Introduction to Station Area Planning
The Charlotte Story

Steve Hamwey - Sasaki Associates, Inc.
Troy Russ - Glatting Jackson, Inc.

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History
- 1994: City of Charlotte approves Centers and Corridor Vision which guides future land use and development along transportation corridors
- 2000: Final EIS, TOD, and PE started
- 2002: Final design and construction
- 2007: South Corridor opens
Project

- South Corridor - 9.8 miles
- 13 stations
- Cost - approximately $475M
- Since 1997 - 3000 housing units
- Civic buildings - ie, Bobcat Arena, Children's Learning Center, and Johnson and Wales
Since Opening in 2007
- Ridership is 65% over projections
- Daily ridership is 14,000 (vs 9,100 projected)
- $1.87B in new investment and developments
- $525M in additional real estate tax revenues
- CATS has received federal approval to expand the system
Goals for TOD

- To encourage land use activities that increase ridership by increasing density of development within walking distance of a transit station.
- Develop plans which have flexibility and can be phased over time.
- Integrated with the Station Area design.
Transit Supportive Development
Why do we need planning principles?

Charlotte adopted the Centers and Corridors Vision... Transit supportive design at the metro scale
Principles represent transit supportive design at the station area scale

- Reduce time needed to walk to transit
- Decrease running time
- Increase in headway frequency, therefore reducing time waiting for transit.
Station Area Principles & Guidelines
Building Livable Communities with Transit

Land Use

Mobility

Community Design
Concentrate a mix of complementary, well integrated uses within walking distance of the transit station.
Provide a mix of land uses complementary to light rail transit
Provide a mix of land uses complementary to light rail transit
Provide a mix of land uses complementary to light rail transit
Mobility

*Enhance the existing transportation network to promote good walking, bicycle and transit connections*
Build a interconnected street network - Capacity

Dense Network

Sparse Hierarchy

Same Lane-Miles

Greater Capacity
Community Design

Use urban design to enhance community identity of station areas and make them attractive, safe and convenient places.
Treat the street as a public space
Treat the street as a public space
Treat the street as a public space
Treat the street as a public space
The Station Location Refinement Process will be divided into three parts, each building on the results of the previous part.

1. **Evaluate the spacing and service areas** of the MIS-defined stations, and add, remove, or relocate stations;

2. Select **specific parcel station locations**; and

3. Document transit supportive station area measures and **create baseline conditions** for future analysis.
Station Location Methodology
Part 1

Evaluate MIS Station Spacing and Service Areas
The first step in the process will be evaluating each corridor’s operational efficiency in serving the corridor. There are four measures that will be utilized.

Two of the measures, operational spacing and effective service area, will expand analysis conducted in the MIS and measure station spacing and service characteristics.

The third measure, TOD opportunities, will be used to document land development initiatives and opportunities that have arisen since the completion of the MIS.

The final measure, other considerations, is intended to be a “fatal flaw” discussion regarding station locations and their implications.
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Station Location Methodology

Start with Adopted MIS Stations
Operational Spacing Analysis: This will be accomplished by testing the MIS-defined station spacing against optimal station spacing standards by mode of transit within urban and suburban locations (defined by both form and density).

1) LRT / BRT: Urban Areas - 1/2 mile spacing; Suburban Areas - 1 mile spacing
2) Commuter Rail: Urban Areas - 2 mile spacing; Suburban Areas - 5 mile spacing
Effective Service Area: The station area planning team will document the total area of land and land use category within a 10-minute drive of each station area using various travel times assigned to street classifications around each station.

The assigned travel times will be: 10 mph for a local street, 15 mph for collector street, 25 mph for arterial street, and 45 mph for freeway. Future streets are defined by using the Adopted 2010 Thoroughfare Plan and known development opportunities.
**TOD Opportunities:** The total acreage of general transit oriented development opportunities within the actual 10-minute walk (one-half mile) will be measured for each proposed station location. Future streets are defined by using the Adopted 2010 Thoroughfare Plan and known development opportunities.
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Develop options that shift stations to match station spacing standards, effectively serve the corridor, and support TOD opportunities.
Part 2

Select Station Sites
Determine station location: Parcel level station locations will be determined based on an integrated site selection process that utilized both operational and spatial considerations.
Engineering Requirements: These considerations will include both transit alignment (horizontal and vertical) and affected adjacent and intersecting roadway geometries.
Ridership: Ridership data for each station will be utilized to size the station and its facility needs.
Station Prototypes

- Park and Ride (5)
  I-485, Archdale, Tyvola, Woodlawn, Scaleybark
- Neighborhood (4)
  New Bern, East-West, Renselaer, Carson
- Walk Up (4)
  Convention Center, 2nd Street, Downtown Transportation (CTC), 7th Street
Document Station Program and Functional Requirements: Station typologies and ridership information will be used to determine the necessary parcel size needed for each station. Potential land parcels will be evaluated for their ability to accommodate each station's programmed uses as well as each station's TOD needs and requirements.
Center Platform
Side Platform
Elevated Platform
Station Location Examples

New Bern
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Remount vs. New Bern
Vacant & Under Utilized Land
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SOUTH CORRIDOR
New Bern Street Station

- Continue warehouse conversion to office
- Improve pedestrian character of South & Tryon
- Protect & enhance neighborhoods
- Improve station visibility & access to South Blvd.
- Potential Yard & Shop
NEW BERN
Urban Design Plan

Develop an urban neighborhood center.

Protect existing neighborhoods.

Convert under utilized industrial space into a mixed use office environment.

Improve visibility of the LRT station.
NEW BERN Capital Improvements

Create park as focal point of the station area.

Enhance station core with streetscape and sidewalk improvements along Griffith Road, New Bern, Marsh, and South Boulevard.

Create Pedestrian / Bikeway from South End to Woodlawn.

Extend Old Pineville Road north from Scaleybark to Clanton Road.

Require new streets as redevelopment occurs.
New Bern Station
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Neighborhoods

Sterling Neighborhood

Pine Valley Neighborhood
Other Surrounding Uses

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What will Come From this Plan?

- Establish a long-term **vision** for area
- Define needed **land use changes**
- Influence the **form & design of** coming development
- Identification of **needed community infrastructure**
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What We Heard:
Things you would like to change

Things you would like to see

*CHANGED*

1. More streets/access
2. Parks & trails
3. Higher density development
4. Mix of residential uses & retail
5. More pedestrian-friendly
6. Appearance of neighborhood/neighbor
7. Less industrial
8. Increased property values

What’s Your Vision:
Things you value the most

Things you VALUE the most.

1. Quaint/safe/secluded neighborhood
2. Institutional uses: church/school
3. The neighbors
Strengthening the Neighborhood
Access to Transit
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Key Connections
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3rd Street Station
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CTC/Arena Station
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platform viewing

framing
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Lessons Learned

- Integrate TOD planner and Station Area designer
- Agency/City/ Stakeholder interaction and consensus with "intent" to implement
- Plan flexibility (future unknown)
- Patience (takes time)
Thank you