Front Range Rail Demand Forecasting
Passenger Rail Commission, June 14, 2019
Erik Sabina, P.E.

CDOT's Travel Forecasting Model

- Completed and brought into production this year
- Already in use on several projects (e.g., Statewide Transportation Plan)
- Modern "Activity-based" model
  - One of the first in the US at the state level
  - Consistent with widespread practice in large metropolitan regions
  - Adapted from DRCOG's "Focus" model

What does this model do?

- Travel on a typical weekday
    - Complete daily travel for each person
    - What trips?
    - For what purpose?
    - To where?
    - What time of day?
    - What mode?
    - What route?
- Developing add-ons for other travel markets
    - Weekends
    - Special events (e.g., major sporting events)
    - DEN Airport improvements

What does this model do?

- Enhancing transit elements
  - Further analysis of Colorado ridership data
  - Comparison to analogous service in other states
  - Further analysis of "big data" showing Front Range travel patterns
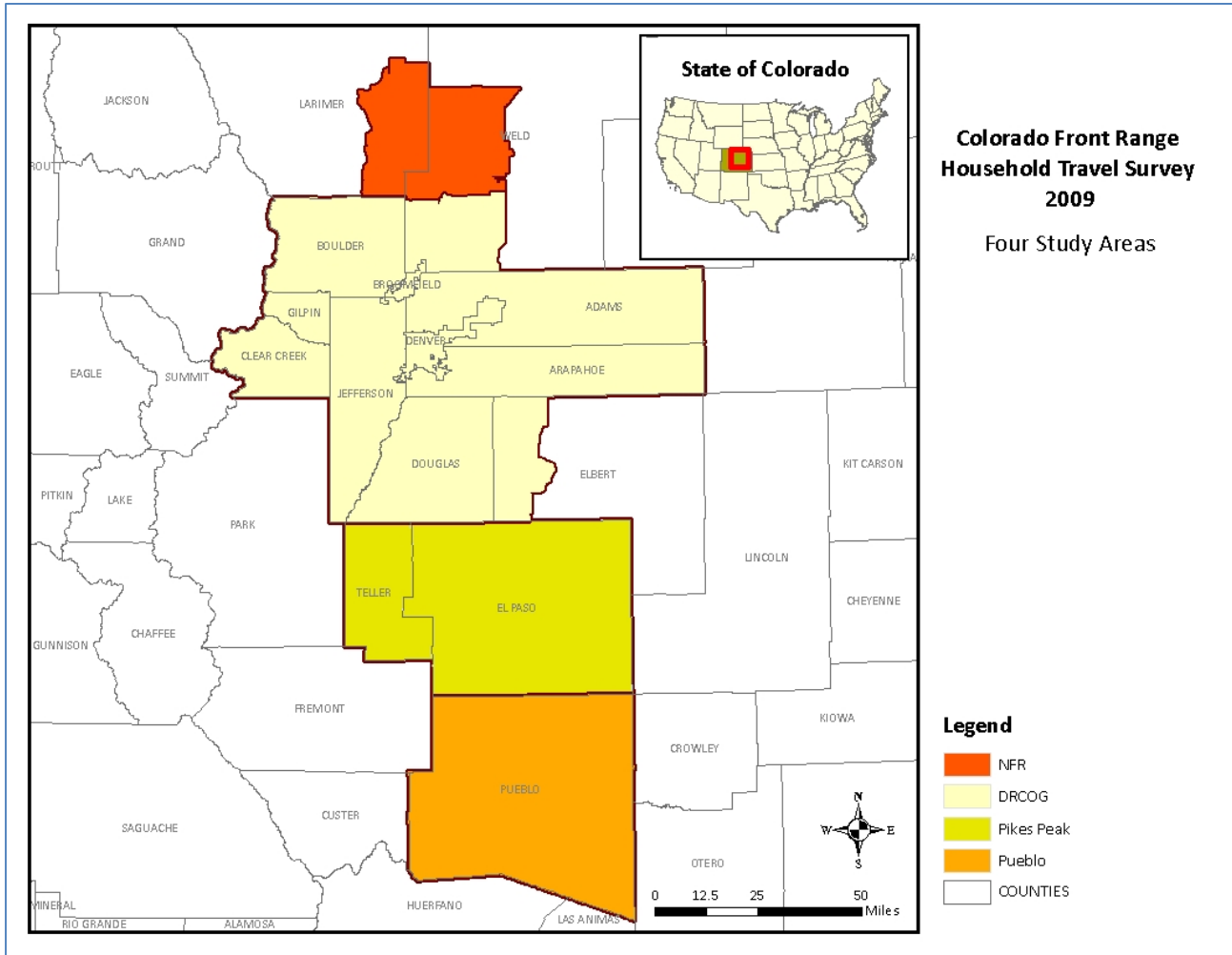
A few other points

- Model was built from a large survey of Front Range residents
    - 12,000 HH, 30,000 people.
    - Conducted in cooperation with all Front Range MPOs
- State model built using data from Front Range MPO models
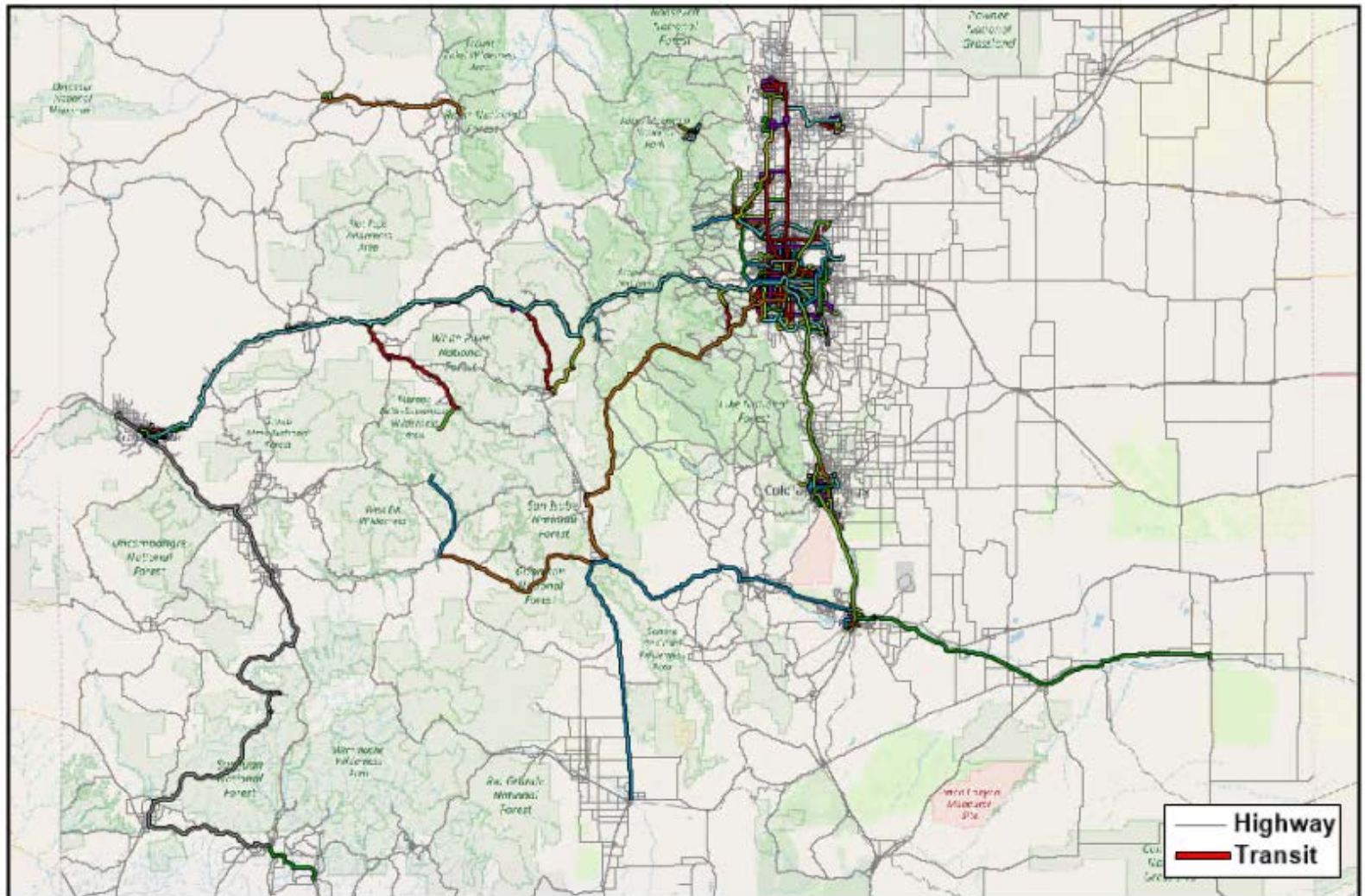- Working closely with them as we build and operate the model

Front Range Travel Counts Survey - 2010
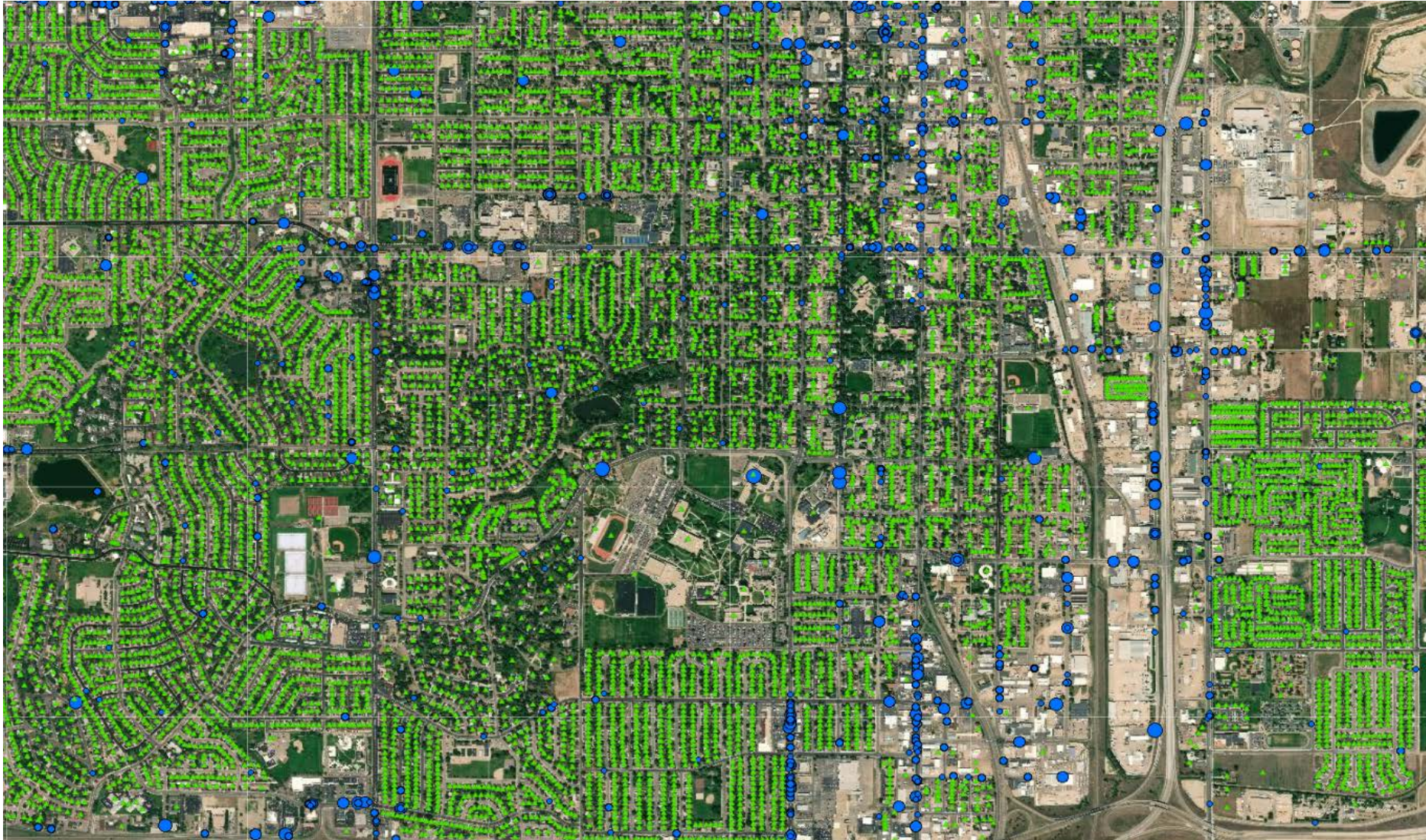
What do we put in the model?

Model Highway Transit Network

What do we put in the model?

Jobs and Households

Popular Outputs

- Roadway traffic and speeds
  - For each road segment
- Transit ridership by:
  - Operator
  - Line
  - And by segment
- Origin-destination tables
  - Shows detailed travel patterns
  - Where are people coming from, and where are they going

Contact info

Erik E. Sabina, PE
Manager, Information Management Branch
Division of Transportation Development
Erik.Sabina@state.co.us
303-757-9811

Shahida Mirza
Shahida.Mirza@state.co.us
303-757-9757

Dr. Juan Robles, P.E.
Juan.Robles@state.co.us
303-512-4815