

JARRETT
WALKER
+ ASSOCIATES

Let's think about transit



Urban Land
Institute

May 14, 2014
8:00 AM - 3:00 PM

REPORT BY WILL ALLEN

Lessons learned
from ULI transit
workshop with
Jarrett Walker



**HUMAN
TRANSIT**

How Clearer
Thinking

about Public Transit
Can Enrich Our
Communities
and Our Lives

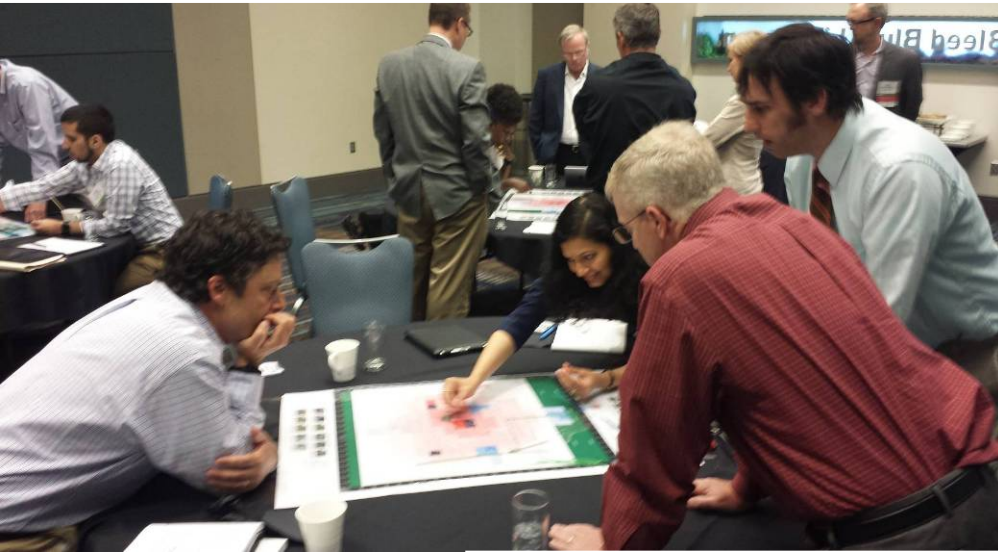
Jarrett Walker

GETTING STARTED

- ▶ About 30 participants, including Raleigh Acting Planning Director Ken Bowers, Mack Paul, Sig Hutchinson, Raleigh City Councilor Mary-Ann Baldwin, and real estate development leaders John Kane and Smedes York.



GETTING STARTED



- ▶ Participants sat at five tables, each of which became a work group of about six.



J. WALKER PROCESS SUMMARY

- ▶ First determine a policy for what percentage of transit dollars will be allocated for ridership and what percentage for coverage.
 - ▶ This is a decision that the governing political body needs to make.
 - ▶ A plumber fixing your sink asks whether to repair or replace. After the plumber knows your decision, he can do either.
 - ▶ Transit planners need similar direction before they act.
- ▶ Once that policy decision is made, the transit system (routes and frequencies) can be planned to align with the policy without regard to technology mode (e.g., bus vs. rail).
- ▶ Lastly, select the appropriate technology mode to fit the system needs.

JARRETT WALKER PRINCIPLES

- ▶ Transportation is about the city you want:
 - ▶ A place is a place because of the types of transportation that enable it
 - ▶ Car-dependent (not dense) versus multi-modal (density possible)



JARRETT WALKER PRINCIPLES



- ▶ Our experience of freedom is partly enabled by transit alternatives available in a place.
- ▶ Each metro area makes transit value choices and transit policy choices whether on purpose or by accident.

- ▶ Transportation options equal freedom. Public transit (PT) plays an important role.
- ▶ Ridership (high frequency service corridors) versus coverage (service for all) is a community choice. Communities that choose coverage should not complain about cost.
- ▶ Frequency is key to attracting riders; frequency is freedom.
- ▶ Technology is unimportant; abundant access through high frequency service is what's important.
- ▶ High frequency corridors should be developed and nurtured.
- ▶ Cities have control of land use and other infrastructure investment and therefore should be central to transit investment decisions.
- ▶ Transit is a system.
- ▶ Loop transit makes little sense; ridership comes from straight line corridors in a grid; loops close a system that wants to be open.
- ▶ Transit has no responsibility to keep income classes apart.

TRANSPORTATION CHOICES ARE KEY

- ▶ Emerging multi-modal cities provide transportation choices, not coercion.
- ▶ If you want to drive, you can. But you are also able to walk, bike, or take public transit (PT).



- ▶ What is transit's role in a multi-modal city? PT is just part of the transportation spectrum, albeit an important part.

TRANSIT FOR THE MILLENNIALS

- ▶ Challenge binary thinking: “Choice riders” versus “captive riders” or “dependent riders” are unhelpful category terms in planning transit for the Millennial generation.
- ▶ Millennials are choosing to own fewer cars:
 - ▶ On average, young people are getting their licenses now at age 19.
 - ▶ Personal technology is changing the value of time.
 - ▶ Increasing interest in living in transit-reliant places.
 - ▶ Transit ridership is higher now than in the 1950s.
- ▶ Message = How we get around (transportation) is a spectrum rather than one thing or another.
- ▶ What is transit’s role in a multi-modal city? PT is just part of the transportation spectrum, albeit an important part.



BE MODE-AGNOSTIC

- ▶ Is rail a tool or a goal?
 - ▶ Most boring question Walker gets asked is: “What do you think of BRT?” or “What do you think of LRT?”
 - ▶ Mode biases attempt to put the cart before the horse.
 - ▶ Technology choices come last after determining split between ridership and coverage and then planning high frequency corridors based on density and ridership: the right mode for the right place.
 - ▶ Transit often starts with BRT in a high frequency corridor—but true BRT that acts like rail—and when ridership surpasses BRT capacity, evolves to LRT.
- ▶ What’s important is not technology; what is important is abundant access.



BUT WE HATE BUSES!

- Hate buses if you want, but do you hate the abundance of access that only they can provide?
 - New network changes buses' role.
 - Bus design is converging on rail experience.
 - Heavy rail will not replace buses ...
 - Only an extensive tram network would do that,
 - if you want trams, build strong bus corridors...



- ▶ Should every area in a region have transit service?
 - ▶ Agree - 28%
 - ▶ Neutral - 12%
 - ▶ Disagree - 52%

- ▶ Priority in transit planning should be growing an all-day network, not just peak.
 - ▶ Agree or strongly agree - 63%
 - ▶ Neutral - 19%
 - ▶ Disagree or strongly disagree - 19%
- ▶ “Peak only” service is incredibly expensive because of cost of labor and equipment and low utilization of both.

CRT CAPACITY VS. FREQUENCY



▶ Once an hour at peak times only?

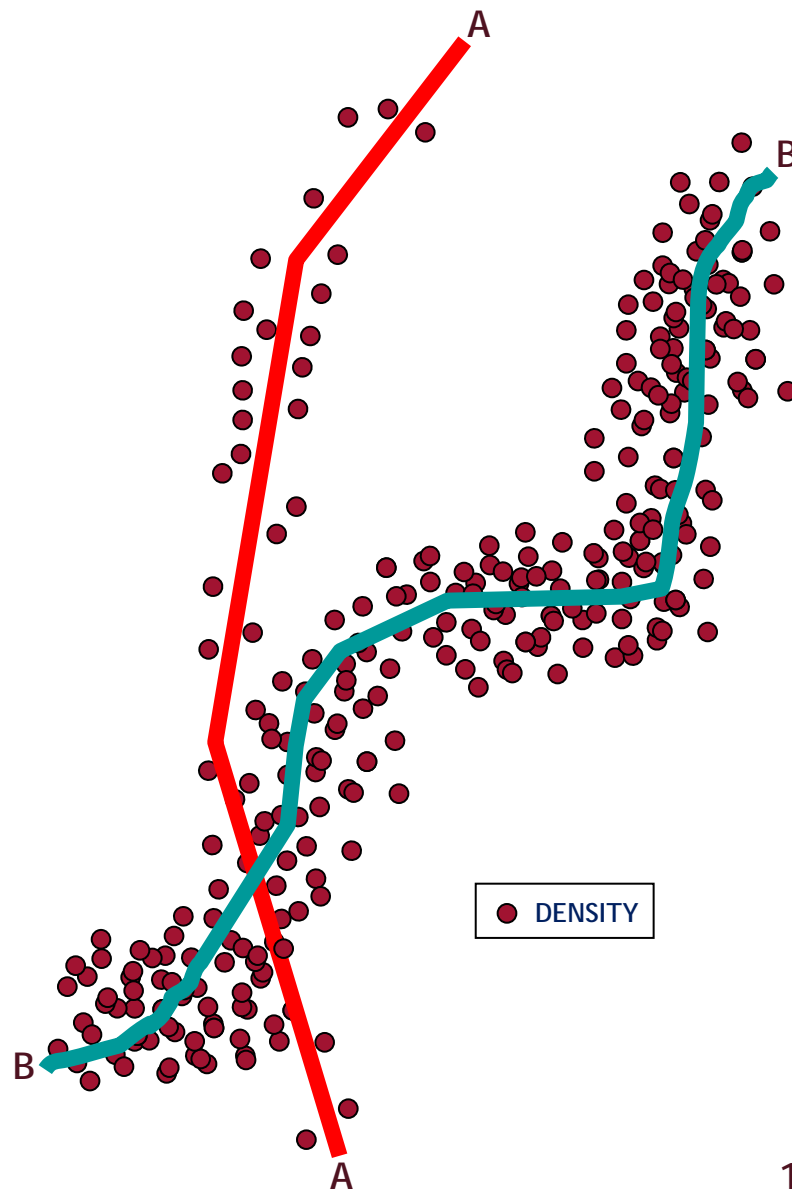
▶ Or all day service every 30 minutes?



- ▶ Transit systems need to be reliable and predictable to get you to your meeting on time.
- ▶ What are the real choices? Listen to our transit planning tools because they ask the real questions:
 - ▶ Line / Route
 - ▶ Connections
 - ▶ Frequencies
 - ▶ Duration
 - ▶ Right-of-way determines speed and reliability
- ▶ Questions are:
 - ▶ Ridership or coverage?
 - ▶ Connections or complexity?
 - ▶ All-day focus or peak?
 - ▶ Is the mode technology (rail versus bus) a tool or a goal?

RIDERSHIP OR COVERAGE?

- ▶ Debating transit profitability is moot because transit competes with the greatest socialist enterprise of all time called roads, a hegemon that can't be touched.
- ▶ However, planning transit networks for ridership rather than for coverage will ensure far better farebox recovery and get transit closer to paying its own way.
- ▶ Which one of the transit corridors depicted in the graphic adjacent is likely to attract more ridership and thus more farebox cost recovery?
- ▶ 80% ridership, 20% coverage is an increasingly common transit policy.



FREQUENCY IS FREEDOM

- ▶ Can only afford more frequency if choose to emphasize ridership over coverage.
- ▶ Frequency is invisible (can't take a picture of frequency).
- ▶ Planners often over-value transit average speed and undervalue frequency.
- ▶ Always ask first: Where do we need frequency?

DEPICTING FREQUENCY

- ▶ Imagine a gate at the end of your drive that only opens once an hour.



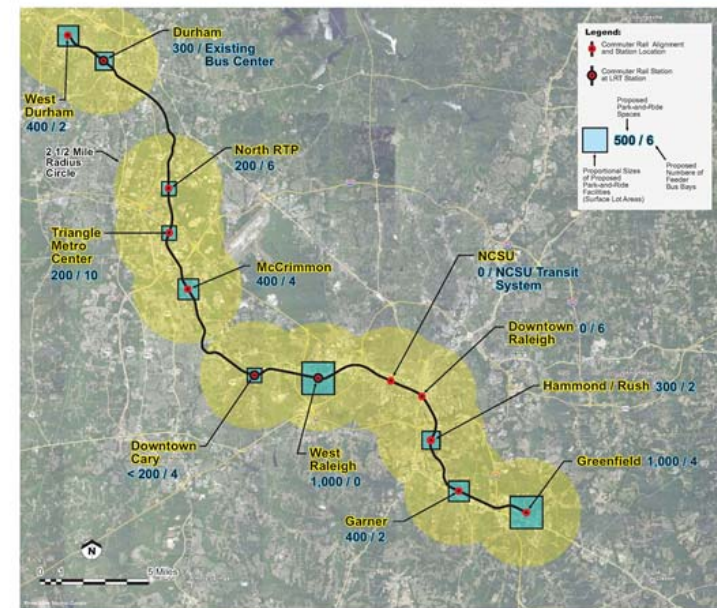
RIDERSHIP RECIPE

- ▶ Plan high frequency and duration transit deployed in corridors with these transit-amenable, built-environment features:
 - ▶ Density - the density only around a transit corridor
 - ▶ Walkability -
 - ▶ Connected streets
 - ▶ Functional infrastructure that enables walking
 - ▶ Safe street crossings at stops not more than 0.25 miles apart
 - ▶ Linearity - literally
 - ▶ Continuity - no low ridership gaps
 - ▶ A reason not to drive
- ▶ How long or far do we have to drive to serve 1,000 people or jobs?
- ▶ High frequency transit corridors should “be on the way.”

- ▶ Gaps are expensive.
- ▶ Don't cross no-ridership gaps.
- ▶ Put density close to transit corridors.
- ▶ Example: Need better CAT-Wolfline connections on Hillsborough St.

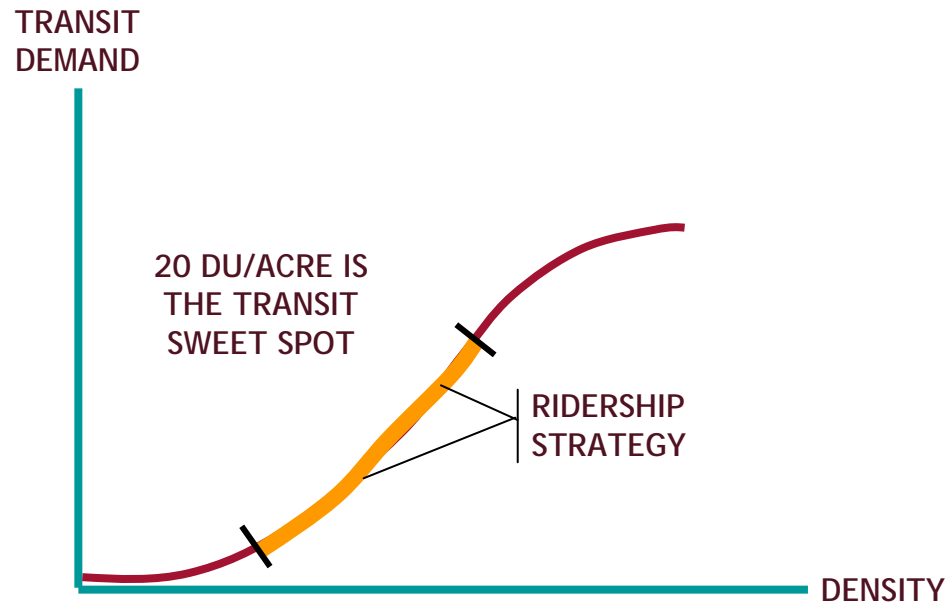
ALL-DAY OR PEAK?

- ▶ Frequency is freedom: Pursue all-day, high frequency service whenever possible.
- ▶ WCTP's 37-mile CRT corridor is the foundation of the cities it serves, all of which except Raleigh grew where they did because of the rail line (Garner, Method, Cary, Morrisville, Durham).
- ▶ As density goes up, ridership goes up fast.
- ▶ Density, which will bring ridership, is already concentrated in the cities along the NCRR corridor.
- ▶ Jarrett doesn't like the name CRT to describe our 37-mile corridor because, with 30 minute, all-day frequencies, CRT will do what LRT does and thus cease to be commuter rail.
- ▶ Pursue all-day, 30 minute CRT frequencies.



DENSITY = RIDERSHIP

- ▶ As density goes up, ridership goes up fast.



- ▶ Anchor high density corridors by ensuring ends are going to attract lots of riders.

TRANSIT PLANNING GAMES

- ▶ Table 1 hard at work on two transit planning exercises.



- ▶ First agreed that ridership has a higher priority than coverage.
- ▶ Then focused on how and why to apply high frequency corridors.
- ▶ Tested principles in model area, then applied them to Wake County.

- ▶ Corridor models by different groups were similar; differences appeared in the selection of aspirational corridors (corridors where we want to grow higher ridership).
- ▶ Street network facilitated development of loops in many groups trying to address cross-town service and hit nodes.



RALEIGH HIGH FREQ. TRANSIT LINES



- ▶ An early iteration (above)

- ▶ Sig inspects emerging high frequency transit map



- ▶ The finished high frequency bus transit corridors for Raleigh (below)
- ▶ We were given only a limited number of transit corridor strips



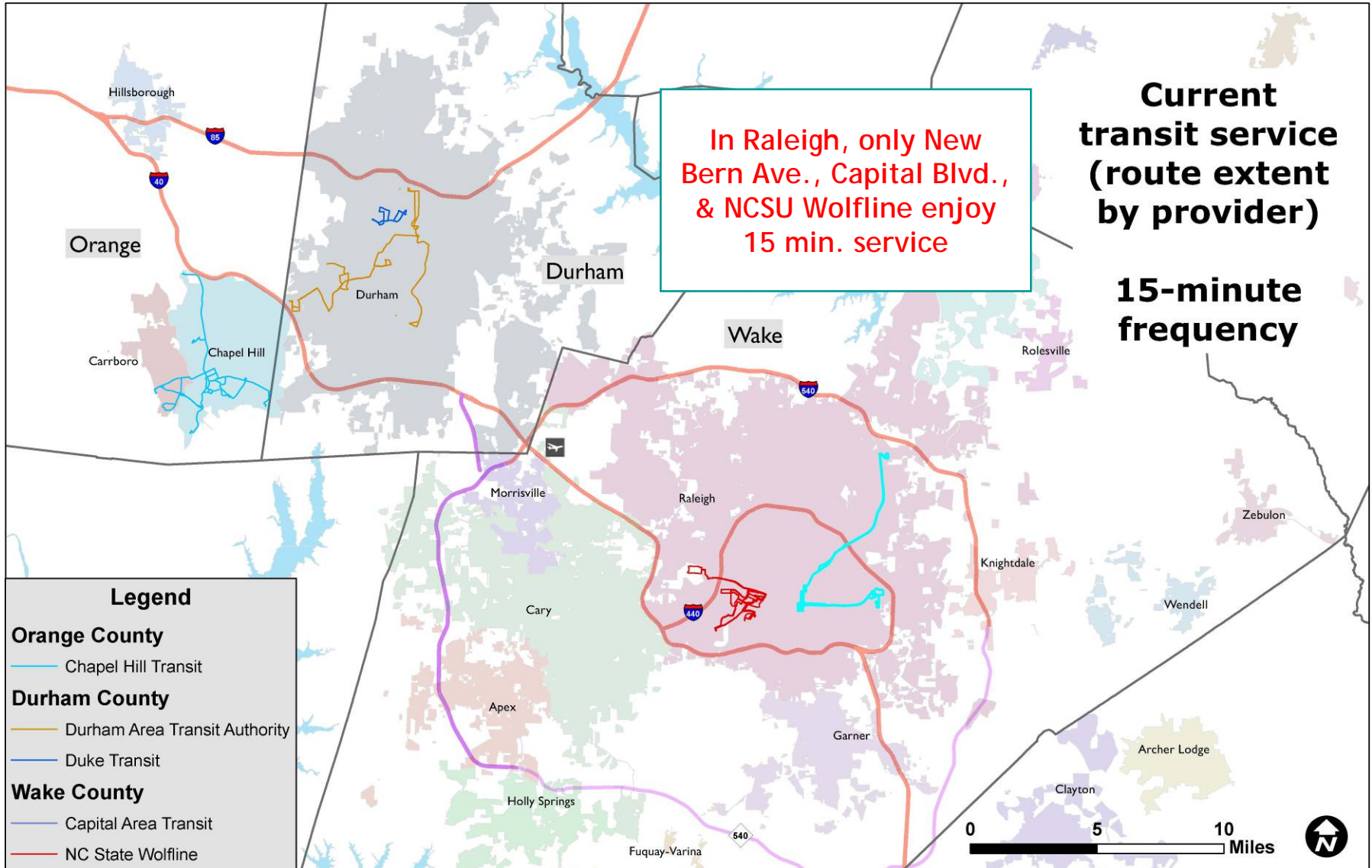
A CLOSER LOOK

Table 1 opted to emphasize:

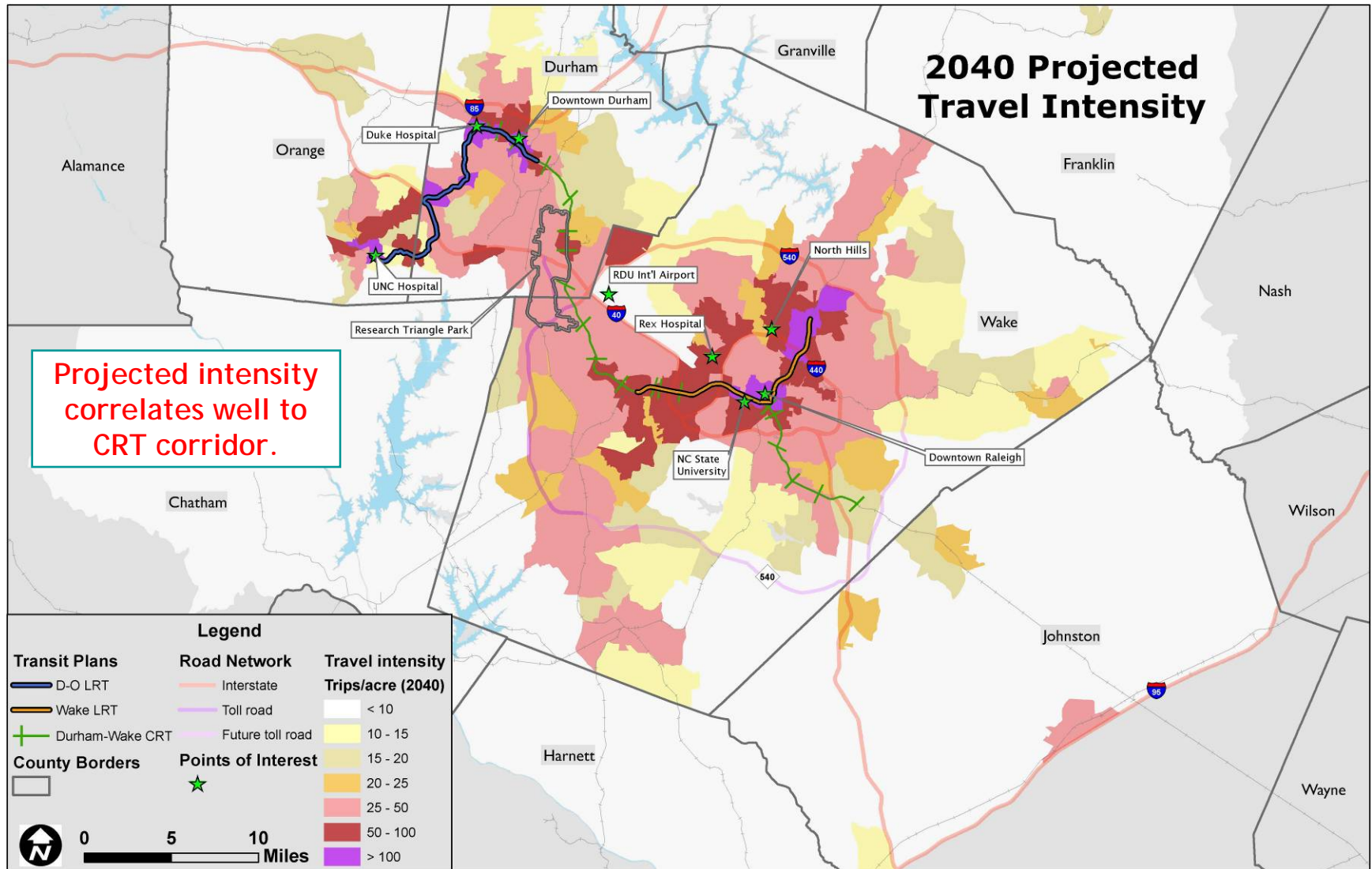
1. Ridership along dense corridors in Raleigh (New Bern, Capital, S. Saunders, Hillsborough, Six Forks, Glenwood/Oberlin)
2. A connection from Hillsborough/Oberlin to NCSU Centennial Campus
3. One aspirational corridor on Blue Ridge/Edwards Mill
4. A connection from Raleigh to downtown Cary

Map of RALEIGH-CARY only

COMPARE TO CURRENT HIGH FREQ.

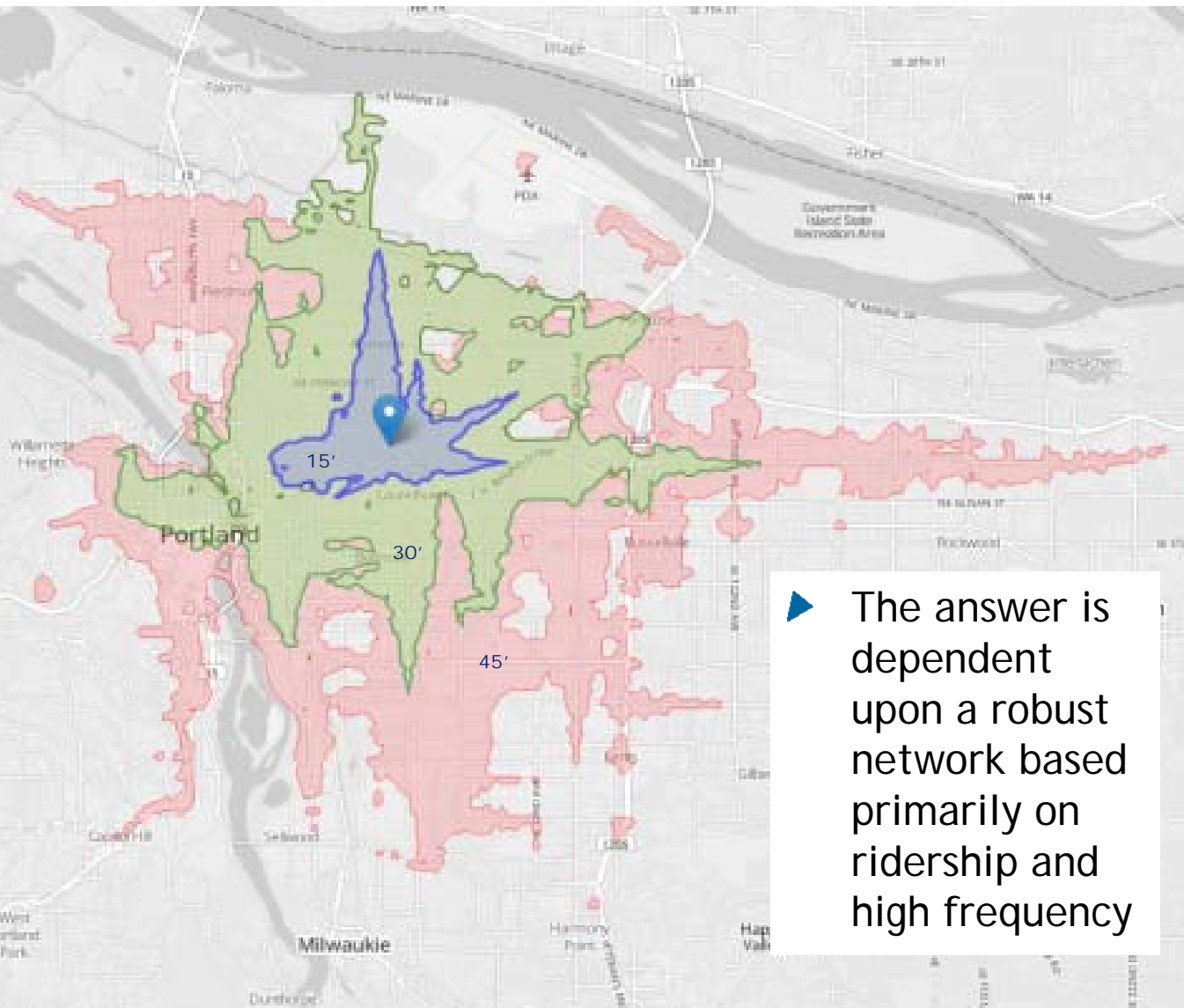


COMPARE TO 2040 INTENSITY



THE TRUE TRANSIT TEST

▶ Where can you be on public transit in 15 minutes, in 30 minutes, and in 45 minutes?



▶ The answer is dependent upon a robust network based primarily on ridership and high frequency

MAP OF PERSONAL RESPONSIBILITY

▶ Where can you be on public transit in 15 minutes, in 30 minutes, and in 45 minutes?

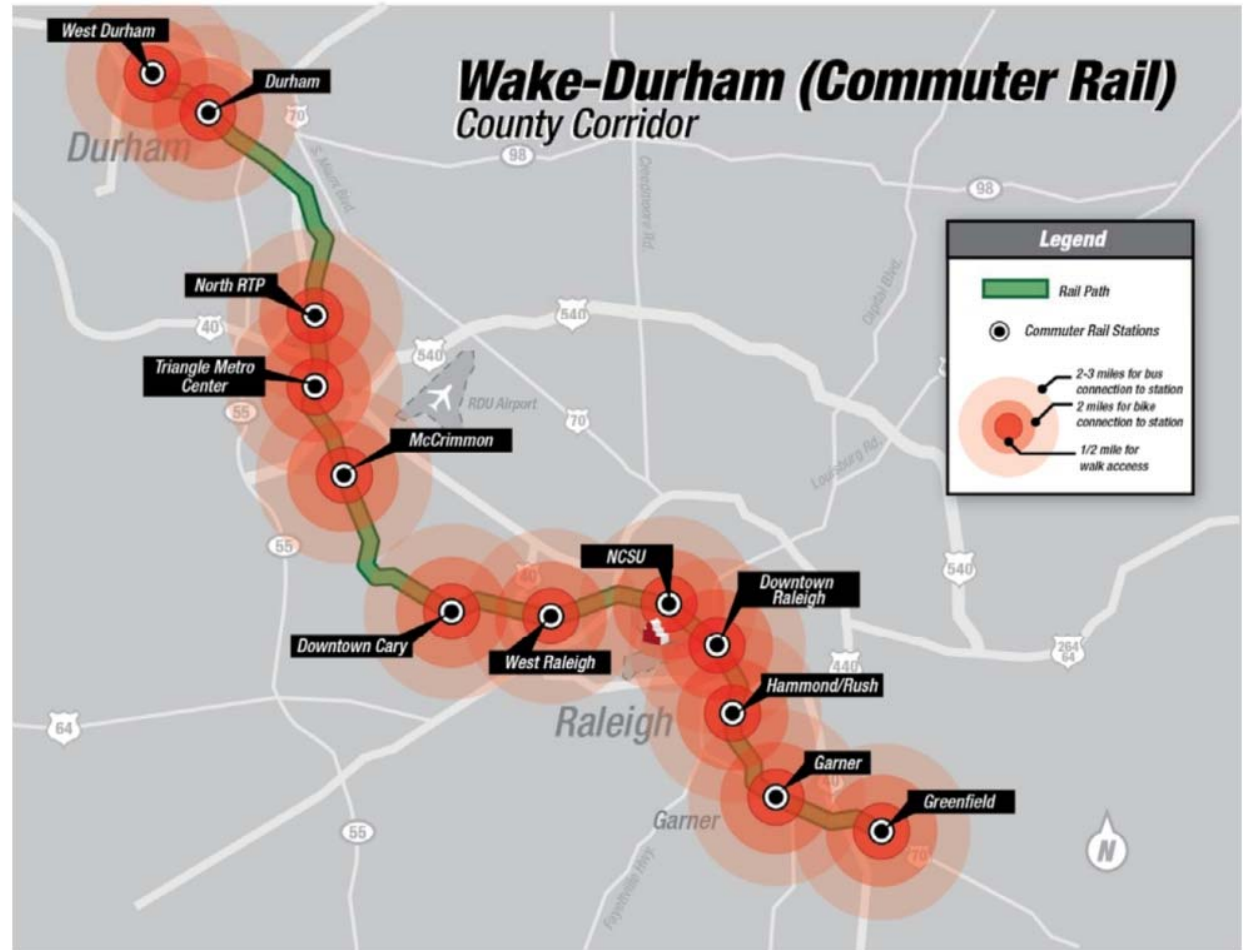


▶ This is a tool for freedom, but also a map of personal responsibility.

▶ FREQUENCY IS FREEDOM!

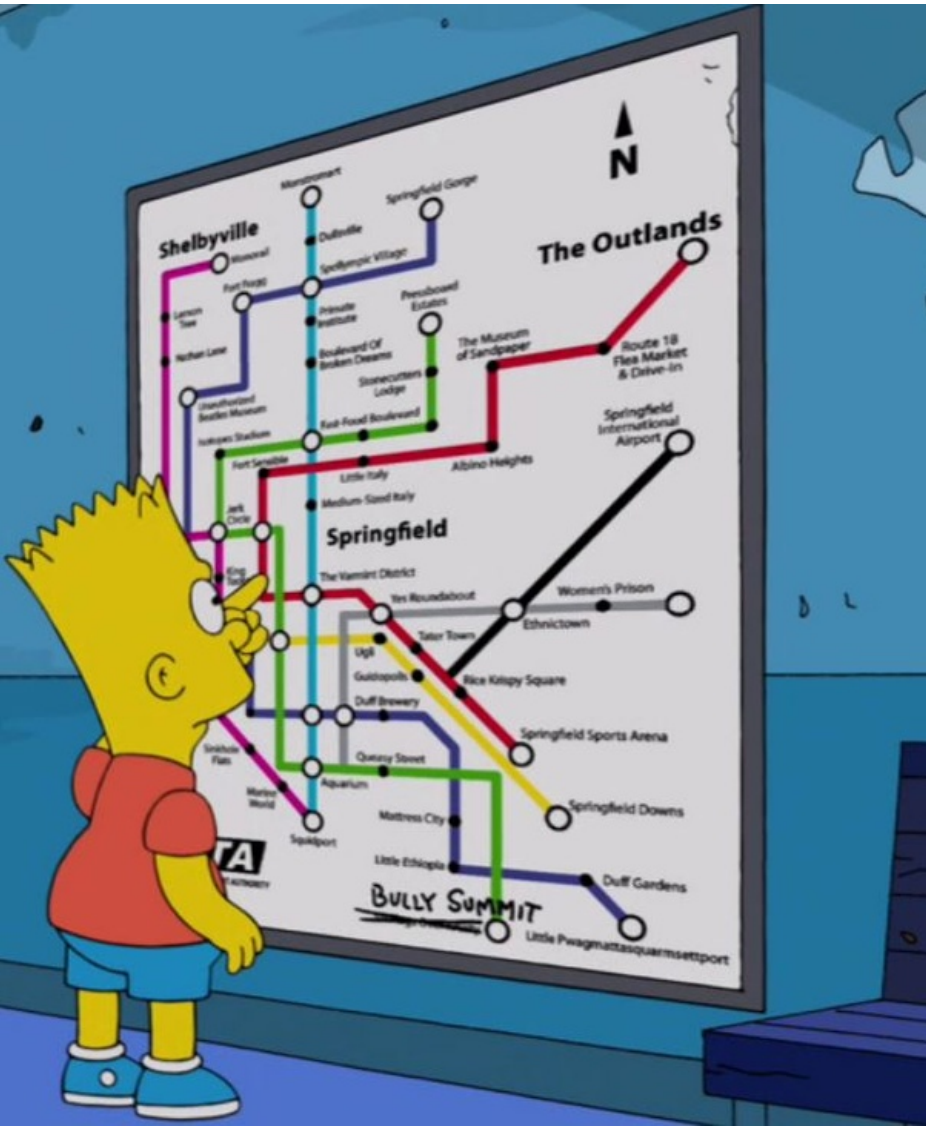
ADVICE SPECIFIC TO WCTP

- ▶ Never let low altitude detail prevent high altitude objectivity.
 - ▶ Jarrett sees the Wake County Transit Plan suffering from this.
-
- ▶ Updated WCTP should include all-day, 30 minute CRT service.



- ▶ Technology was selected before issues known.
- ▶ Plan does not deliver or sell a better service future.
- ▶ CRT corridor connects historic community cores, but CRT plan is not frequent enough; consider emerging FRA vehicle types to increase frequency to all-day, 30 minute service.
- ▶ No focus on high frequency corridors.
- ▶ LRT corridors over-reach (Cary and North Raleigh).
- ▶ CRT too fixed (not scalable) and not frequent enough.
- ▶ Focus on Regional Authority may prevent creativity and service provision.
- ▶ Plan proposed parts, but not a system.

QUESTIONS



Questions?

Comments?

