

2050 MTP (2024) TIP Amendment #5 ABM Series

Model Users Group
December 19, 2025



ONE
great
REGION

TIP #5 HIGHLIGHTS

- **ABM Model runs for 2020, 2030, 2033, 2040, 2050 and 2050 No Build**
- **Updated synthetic population with the new updated PopSyn incorporating a Major University model**
- **Updated highway and transit networks reflecting the 2025 Redefining the Ride 2.0 XPRESS service and MARTA's April 2026 NextGen Bus Network beginning in the 2030 network year**
- **2020 Toll volumes updated by time of day to match October 2019 toll volume data**
- **Conformity Redetermination Report (CRR) approved November 2025**

ANCILLARY MODEL UPDATES

- **University Location Choice Model**
- **Truck & External Models**
- **Air Passenger Model**

UNIVERSITY LOCATION CHOICE MODEL

- **New residence choice model assignment based on residence locations of university students based on school and work locations**
- **The Major University model was incorporated with the updated PopSyn version**
- **New socioeconomic data file (zoneData20_univ.csv) and updated synthetic population created from PopSyn (persons.csv & households.csv)**
- **Updates to main script and config files**

TRUCK & EXTERNAL MODELS

- **Updated truck zones consistent with ARC Freight Clusters**
- **Commercial vehicle toll assignment carried over from the prior TIP #3 ABM version**
- **Updates to external medium & heavy-duty truck percentages**
- **Updates to external-to-external, external-to-internal, and internal-to-external trip tables**
- **Updates to main script and Parameters & WarmStart files**

AIR PASSENGER MODEL

- **Updated enplanement counts**
 - Enplanements for 2020 adjusted higher based on Federal Aviation Administration (FAA) data from the Atlanta Airport
 - Forecasted enplanements adjusted higher based on preliminary forecast from the 2023 Atlanta Airport Master Plan
- **Updated parameters**
 - Percent of transferring passengers (before 69.7%, now 46%) from the 2023 Airport Service Quality Departures Passenger Satisfaction Report
 - Residents or Non-Residents on Business or Non-Business Trips percentages – 2023 ASQ
 - Taxi fare and flag drop fare – Atlanta Airport taxi info
 - Transit Park & Ride parking cost – MARTA
 - Auto operating cost – ARC model

AIR PASSENGER MODEL

- **Airport Ground Access Mode Choice**
 - Updated constants for the Air Passenger Mode Share by Trip Purpose (for business or non-business by residents or non-residents) and Mode (dropped off, drive alone, rental vehicle, taxi/TNC, and transit) using results of the 2019 Transit On-Board Survey and the 2023 ASQ
- **Updates to main script & enplanement Parameter files**

ABM CALIBRATION

- **ABM calibrated to pre-COVID 2020 conditions**
- **Calibration data sources & sub-models**
 - **Re-expanded 2011 Household Travel Survey (ARC)**
 - ▶ **Work location choice – home to-workplace trip length frequency distribution (TLFD), average home-to-workplace trip distances**
 - ▶ **School location choice – average home-to-school trip distances**
 - ▶ **Coordinated Daily Activity Pattern (CDAP) – percentages of persons with mandatory, non-mandatory or home patterns**
 - ▶ **Mandatory tour frequency – percentages of persons with tours (1 work, 2+ work, 1 school, 2+ school, or both work & school)**
 - ▶ **Individual non-mandatory tour frequency – percentages of persons who made 0, 1, or 2+ tours for each of the 6 non-mandatory tour types, percentages of persons who made 0, 1, 2, or 3+ at-work sub-tours**

ABM CALIBRATION

- **2011 Household Travel Survey (ARC) continued**
 - ▶ **Joint tour frequency – Percentages of persons who made 0, 1 or 2+ joint tours**
 - ▶ **TOD choice – Tour time-of-day (in 30-minute intervals) frequency distribution for each of the 10 tour types**
 - ▶ **Non-mandatory tour destination choice – Tour distance frequency distribution for each of the 6 types of non-mandatory tours and at-work sub-tours**
 - ▶ **Stop frequency – Percentages of tours with given outbound stop and inbound stop number combinations for each of the 9 tour types**
 - ▶ **Mode Choice – Percentage of tours taking each mode, segmented by auto sufficiency**
- **2019 Transit-On Board Survey (ARC)**
 - ▶ **Mode Choice**

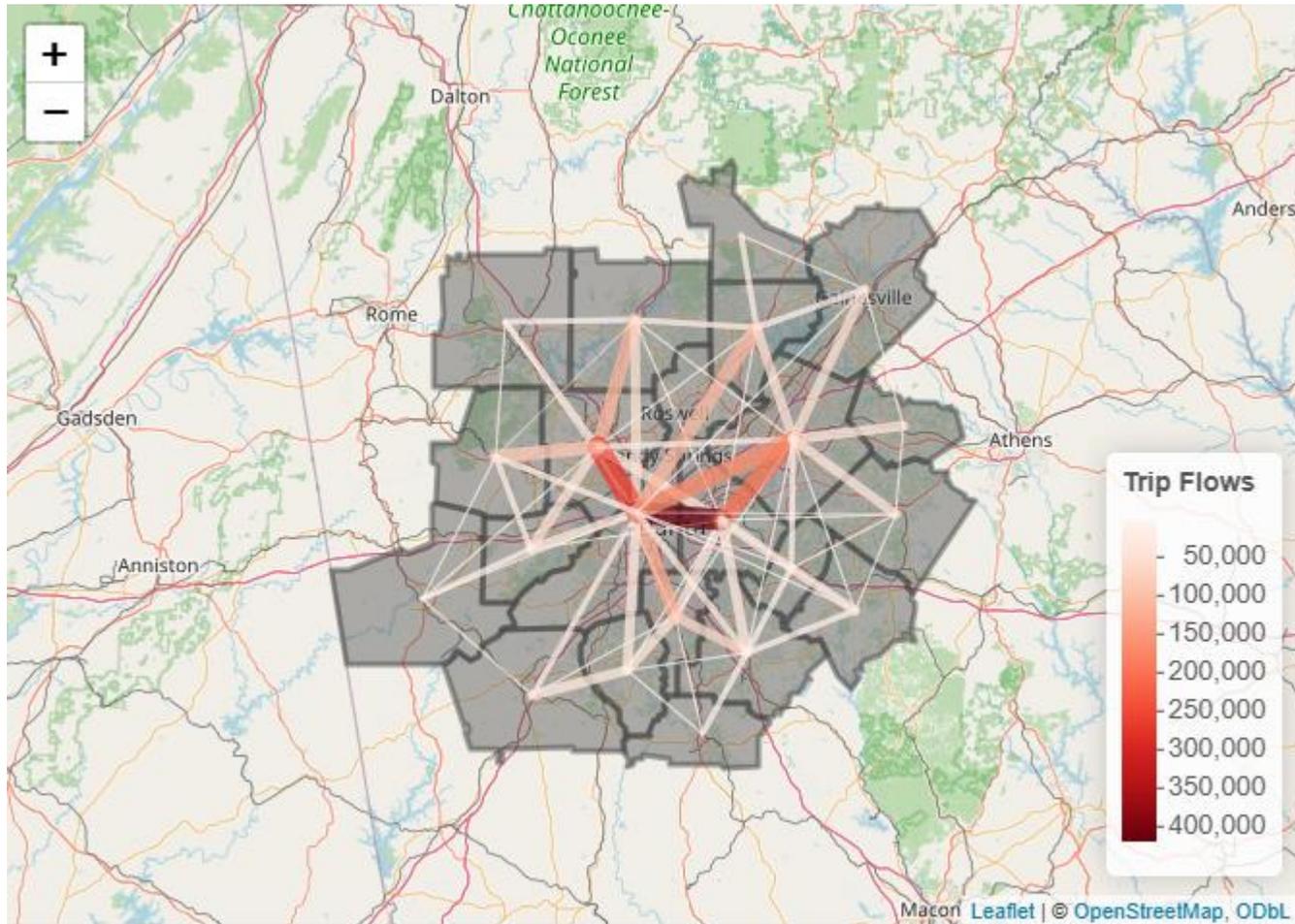
ABM CALIBRATION

- **2015-2019 ACS (Census)**
 - **Work from home – percentage of workers working from home**
- **2015-2019 ACS PUMS (Census)**
 - **Auto ownership – percentage of households with 0, 1, 2, or 3+ vehicles**
- **2012-2016 CTPP, 2006-2010 CTPP, 2016-2020 ACS Commuting Flows (Census), 2019 Regional Commuter Survey (ARC)**
 - **Work location choice – percentages of county-to-county worker flows**
- **Expanded survey regional population by age matches closely with control totals, within 1% by all age groups**
- **Close match of each subcomponent model calibration result compared to targets**

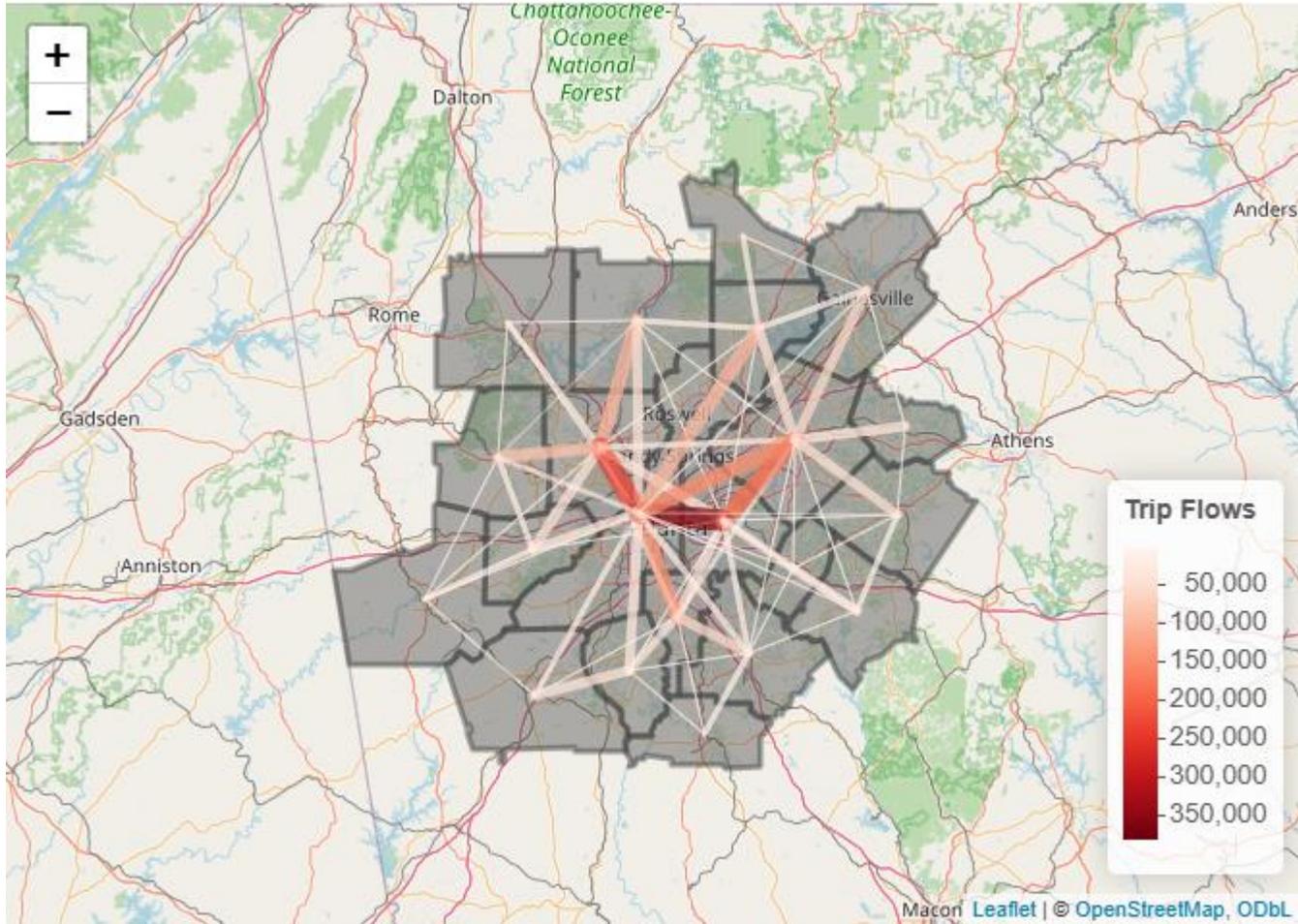
ABM VALIDATION

- **Trip Distribution**
 - **Estimated County-to-County Trips by Trip Purpose**
 - **Observed County-to-County Trips by Trip Purpose**
 - ▶ **2019 NHTS NextGen OD**
 - ▶ **2019 Replica Synthetic OD**
 - ▶ **2017-2021 CTPP Flows**

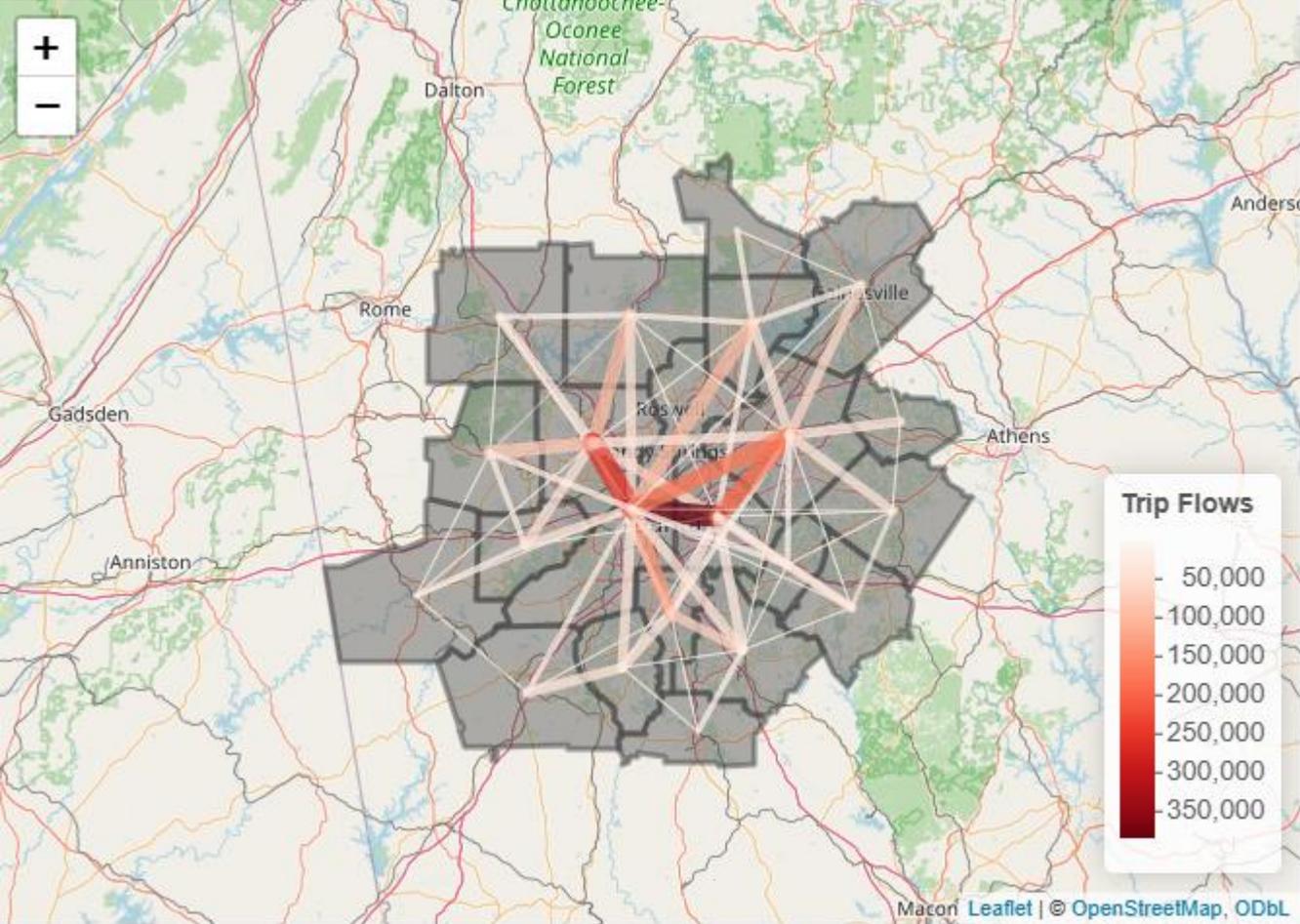
2019 ESTIMATED OD



2019 NHTS NEXTGEN OD



2019 REPLICA SYNTHETIC OD

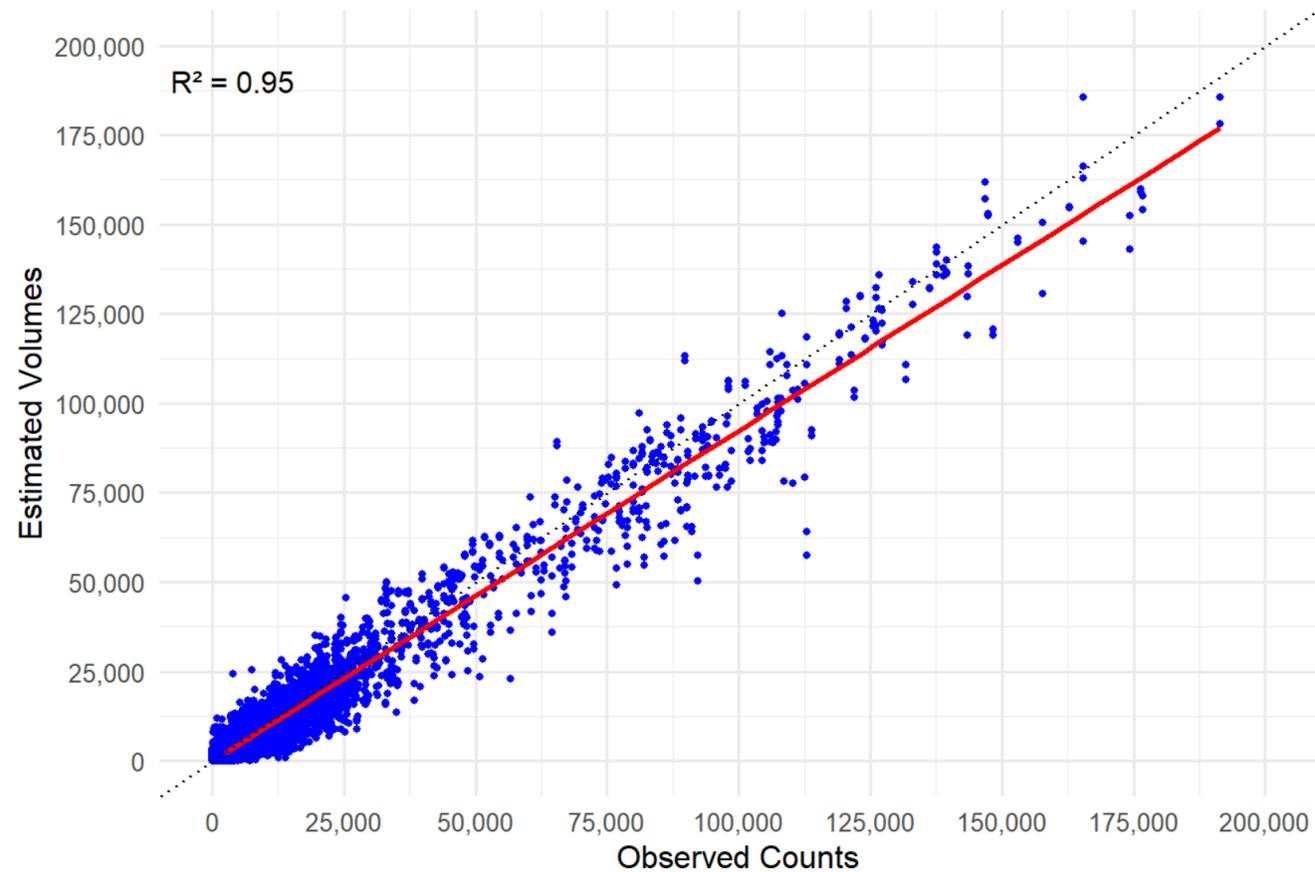


ABM VALIDATION

- **Highway Assignment**
 - **Total Traffic Counts**
 - ▶ Volume group size
 - ▶ Facility type
 - ▶ Area type
 - **Truck Traffic Counts**
 - ▶ Facility type
 - ▶ Area type
 - ▶ Inside or outside I-285
 - **Vehicle Miles Traveled by Functional Classification**
 - **Screenlines**
 - **Speeds by Time-of-Day Period**

ABM VALIDATION

- **2019 Daily Observed Counts vs Estimated Counts**



ABM VALIDATION

- **Transit Assignment**
 - **Boardings by Transit Operator**
 - ▶ Regional total -5% compared to observed
 - ▶ ATL XPRESS, CobbLinc, Ride Gwinnett and MARTA Bus +/- 20% compared to observed
 - **MARTA Boardings by Rail Station**
 - ▶ Total -2% compared to observed
 - **Bus Boardings by Route**
 - ▶ Total R-squared 0.69

MAJOR PROJECT UPDATES

- **MMIP Projects**

- **I-285 North Express Lanes Westbound from Henderson Mill Road to Northside Drive (AR-ML-200E1) – 2033**
- **I-285 North Express Lanes Eastbound from Northside Drive to Henderson Mill Road (AR-ML-200E2) – 2040**
- **I-75 South Express Lanes from I-675 to Bill Gardner Parkway (AR-ML-650) – bidirectional service extended from SR 155**
- **I-75 South Express Lanes from C W Grant Parkway to SR 138 (AR-ML-610) – deleted from the 2050 MTP**

- **Others**

- **SR 316 / US 29 (University Parkway) at Drowning Creek Road Grade Separation (GW-184B) - New Interchange removed**
- **SR 316 / US 29 (University Parkway) at Williams Farm Road / Rowen New Interchange (GW-452)**
- **Project updates from the GHMPO 2055 MTP (adopted May 2025)**

ABM DATA

- **ABM Runs by network year: ARC ABM Run - MTP24 TIP5 – 20XX.zip (20/30/33/40/50/50NB)**
- **ABM Inputs: ARC ABM Inputs - MTP24 TIP5.zip**
- **GIS Outputs: ARC ABM Outputs (GIS) - MTP24 TIP5.zip**
- **PopSyn Runs: ARC PopSyn - MTP24 TIP5.zip**
- **ABM Data Download: <https://atlantaregional.org/what-we-do/transportation-planning/modeling/abm-data-download/>**
- **Documentation: <https://atlantaregional.org/what-we-do/transportation-planning/modeling/>**

2026-2027 ATLANTA REGIONAL HOUSEHOLD TRAVEL SURVEY

- Targeting at least 8,000 surveys in the ARC 21-county modeling region during the Fall of 2026 and the Spring of 2027
- Complements the over 3,500 surveys from the 2025 Georgia Add-On National Household Travel Survey (NHTS) that were in the Atlanta modeling region
- \$1.875 million available funding
- [RFP](#) posted on ARC's website on 12/15/2025
- Proposals due on 1/28/2026 at noon

2026-2027 ATLANTA TRANSIT ONBOARD SURVEY

- Proposed to survey the regional non-MARTA transit agencies during Fall 2026
- MARTA service is proposed to be surveyed in Spring 2027 to allow a year for MARTA's April 2026 NextGen Bus Network implementation to mature
- \$2 million available funding including \$400,000 from the [FY25 ATL Transit Trust Fund](#)
- RFP to be posted in early first quarter 2026

TRAVEL DEMAND MODELING CONSULTANT ASSISTANCE

- **Two-year contract**
- **Heavy focus on ActivitySim**
- **\$600,000 available funding**
- **RFP to be posted in early first quarter 2026**