

FOREVER

EXPLORING TRANSIT ORIENTED DEVELOPMENT



Jason Lawrence Senior Transportation Planner Charlotte Area Transit System



What is TOD?

The Charlotte Story

Did the plan work?

Lessons Learned

Expanding the vision





Federal Transit Administration

Transit-oriented development, or TOD, includes a mix of commercial, residential, office and entertainment centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities.

Successful TOD depends on access and density around the transit station. Convenient access to transit fosters development, while density encourages people to use the transit system. Focusing growth around transit stations capitalizes on public investments in transit and provides many benefits, including:

- increased ridership and associated revenue gains for transit systems
- incorporation of public and private sector engagement and investment
- revitalization of neighborhoods
- a larger supply of affordable housing
- economic returns to surrounding landowners and businesses
- congestion relief and associated environmental benefits
- improved safety for pedestrians and cyclists through non-motorized infrastructure











So what is TOD?

Google Image Search...

<complex-block><complex-block><complex-block><complex-block>









But which one? What about organizations or online resources?





There's a few



Complete Communities

attractive, inclusive, efficient, healthy & resilient places

Federal Transit Administration



RECLAIM. CONNECT. TRANSFORM.

NATIONAL RESOURCES & TECHNICAL ASSISTANCE FOR TRANSIT-ORIENTED DEVELOPMENT





heCityFix

TRANSIT ORIENTED DEVELOPMENT





We could look to the past



Collection of Jon Bell, http://www.jtbell.net/transit/postcards/

We could look to the past



Collection of Jon Bell, http://www.jtbell.net/transit/postcards/

We could look to the past



Main Street Today









Population Growth

	2010	2017	% Increase
Greenville	58,409	68,219	16.8%
Greenville County	451,225	506,837	12.3%
Greenville MSA	824,112	897,247	8.9%
Upstate SC Region	1,362,073	1,460,785	7.2%
South Carolina	4,625,364	5,037,131	8.9%

Southern Cities Growing Quickly

The 15 Fastest-Growing Large Cities by Percent Change Between July 1, 2015, and July 1, 2016







Population Growth

It's official: Charleston is now South Carolina's largest city; Greenville among fastest-growing in nation

BY DAVID SLADE DSLADE@POSTANDCOURIER.COM MAY 25, 2017 🔍 (7)



In 1998 the Charlotte Mecklenburg population was projected to grow by about 385,000 people over the next 30 years a 66% increase.

	1995	2025
Mecklenburg County projected population growth in 1998	580,000	965,000

In 2014 the US Census Bureau estimated Mecklenburg County's population is already over a million people at 1,012,539. That is a 75% increase from 1995. We have reached our projections a full 10 years early.





Charlotte's Origin Story

Centers and Corridors Strategy developed in the 1990's

- Long-term management strategies for future population growth and congestion
- Five primary transportation and development corridors
- Transform unfocused development patterns in corridors and wedges to compact mixeduse development along corridors and in station areas







2025 Transit / Land Use Plan-1998

- Vision for a long-term growth management strategy
- Integrates rapid transit and mixed-used development along 5 transportation corridors
- Expands transit system to serve between the rapid transit corridors
- Provide more transportation choices to meet mobility needs
- Support sustainable growth for region
- Half cent sales tax dedicated to transit approved by Mecklenburg County votes in 1998
- Metropolitan Transit Commission created as policy board for CATS. Includes voting members from Charlotte, Matthews, Mint Hill, Cornelius, Huntersville, Davidson, NCDOT, and Mecklenburg County







BUS RAPID TRANSIT



- Intended for a variety of trips from regional to local
- Operates in a variety of ROW scenarios
- Service throughout the day and on weekends

Intended for shortdistance trips in urban areas

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STREETCAR

- Typically operates in mixed traffic
 - Service throughout the day and on weekends
- Intended for a variety of trips from regional to local

LIGHT RAIL

- Typically operates in dedicated ROW
- Service throughout the day and on weekends





- Intended for longerdistance commute trips from suburbs into a central city
- Operates in dedicated ROW
- Service during peak
 hours of travel M-F











More than rail



Neighborhood shuttles



ht Rail



Streetcar

Express Bus

Vanpool

164

Paratransit

Car

Bus Investments

Start at the stop







Bus Investments

First CATS improved the bus stop



Sprinter Airport Enhanced Bus



AREA TRAASIT SYSTEM



What's changed since 1998?

- 2002—2025 Transit System Plan
 - Streetcar Beatties to Central Ave
 - BRT SE/W...continue to study LRT
 - LRT Northeast Corridor
 - CRT North Corridor
- 2006—2030 Transit System Plan
 - Streetcar Central/Beatties confirmed
 - Streetcar New West LPA
 - BRT SE...continue to study LRT
 - LRT Northeast advanced
 - CRT North Corridor-alternative funding
- 2007-LYNX Blue Line opens
- 2009-Sprinter Airport Enhanced Bus
- 2015-CityLYNX Gold Line Phase 1 opens
- 2016-LYNX Silver Line LRT LPA adopted
- 2017-LYNX System update
- 2018-LYNX Blue Line Extension Opens
- Charlotte Gateway RFP

LYNX SYSTEM MAP





Corridor preservation is the critical path to completing any rapid transit plan: LYNX Blue Line in Uptown Charlotte





1993 Uptown Charlotte



1998 Uptown Charlotte



2018 Uptown Charlotte











Before TOD could occur policies and plans were developed

- 1990's Centers, Corridors, and Wedges Growth Framework
- 1998 2025 Integrated Transit & Land Use Plan
- 2001 Transit Station Area Principles
- 2002 Transit Station Area Joint Development Principles and Policies
- 2003/2007 General Development Policy update to include Environmental and Infrastructure Chapters
- 2006 Transportation Action Plan
- 2007 Urban Street Design Guidelines
- 2008/2013 Transit Station Area Plans







The Transit Station Area Principles created the framework for the Station Area Plans by focusing on three points.

- Land Use
- Community Design
- Mobility







Transit Station Area Principles

Land Use

- Encourage highest density uses closest to the transit station and transition to lower densities adjacent to existing single family neighborhoods.
- Encourage a mixture of residential, office, serviceoriented retail and civic uses, either through mixed or multi-use development.
- Disallow automobile-dependent uses, such as automobile sales lots, car washes and drive-thru windows.
- Consider special traffic generators such as cultural, educational, entertainment or recreational uses - to locate in station areas.
- Preserve existing stable neighborhoods.
- Encourage a mixture of housing types, including workforce/ affordable housing.







Transit Station Area Principles

Community Design

- Orient buildings to front on public streets or open spaces.
- Minimize setbacks and locate parking to the rear.
- Provide windows and doors at street level and minimize walking distance to entrances.
- Screen unsightly elements, such as dumpsters, loading docks, service entrances and outdoor storage from the transitway.
- Include active uses on the ground floor of structures.
- Include elements such as street trees, pedestrian scale lighting and benches in streetscape design to encourage pedestrian activity.
- Place utilities underground, when possible
- Establish public open spaces that act as development catalysts and serve as focal points around transit stations.
- Design open spaces to be centers of activity that include items such as benches, fountains and public art.







Transit Station Area Principles

Mobility

- Create a multi-modal environment that emphasizes pedestrians and bicyclists.
- Provide an extensive pedestrian system throughout the station area to minimize walking distances, connect to neighborhoods, accommodate large groups of people, and eliminate sidewalk gaps.
- Design the pedestrian system to be accessible, safe and attractive, by using planting strips, street trees, onstreet parking and bicycle lanes.
- Develop an interconnected street network with maximum block lengths of 400'; provide mid-block crossings if blocks are larger.
- Establish parking maximums, rather than minimums.
- Minimize surface parking and encourage shared parking facilities.









Transit Station Area Plans are adopted for each station and are intended to provide an in-depth look at the current conditions in the area surrounding the station and make recommendations to:

- Facilitate the right mix of development and appropriate infrastructure to complement the transit investment; and
- Optimize the land use and infrastructure within the larger Corridor to support its continued ability to accommodate growth.



Corridor Wedge C LYNX Blue Line Thoroughfares Station Area Plan Boundaries Urban LRT Stations South End Neighborhood LRT Stations Community LRT Stations Regional LRT Stations Multi-Modal LRT Stations New Bern Scaleybark Woodlawn Tvvola Archdale Arrowood Sharon Road West -485/ South Boulevard



Achieving the Vision

The Station Area Plans are organized into chapters that:

- First, provide an overview of the study area and identify opportunities and constraints to achieving the City's objectives for the plan area, especially the transit station area;
- Secondly, propose a vision for the future of the study area and offer recommendations to move towards that vision; and
- Lastly, suggest specific actions to be taken to implement the recommendations.













Before LYNX BLUE Line there were concerns:

- Would the development occur?
- Too much affordable housing
- Too much density








South End from New Bern station area looking toward Uptown Charlotte



Junction 1504

3030 South

ton

Ashton

Junction 1504

Silos 1

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Camden-

Colonial Reserve

3030 South

Junction 1504 Camden Southline

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Junction 1504 Publix Camden Southline 21 2400 South Blvd Solis Southline

Colonial Reserve

New Bern Station

3030 South

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Dimensional Place

- 253,842 SF office
- 16,136 SF retail
- Structured parking
- Under construction













After the LYNX BLUE Line we are asking different questions

- How do we better manage development design and form?
- How do we incorporate affordable housing?
- Should a greater diversity of density be allowed?
- How to incorporate the System Plan Update into the Comprehensive Plan?





TOP 10 URBAN DESIGN ISSUES

- 1. STREETS & STREETSCAPES
- 2. SIDEWALKS
- 3. CONNECTIONS
- 4. ACTIVE EDGES/ STREET WALLS
- 5. BUILDING ENTRANCES

- 6. HEIGHT AND MASS
- 7. TRANSITIONS
- 8. BUILDING
- PLACEMENT
- 9. PARKING
- 10. OPEN SPACE







1. STREETS & STREETSCAPES

ELEMENTS OF THE STREETSCAPE





2. SIDEWALKS



Neighborhood streets: 5 feet



Mixed-use streets: 6-8 feet





Urban commercial: 8+ feet Outdoor dining: 12+ feet Outdoor dining: 12+ feet

- The appropriate sidewalk width differs according to the street type, zoning district, and adjacent use.
- Charlotte's minimum sidewalk width is 5 feet.

Urban zoning districts typically require a minimum of 6 feet in width.





3. CONNECTIONS



Connect to the sidewalk.



4. ACTIVE EDGES / STREET WALLS







5. BUILDING ENTRANCES

These guys can't find the entrance



Building entrances should be prominent and easy to find.

MOSAIC SOUTHEND

Individual residential entrances should be separated from the sidewalk and raised for privacy.

e Apartments

MIT: F. F. MILLERA

Dilworth

NOW HIRING

Marsh

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Residential entrances that are lower than the sidewalk can also provide a sense of privacy.

6. HEIGHT AND MASS



THE REPORT OF

Taller buildings are appropriate in certain locations.

ATS

ATS

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H3 Biolinas' NEW Home for

Breaking up a long building into smaller elements not only provides visual interest but can make a large building seem smaller and more human in scale.



7. TRANSITIONS

High intensity development should respect existing adjacent established lower density neighborhoods by stepping down building height and providing appropriate buffers and screening.

Taller buildings adjacent to single family neighborhoods should respect the relationship by stepping down in height closer to the lower density use.



8. BUILDING PLACEMENT

Typical resident building placement

Typical commercial building placement

Local. Affordable. Handmade.
Two sides of the same street

Buildings placed further from the street with parking in front

Building edge at the back of the sidewalk THE MASONBORO BOYS NEAR GRAVITY May 7 on the Run

SAT FRI FRI



9. PARKING

1

How much parking is too much parking?

Urban zoning with structured parking behind building

2)

1-3

Conventional zoning setback with parking in front

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State Los Al

Dert

Urban zoning with structured wrapped parking

Structured parking is usually a better option than surface parking in higher density areas such as activity centers and station areas.

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Parking garages can be beautiful.

ENTRANCE

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Structured parking wrapped with active uses.



10. OPEN SPACE

Passive open space at JCSU.

Typical ordinance-required urban open space.









- By 2020 Charlotte will have completed:
- Unified Development Ordinance
- Comprehensive Plan
- And Charlotte Area Transit System will have:
- Updated the 2030 Transit system plan
- Completed a regional transit plan that will...







Expand the vision



Regional TOD Grant Partnership

CATS in partnership with Charlotte Planning, Design + Development Department, City of Gastonia, City of Belmont, Town of Matthews, Town of Stallings, and Town of Indian Trail submitted an application for a \$1.0 million planning grant for TOD planning from the Federal Transit Administration.



Specific outcomes of this work will include

- Determining future land use around stations
- Identifying supporting infrastructure
- Advance actions for corridor preservation and affordable housing
- Identification of innovative economic development and financing strategies











What is possible?









What is possible?







STONEWALL STREET in 2005

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1993 Uptown Charlotte



What decision today benefits the cities of tomorrow?



How 2,000-year-old roads predict modern-day prosperity—Washington Post





ELIZABETH SQUARE

Height is measured in feet from the average grade to the tallest part of the building. Rooftop structures (like stair towers) are not counted toward the maximum height.

Mass includes the relationship of the building's various parts to one another and can affect how the building fits into its surroundings.

Sidewalks:

If not specified, then the sidewalk must be a minimum of eight feet in width. Sidewalks must meet the standards for concrete sidewalks in accordance with the Charlotte-Mecklenburg Land Development Standards Manual.





Connections:

Where ground-floor residential units provide outdoor space located within 15' of the public sidewalk and within 3' of finished grade, such open space must provide a connection to the sidewalk.





Active Edges + Street Walls:

No building may contain a blank wall area greater than 20 linear feet, measured either horizontally or vertically. Wall areas in excess of 20 feet must incorporate two or more decorative elements such as banding, medallions, artwork such as murals and mosaics, change in wall plane of at least 3", windows, doors or other architectural or material embellishment.





Building Entrances:

Where ground-floor residential units provide outdoor space located within 15' of the public sidewalk and within 3' of finished grade, such open space must provide a connection to the sidewalk.





Height + Mass:

Height above 75' or six stories, whichever is reached first, requires a minimum stepback of 15' from the building façade line on upper-story building façades.





Transitions:

... any lot fully or partially within 200' of a residential district is limited to a maximum building height of 65'





Building Placement:

Build-To Percentage. A build-to percentage specifies the percentage of the building facade that must be located within a build-to line or build-to zone. Facade articulation, such as window or wall recesses and projections, do not count against the required build-to percentage.







Parking:

No surface parking may be located in front of a building façade along any street frontage. The preferred location for surface parking lots is in areas abutting an interior side and/or rear lot line to the rear of the building.





The Tree Ordinance requires every new parking space to be within 40 feet of a tree.



Surface parking lots should provide safe pedestrian connections from the public street to the primary uses.

DragonFly CHINESE CHIISINE

Cleop

Allstate

1900 Mexican

IN'S
Surface parking lots should be screened from view of the street and adjacent property. This may be done with landscaping or with something more interesting.

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Evening & Weekend Sistor Parking Nabk in Parking Deck



Structured parking should be wrapped with active uses along street edges.

Open Space:

All multi-family and mixed-use developments must provide at least 100 square feet of useable on-site open space per dwelling unit. This open space may be either private open space for the dwelling unit or common open space for the use of residents.





Regional Transit Engagement Series

METROPOLITAN TRANSIT COMMISSION CENTRALINA COUNCIL OF GOVERNMENTS













Regional Transit – Phase I Findings

Regional, System-wide Focus

- Desire for Developing a Regional Transit Plan to Identify:
 - Mobility Options and Connections (other than light rail)
 - Transit Destinations, Transit Lines, Transit Mode
 - Funding Options, Barriers, and Peer Region Review
 - Administrative Structure Options and Peer Region Review
 - Regional Commuter Rail Options











Additional Participating Jurisdictions and Regional Organizations

American Heart Association Anson County Transportation System Catawba Indian Nation Charlotte Area Transit System (CATS) Centralina Council of Governments (CCOG) Charlotte Business Journal Charlotte Chamber of Commerce Charlotte Commercial Properties Charlotte Department of Transportation (CDOT) Charlotte Douglas International Airport Charlotte Mecklenburg Planning Commission Charlotte Regional Transportation Planning Organization (CRTPO) City of Charlotte Planning Department City of Durham City of Greensboro City of Raleigh Clean Air Carolina CLT.biz LLC Concord Kannapolis Area Transit CRL Associates, Inc. Disability Rights & Resources Duke University Federal Highway Administration (FHWA) Foursquare ITP Francis Consulting Services Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) Gaston County Dept. of Health and Human Services Greater Gaston Development Corporation Gaston Gazette Greensboro Department of Transportation Gresham, Smith and Partners HDR, Inc. HNTB Corporation Iredell County Area Transportation System (ICATS) Iredell County Board of Commissioners Iredell County Economic Development Lake Norman Regional Transportation Commission Latin American Economic Development Corp. Lincoln County Department of Social Services Lincoln Economic Development Association Mecklenburg County Air Quality Mecklenburg County Office of Economic Development Mecklenburg County Park & Recreation Mecklenburg Transportation System Moore & Van Allen North Carolina Dept. of Transportation (NCDOT) NCDOT Division 12 NCDOT DM/sign 12 NCDOT Public Transportation Division North Carolina City & County Management Association North Carolina General Assembly members NC House of Representatives Northwood Office Novant Health Matthews Medical Center Office of NC Governor Roy Cooper Office of US Congressman Patrick McHenry Office of US Congressman Richard Hudson Office of US Congresswoman Alma Adams Office of US Senator Thom Tillis Pamaka Group Public Affairs Communications Rowan Cabarrus Community College Red Propeller Rock Hill-Fort Mill Area Transportation Study Routematch Rocky River Rural Planning Organization RS&H Sierra Club SMART Transportation Division South Carolina State House of Representatives South Carolina Dept. of Transportation (SCDOT) Southeastern Institute of Research, Inc STV, Inc. Sustain Charlotte The Spiritus Group Transportation Administration of Cleveland County UNC Charlotte UNC Charlotte Urban Institute Veterans Association VHB Engineering NC Wood Environment & Infrastructure Solutions WSP



Welcome

Philip Dubois

Chancellor, UNC Charlotte

Philip Dubois became UNC Charlotte's fourth chancellor in July 2005. Now in his thirteenth year as Chancellor, Dubois has focused his efforts on building the University's visibility and support in the Charlotte region; long-range planning for an expected enrollment of 35,000 students; completion of key capital construction projects including UNC Charlotte Center City, and implementation of an intercollegiate football program. Dubois has many accomplishments including the Higher Education Gvic Engagement Award from the Washington Center (2016), the World Affairs Council of Charlotte's World Citizen Award (2016), the CASE III Inclusion and Diversity Leadership Award (2015), and the Charlotte Regional Partnership "Jerry" Award (2009, for public sector contributions to economic development). Dubois attended



political science. He then earned master's (1974) and doctoral (1978) degrees in the field from the University of Wisconsin-Madison.

Our Keynote Speakers



John Martin

Transportation Futurist, President and CEO, Southeastern Institute of Research, Inc.

John W. Martin is a futurist, mobility expert, award-winning author and the CEO of Southeastern Institute of Research, Inc. (SIR), a strategic consultancy headquartered in Richmond, Virginia, Founded in 1964, SIR helps corporations, government agencies, universities, nonprofits, and even entire communities understand what tomorrow will bring and what to do about it today.

John is also the founder and managing partner of SIR's Institute for Tomorrow. The Institute is a national researchbased think tank that identifies and reports on major demographic and cultural trends shaping America's future. Tapping into over 50 years of SIR's research and insights expertise, the Institute for Tomorrow has helped hundreds of organizations connect the dots and navigate the changes ahead.

No stranger to the stage, John has delivered hundreds of eye-opening keynote presentations on the future of transportation for transit agencies, TDM organizations, MPOs, and DOT's. His insights have also been sought out by organizations like Walmart, Google, Circle K, AARP, Wells Fargo, and even the rocket scientists at NASA.

Frequently sought out by the media for his opinions and insights, he's appeared on NBC, CBS, CNBC, and in articles in BusinessWeek, TIME, The Washington Post, The New York Times and countless others. Along with his business partner Matt Thornhill, he's the co-author of the acclaimed book, Boomer Consumer.

Maria Garcia Berry

Founder & Chairman of the Board, CRL Associates, Inc.

Maria Garcia Berry is the guiding force behind what is today one of the most influential public affairs firms in Colorado. Serving a broad spectrum of clients from transportation to professional sports teams to real estate developers - the services of Ms. Garcia Berry and her associates are sought by dients across the United States.

There are few transportation projects in Denver that have not felt her effect, including FasTracks, the nation's largest proposed mass transit expansion effort at the time; the I-25 T-REX Project completed in 2006, which reconstructed 17 miles of two interstate highways while simultaneously adding 19 miles of light rail; and the redevelopment of Denver's Union Station. She is a much sought-after consultant for other locales striving to bring an integrated and comprehensive transportation program to their area. She has been a strategic consultant to a number of transportation-related initiatives around the country, including a transportation master plan for the seven-county

Tampa Bay region adopted by the Tampa Bay Area Regional Transportation Authority (TBARTA) and a regional transportation referendum in the 10-county Atlanta region to fund transportation improvements.

As chairman of the board of CRL Associates, Inc., she successfully manages CRL's broad client base that includes a variety of high-profile projects such as the transformation of the 125-acre National Western Center in north Denver, the Master Plan and redevelopment of the former Stapleton International Airport and the completion of Denver's Pepsi Center, Coors Field, Sports Authority Field at Mile High

Highly respected for her skills in negotiation, mediation and advocacy, Ms. Garda Berry is experienced at forging links between diverse interests and groups. She is widely recognized in her field for her expertise in government and public decision-making, strategic planning, coalition building, crisis communications, community outreach, public positioning, and legislative advocacy.

Maria Garcia Berry joined the board of the Latino Leadership Institute; serves on the Rose Community Foundation's Committee on Aging and recently joined two national boards: the Cuba Emprende Foundation and the Cuba Study Group. Ms. Garcia Berry is a member of the Urban Land Institute. She is married to Chuck Berry, currently the CEO and president of Colorado's Association of Commerce, and Industry and formerly Colorado's Speaker of the House. They have three children.

Keynote Speakers

- John W. Martin is a futurist, mobility expert, award-winning author and the CEO of Southeastern Institute of Research, Inc. (SIR)
- Maria Garcia Berry is Founder & Chairman of the Board, CRL Associates, Inc, one of the most influential public affairs firms in Colorado







Regional Speakers









Regional Transit Plan

- CATS and CCOG will release an RFP in late 2018
- Study area will include 12 counties across two states.
- Study will begin in mid 2019 and conclude in late 2020



