

# Creating Complete Streets in Charlotte

An aerial photograph of the Charlotte, North Carolina skyline. The image shows several prominent skyscrapers, including the Bank of America Corporate Center (a tall, blue, rectangular building with a distinctive top) and the Charlotte-Spartanburg Expressway (a large, curved highway). The foreground features a mix of urban development, including parking lots, smaller commercial buildings, and green spaces with trees. The sky is clear and blue.

**TRB AFB40 Conference  
September 8th, 2014**

**Ben Miller, AICP  
Transportation Planner, Charlotte DOT**



- Why complete streets?
- Charlotte's approach
- Complete streets through:
  - City projects
  - Land development
  - State-related projects
- What's Next?





# Why Complete Streets?





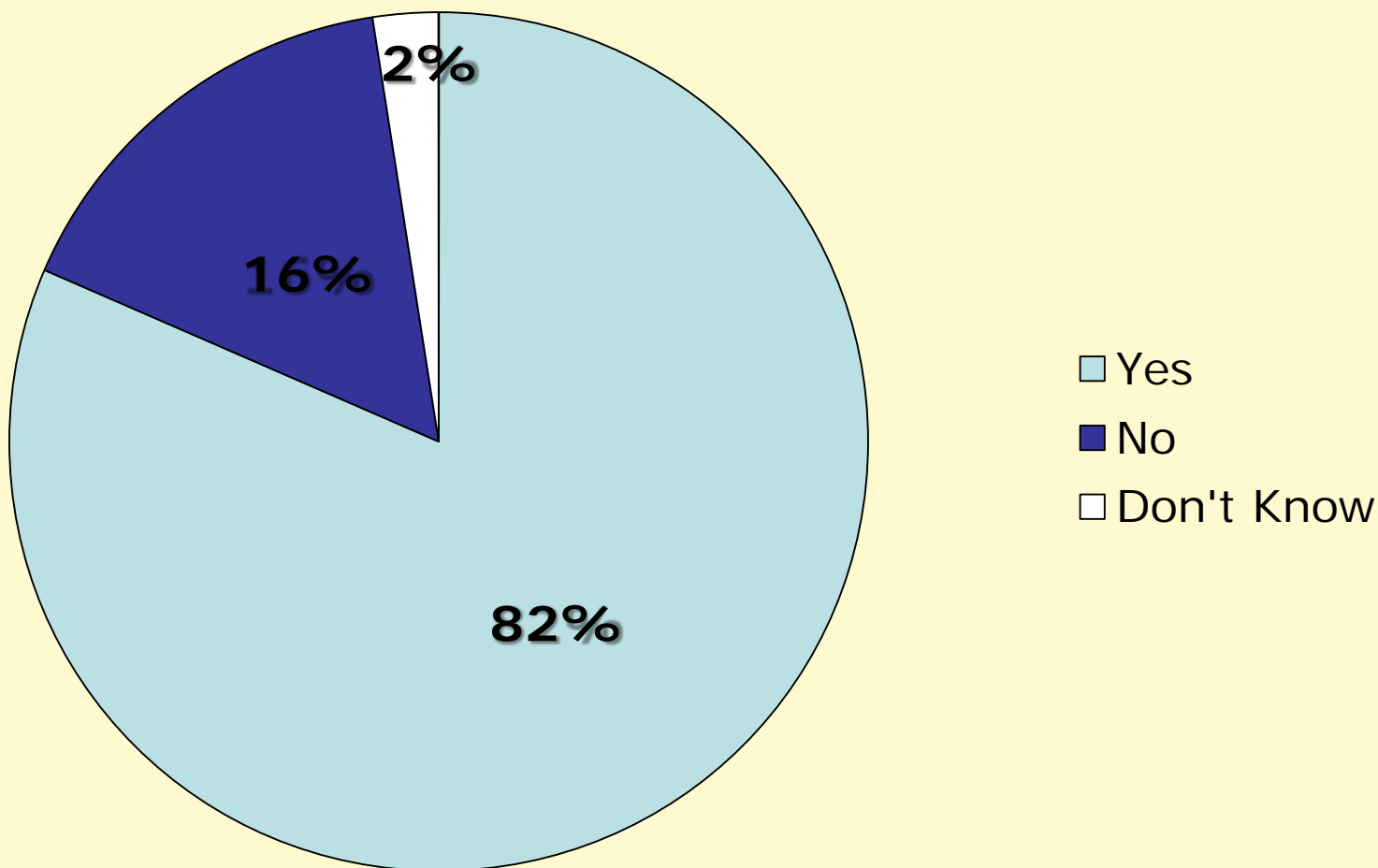
Queens Rd. West





# Incomplete Streets: Not What People Want

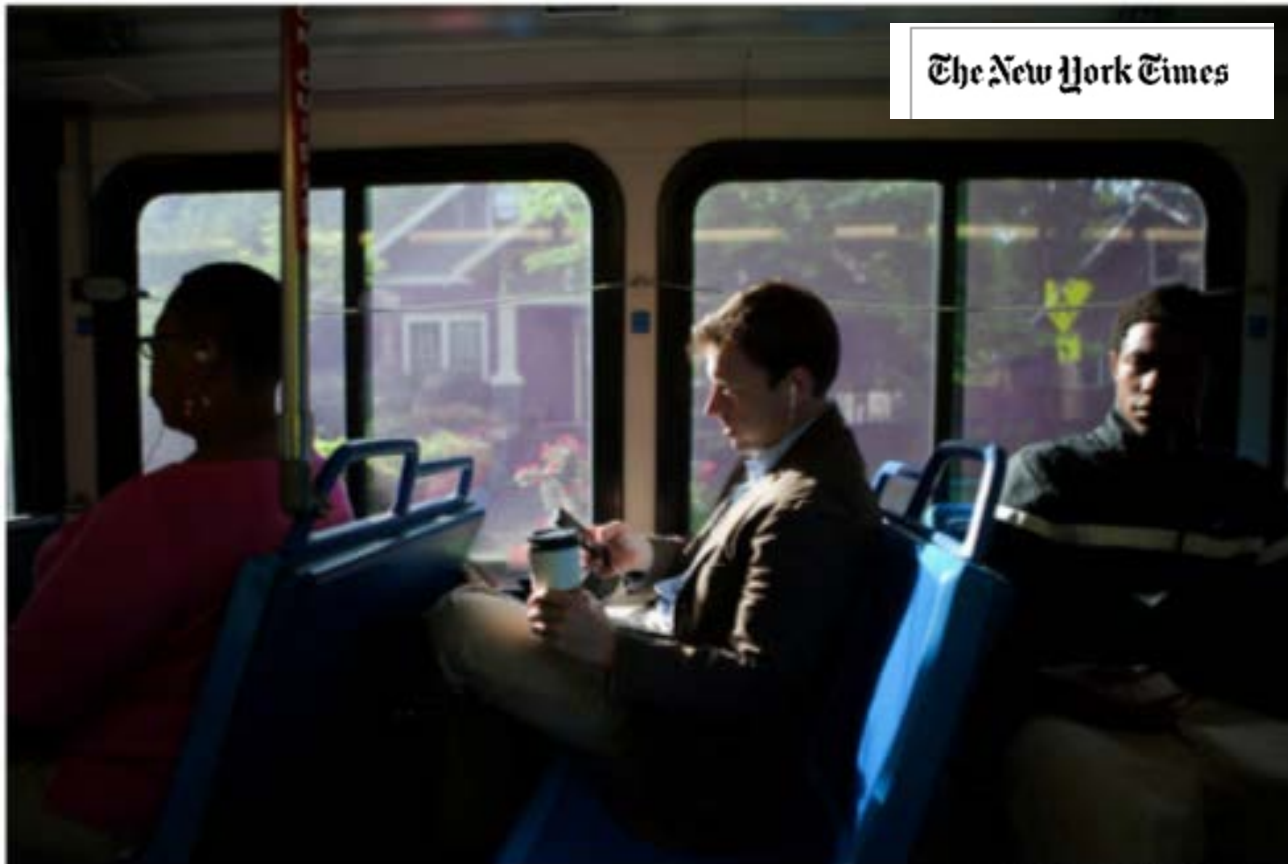
Do you believe roads should be designed to accommodate all users including motorists, pedestrians, bicyclists, and transit users?





# Changing Travel Behavior

## Young Americans Lead Trend to Less Driving



The New York Times

Andy Molloy for The New York Times

Ted Boyd, on a bus in Charlotte, N.C., on Friday, decided to drive less after visiting New York.

By JOHN SCHWARTZ

Published: May 13, 2013

CHARLOTTE, N.C. — Dan Mauney keeps misplacing his car.

 FACEBOOK



# The “Market” Wants Livable, Walkable Communities



South End

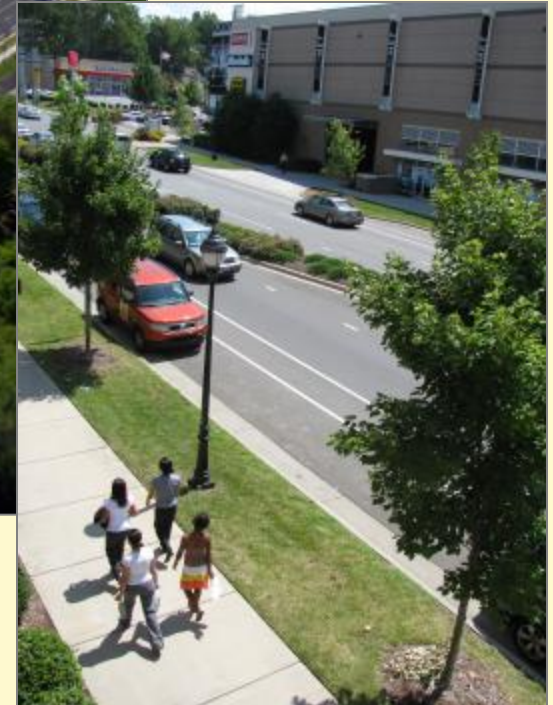




# The “Market” Wants Livable, Walkable Communities



The Metropolitan





# “They Are Coming”

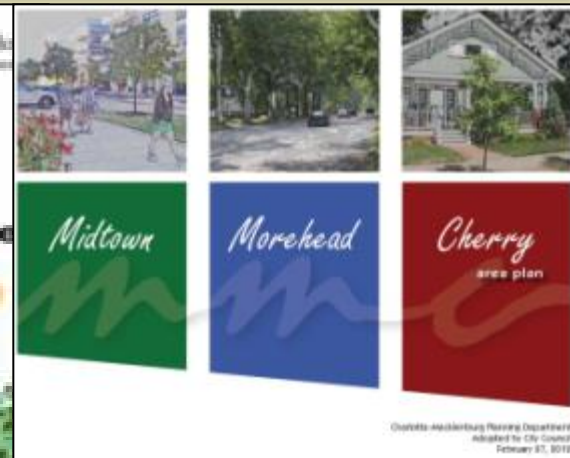
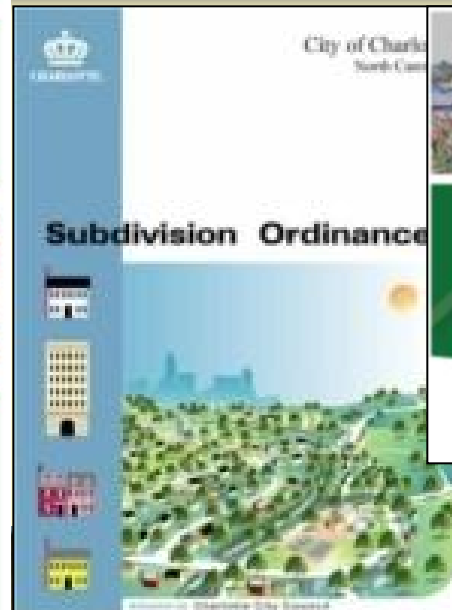
- Charlotte’s projected 25 year population growth equals the current population of:
  - Orlando (236,000)
  - Birmingham (230,000)
  - Durham (229,000)



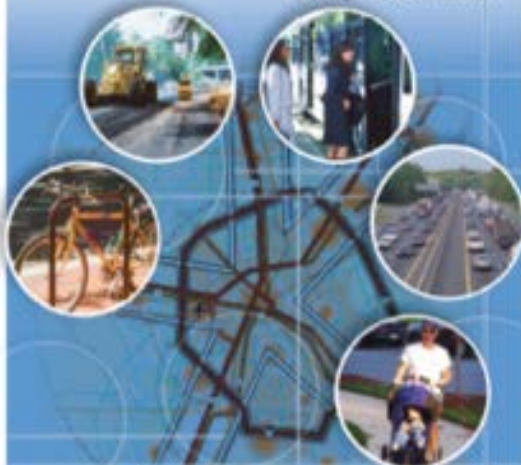


# Charlotte's Approach

## URBAN STREET DESIGN GUIDELINES



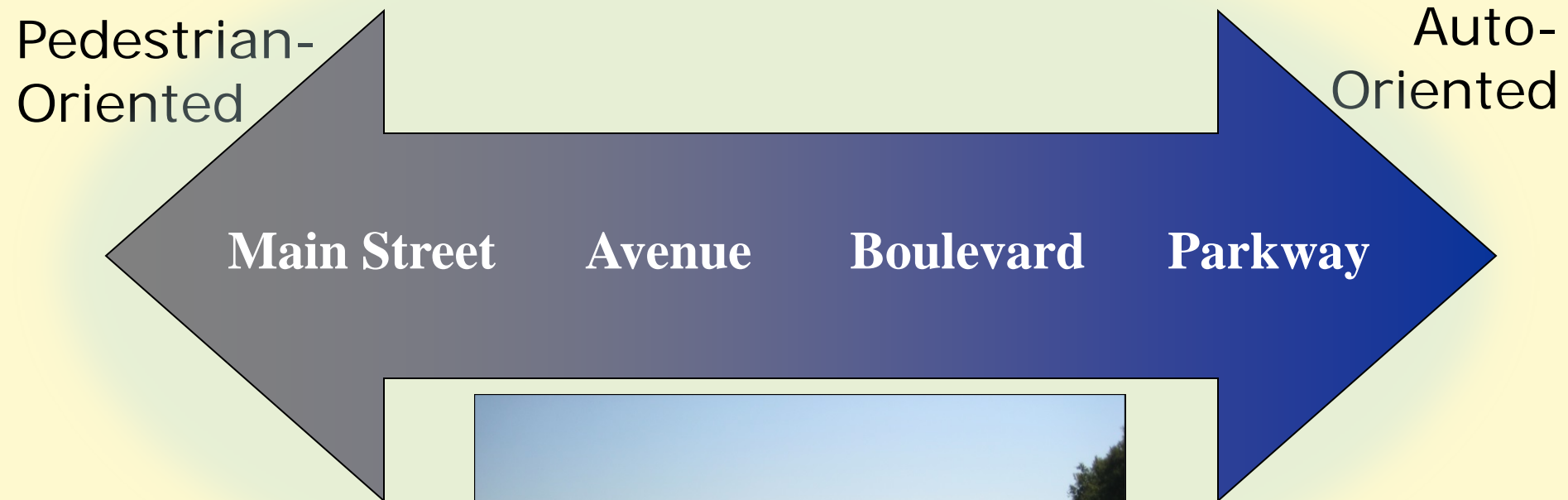
## The City of Charlotte TRANSPORTATION Action Plan Policy Document



Adopted by Charlotte City Council  
October 22, 2007



# Street Types





## Complete streets through **city projects**



Figure 2 - Transportation Projects Programmed or Implemented By the City Since TAP Adoption



Programmed or Implemented Projects

- Intersection
- Roadway

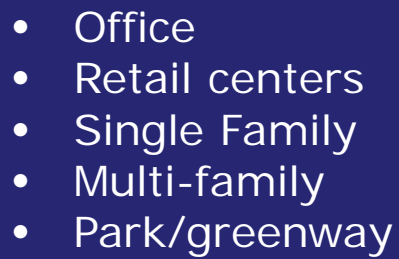
0 1 2  
Miles

Charlotte Department of Transportation  
Planning & Design - GIS  
December 7, 2012

# CIP Results

Charlotte has **constructed over \$400m** of road and intersection projects – all are “complete streets.”





East Blvd. Phase 1 - Before





East Blvd. Phase 1 - After





East Blvd. Phase 2 - Before



70' of pavement



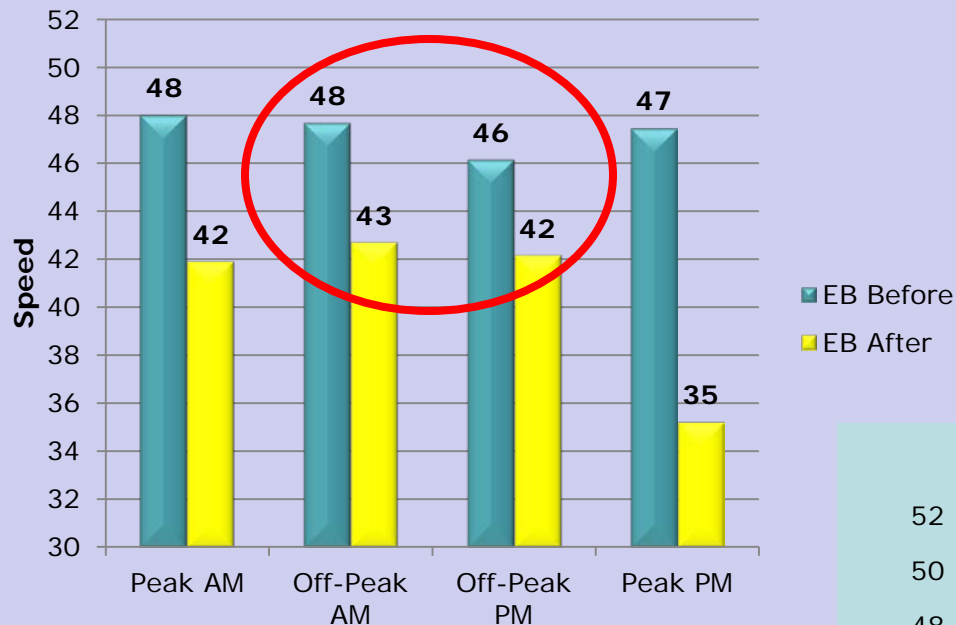
East Blvd. Phase 2 - After



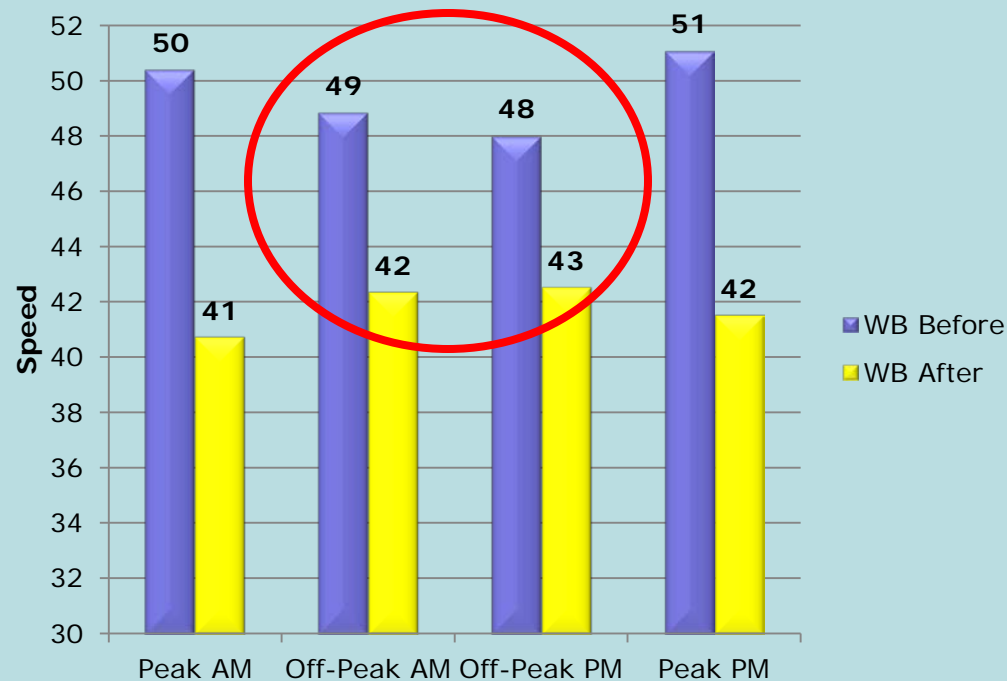


## Phase II Speed Results

### Eastbound 85th Percentile



### Westbound 85th Percentile







## East Blvd. Phase II Crashes

Overall crashes decreased from 1.97 to 1.86 crashes/month

			Results	
	Crash Type	Expected To	%	Crashes/Month
Related	Rear End	Increase	+ 132 %	+ 0.6
	Angle Types	Decrease	- 27 %	- 0.2
	Sideswipe	Decrease	- 43 %	- 0.1
	Head-on	Decrease	- 100 %	-0.03
	Parked	Decrease	- 71 %	- 0.01
	Unrelated	???	- 74 %	- 0.3

Crash Type	Expected To	Before	After
Bike	???	0	0
Pedestrian	???	2	0

Before data: 36 months

After data: 24 months

## Commonwealth Ave. - Before





## Commonwealth Ave. - After





## Rozzelles Ferry & West Trade

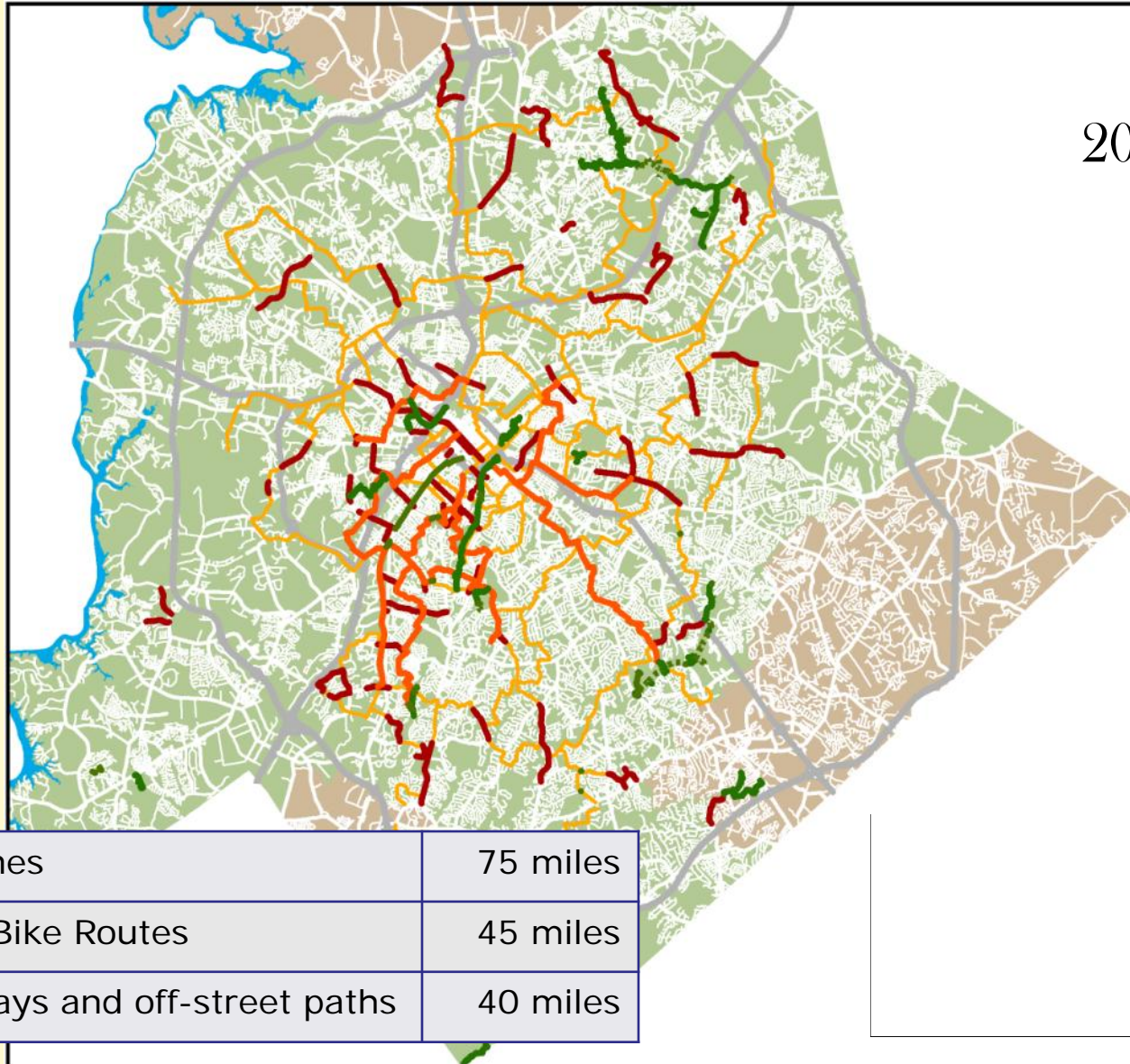








# Bike Lane Growth



Bike Lanes	75 miles
Signed Bike Routes	45 miles
Greenways and off-street paths	40 miles





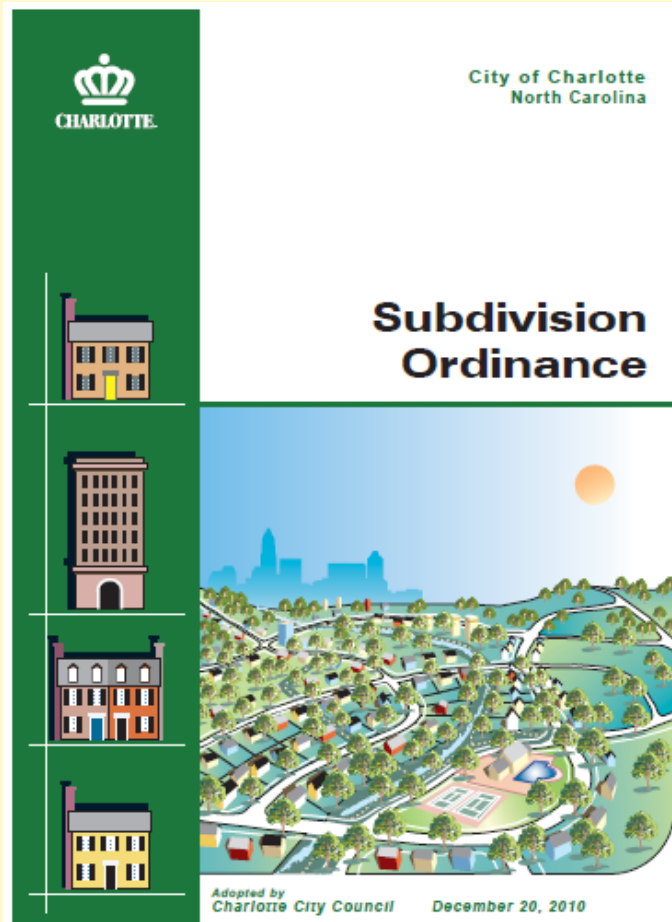
# Complete streets through **land development**

## CITY OF CHARLOTTE ZONING ORDINANCE



Prepared by:

CHARLOTTE-MECKLENBURG PLANNING COMMISSION  
CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT  
600 E. Fourth Street (8<sup>th</sup> Floor)  
Charlotte, North Carolina  
(704)-336-2205  
[www.rezoning.org](http://www.rezoning.org)



## Charlotte Land Development Standards Manual (CLDSM)

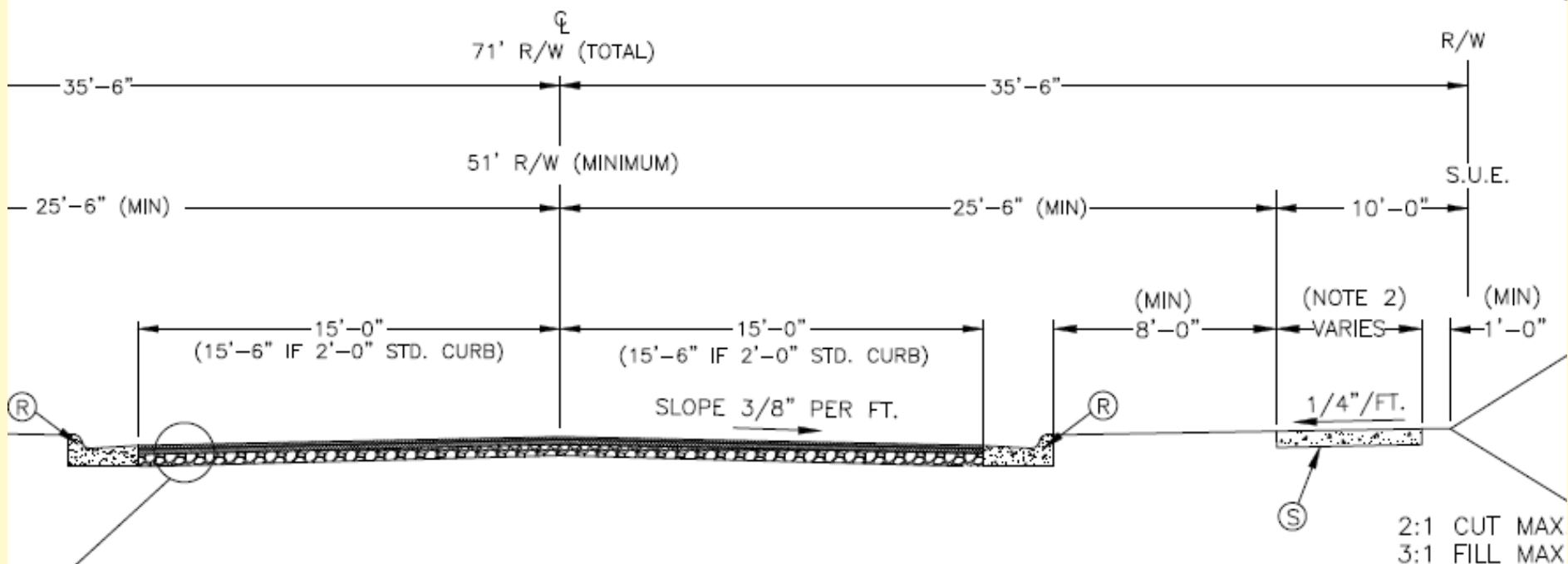
Revision N<sup>o</sup> 12  
July 15, 2014



## Complete streets and the private sector

- Zoning ordinance sets **streetscape requirements** by land use and "council adopted streetscape plan"
- Prescriptive tables in subdivision ordinance for **block length requirements** and **local street cross-sections**
- Land development standards manual provides **engineering details**





#### SURFACE COURSE

1" SF9.5A

FINAL LIFT TO BE APPLIED UPON MEETING ONE OF THE FOLLOWING CONDITIONS:

- 1) 75% DEVELOPMENT OCCUPANCY,
- 2) 1 YEAR FROM INTERMEDIATE COURSE PLACEMENT,
- 3) FOR ETJ STREETS, FINAL 1" MAY BE PLACED WHEN APPROVED BY NCDOT.

#### NOTES:

1. VALLEY GUTTER IS ALLOWED ONLY WITH PRIOR APPROVAL FROM CDOT AND CITY ENGINEERING.
2. SIDEWALK IS 6' MIN. WHEN LESS THAN 12 DWELLING UNITS PER ACRE (D.U.A.). SIDEWALK IS 8' MIN. WHEN 12 D.U.A. OR GREATER.



# The Silos in South End



Residential $\geq 5$ du/acre	600
Residential $< 5$ du/acre	600

Red (meter)
0
0
0
0
0
0



**S. Blvd. before Lowes**



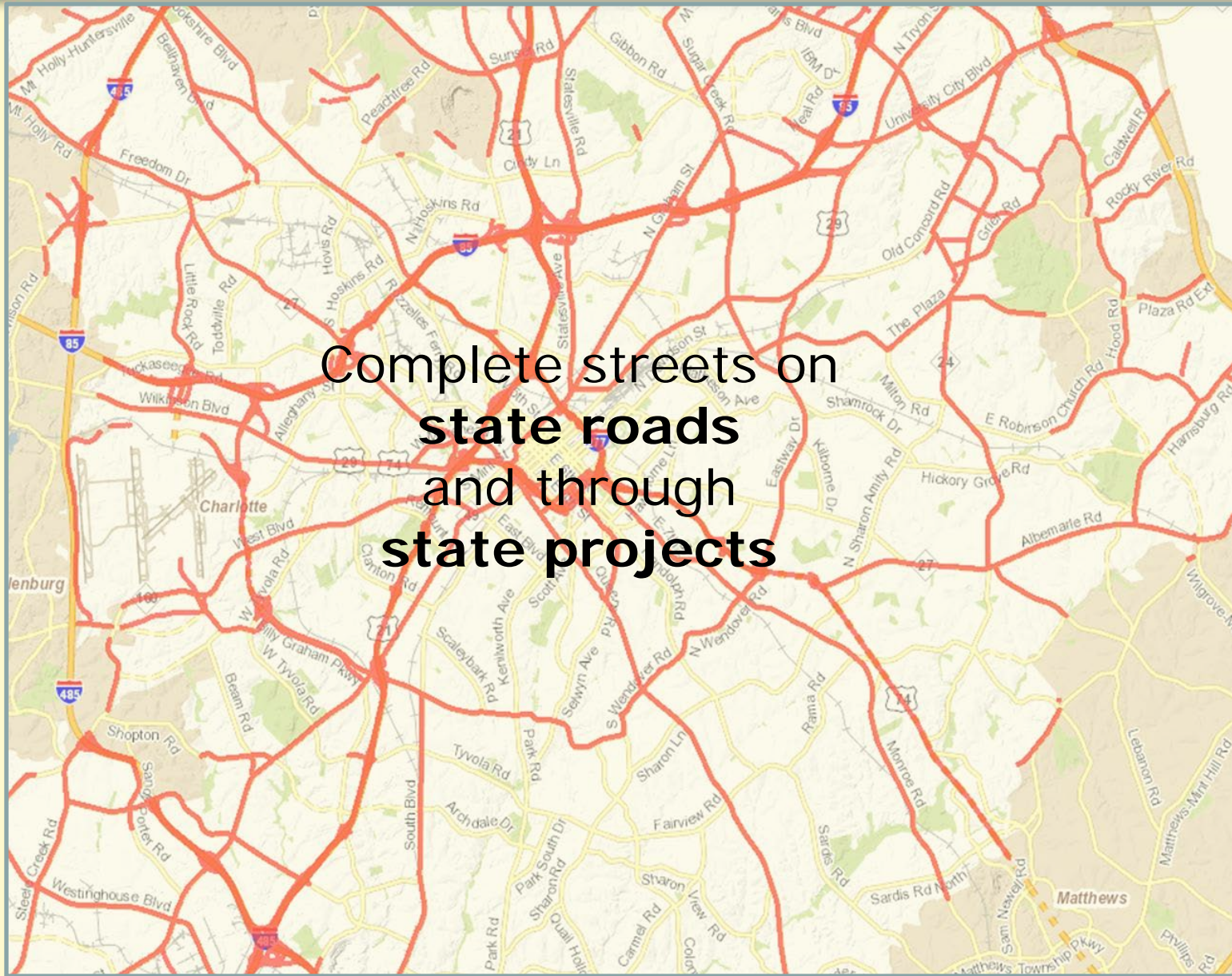
**S. Blvd. after Lowes**



# Tranquil Court on Selwyn Avenue









# Stonewall/I-277



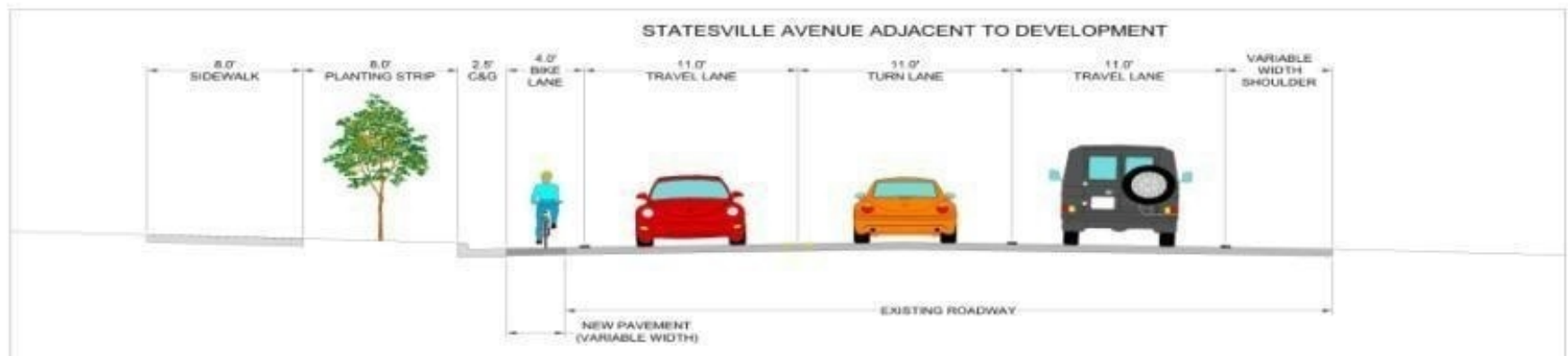


# West Morehead (NC 27)



# Statesville Avenue (road diet/redevelopment)

- Project History
  - Redeveloping area - part of Hope VI project
  - State road – 4-lanes (10,000 ADT)
  - City desired a road diet – NCDOT initially wanted 5-lanes and right turn lanes
  - City conducted traffic study
  - 3-lane cross-section agreed upon





# Statesville Avenue





# What's Next?

## Urban Bikeway Design Guide



National Association of  
City Transportation Officials





## Bicycle Facilities



Pamela Murray

Jun



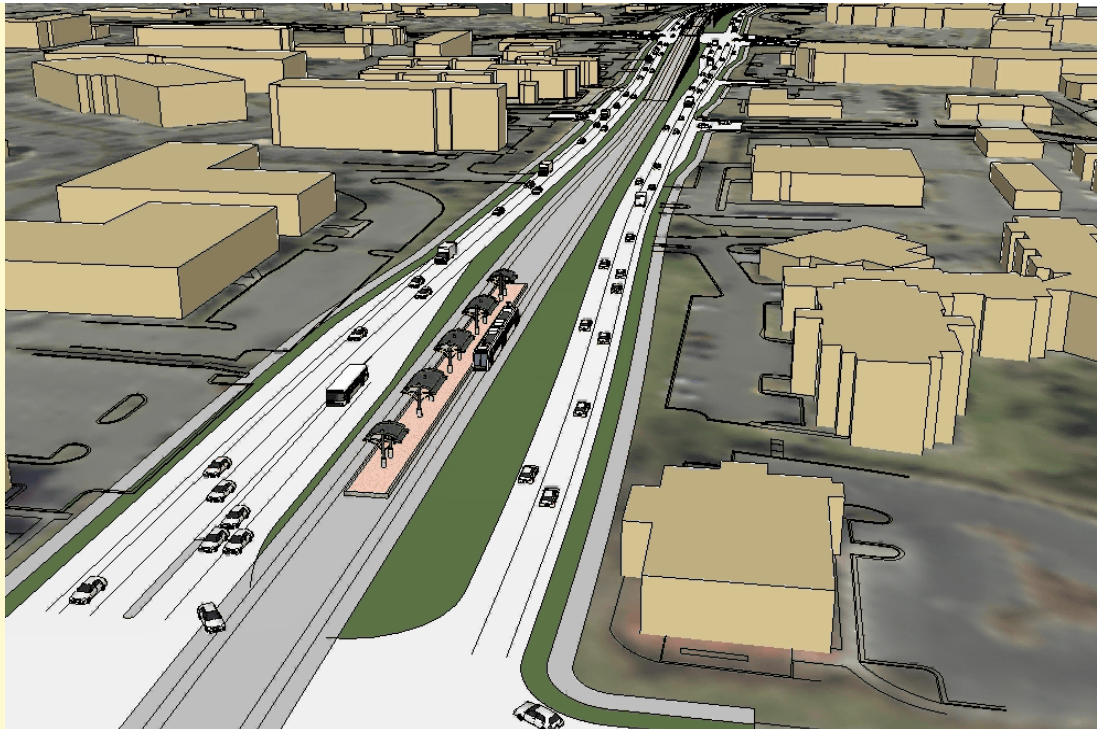
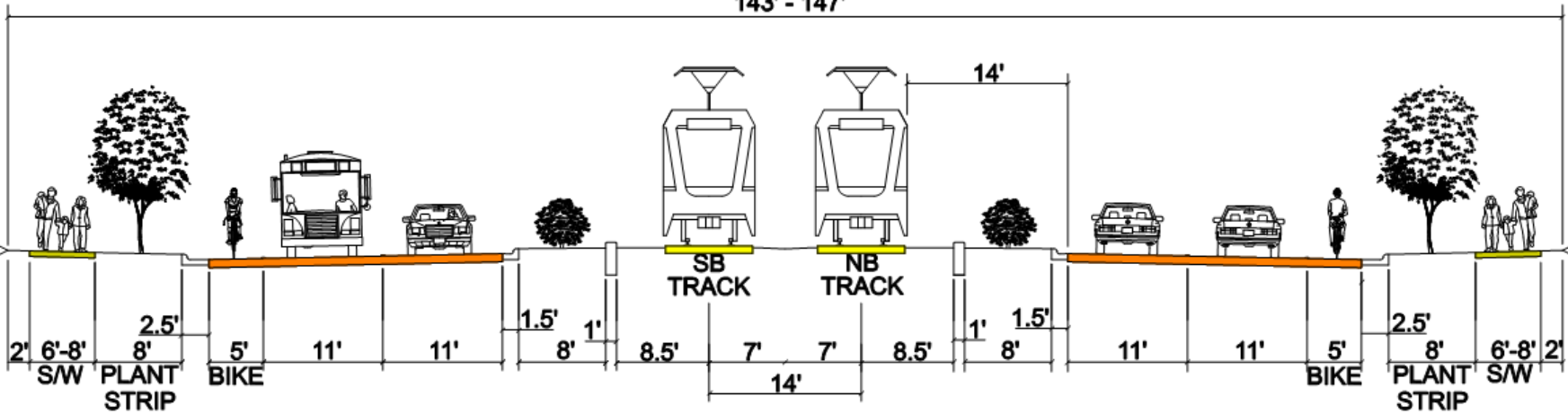
Because I like to ride my bike, people think I like bike lanes. I DO NOT like bike lanes. Bike lanes are the idea of people who don't ride bikes. I don't want to ride in a 5 foot bike lane. I want to ride where everyone else drives - the 11 foot travel lane.

Like - Comment - Share

👍 30 💬 33

Versus...

Charlotte. University resident and former Director of Facilities Planning at UNCC, Martin Zimmerman, points out that on heavily trafficked urban arterial streets where there is not the luxury to separate the bike path by a wide lawn, more and more U.S. cities are copying the European solution. It's called a "cycletrack" or "buffered lane" where the design of the bikeway, while still technically part of the roadway, is physically raised from the roadway or otherwise separated from traffic by a row of bollards or similar physical buffer. CDOT is a member of NACTO, a new national organization spearheading the effort to overcome the safety limitations of bike lanes.









# N. Tryon near WT Harris





# Cycletracks



GRAPHIC SCALE




( IN FEET )  
1 inch = 40 ft.

12th St. Cycletrack  
CONCEPT



# The Payoff



Complete streets are worth the effort

A city's streets can transform quickly when  
complete streets are made routine

Ben Miller  
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