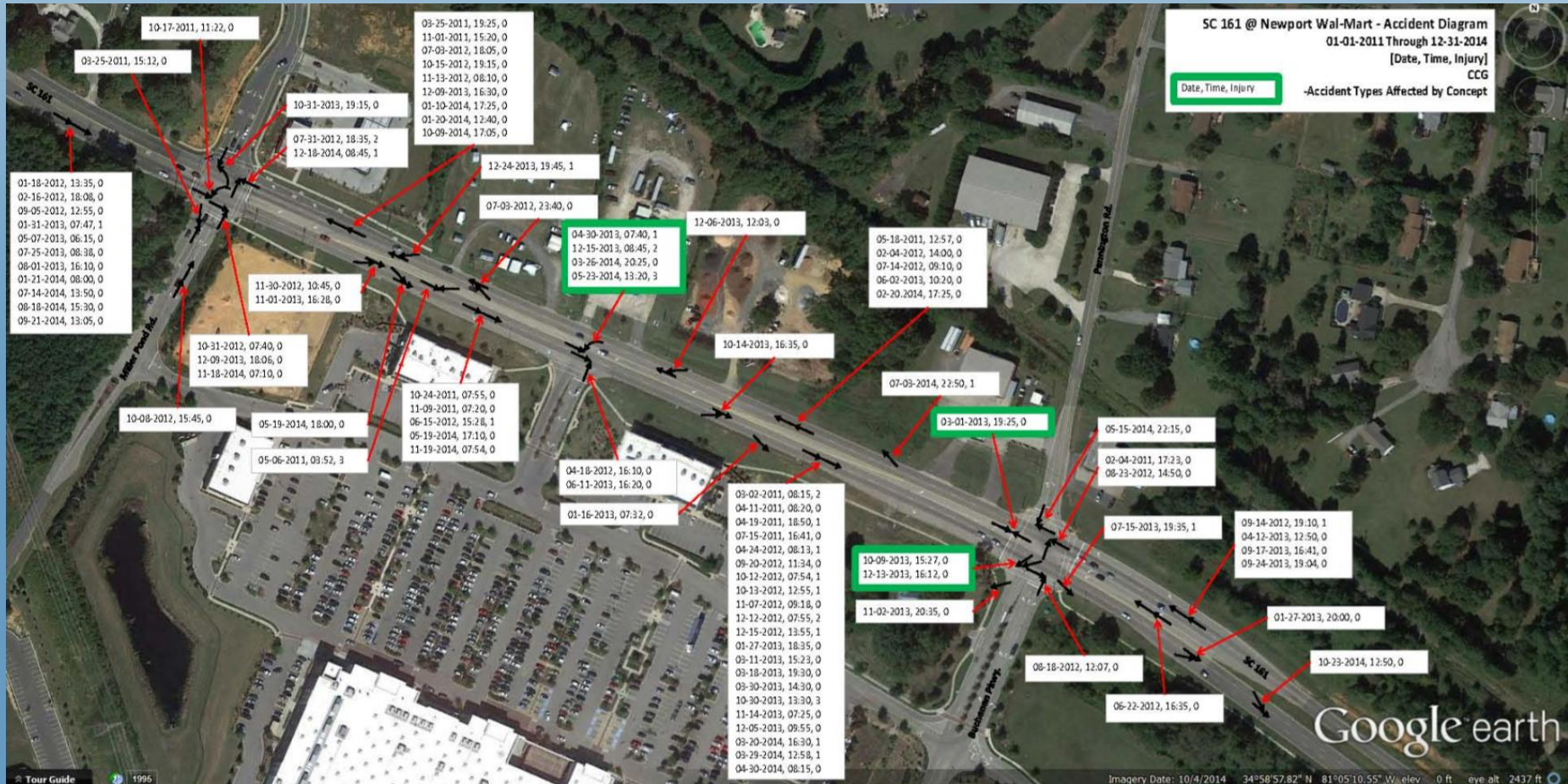


## Newport Wal-Mart: Left-Turn Change





## Newport Wal-Mart: Left-Turn Change

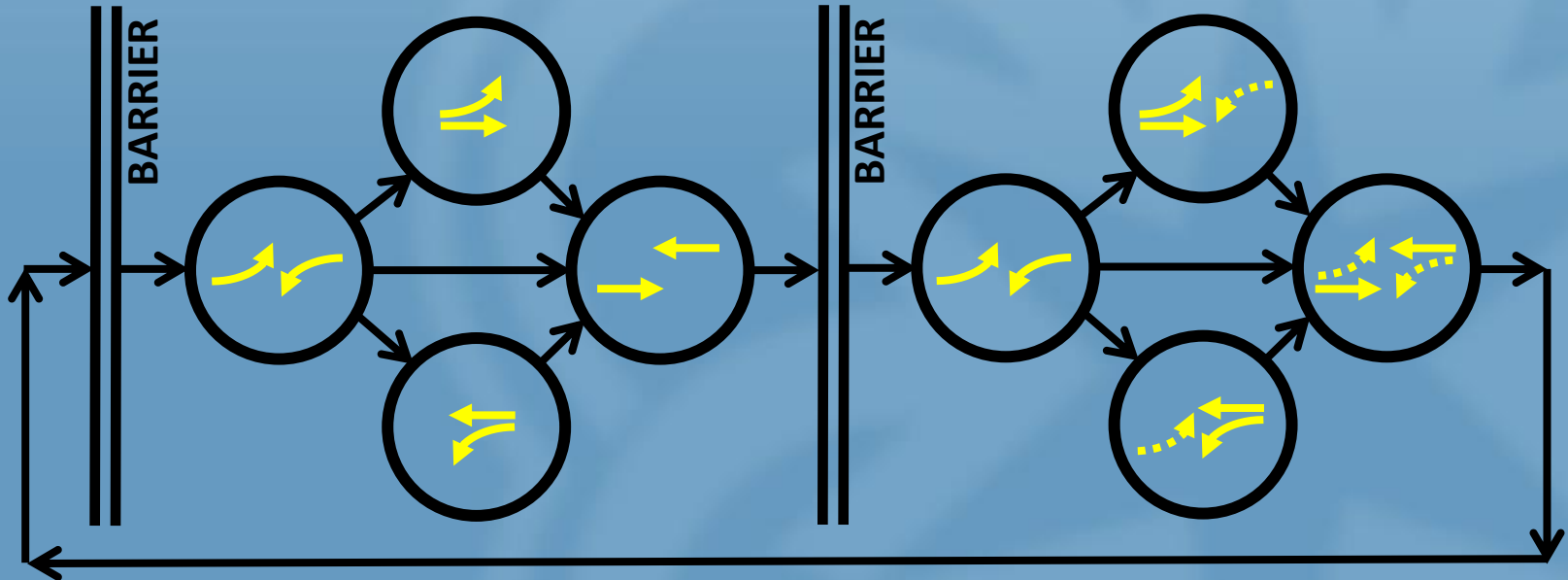
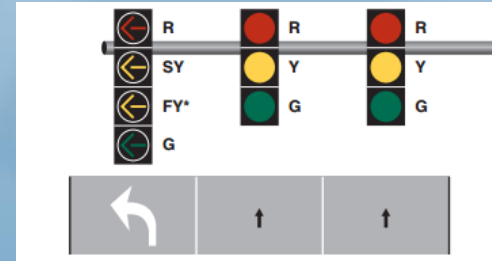
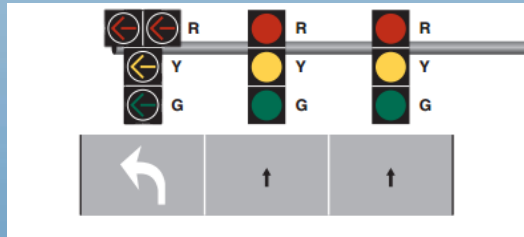


## Newport Wal-Mart: Left-Turn Change

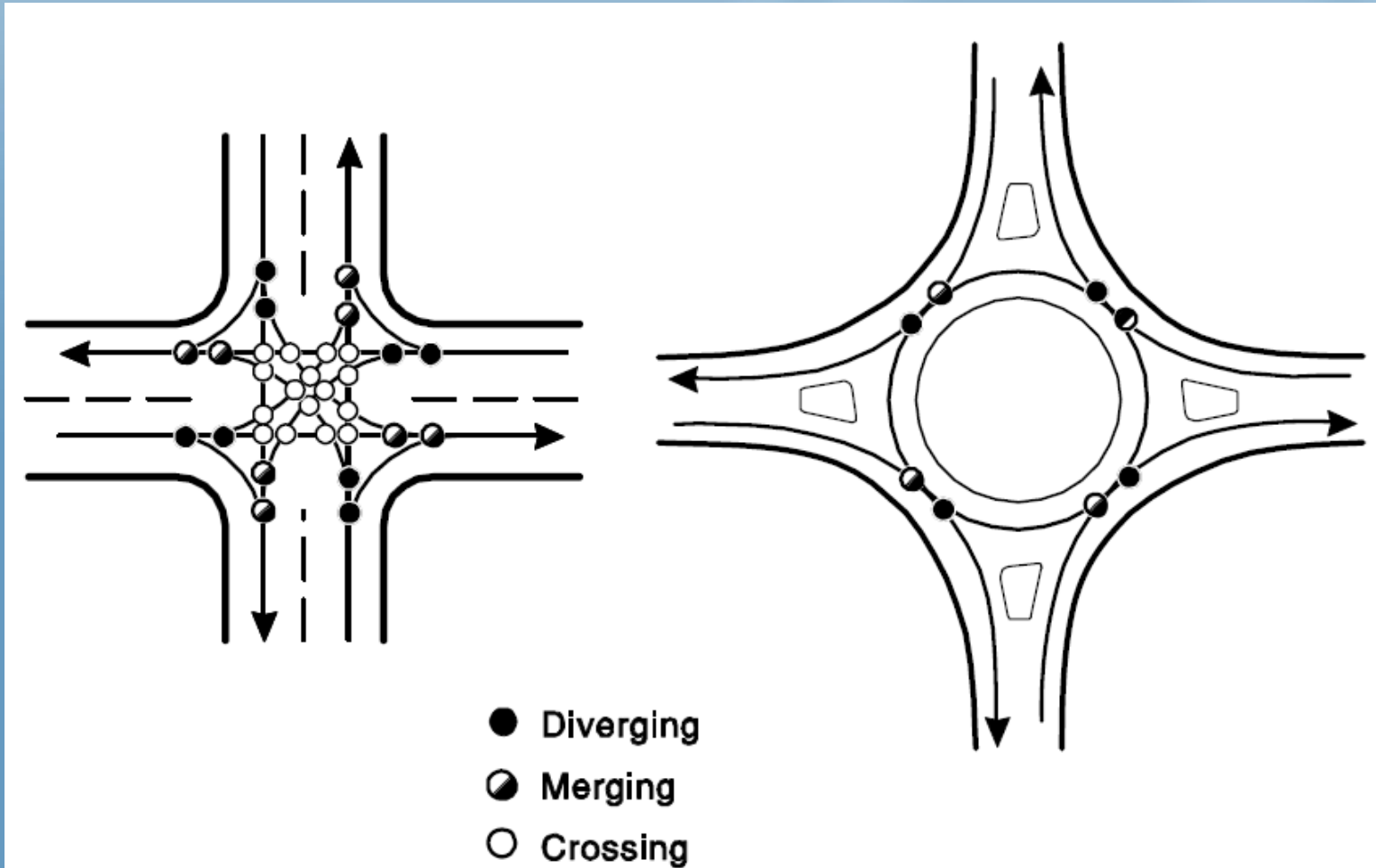
\*Image of Improvement



## Newport Wal-Mart: Left-Turn Change



## Conflict Points



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