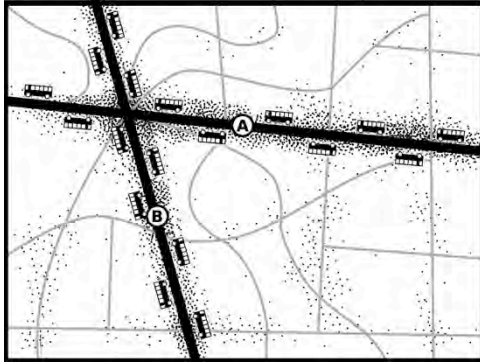


Existing Network, Performance, and Goals

Scudder Wagg, Jarrett Walker + Associates

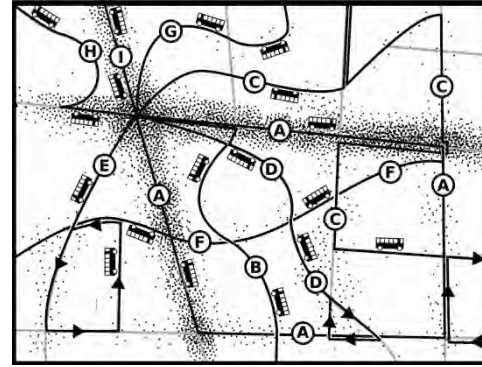


Ridership and Coverage Goals



“Think like a business.”

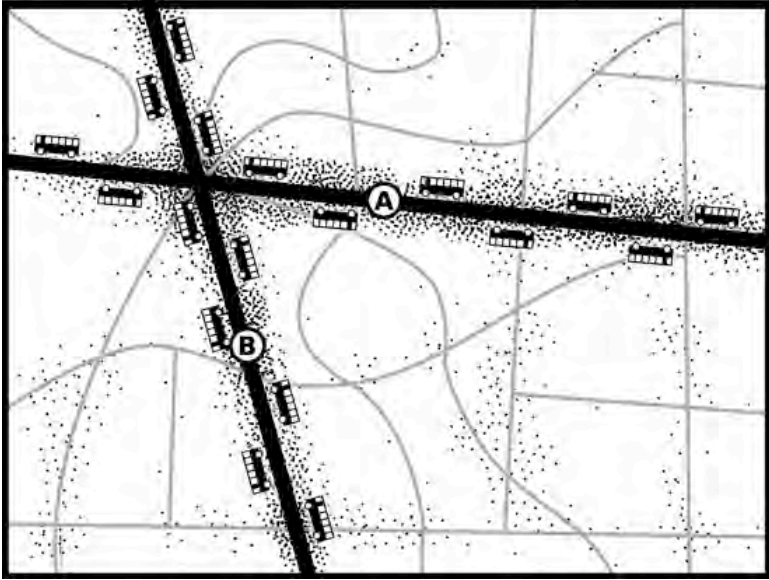
- Focus where ridership potential is highest.
- Supports dense redevelopment.
- Environmental benefits
- Congestion benefits
- Maximum job access.



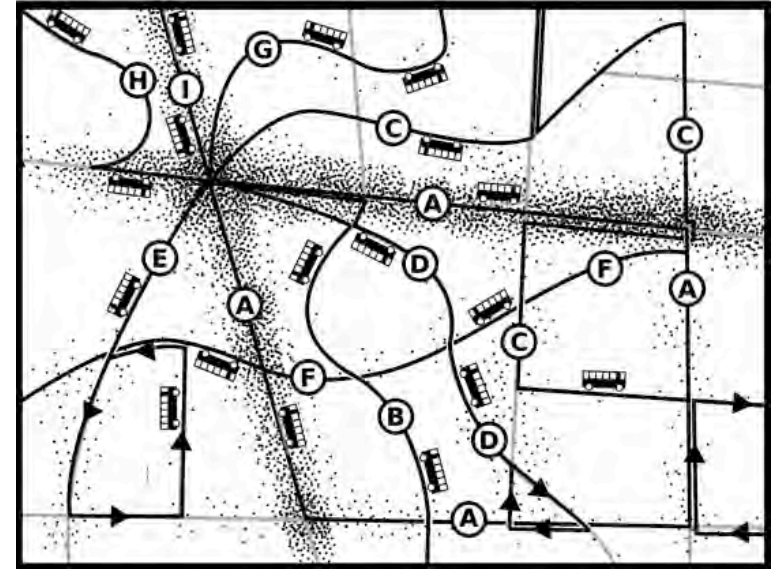
“Access for all”

- Services for suburban, hard-to-serve areas, despite low ridership.
- Lifeline access for everyone
- Political equity: Service to every neighborhood or electoral district.

So it helps to choose a point on the spectrum ...



Ridership Goal



Coverage Goal



2012 and 2017 Plan Goals

- Ridership:
 - Improving overall mobility
 - Encouraging transit-supportive land use
 - Providing positive impacts on air quality
- Coverage:
 - Improving transportation options
 - Providing geographic equity
- Other
 - Supporting improved capital facilities (Civility-Luxury Trade-off)

The Spectrum: Fixed Service to Demand Responsive



Frequent fixed route with paratransit



Fixed route with paratransit



Fixed route with paratransit deviations



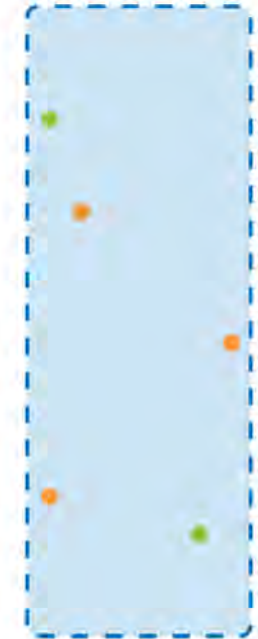
Fixed route with paratransit deviations and request-stops






Fixed route with flex zone



Demand-response zone and timed connection



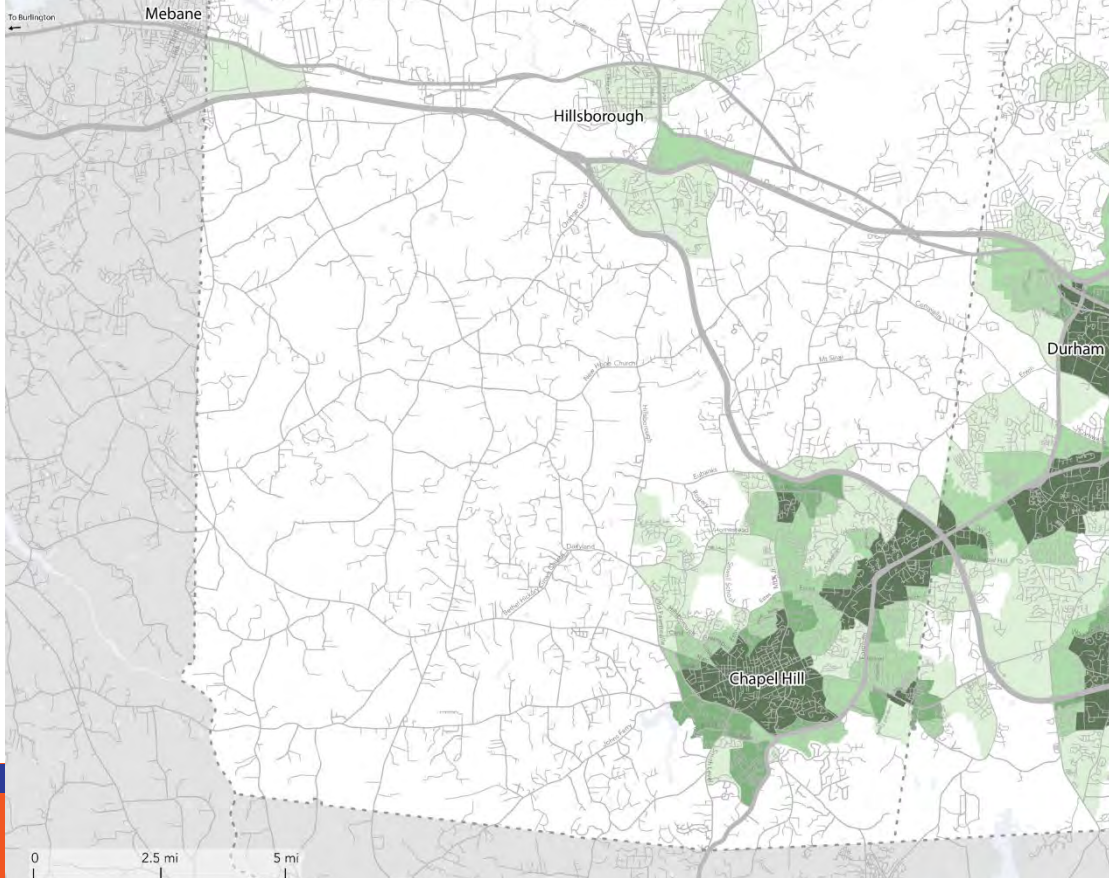
Demand-response (paratransit and general public)

-  Scheduled transit stops
-  Paratransit passengers
-  General public passengers

Orange County, North Carolina
Population Density

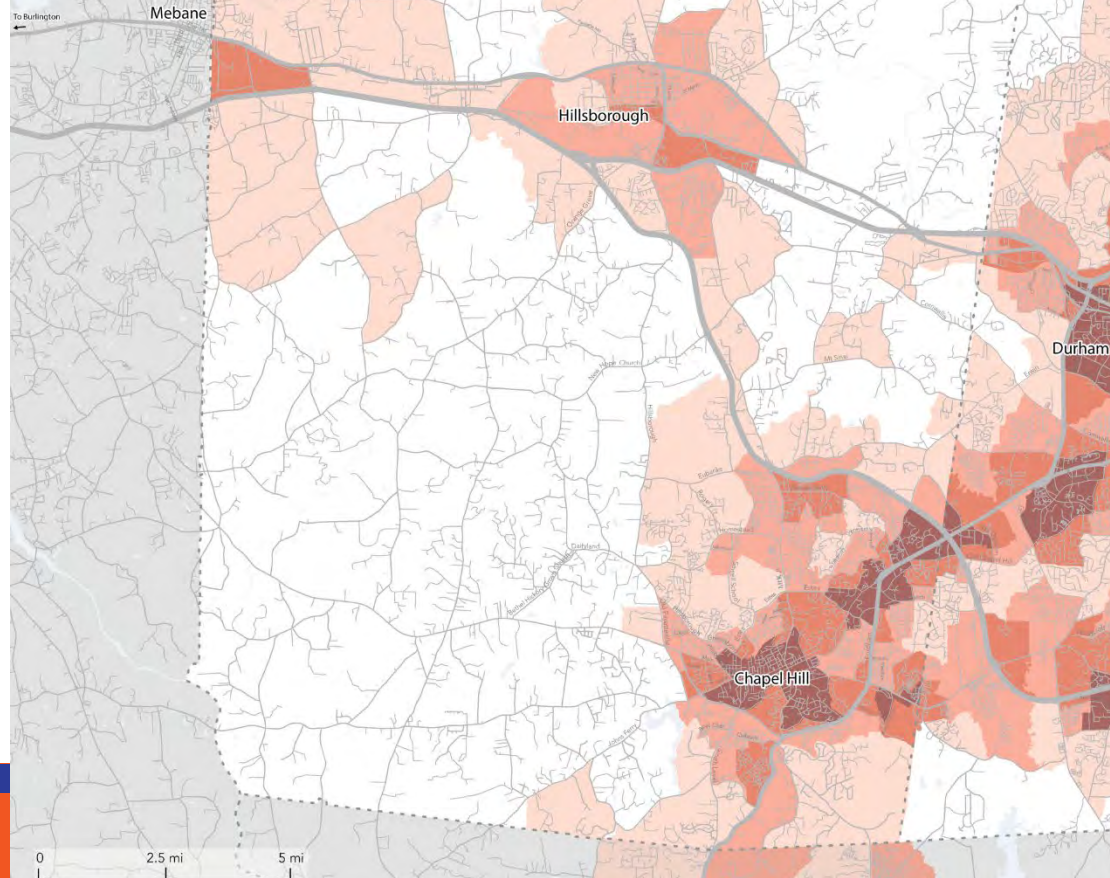
Residents per Square Mile

- Less than 1,500
- 1,501-3,000
- 3,001-4,500
- 4,500-6,000
- 6,001+



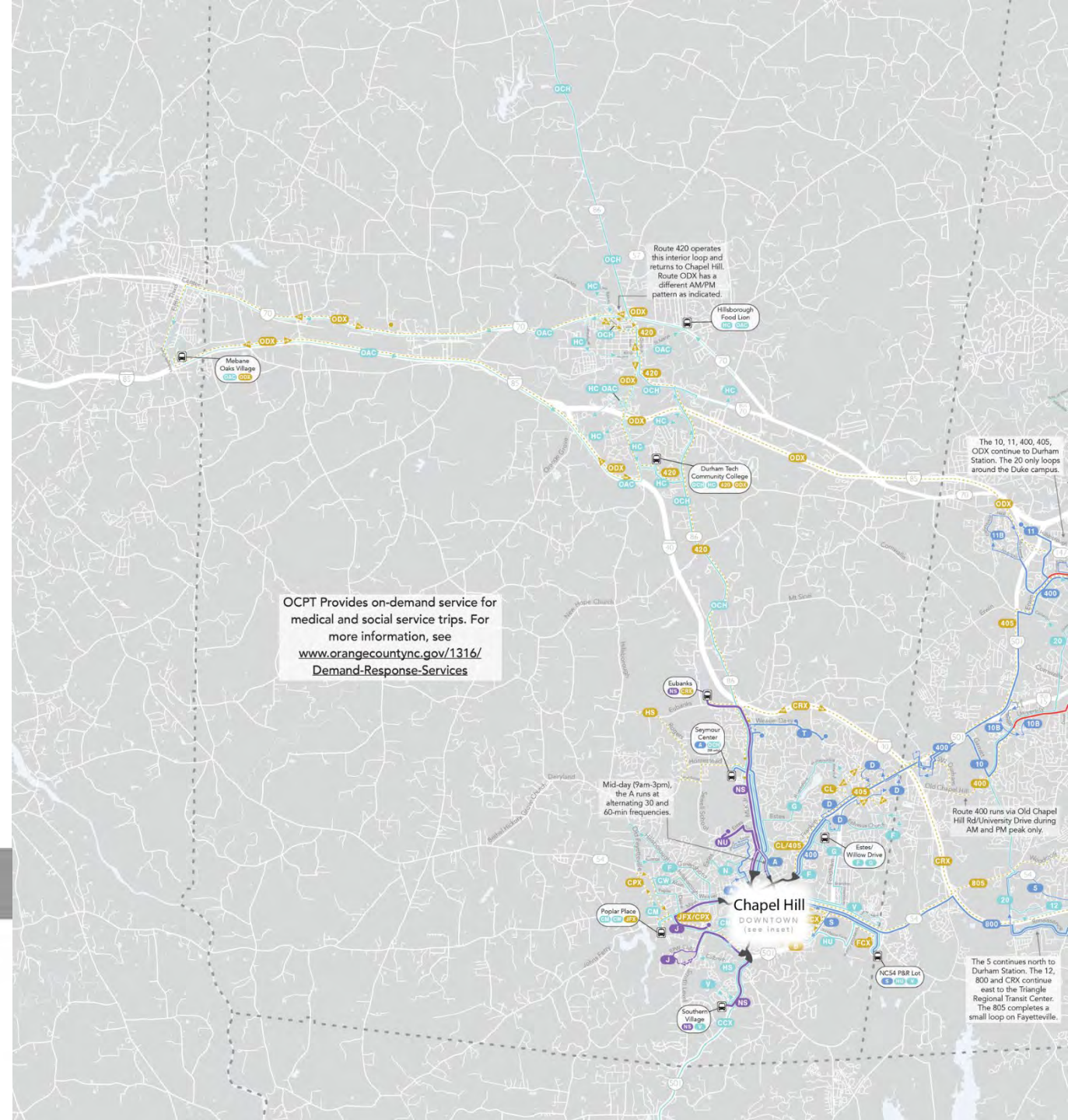
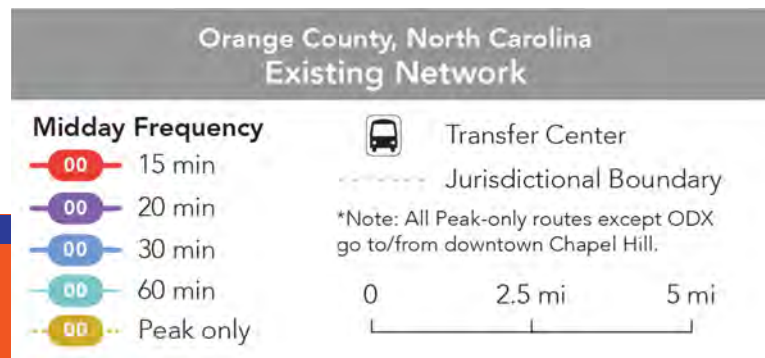
Orange County, North Carolina
Employment Density

- 0-25
- 25-200
- 200-750
- 750-2,000
- More than 2,001
- Outside study area



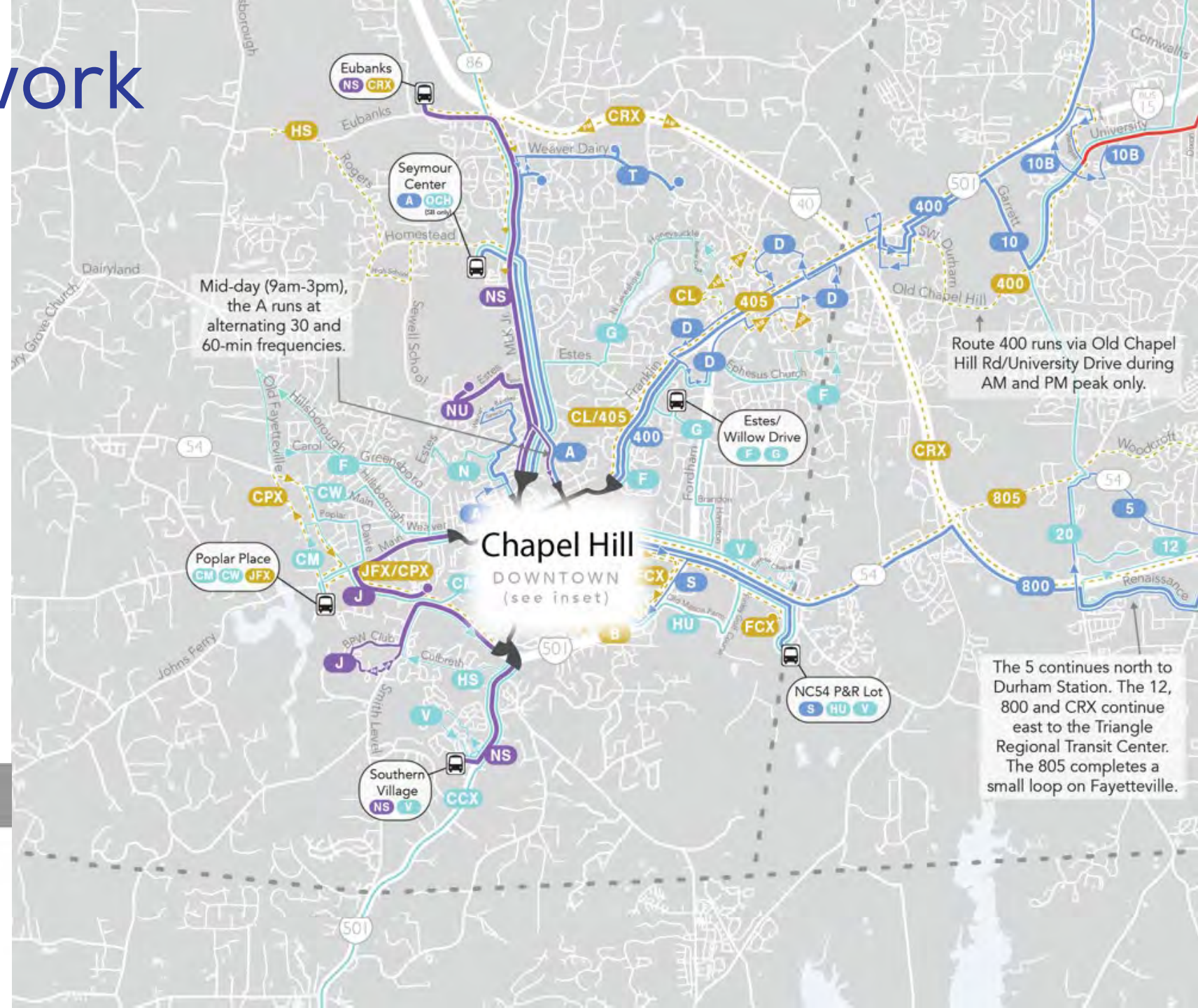
Existing Network

- Most service is in Chapel Hill and Carrboro
 - Because that's where most people and jobs are
 - And they pay for most service
- Remainder of county only has
 - Hourly service on three fixed routes (OCH/420, HC, OAC)
 - Peak service on one route (ODX)
 - On Demand Services for specific groups and/or at high cost










“Existing” Network

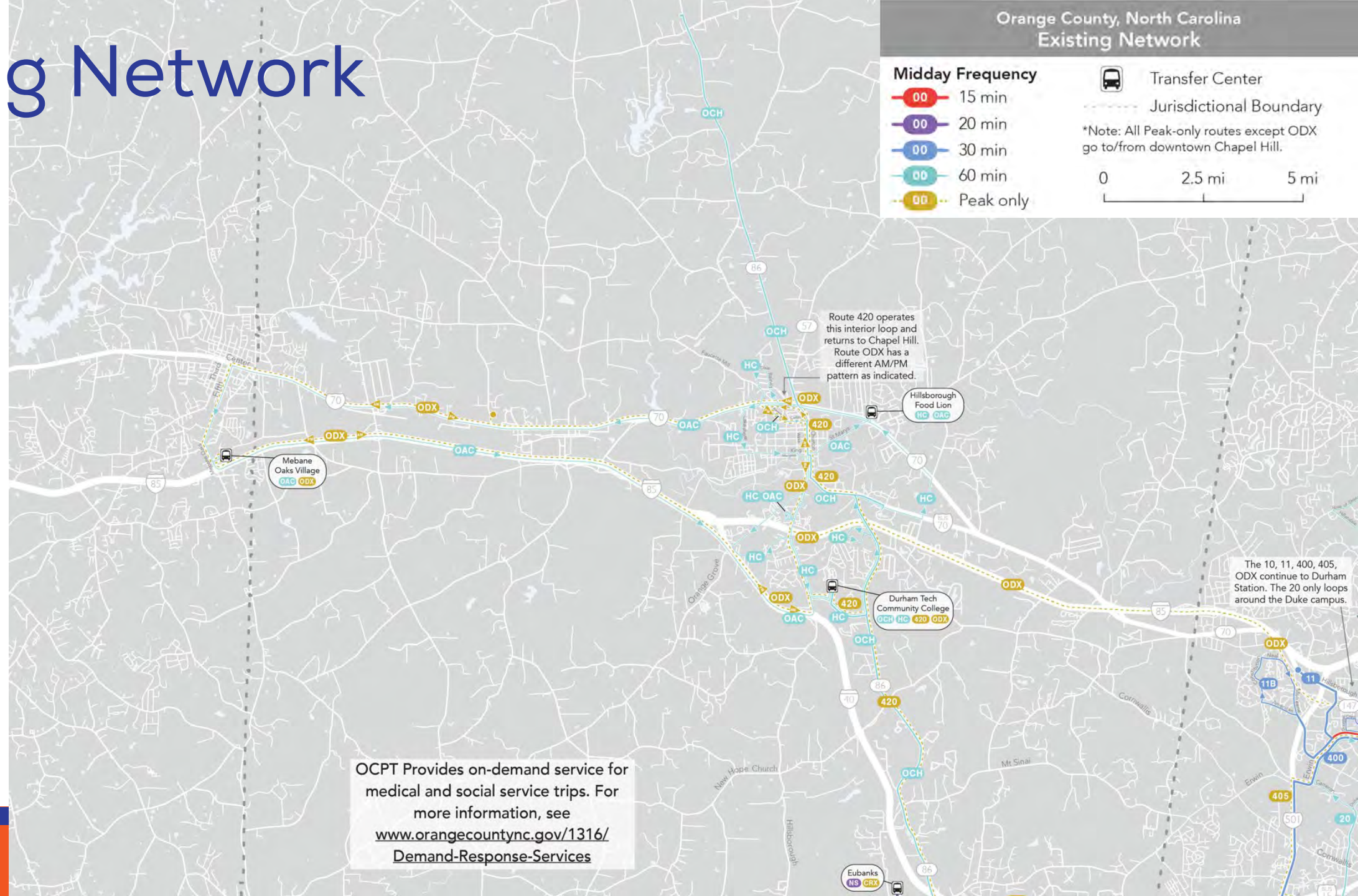
- Most service is in Chapel Hill and Carrboro
 - 80% of County jobs
 - 57% of County residents
 - Highest densities in the county
 - 15/501 and 54 corridors are major regional links



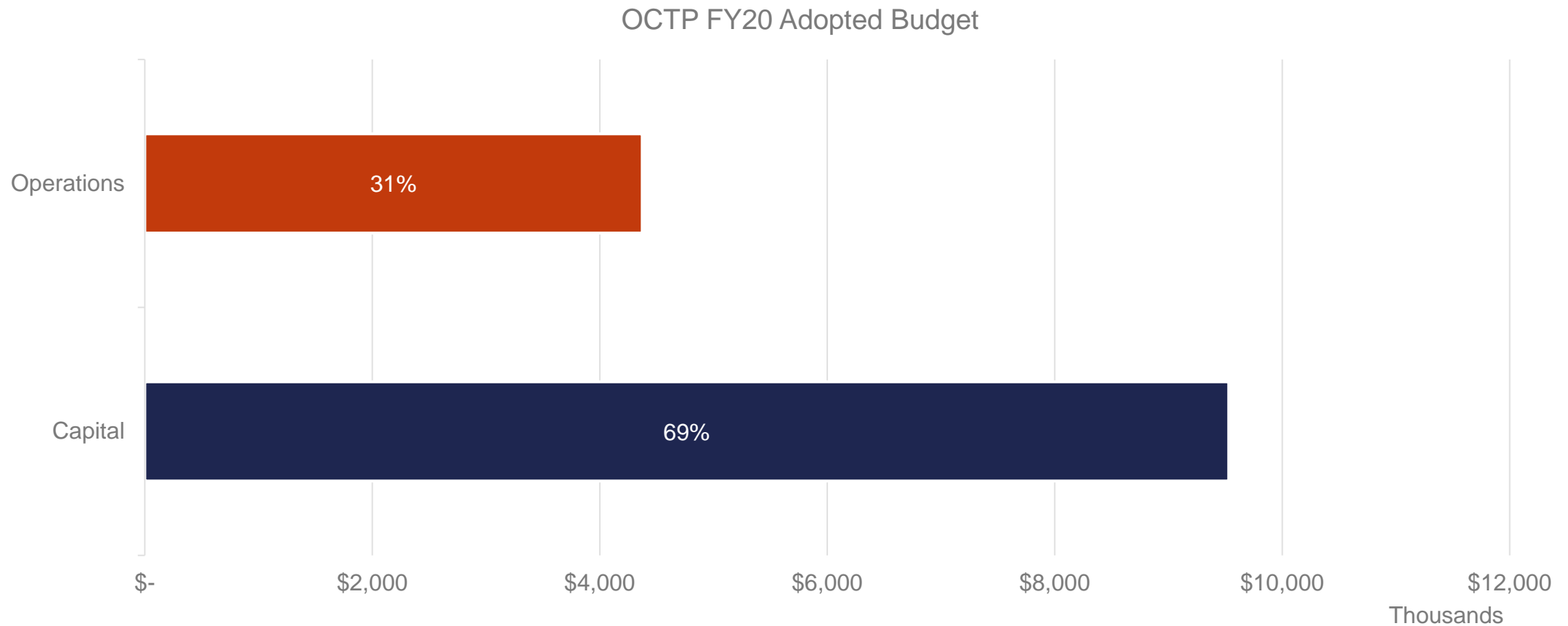
Orange County, North Carolina
Existing Network

 15 min	 Transfer Center
 20 min	 Jurisdictional Boundary
 30 min	<i>*Note: All Peak-only routes except ODX go to/from downtown Chapel Hill.</i>
 60 min	0 2.5 mi 5 mi
 Peak only	

Existing Network



Orange County Transit Plan Budgeted Funding (FY20)



Capital versus Operating

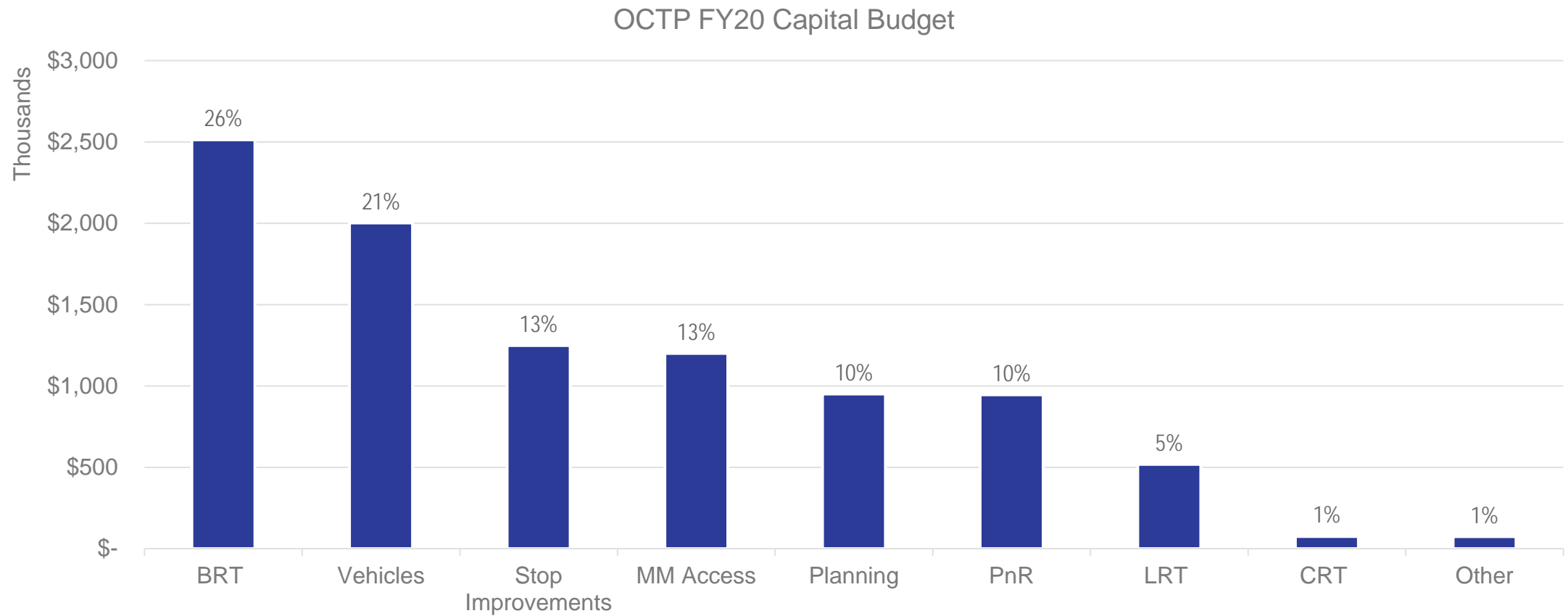
- Operating

- Provides the actual transit service
- Is hard to fund from other sources

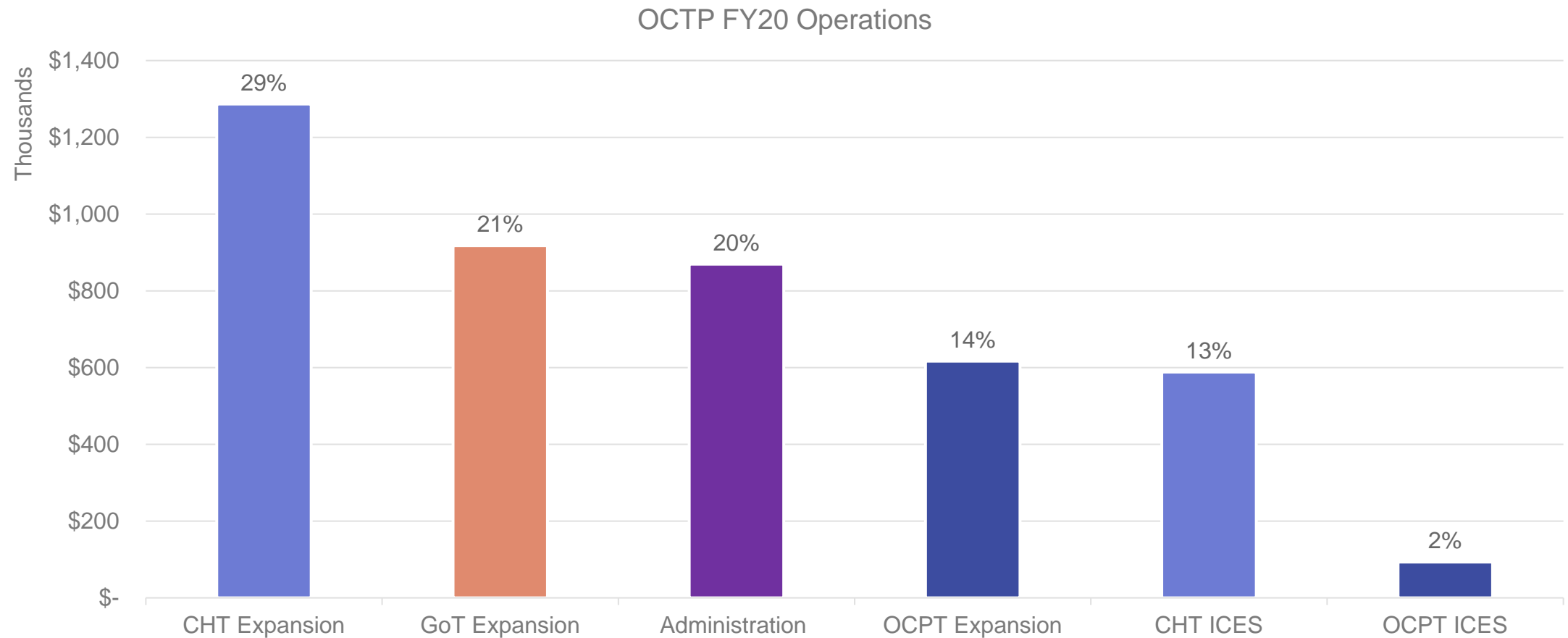
- Capital

- Necessary for long-term service provision (vehicles, garages)
- Can leverage other funding sources for high impact
- Can improve operating cost or service levels
 - speed and reliability
- Can build ridership
 - sidewalk improvements, shelters
- Highly visual

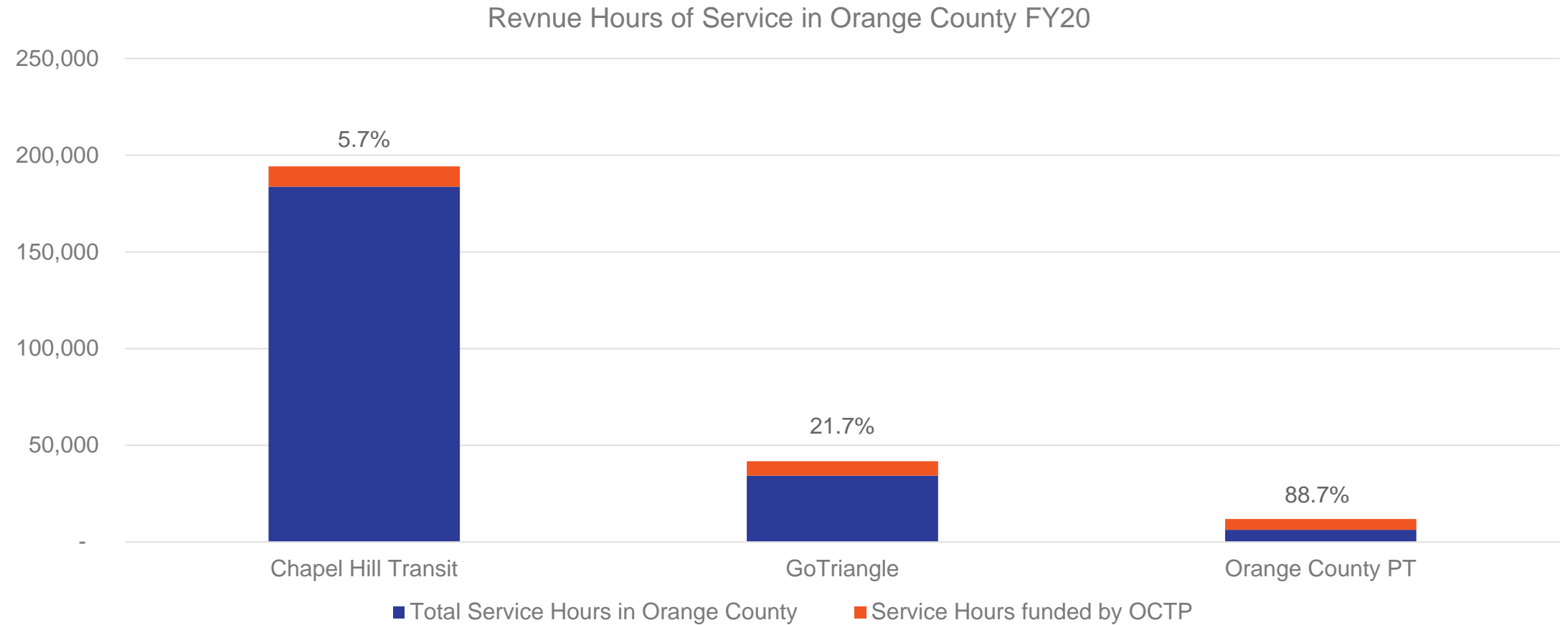
Where are capital funds going?



Where are operating funds going?

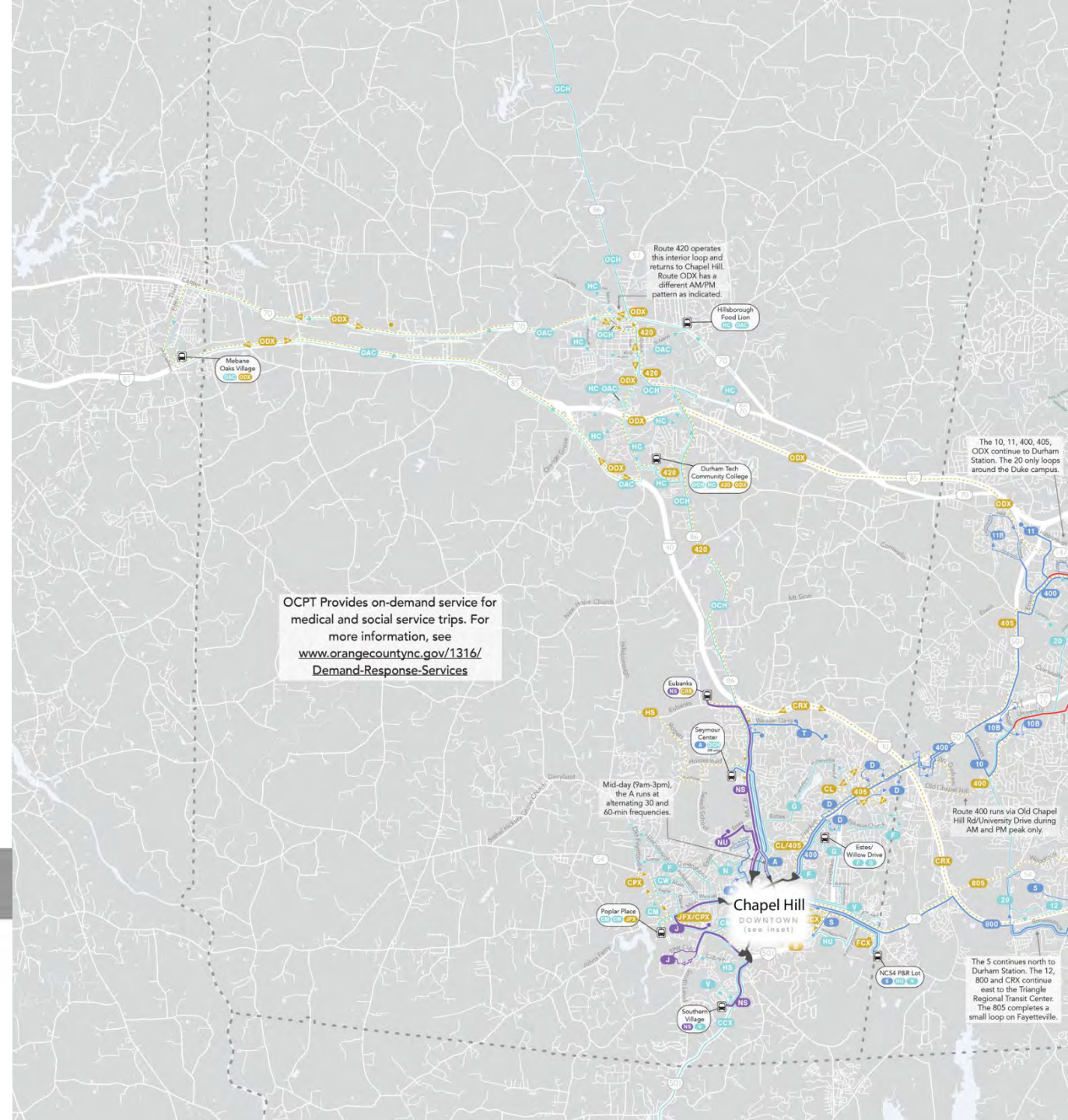
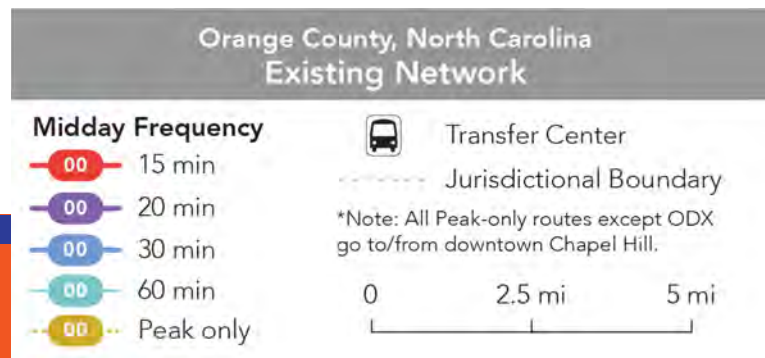


How much service is funded by OCTP?



Existing Network

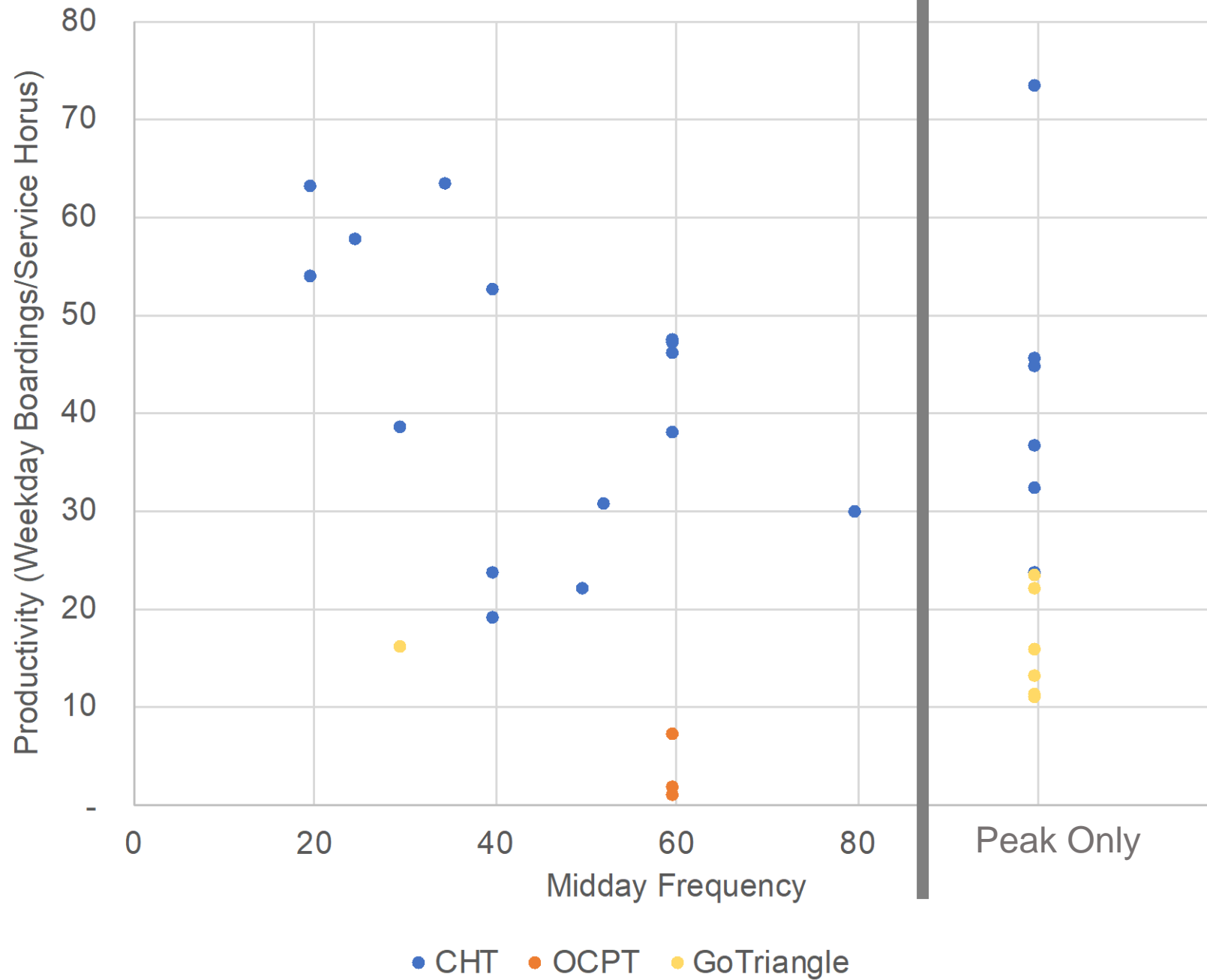
- Only 10% of the service hours on this map are paid for by the Orange County Transit Plan.



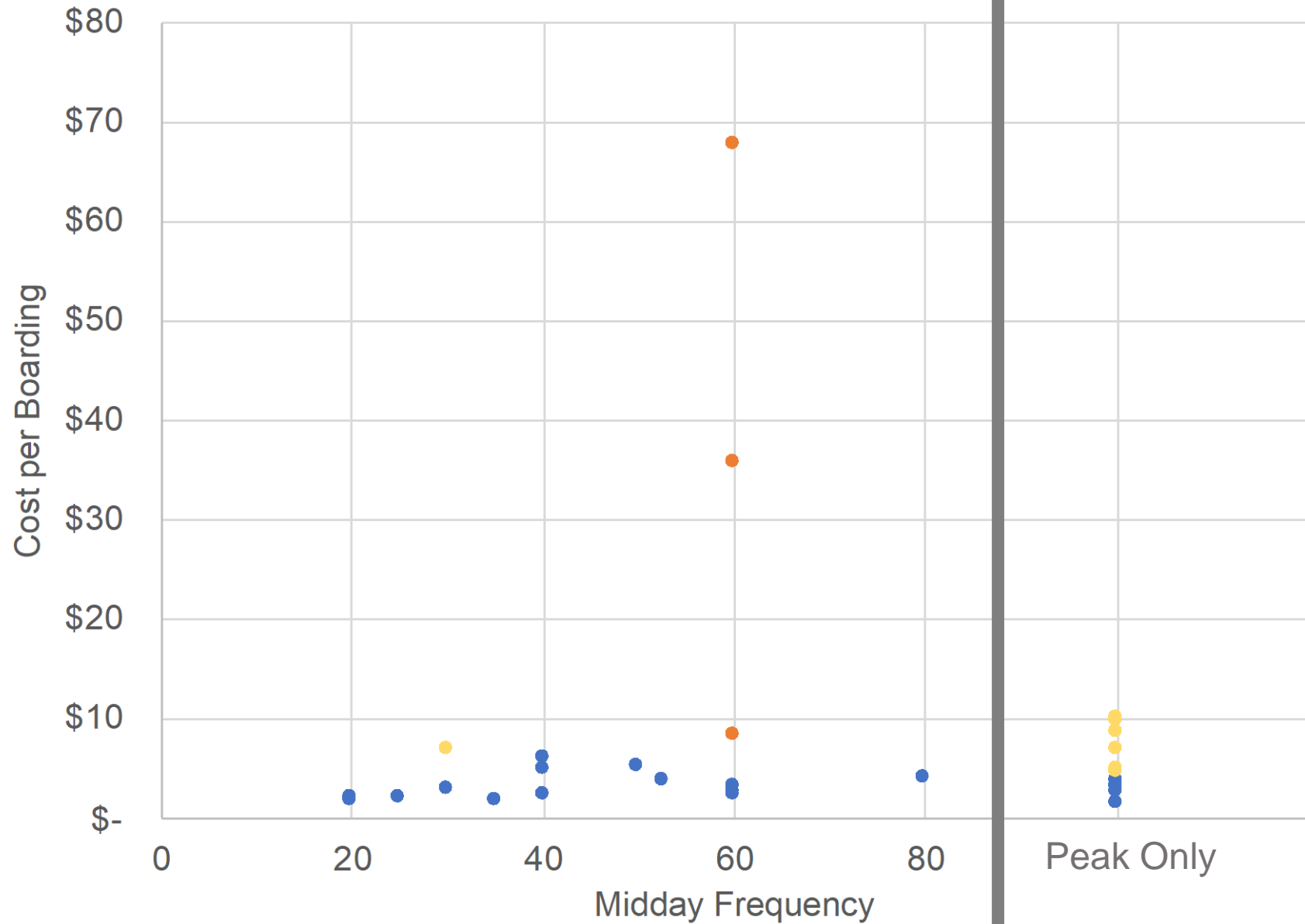
Additional Coverage Service

- Orange County Public Transportation provides on-demand, dial-a-ride type service under the following programs:
 - Medicaid Transportation Service (Non-Emergency Medical Transportation)
 - Elderly and Disabled Medical Transportation (EDTAP)
 - EMPL (Department of Social Service: Work First)
 - Rural General Public (RGP)
 - Origin or destination must be in non-urbanized area, high fare (\$12.75)
- OCPT will be piloting a more expansive on-demand service

Weekday Productivity and Midday Frequency



Cost per Boarding by Midday Frequency



● CHT ● OCPT ● GoTriangle

Productivity for CHT and GoTriangle

- Most CHT services are highly productive
 - Average more than 40 boardings per hour, around \$3 per boarding.
 - Being fare free helps
- GoTriangle Services vary in productivity and cost per rider
 - Route 400, 405, 800, and 800S average
 - 16-23 boardings per hour
 - \$5-7 in cost per boarding
 - ODX, CRX, and 420 are the least productive and highest cost per rider
 - Average 11 to 13 boardings per hour
 - Average \$8.57 to \$10.18 in cost per riders

Peaking has extra costs:

- Extra buses in the fleet to:
 - Purchase
 - Maintain
 - Garage
 - Replace
- Slight additional labor costs
- Less service in the midday, evenings, and on weekends
- Requires a higher capital to operating ratio

OCTP Productivity

- OCTP Services have lower productivity and some very high cost per rider
 - HC: 7 boardings per hour, \$8.39 per boarding
 - OCH: 1.7 boardings per hour, \$35.17 per boarding
 - OAC: 0.9 boardings per hour, \$67.77 per boarding
- Demand responsive productivity is about 2 boardings per hour.
 - This equates to about \$30 per boarding.

Key Question #1: Operating vs. Capital

- Operating funding actually provides the service that people need and use.
- Capital funding supports the service (vehicles, planning)
 - Can be over funded relative to operating due to high impact and visibility
- Should Orange County invest significantly more in transit operating and less on capital support?
- Or is the current balance of capital and operating about right?

Key Question #2: Ridership vs Coverage

- Current funding split is 64% CHT, 24% GoTriangle, 12% OCPT.
 - 90% of CHT service is prioritizing ridership
 - 60% of GoTriangle service is prioritizing ridership
 - 20% of OCPT service is prioritizing ridership.
- Should Orange County invest more higher ridership service?
- Should Orange County invest more in higher coverage?
- Or is the current balance of ridership and coverage about right?

Key Question #2 (part 2): Coverage Priorities

- When we deploy coverage service, is the priority ...
 - Service where or when needs are greatest (low income, senior etc.)?
 - Serving new development, even if it won't produce high ridership?
 - A little service everywhere?
 - This responds to the ask from taxpayers who are all contributing.
 - This tends to spread service the thinnest and yield the lowest productivity and highest cost per rider.

Key Question #3: Longer distances, or more riders

Route	What does it do?	How should we measure it?	Results:	
A	4 people, 3 miles each	Number of people (boardings)	4 boardings	12 passenger miles
B	2 people, 10 miles each	Number of miles (people x miles)	2 boardings	20 passenger miles

Which of these routes is doing work that you care about more?

Thoughts, Questions, Discussion

Thank you!

