I'm going to talk about what Charlotte has done to attract transit oriented development, how we've tried to fulfill the vision for our transit station areas, what we've learned in the past decade-plus, and what we see ahead of us.
Charlotte has one light rail corridor, the LYNX Blue Line, which is operated by CATS, the Charlotte Area Transit System. CATS is a department of the City of Charlotte. The Blue Line corridor runs roughly north-south and bisects the center city, known as Uptown. The first segment of the Blue Line, the South Corridor, opened in late-2007. It runs 9-1/2 miles from Uptown southward and has 15 stations. In March of this year the Blue Line Extension was opened. This extended the Blue Line from Uptown 9-plus miles to the north, where it terminates on the campus of the University of North Carolina at Charlotte with its 29,000 students. This Extension added another 11 stations for a total of 26 along the corridor. Ridership is around 28,000 on a typical weekday.
Charlotte began preparing for TOD well before the first light rail train rolled down the tracks. Unlike many cities, Charlotte didn’t acquire or hold onto excess land around its transit stations for the purpose of soliciting proposals for transit oriented development projects. Instead, it looked to the private sector to do development projects in the station areas according to a vision established by the City and the community through the transit station area planning process. Before the opening of each segment of the Blue Line, both the original South Corridor and the Blue Line Extension to the north, the City completed station area planning around each station that set the vision in terms of land use, transportation and mobility, and urban design.
The station area plans identified parcels around each station that are appropriate for transit oriented development, while seeking to protect established residential neighborhoods. Initially station areas were defined as land roughly within a half-mile walk distance of the station. We’re now looking at increasing that distance in some cases up to a mile.
We followed up the visioning done through the station area planning process with the establishment of the regulatory tools needed to ensure the right form of development. In 2003, four years before the opening of the first light rail corridor, the City adopted 3 new TOD zoning districts, plus a Transit Supportive overlay district a couple of years later. All of these districts have similar standards geared toward creating high density, walkable, transit-supportive neighborhoods with a mix of uses, which I’ll summarize in the next 3 or 4 slides.

**ALPHABET SOUP of zoning districts**

**TOD-E =**
Transit Oriented Development - Employment

**TOD-R =**
Transit Oriented Development - Residential

**TOD-M =**
Transit Oriented Development – Mixed-Use

**TS =**
Transit Supportive Overlay District

**MUDD =**
Mixed-Use Development District

**(CD) =**
Conditional Zoning District

**-O =**
Optional Zoning District
Charlotte’s TOD zoning in some ways turns our conventional zoning on its head. Where most zoning districts have a maximum allowed density, TOD zoning has minimum density requirements. And where most zoning districts require a certain amount of parking based on the land use, Charlotte’s TOD districts have no minimum parking requirements in most cases. Instead, there are maximum parking requirements in place. Several cities are incorporating zero required parking into their codes, but we’ve been doing this in Charlotte for over a decade. Most Charlotte residents aren’t quite ready for a carless lifestyle yet, so most projects have been built with parking that approaches the maximum permitted. The banking institutions that finance their projects aren’t yet comfortable with projects that don’t have a fair amount of parking. However, developers aren’t required to provide this parking.
TOD ZONING STANDARDS

TOD zoning allows for a mix of land uses appropriate for the kind of high density, walkable neighborhoods we want our station areas to be. Most industrial and auto-oriented uses are not permitted, although any existing non-conforming uses can remain. The TOD zoning districts also prescribe the type of pedestrian environment we desire, specifying how wide sidewalks should be (8’ minimum, sometimes wider), and the presence of an amenity zone and on-street parking between the street and the sidewalk to buffer pedestrians against traffic.
There are also requirements regarding building height, which is currently capped at 120 feet but some projects have exceeded that height through a conditional rezoning. Because we want station areas to be walkable and bikeable, there are requirements for connections from buildings to adjacent sidewalks, trails, and open space, as well as internal site connections.
Each project built in a TOD zoning district is required to provide a certain amount of open space, which is either private or public according to the use. The amount required depends on the scope of the project. Charlotte’s TOD zoning also has some requirements for the activation of the ground floor of buildings that are intended to ensure a walkable, interesting public realm. Things like requiring a clear glass windows and doors, a limit on how long a blank wall can be, etc.
The vision laid out in our station area plans, plus the regulatory tools in the Zoning Ordinance, have served us fairly well. As you can see from these aerial photos taken 10 years apart, the South End neighborhood, which has four LYNX stations with the New Bern station being the southernmost, has undergone a tremendous transformation over the last decade. This former industrial area alongside an old freight line, once filled with textile mills and warehouses, is now one of the hottest residential markets in America. The former freight line corridor is now the light rail corridor, and those old industrial sites are now apartments, shops, restaurants, breweries, and offices.
This will give you an idea of the scope of development we’ve seen along the Blue Line light rail corridor going back to 2006, the year before revenue service began. Over 10,000 new residential units have either built, are under construction, or in the planning stage. Add to this the over 2 million square feet of commercial and office space, and there has been well over 2 billion dollars in private development on this segment of the transit corridor, leveraged by Charlotte’s investment in light rail.
DEVELOPMENT ON THE BLUE LINE EXTENSION
2012-2018

The opening of the Blue Line Extension earlier this year was preceded by burgeoning development along the northern segment of the corridor. Seeing the success of development on the South Corridor, developers began to acquire land along the extension and started building. We fully expect development on the extension to mirror what we’ve seen on the original South Corridor, not at every station right away but beginning in the station areas closest to Uptown. We’re seeing this happen now.

<table>
<thead>
<tr>
<th>Completed/Under Construction</th>
<th>Planned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Units</td>
<td>3,002</td>
</tr>
<tr>
<td>Commercial/Office</td>
<td>3,561</td>
</tr>
<tr>
<td>Investment</td>
<td>3,100,000 sq. ft.</td>
</tr>
<tr>
<td></td>
<td>$1.5 billion+</td>
</tr>
</tbody>
</table>
Our vision for transit oriented development and our current TOD zoning standards have resulted in some good, walkable, bikeable, scooter-able mixed use development like this area around the Bland Street station in South End. High density mixed-use residential and commercial buildings are adjacent to a transit station, a network of paths including a trail-side ped/bike path we call simply the Rail Trail, popular restaurants and breweries with outdoor seating, and happy Charlotteans living the dream.
But we’ve also gotten some development that looks more like this. Lower density single-use residential buildings with surface parking. Not that’s there’s anything wrong with this in many other places in Charlotte, but this site is a quarter-mile away from the Bland Street station we saw in the previous photo, and it doesn’t meet our aspirations for density, mixture of uses, etc.
Building on the lessons learned, both positive and less than positive, we have begun to rethink and revise the vision for TOD laid out in the station area plans. Earlier this year, we updated our oldest station area plan, the 2005 South End Transit Station Area Plan, with a new supplemental plan called the South End Vision Plan. This plan is much more aspirational than the older plan in terms of building design, density height, and mobility (to name a few areas), because it builds on our actual experiences. Whereas the original South End plan was created before the light rail began running and before the development boom that would occur over the next 12-plus years, and we didn’t really know what to expect.
So when the mixed-use but mostly residential project was built adjacent to a light rail station in 2007, we were pleased with it. However, we now believe we should build more density into projects nearest to our stations, especially those more urban stations closer to Uptown. The rendering of the Railyard project on the right, which is now under construction, is more typical of the kind of development we now want. This project has 300,000 sq. ft. of office space on 8 floors, 50,000 sq. ft. of ground floor commercial space, and is wrapped with 84 residential micro-apartments (as small as 350 sq. ft.). It is currently under construction just up the street from the development in the left-hand photo.
One of the most frustrating failures of some of the TOD projects that have been done to date has been the lack of ground floor activation and the presence of structured parking along the public realm. Some critics in the media and elsewhere have taken to calling conditions like the one shown on the left “cars behind bars”, and this has been an oft-used phrase by those seeking higher design standards. Fortunately, we’ve been far more successful lately in getting better ground floor activation in many of the newer projects, such as the Camden Gallery mixed-use building on the right, completed in 2016.
We are presently creating a new Unified Development Ordinance in Charlotte. The first major task in this effort is to update the TOD zoning districts that we’ve been using since 2003. The revised TOD ordinance will have a more contemporary appearance with more graphics and tables and less text, probably like some of the newer zoning codes in your cities.
The new TOD districts will introduce some form-based code concepts that haven’t been typically applied in Charlotte’s Zoning Ordinance to date. These include build-to zones, minimum ground floor heights, ground floor transparency requirements, and a requirement that parking structures in some of the highest-intensity buildings be convertible to usable space as the demand for parking decreases over time.
We’re also trying something new for us, a height bonus. Charlotte, like most American cities, is struggling to provide affordable housing for its residents. North Carolina law does not permit inclusionary zoning that would require a percentage of new residential units to be affordable, so we look at other ways of incentivizing affordable housing. We’re going to include a provision in our new TOD zoning that will allow buildings to exceed the maximum permitted height by earning bonus points for providing various public benefits, including affordable housing. Details of the bonus system are still being worked out.

**UPDATE THE ORDINANCE**

**HEIGHT BONUS**

- Allows additional height above the maximum by earning bonus points
- Bonus points may be awarded for:
  - Providing affordable housing
  - Open space, greenways
  - Environmental sustainability
  - Convertible structured parking
  - Non-required off-site transportation improvements (including bike infrastructure)

Example: Height in new TOD-H1 district can go from 150’ (max w/o bonus) to 300’ with sufficient bonus points
But development isn’t taking a vacation while we update our ordinance. It’s still going ahead full-steam, especially residential apartment development, so we need to get it completed and adopted so we can start applying the revised standards to new projects. The bare dirt in this photo is a new mixed-use project that recently broke ground in South End that will have 264 residential units and 35,000 sq. ft. of commercial space. Just above it is another mixed-use project with 350 residential units, and the low one-story building to the right of that is a conversion of an old warehouse into commercial and restaurant spaces.
Here are a couple of recent projects now under construction in South End near the Bland Street station. The Railyard, which I showed a rendering of a few slides back, is in the upper right of this photo, and the mixed-use building in the center with the green artificial turf roof is the new corporate headquarters of a financial services company, bringing 300 well-paying jobs from Texas to Charlotte. They specifically wanted to be near a transit station to be able to attract young professionals.
I mentioned earlier that we’re now seeing a lot of development along the Blue Line Extension going north to the University. Here’s a 307-unit multi-family residential project directly across the street from the Parkwood station, which is the first station to the north outside of Uptown, in the Optimist Park neighborhood. This area used to be a mix of industrial uses and truck yards serving a former multi-modal yard across the street. The large Norfolk Southern rail yard is along one side of the light rail corridor in this area, and that’s not going anywhere any time soon.
This is a 345-unit multi-family project located in the NoDa neighborhood of Charlotte, at the 36th Street station, the 3rd stop going north outside of center city. There is also a retail building along the street which is part of the project.
This is a 278-unit residential project that recently got underway adjacent to the McCullough station of the Blue Line Extension. It will have street-level commercial space. As you can see, this is not an urban site. It’s more like strip-commercial. The light rail along this segment runs in the median of a major thoroughfare, making it very challenging to create the kind of walkable, mixed-use environment we want around our transit stations. However, with the proper planning vision and tools, we’re confident that areas like this will eventually be transformed into those types of places, just as South End has been transformed from a former industrial area to the hottest neighborhood in Charlotte.
WHAT’S NEXT?

- Update vision for remaining planned transit corridors
- Apply new TOD zoning districts
- Continue evaluation of TOD projects
- Remain flexible and willing to adjust