

DRAFT 3 TRAVEL BEHAVIOR MODELING



ENVISION TOMORROW HH7D MODEL

- Population Density
- Employment Density
- Transit Access
- Employment Access
- Household Incomes
- Family Sizes
- Etc

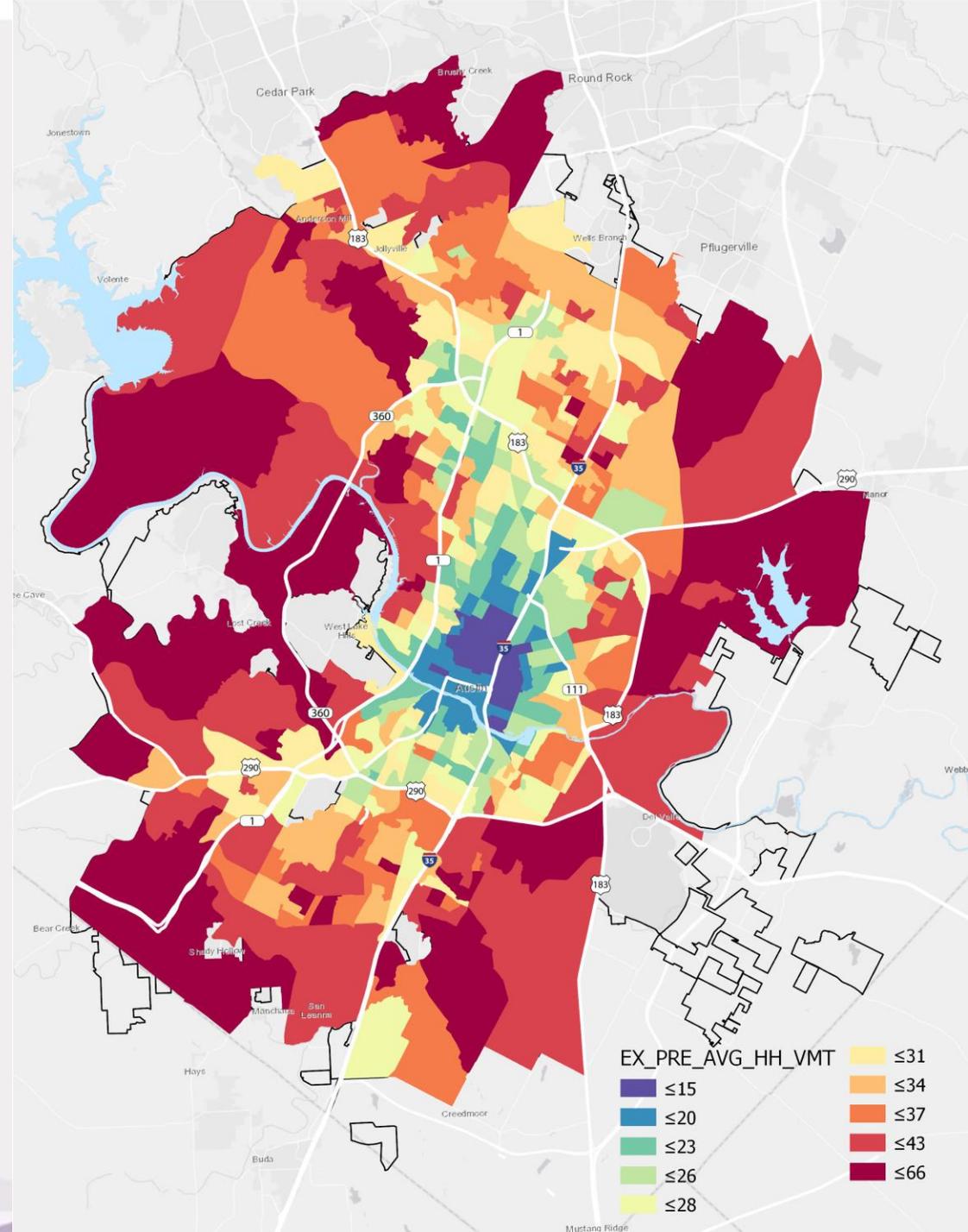


- Household VMT
- Auto Trips
- Transit Trips
- Bike Trips
- Walk Trips

AVERAGE HOUSEHOLD VEHICLE-MILES TRAVELED (VMT)

Existing Conditions (2014)

- Based in existing housing and employment data received from CoA



AVERAGE HOUSEHOLD VEHICLE-MILES TRAVELED (VMT)

Nearest Equivalency

- Additional housing and jobs added to existing
- Based in household control total: 135,000 (strategic housing blueprint)

Percent change in VMT per household



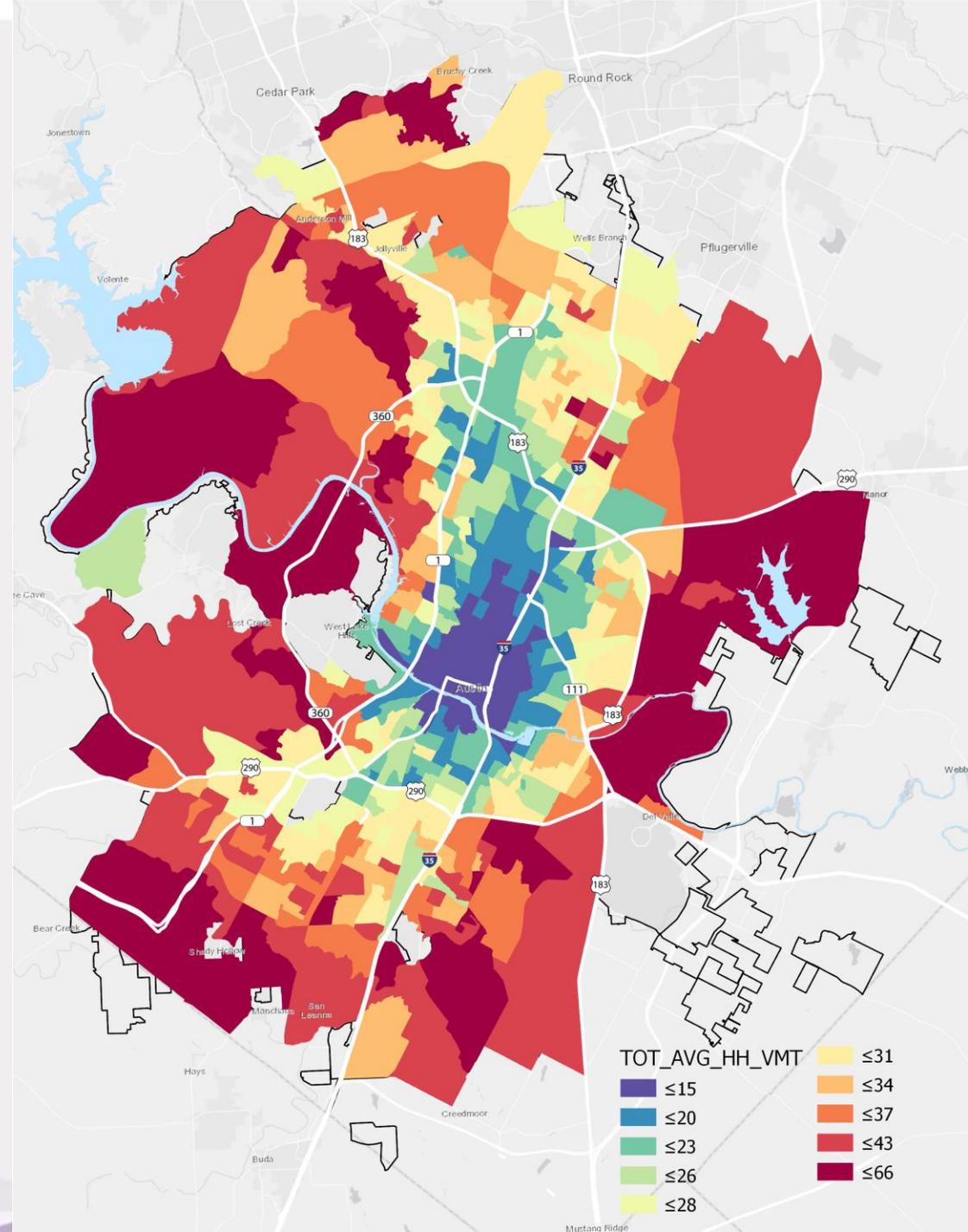
City wide

-7.2 %



Outside the urban core

+0.4 %



AVERAGE HOUSEHOLD VEHICLE-MILES TRAVELED (VMT)

Draft 3

- Additional housing and jobs added to existing
- Based in household control total: 135,000 (strategic housing blueprint)
- Housing is allocated based on “best fit” of strategic housing targets (FA Balanced Housing Model)

Percent change in VMT per household



City wide

-7.4 %

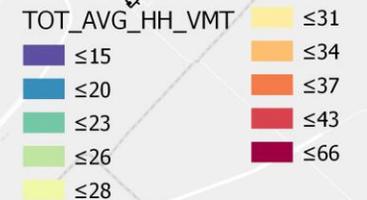
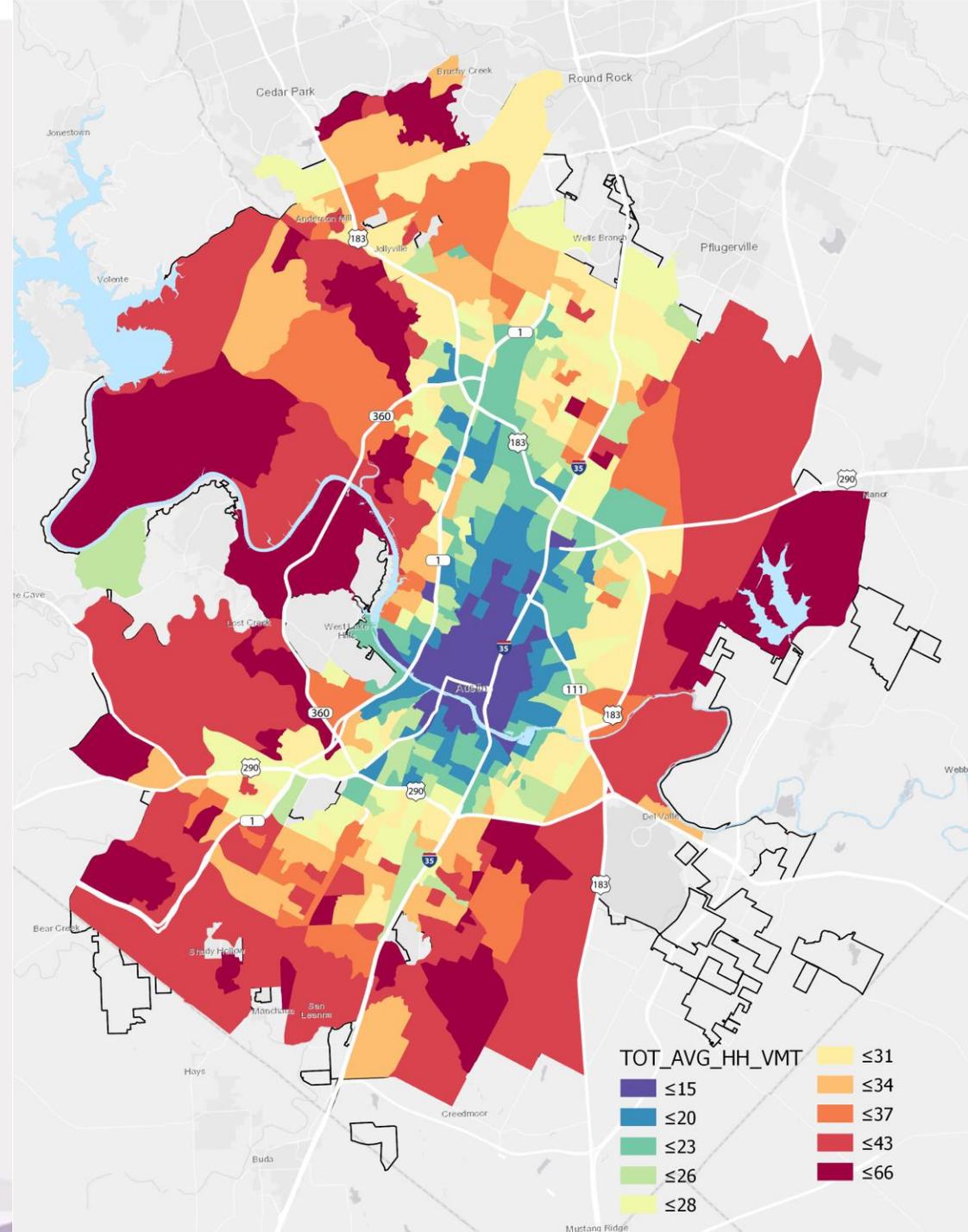


Outside the urban core

-3.4 %



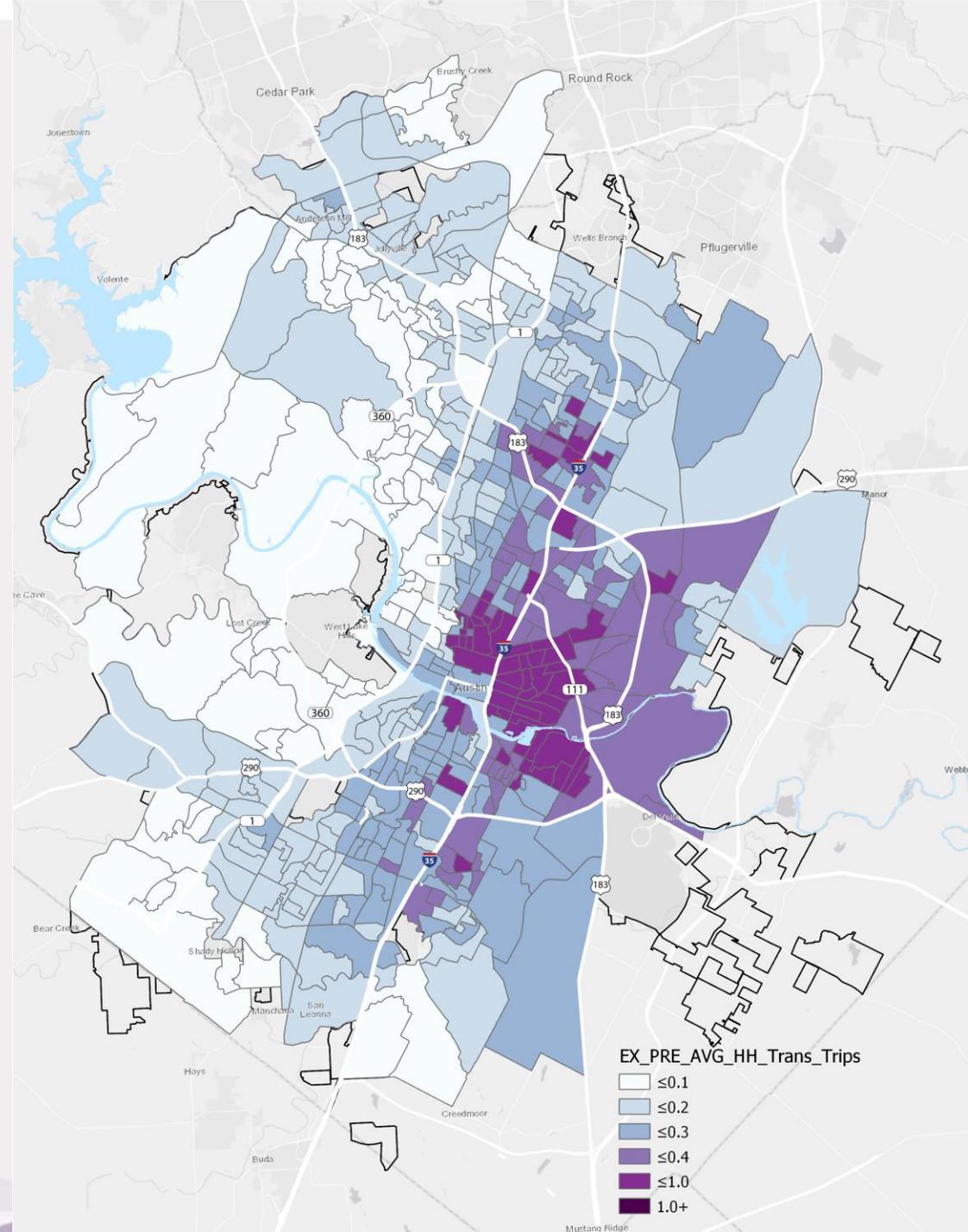
Micro changes across the city are most pronounced outside urban core.



AVERAGE HOUSEHOLD VEHICLE-MILES TRAVELED (VMT)

Existing Conditions (2014)

- Assumes existing transit network/service



AVERAGE HOUSEHOLD VEHICLE-MILES TRAVELED (VMT)

Nearest Equivalency

- Assumes Connections 2025 Transit Network

Mode Split



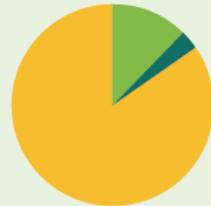
Walk/
Bike



Transit



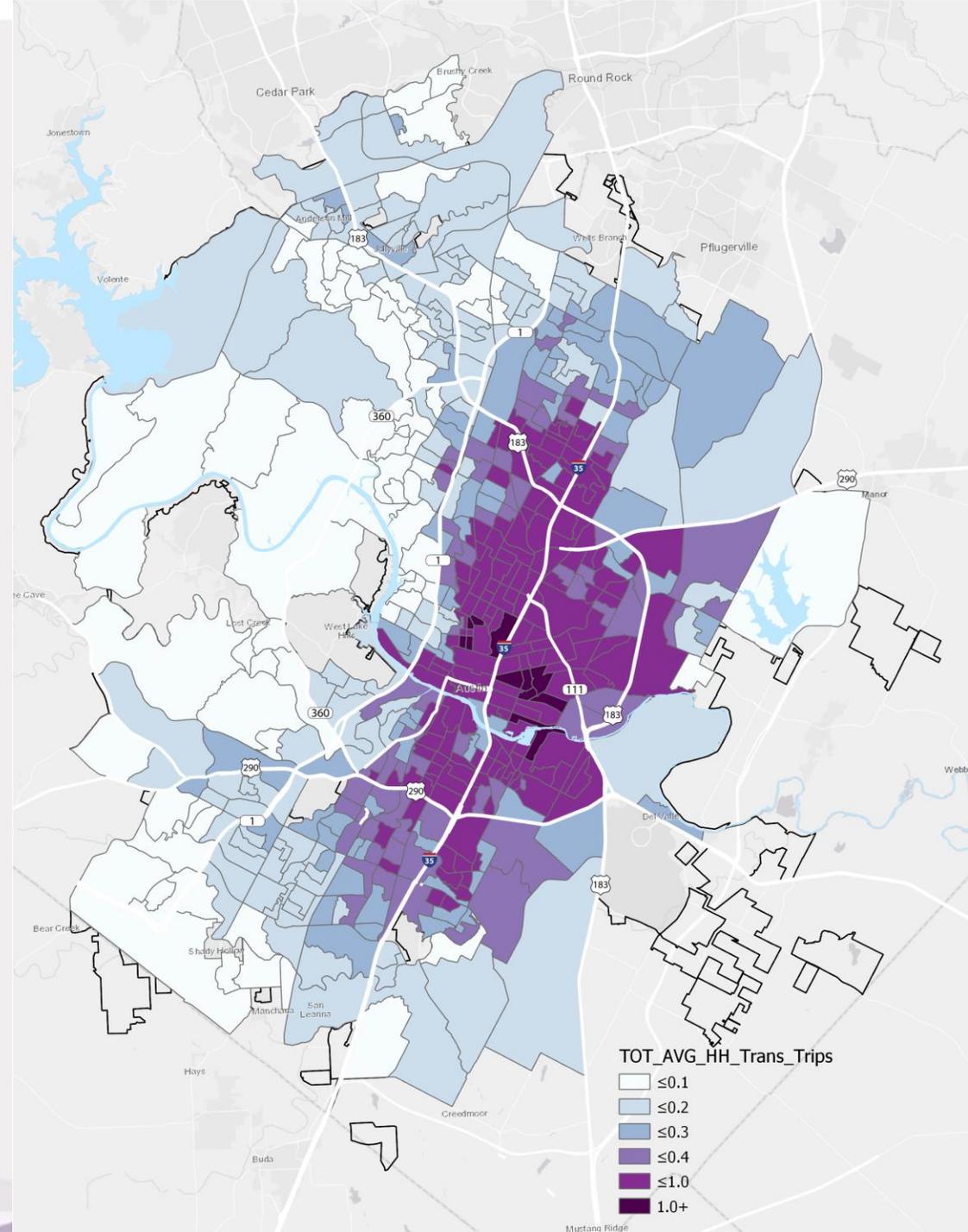
Auto



12.3 %

3.2 %

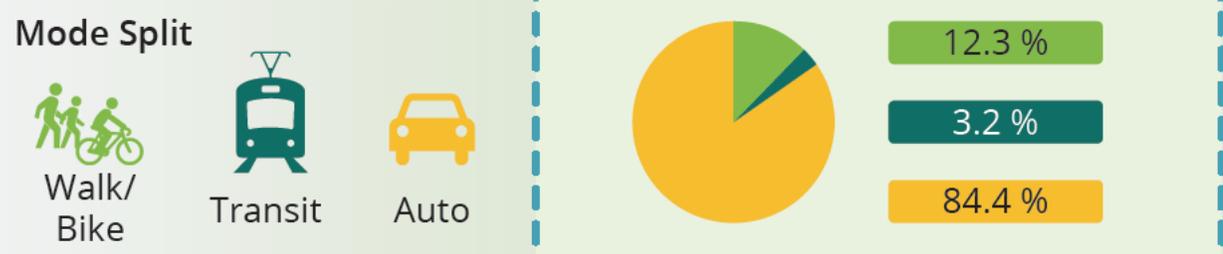
84.4 %



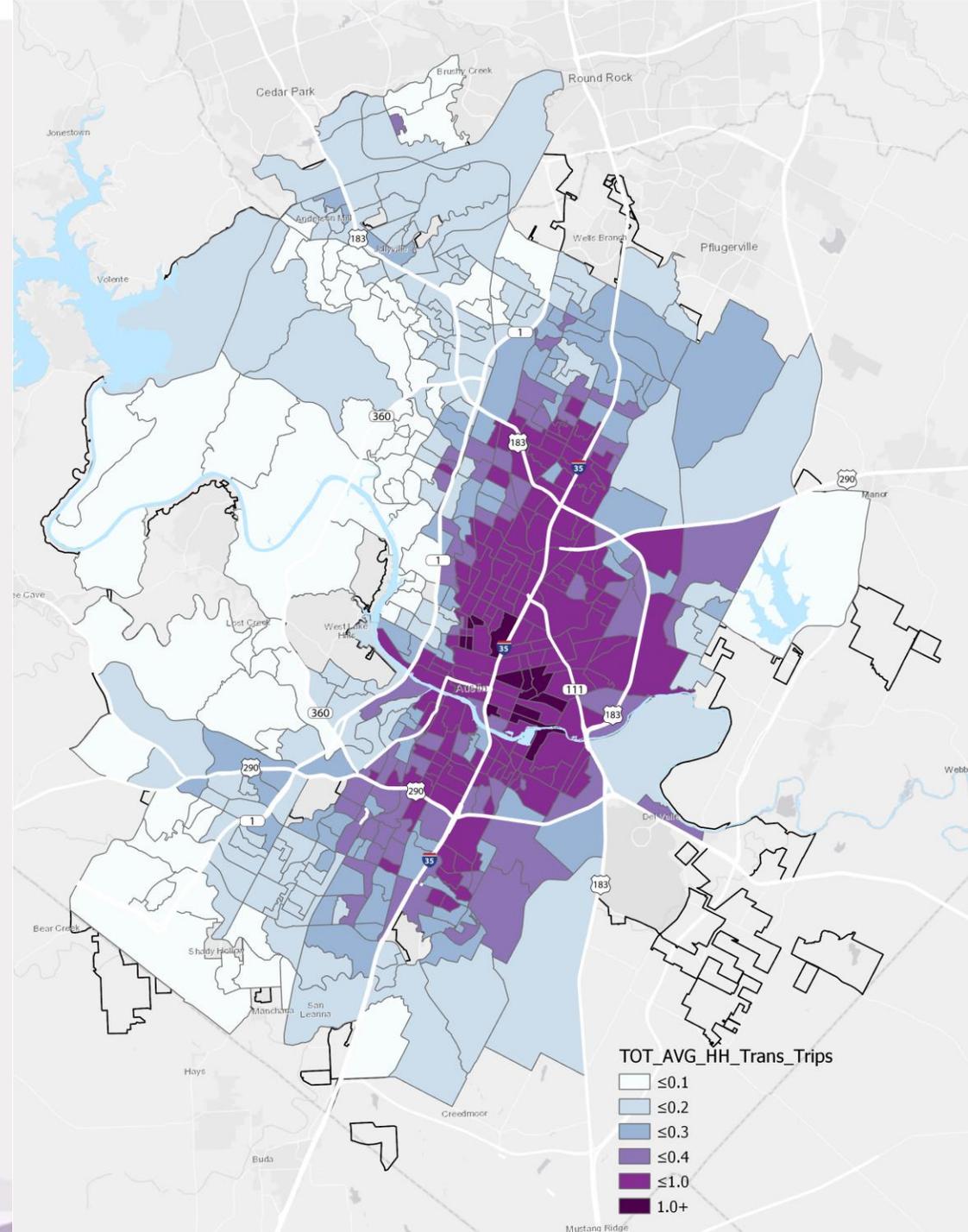
AVERAGE HOUSEHOLD VEHICLE-MILES TRAVELED (VMT)

Draft 3

- Assumes Connections 2025 Transit Network



Micro changes in different parts of the City, but overall mode split remains unchanged.



VMT TAKE-AWAYS

- We have demonstrated that Draft 3 shortens trip lengths (and thus VMT)
- This is most pronounced outside the urban core where increased allowed entitlements are creating more balanced trip productions and attractions
- However Draft 3 has a very small impact on shift mode split

Why did we end up with this result?

- Nearest equivalency already allows a lot of density in the core
- We use the same transit network for both scenarios
- Draft 3 does not specifically consider VMT
- There are factors we can consider if we want to create a scenario that performs better...



HOW DO WE IMPROVE MODE SPLIT?

- **Increase Jobs** – more employed workers per HH means more trips in general by all mode
- **Diversify Income Levels Household income** – the higher household incomes get, the less likely people are to bike, walk and ride transit. Smaller units and less expensive units can help this.
- **Increase Activity density** – the density of population and jobs within $\frac{1}{4}$, $\frac{1}{2}$, and 1 mile of one another. The more mixed, the better
- **Balance Jobs-Population balance** – you want this to be as close to 1 as possible
- **Balance land use mix** – goal is to get land uses within $\frac{1}{4}$ and $\frac{1}{2}$ mile of any point in the City to be as balanced as possible. Equal number of retail, office, industrial jobs and residents.
- **Increase Transit stop density** – higher density of transit stops means more transit use, more walking
- **Increase Number of jobs accessible within a 30 minute transit trip** – increasing this (i.e. more jobs near transit) will reduce VMT and increase transit use
- **Increase Number of jobs within a 10 minute auto trip** – increasing compactness of jobs, even if driving is involved, is good because it means shorter trips.

