G S & P

TPO

Chattanooga-Hamilton County/North Georgia

CAMBRIDGE SYSTEMATICS

The Road Less Traveled

Non-traditional Health Impact Analyses in Transportation Planning

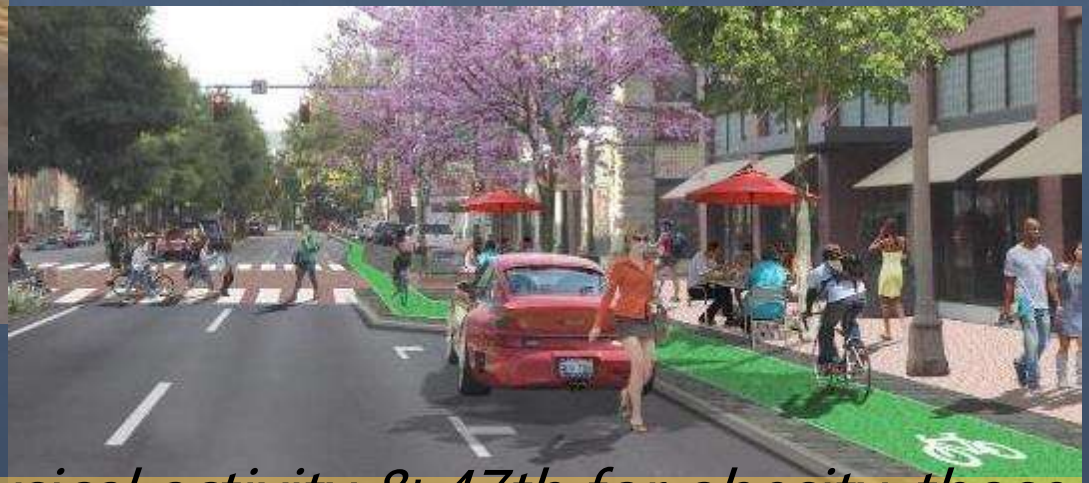
Chattanooga TPO

- 443,000 people
- 2,110 lane miles
- 19 Jurisdictions

- $7.3M/year FHWA
- $4.7M/year FTA
- 19 Jurisdictions

Where to start in considering health

"Go back to your community and start today" – Mark Fenton, 2005

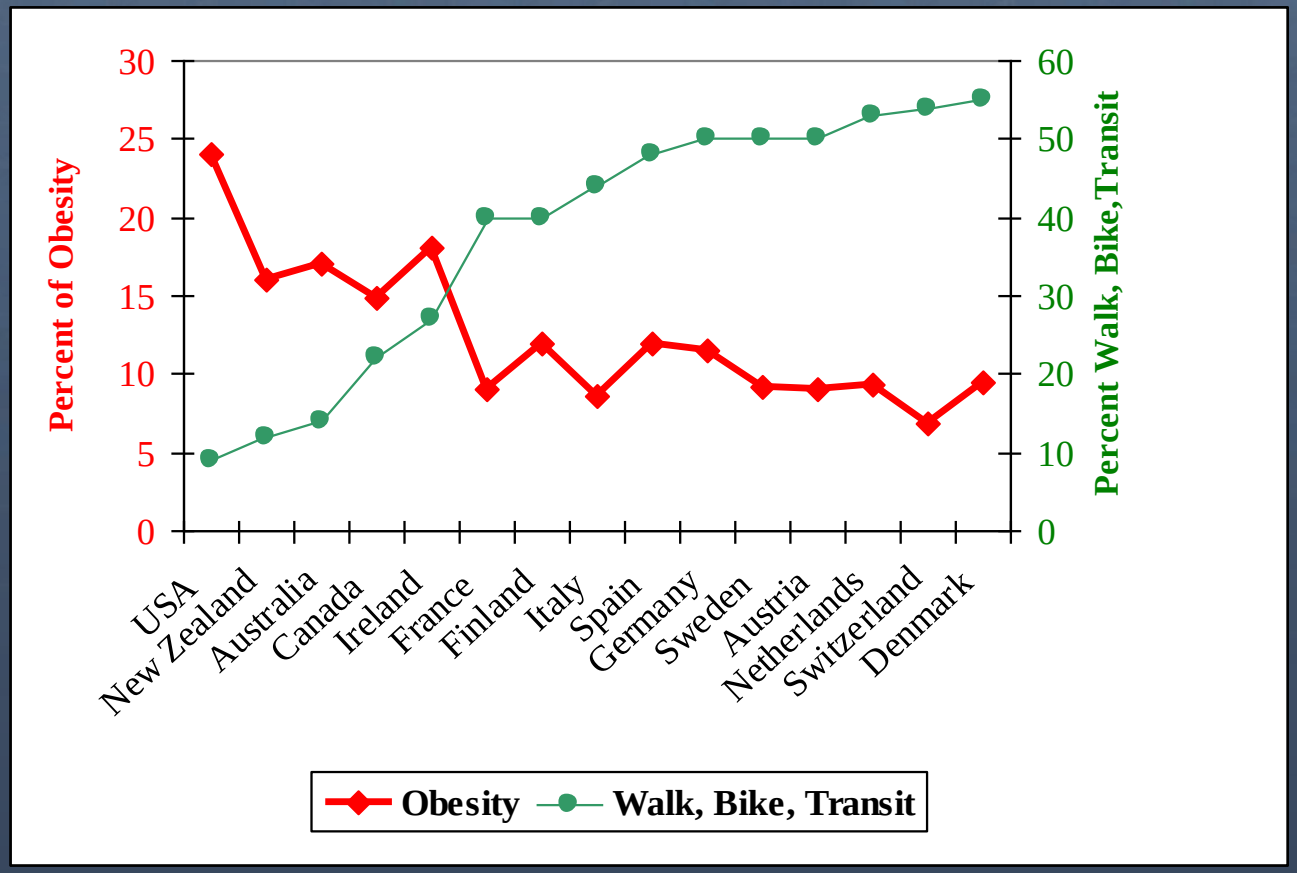


"TN 49th worst state physical activity & 47th for obesity, those ratings can change if state & city leaders increase efforts to make bicycling & walking safer & more convenient" – TN Department of Health Commissioner John Dreyzehner, 2015

The process to

- Educate (i.e. workshops)
- Evaluate (i.e. audit access to health-based goods/services)
- Prioritize (i.e. health-based measures)
- Fund (i.e. set-aside and available grants)

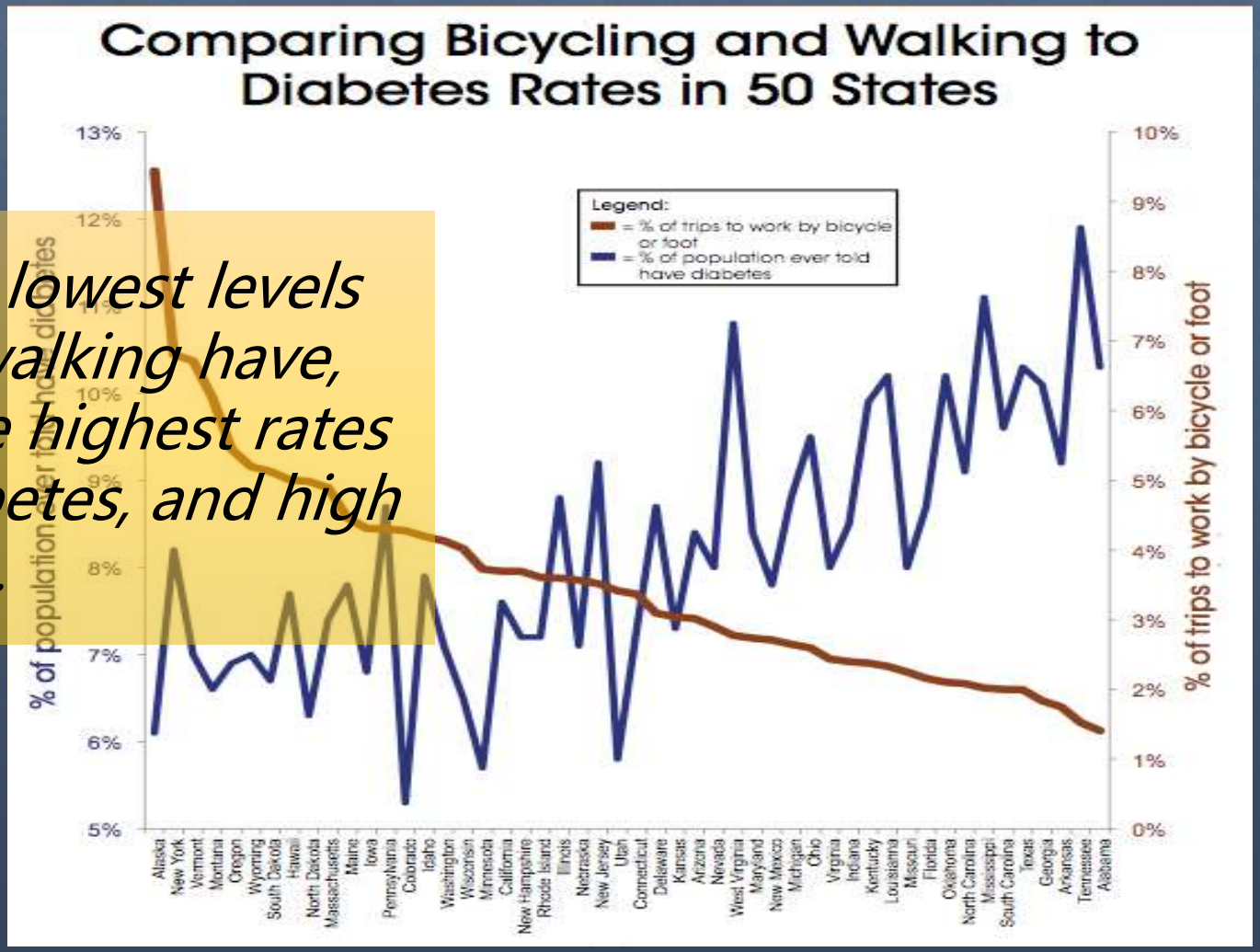
Physical activity and health



Pucher, "Walking and Cycling: Path to Improved Public Health," Fit City Conference, NYC, June 2009

Physical activity and health

States with the lowest levels of biking and walking have, on average, the highest rates of obesity, diabetes, and high blood pressure.

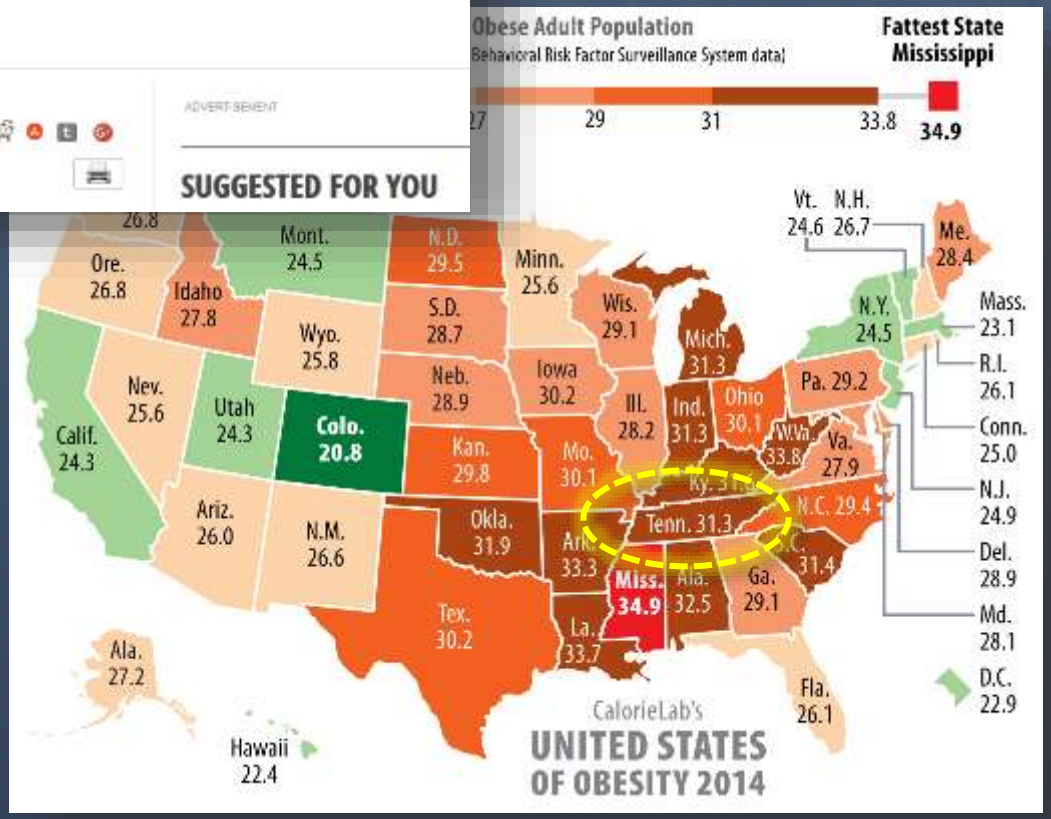


Bicycling and Walking in the United States: 2010 Benchmarking Report, Alliance for Biking and Walking

Physical activity and the built environment

One third of regular transit users meet the minimum daily requirement for physical activity during their commute.

Coincidence?



Surgeon General

Centers for Disease Control and Prevention

Health Considerations for the 2040 RTP

Integrating Health into the 2040 RTP

Existing Conditions Analysis

- Safety emphasis areas
- Livability corridors
- ***Accessibility analysis***
- ***Bicycle/pedestrian gap analysis***
- ***Transit gap analysis***
- ***H+T affordability analysis***

Project Identification

- Targeted multimodal investments
- Complete streets upgrades on strategic corridors
- Strategies to reduce vehicle-miles travelled

Project Evaluation

- Project improves safety
- Project reduces VMT
- Project promotes multimodal access to community resources
- Project fills gap in multimodal system

Plan Evaluation

- VMT per capita
- Air pollution emissions
- Transportation disadvantaged analysis – crashes, emissions, accessibility
- Investment allocations by transportation mode

Health Impact Assessment

Viewing the Regional Transportation Plan through the lens of public health:

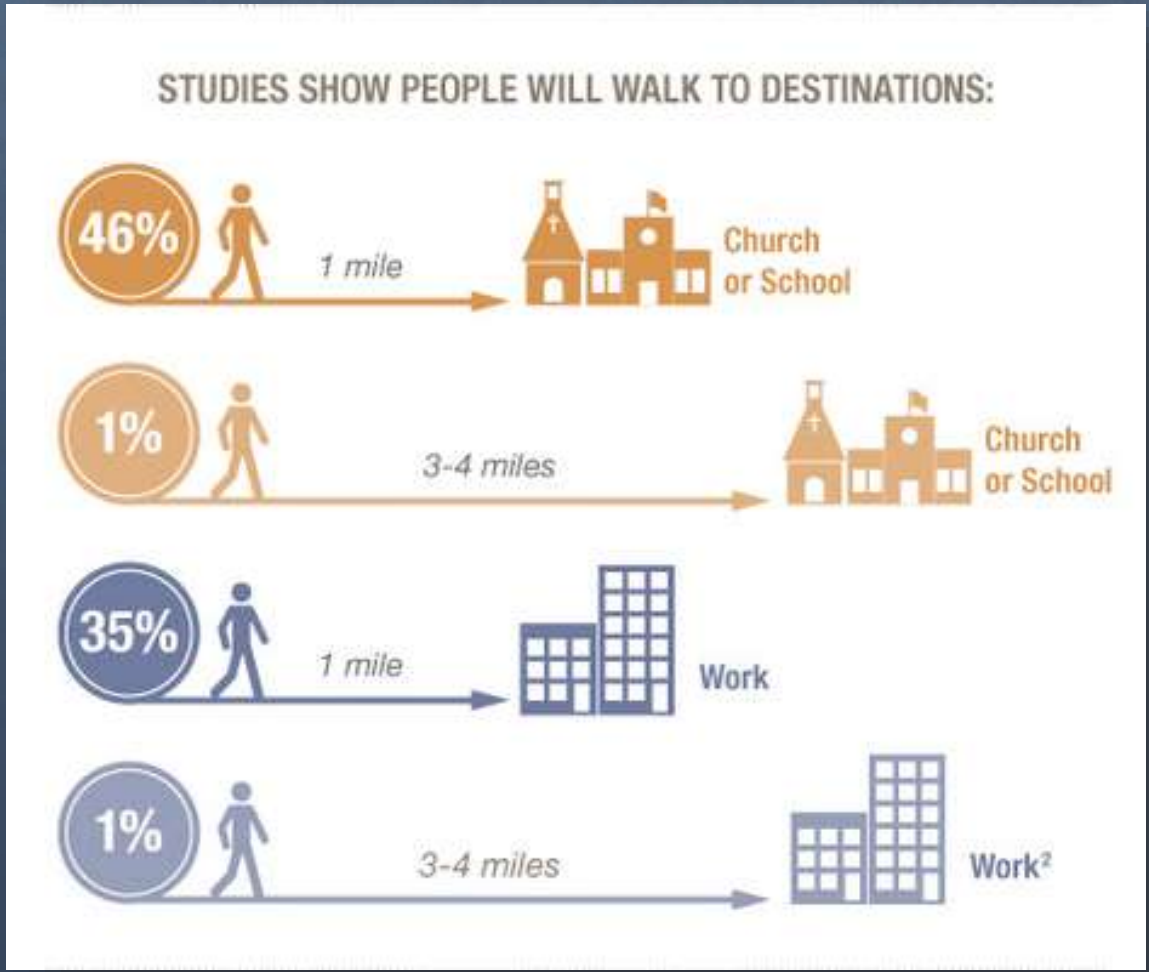
How can insights about the built environment influence decisions for the 2040 Regional Transportation Plan?

2040 RTP
REGIONAL TRANSPORTATION PLAN

Health Impact Assessment

- GIS-based
- Readily available data
- Yields relevant information

Proximity is key

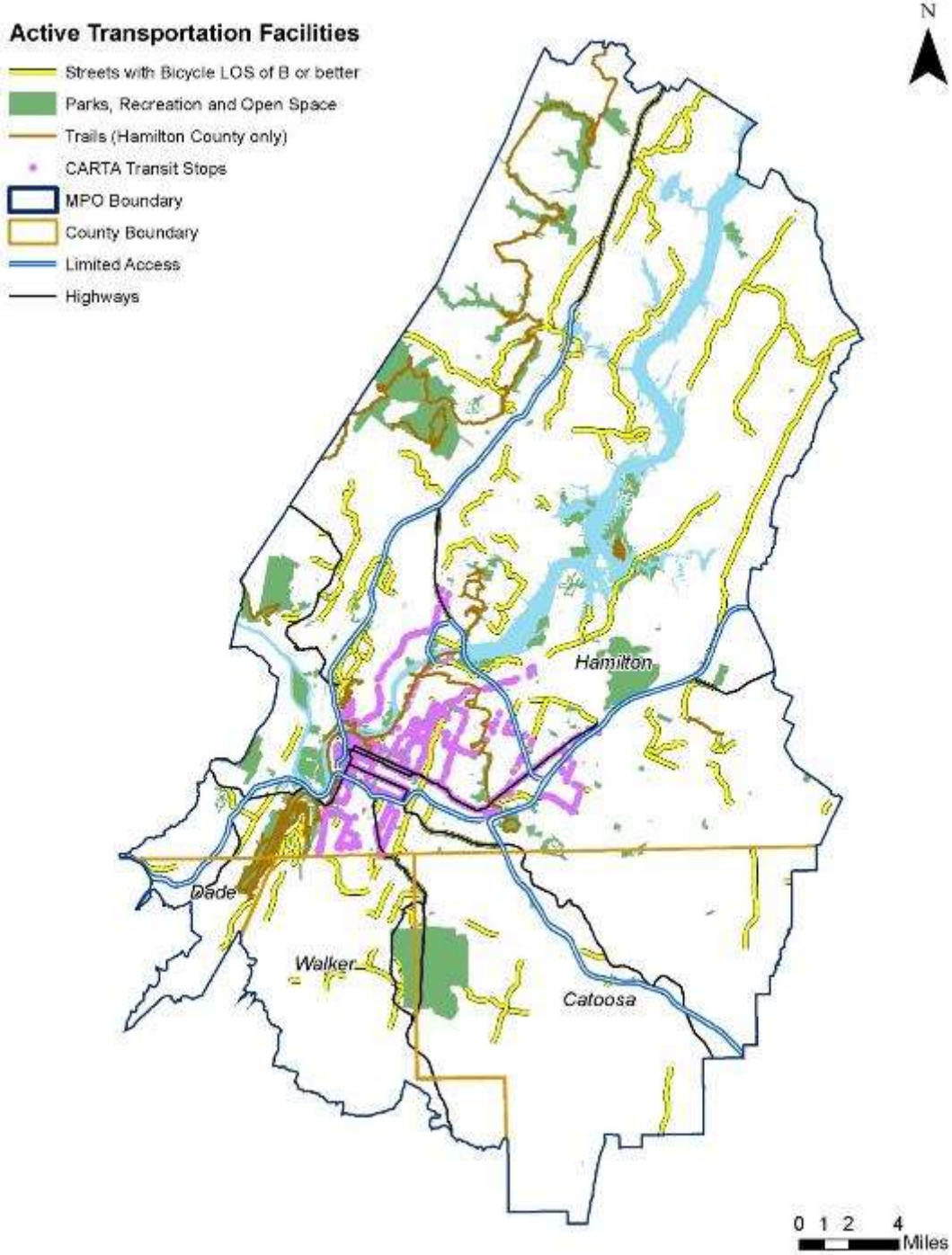


Centers for Disease Control and Prevention 2012, newpublichealth.org

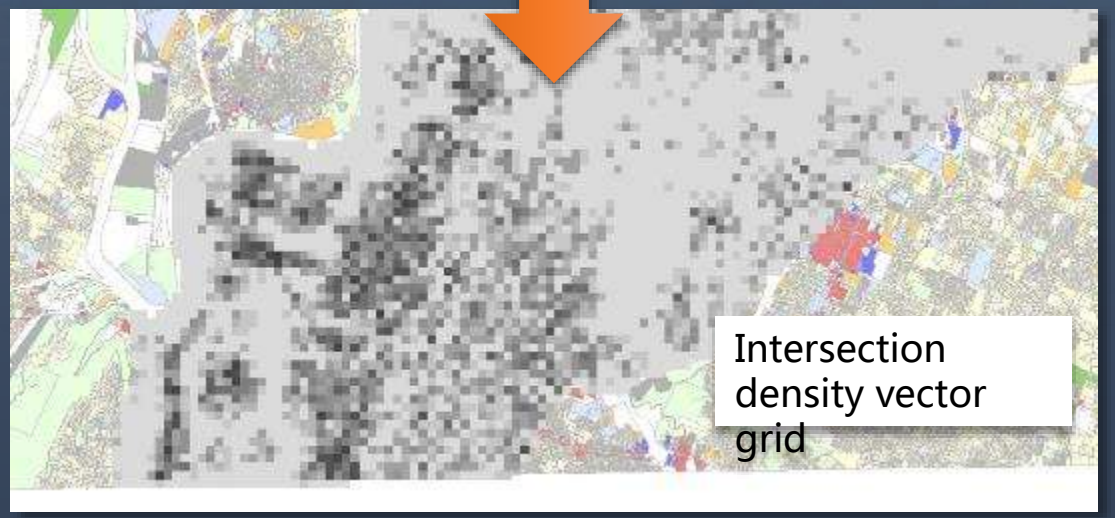
Three-pronged approach

Active transportation facilities

- Bicycle level of service
- Parks and open space
- Trails
- Transit stops
- Sidewalks

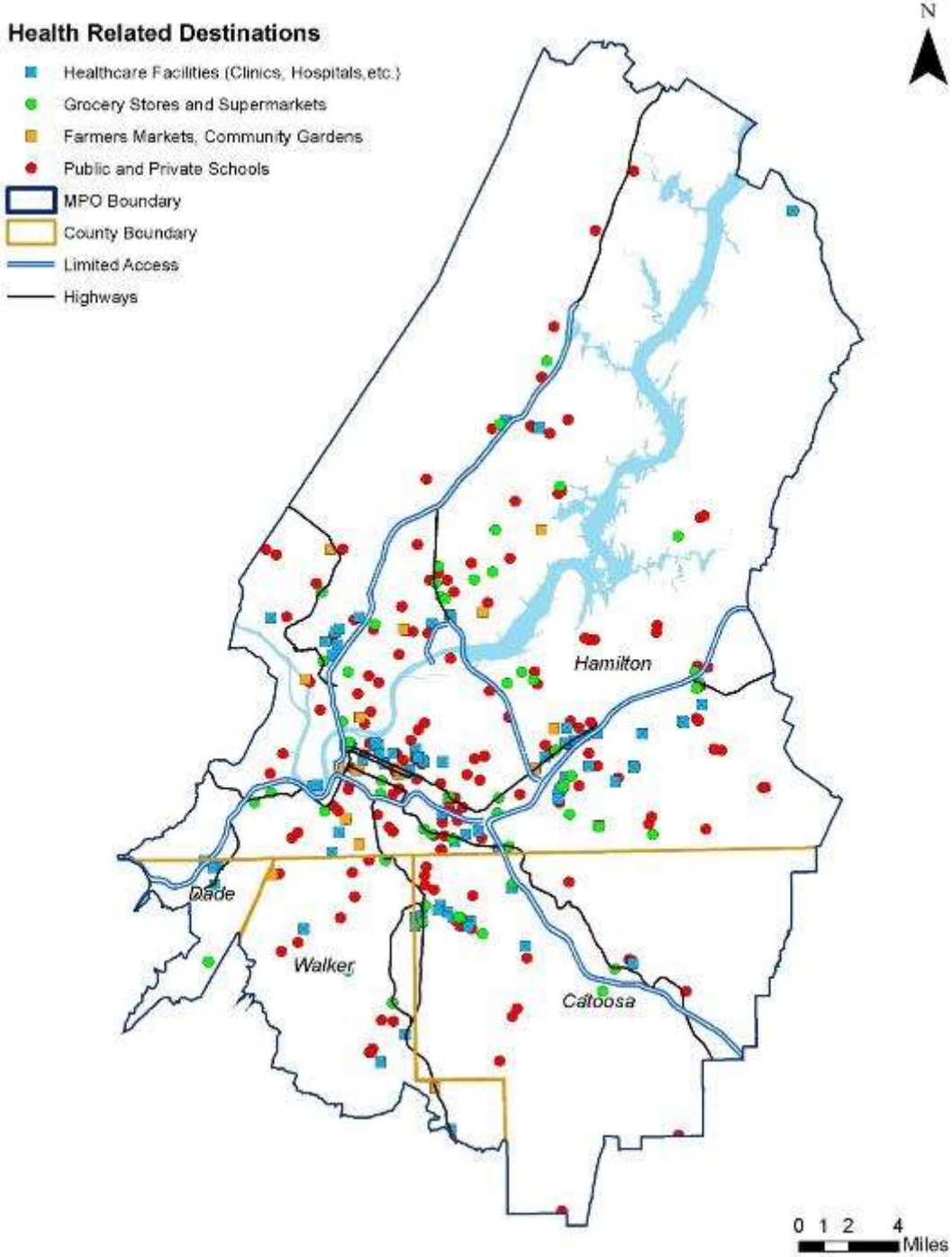

Active Transportation Facilities
Streets with Bicycle LOS of B or better
Parks, Recreation and Open Space
Trails (Hamilton County only)
CARTA Transit Stops
MPO Boundary
County Boundary
Limited Access
Highways
N
Hamilton
Dade
Walker
Catoosa
0 1 2 4
Miles

Intersection density as a proxy for sidewalks?



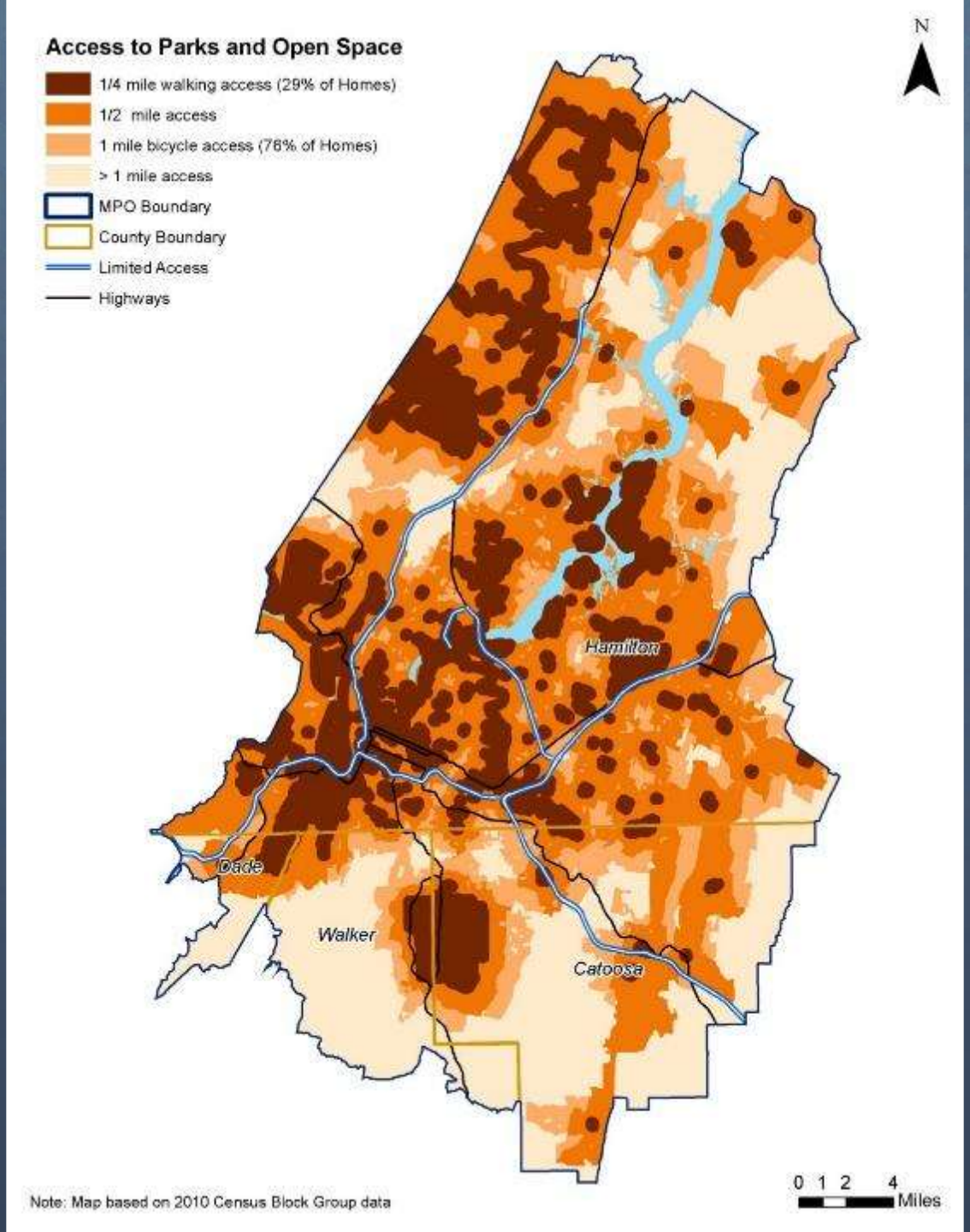
Health destinations

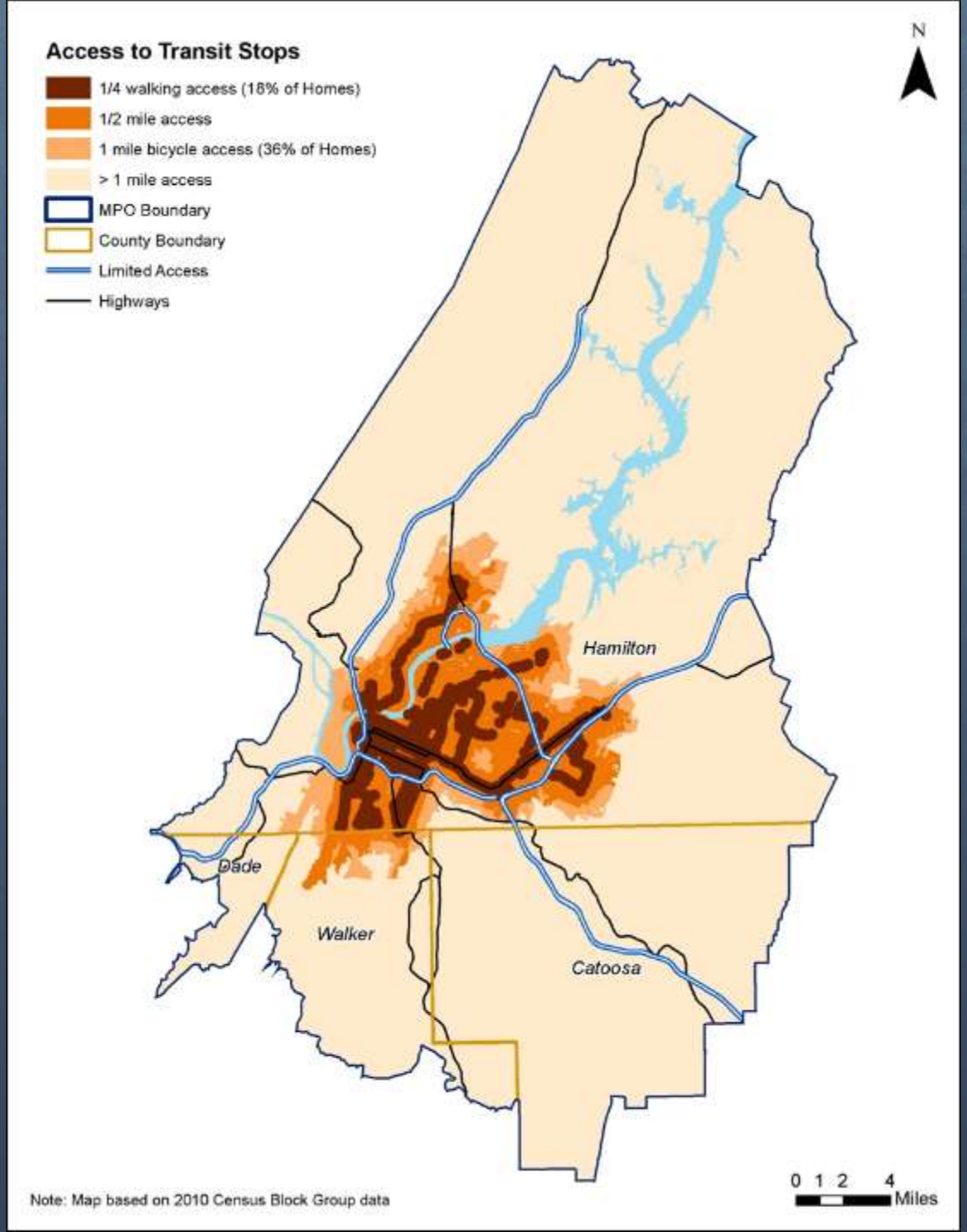
- Healthcare facilities
- Grocery stores and supermarkets
- Farmers markets, community gardens and mobile market sites
- Public and private schools (K-12)

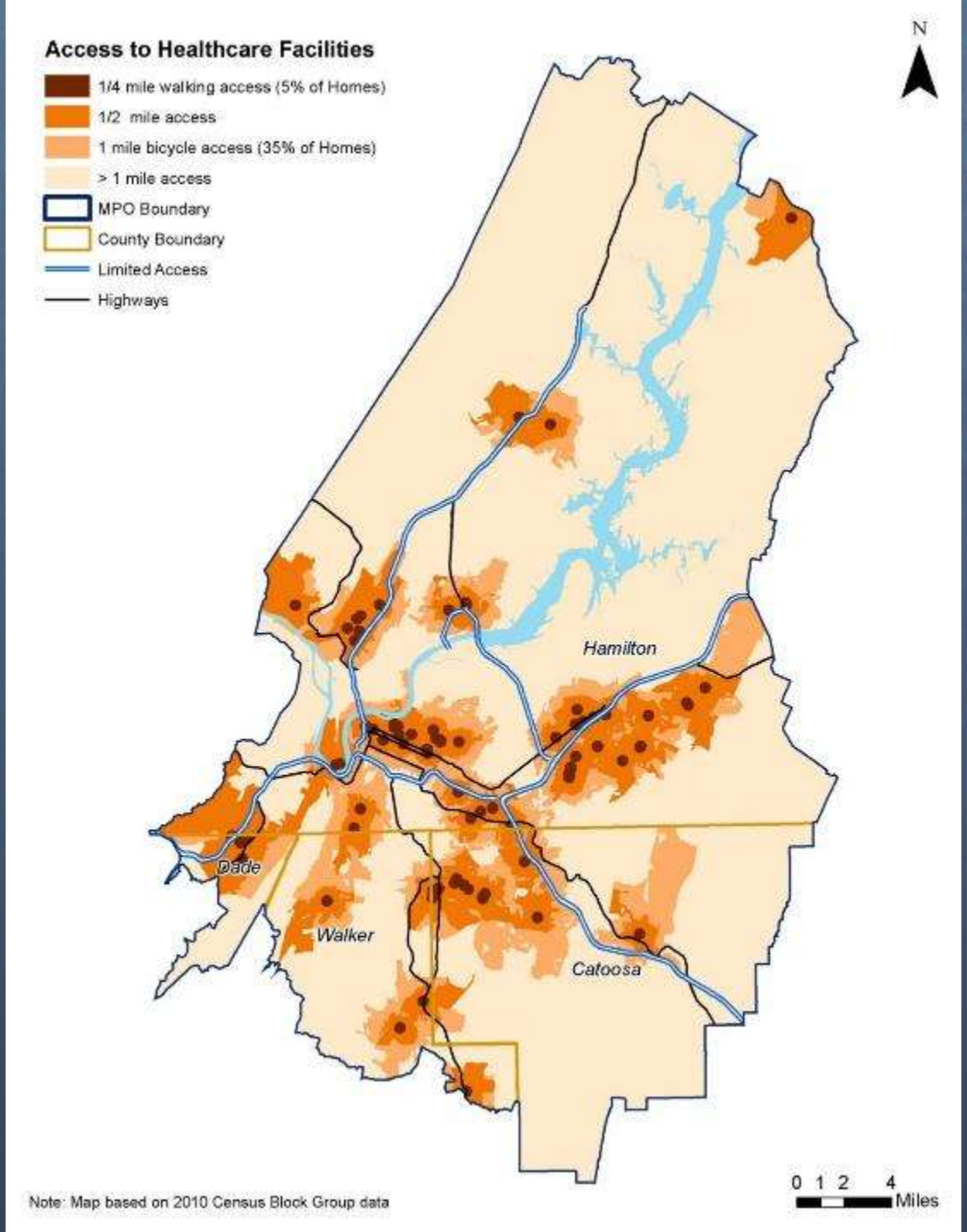

Health Related Destinations
Healthcare Facilities (Clinics, Hospitals,etc.)
Grocery Stores and Supermarkets
Farmers Markets, Community Gardens
Public and Private Schools
MPO Boundary
County Boundary
Limited Access
Highways
N
Hamilton
Dade
Walker
Catoosa
0 1 2 4
Miles

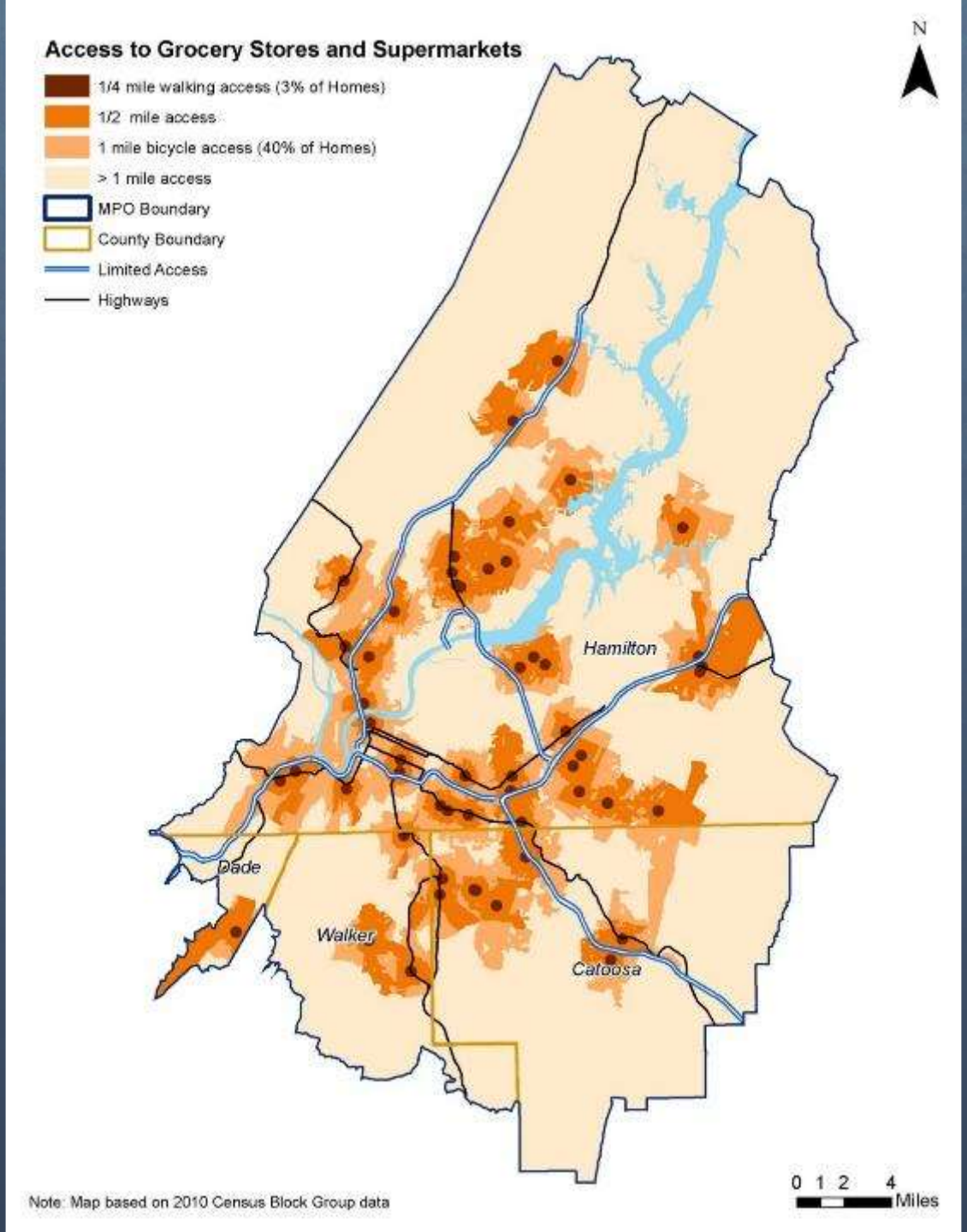
Defining accessibility

"The sovereign invigorator of the body is exercise, and of all the exercises walking is the best." Thomas Jefferson

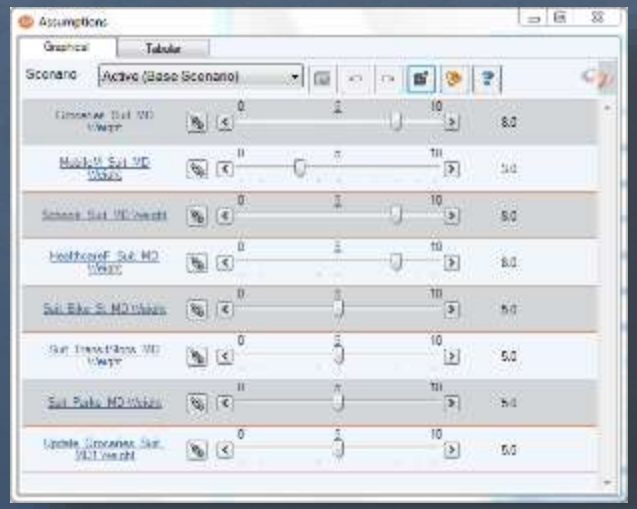

Access to Parks and Open Space
1/4 mile walking access (29% of Homes)
1/2 mile access
1 mile bicycle access (76% of Homes)
> 1 mile access
MPO Boundary
County Boundary
Limited Access
Highways
N
Hamilton
Dade
Walker
Catoosa
0 1 2 4
Miles
Note: Map based on 2010 Census Block Group data

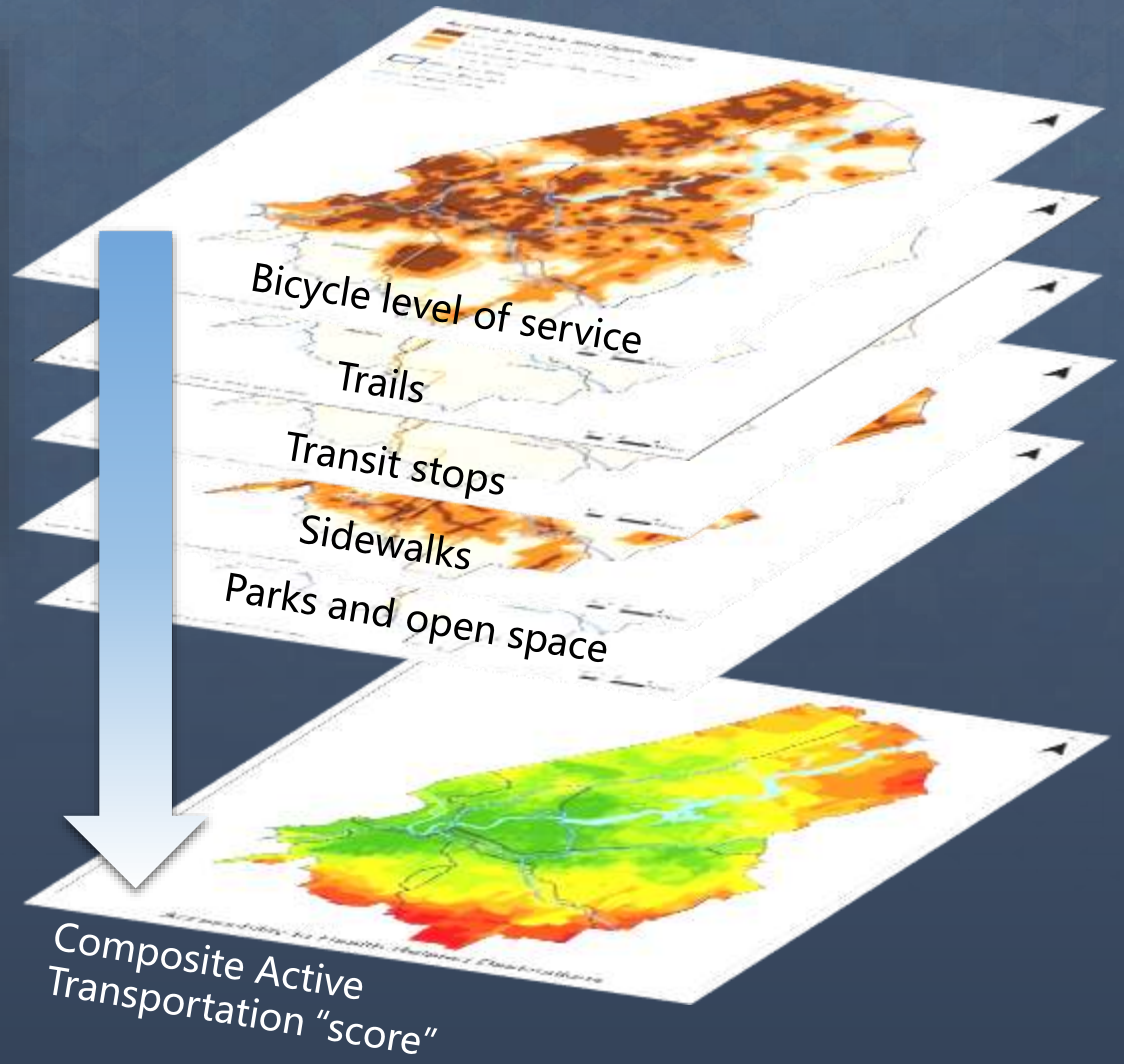

Access to Transit Stops
1/4 walking access (18% of Homes)
1/2 mile access
1 mile bicycle access (36% of Homes)
> 1 mile access
MPO Boundary
County Boundary
Limited Access
Highways
N
Hamilton
Dade
Walker
Catoosa
0 1 2 4
Miles
Note: Map based on 2010 Census Block Group data


Access to Healthcare Facilities
1/4 mile walking access (5% of Homes)
1/2 mile access
1 mile bicycle access (35% of Homes)
> 1 mile access
MPO Boundary
County Boundary
Limited Access
Highways
N
Hamilton
Dade
Walker
Catoosa
0 1 2 4
Miles
Note: Map based on 2010 Census Block Group data


Access to Grocery Stores and Supermarkets
1/4 mile walking access (3% of Homes)
1/2 mile access
1 mile bicycle access (40% of Homes)
> 1 mile access
MPO Boundary
County Boundary
Limited Access
Highways
N
Hamilton
Dade
Walker
Catoosa
0 1 2 4
Miles
Note: Map based on 2010 Census Block Group data

Putting it all together

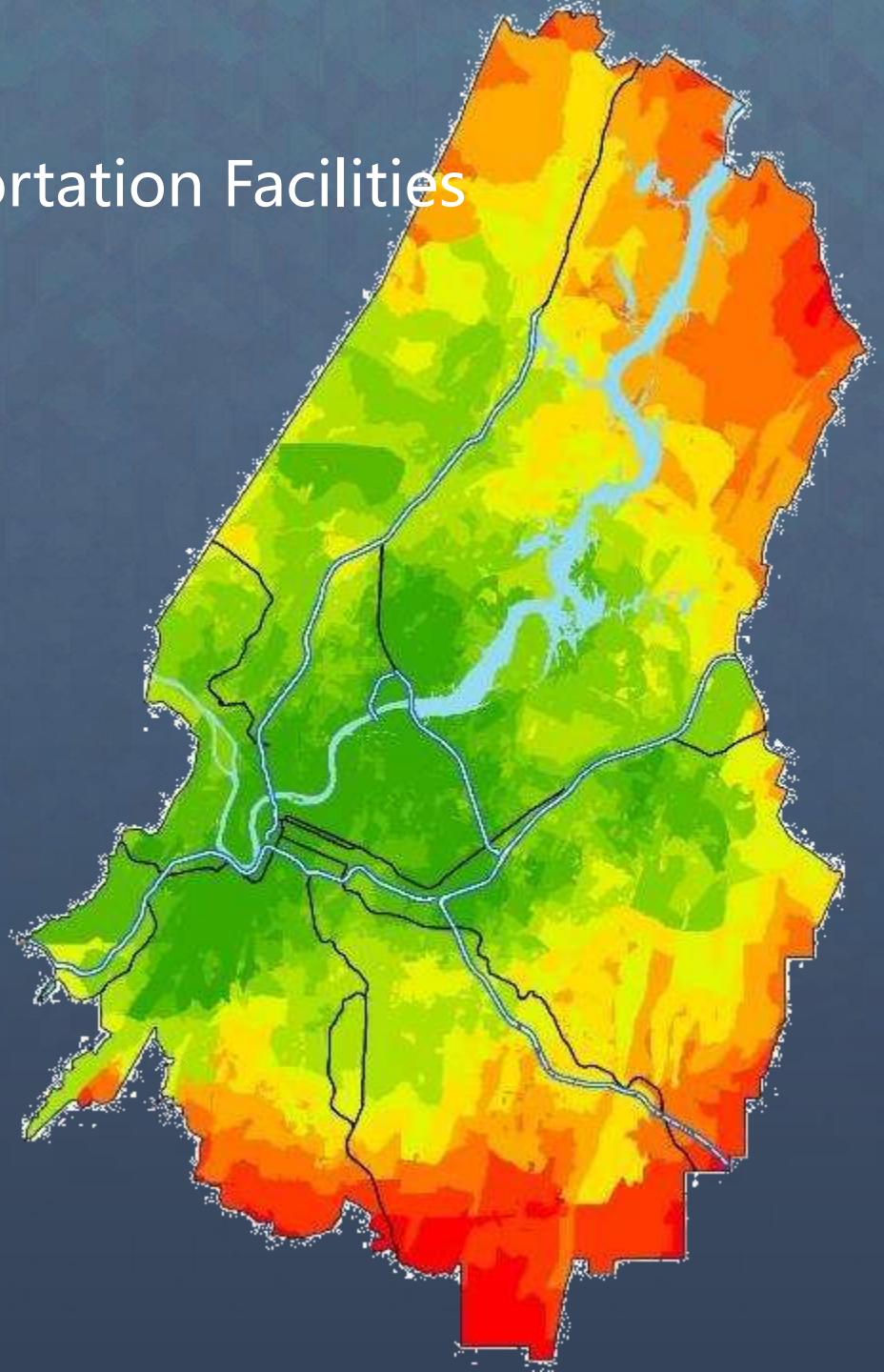




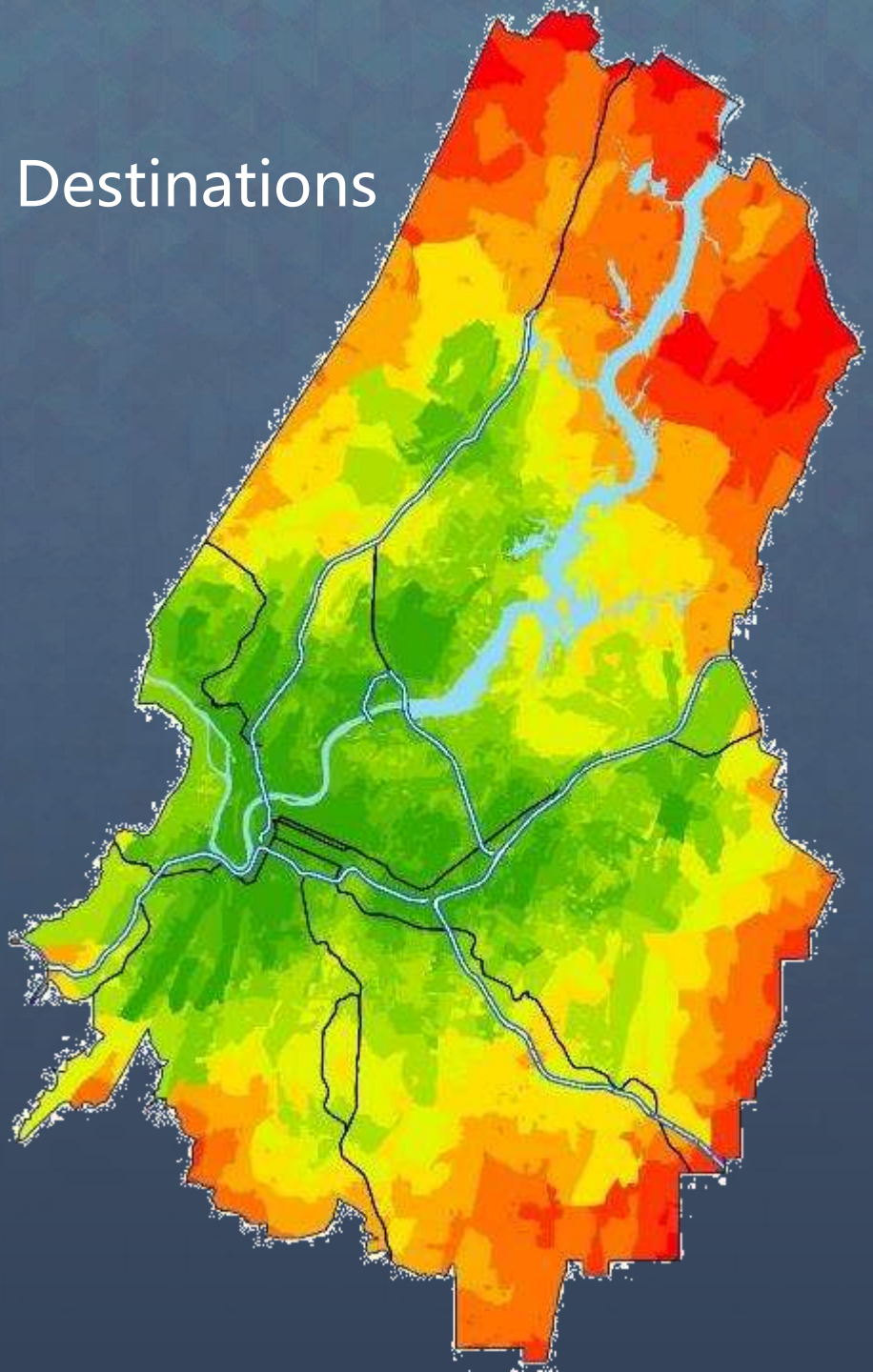
CommunityViz provides the ability to combine multiple layers of data simultaneously.

Access to Active Transportation Facilities Composite Score

Lower *Higher*



Access to Health-related Destinations Composite Score

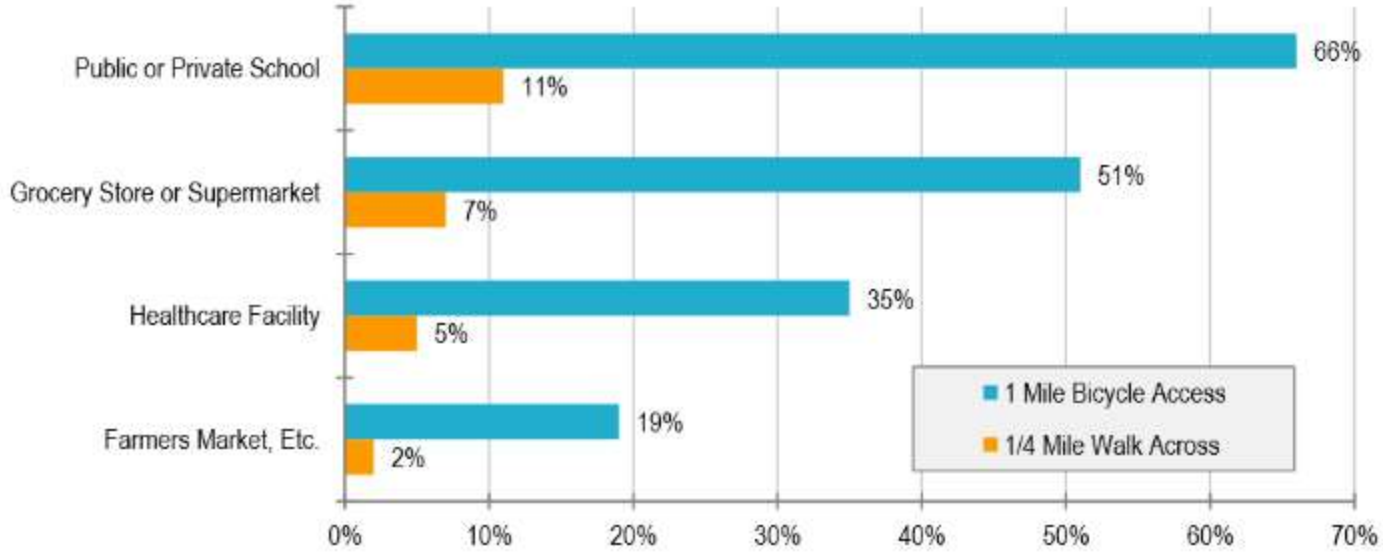


Informing the 2040 RTP

Average distance in region between homes and the nearest active transportation facility

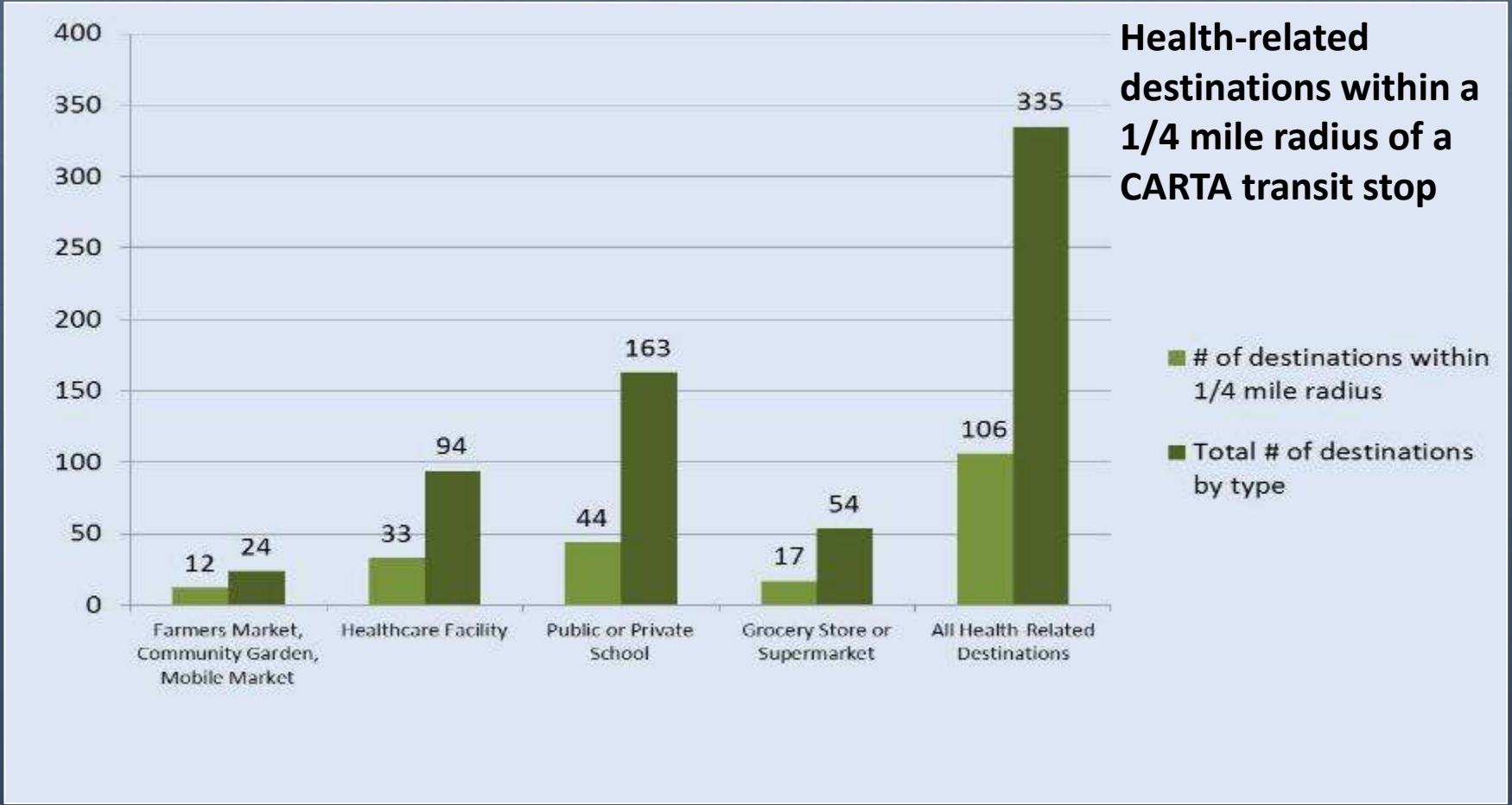
Informing the 2040 RTP

Figure 4.23 Walk Access and Bicycle Access – Percentage of Homes in the Region That Are within One-Quarter Mile and One Mile to Health-Related Destinations



2040 RTP REGIONAL TRANSPORTATION PLAN

Informing the 2040 RTP




Did you know...
The average home in the Chattanooga region is
1.6 miles
from the nearest trail,

Did you know…

BUT the average distance from a home to the nearest CARTA transit stop is 3.05 miles

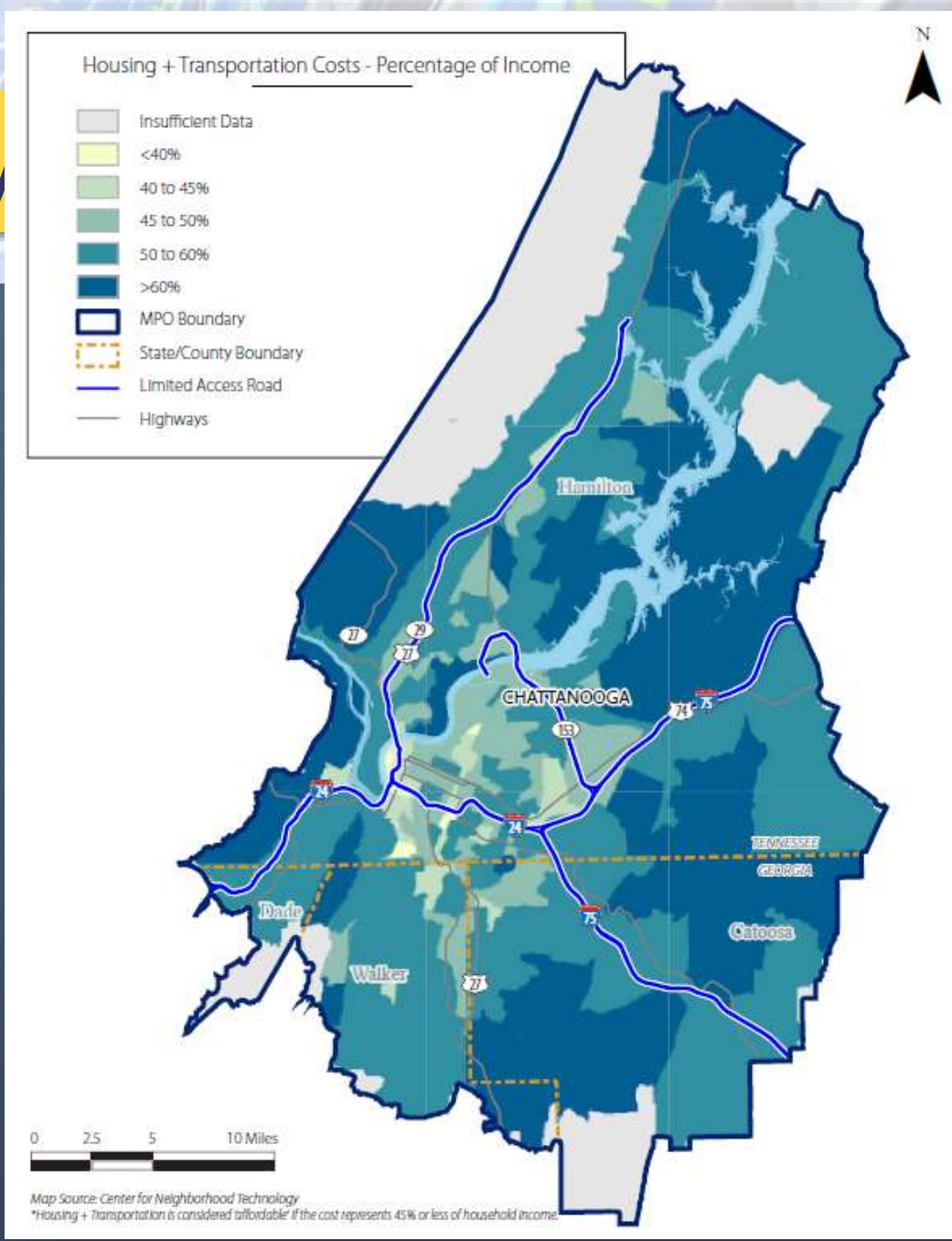
Did you know…

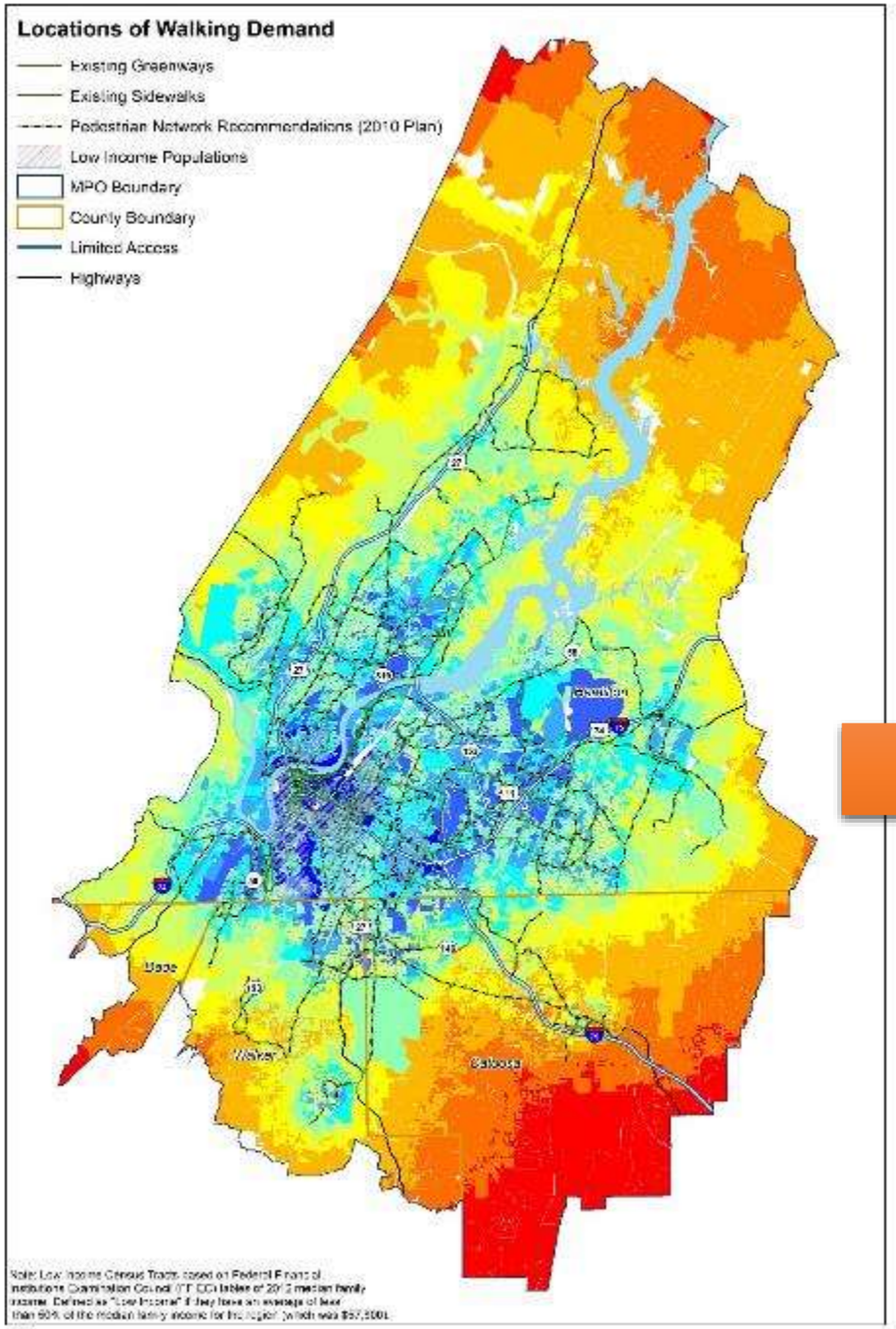
36% of all Health-Related Destinations are within a ¼ mile from a CARTA transit stop?

Within Chattanooga's "Food Desert" are :

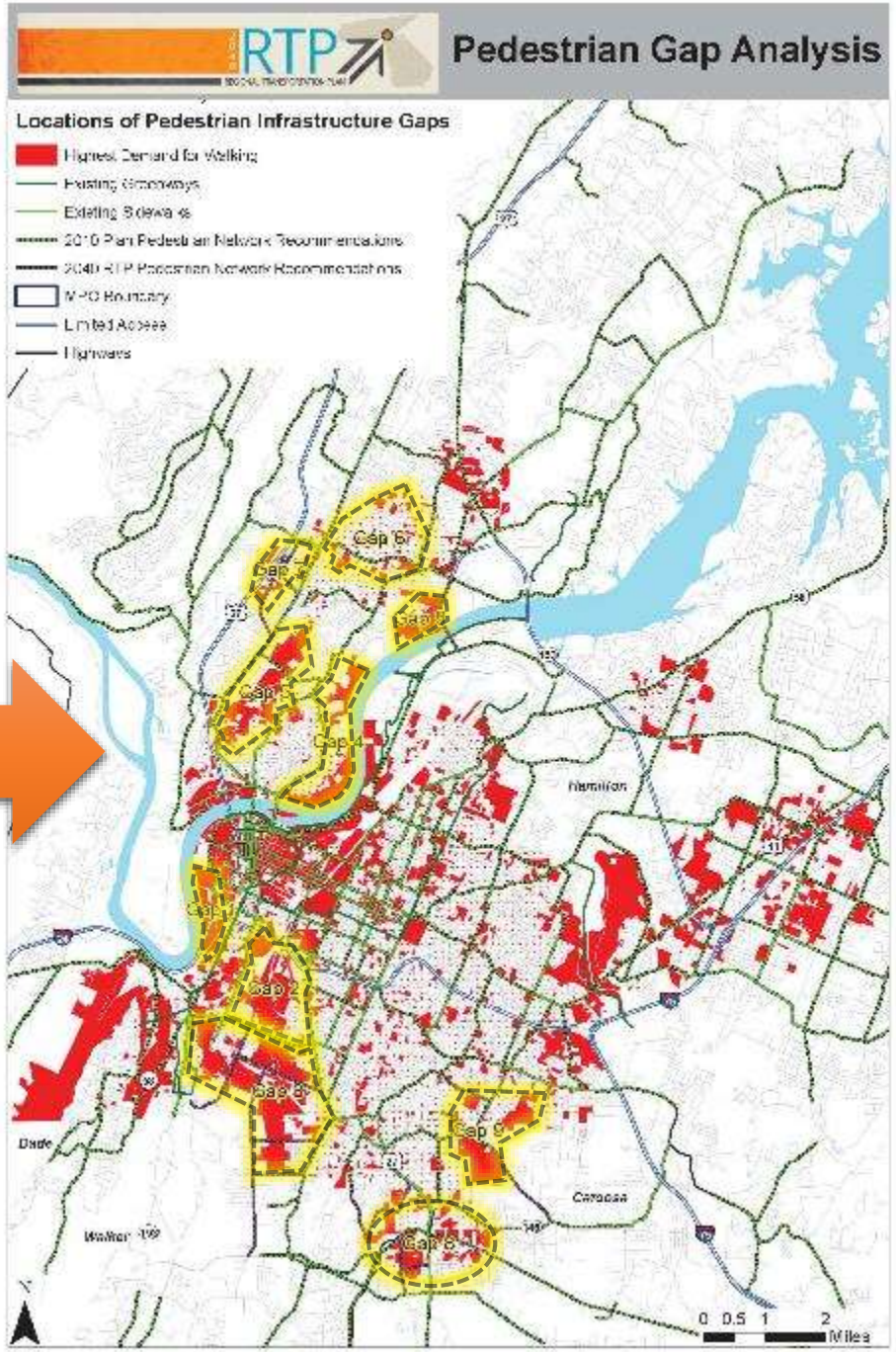
- 60,000 people and 2 grocery stores
- 64 corner stores and gas stations
- 23 fast food chain restaurants
- Neighborhoods of Westside, Alton Park, Orchard Knob, East Chattanooga

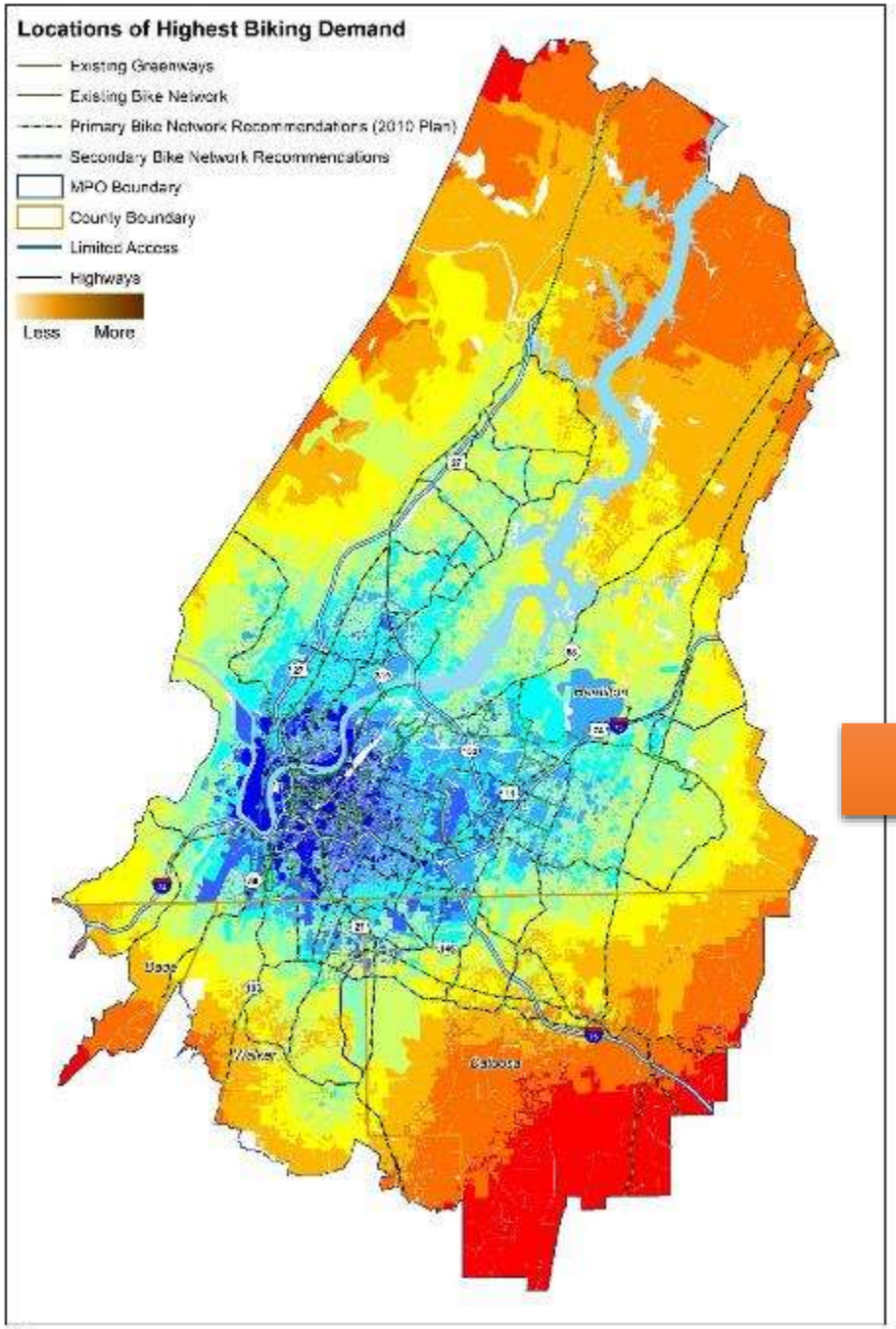
Affordability



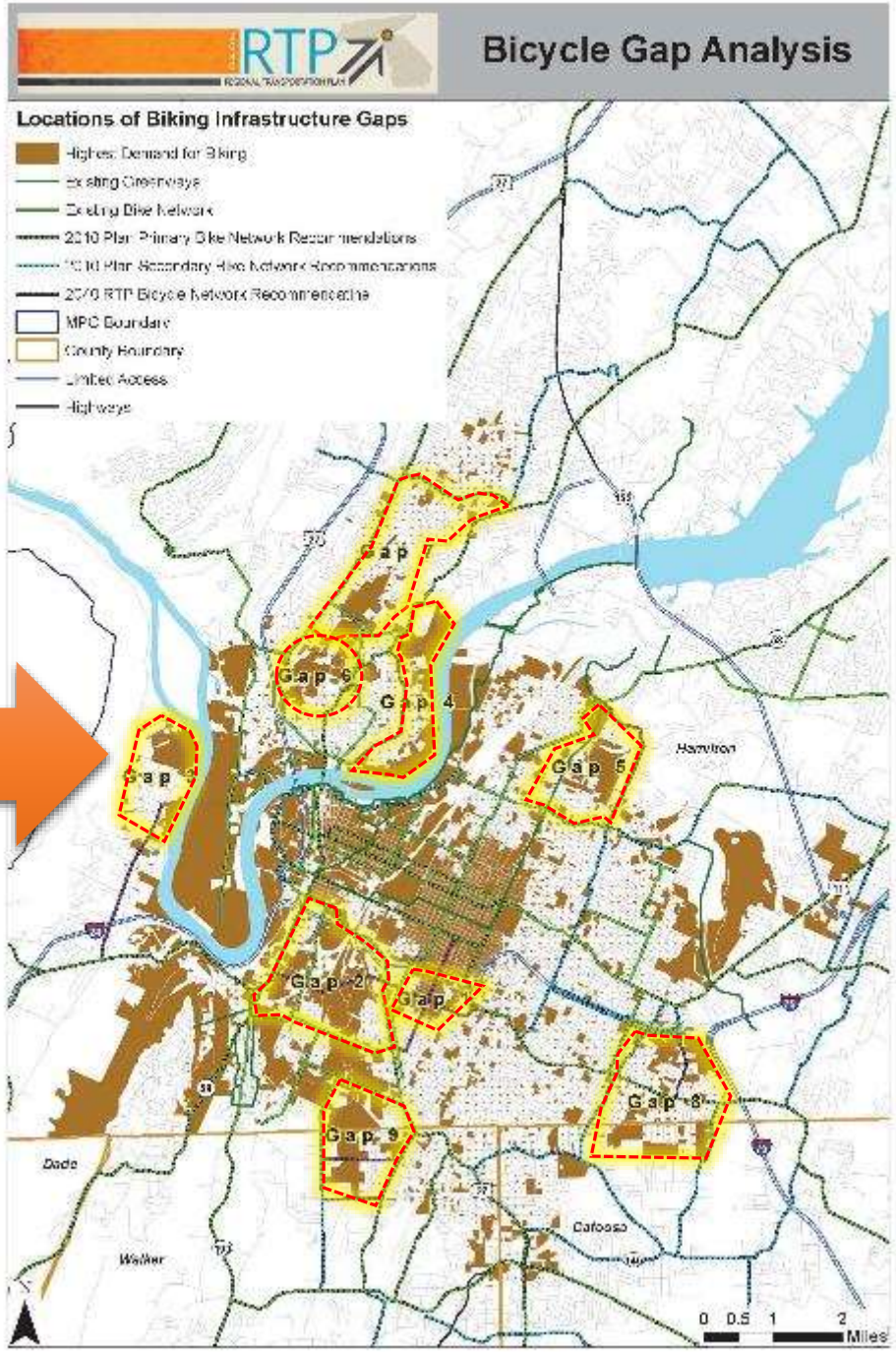


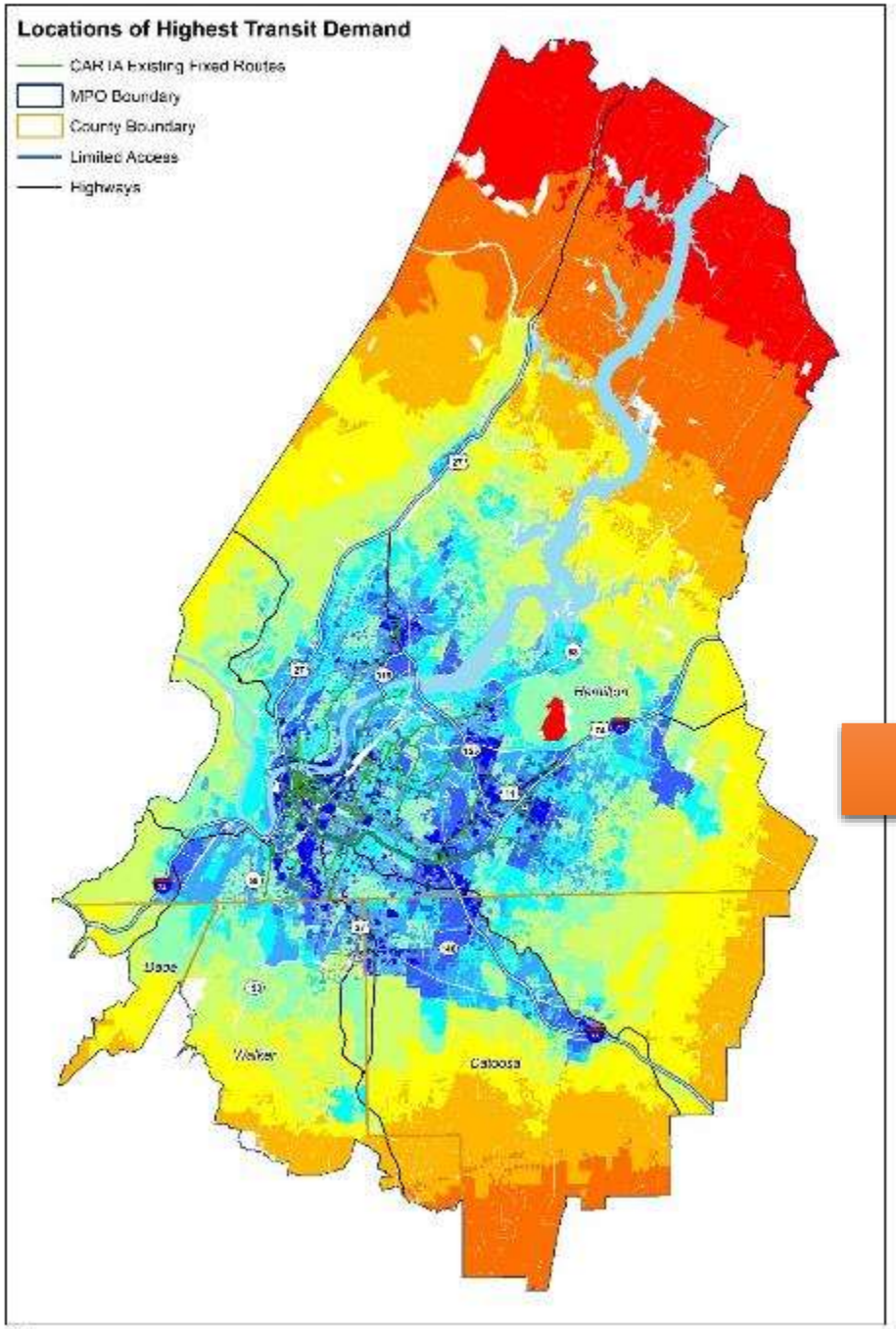
2040 RTP - Pedestrian Gap Analysis

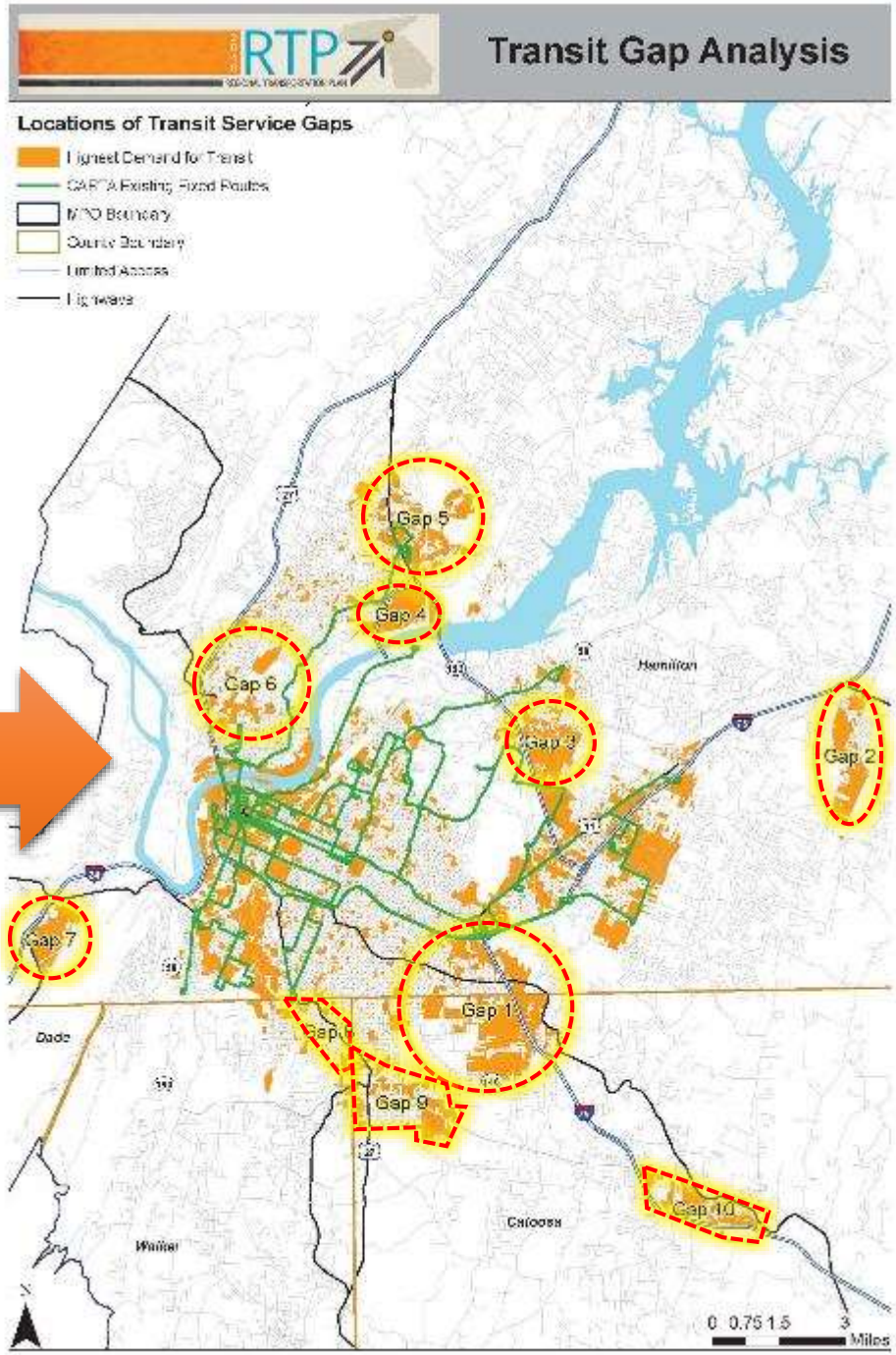




2040 RTP - Bicycle Gap Analysis



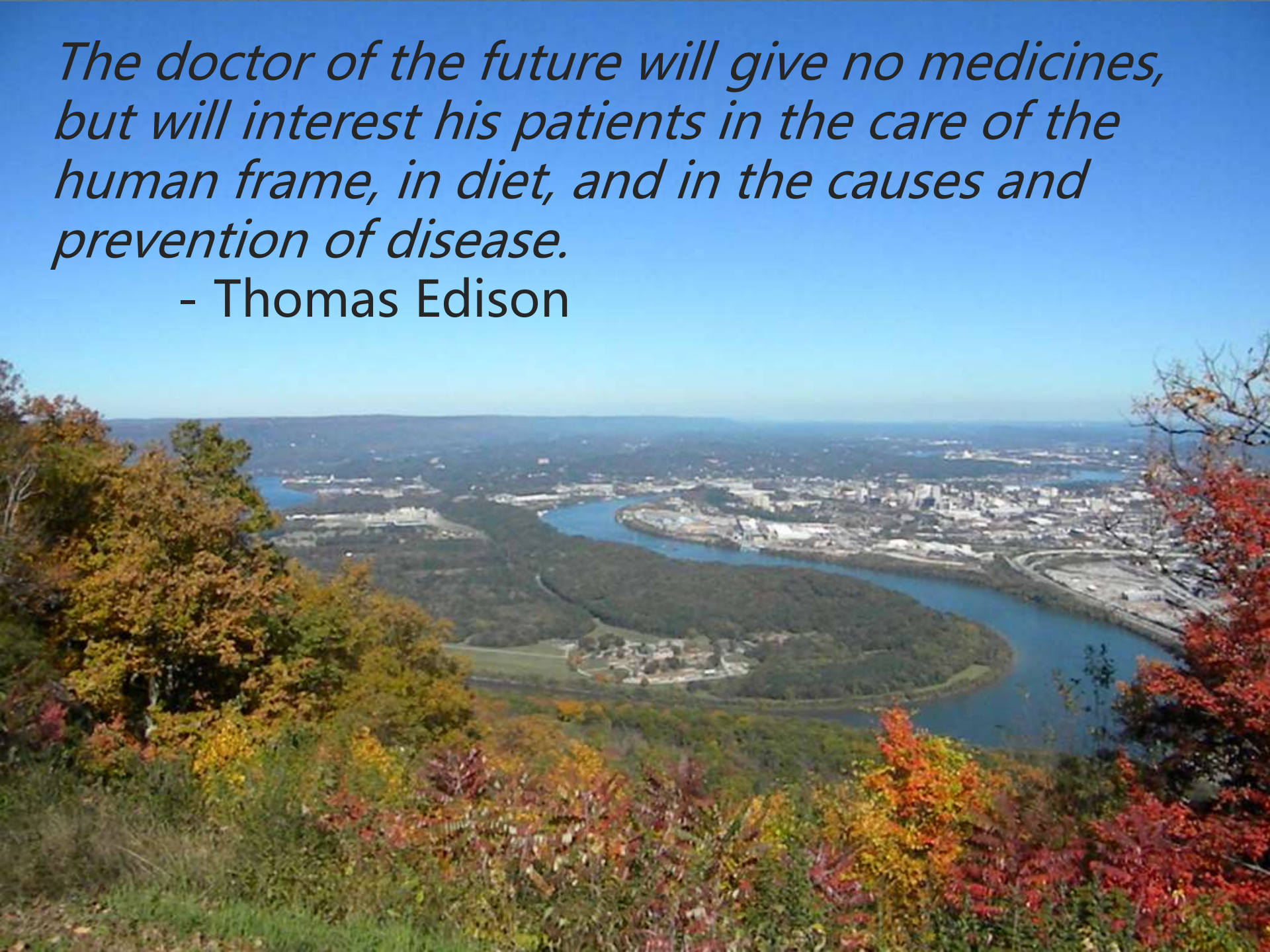




2040 RTP - Transit Gap Analysis

Final thoughts…

- Not a one-size-fits-all approach.
- Customize to your data and needs.
- Make it meaningful to your audience.


The doctor of the future will give no medicines, but will interest his patients in the care of the human frame, in diet, and in the causes and prevention of disease.
- Thomas Edison


MAY THE FORCE
BE WITH YOU

Thank you!