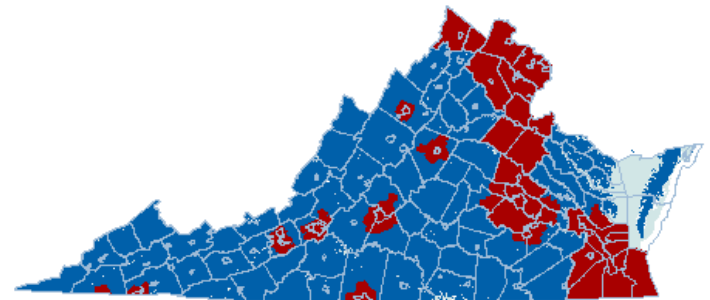




**MPO Policy Board
August 27, 2025**

Regional Travel Demand Model Demographics Development

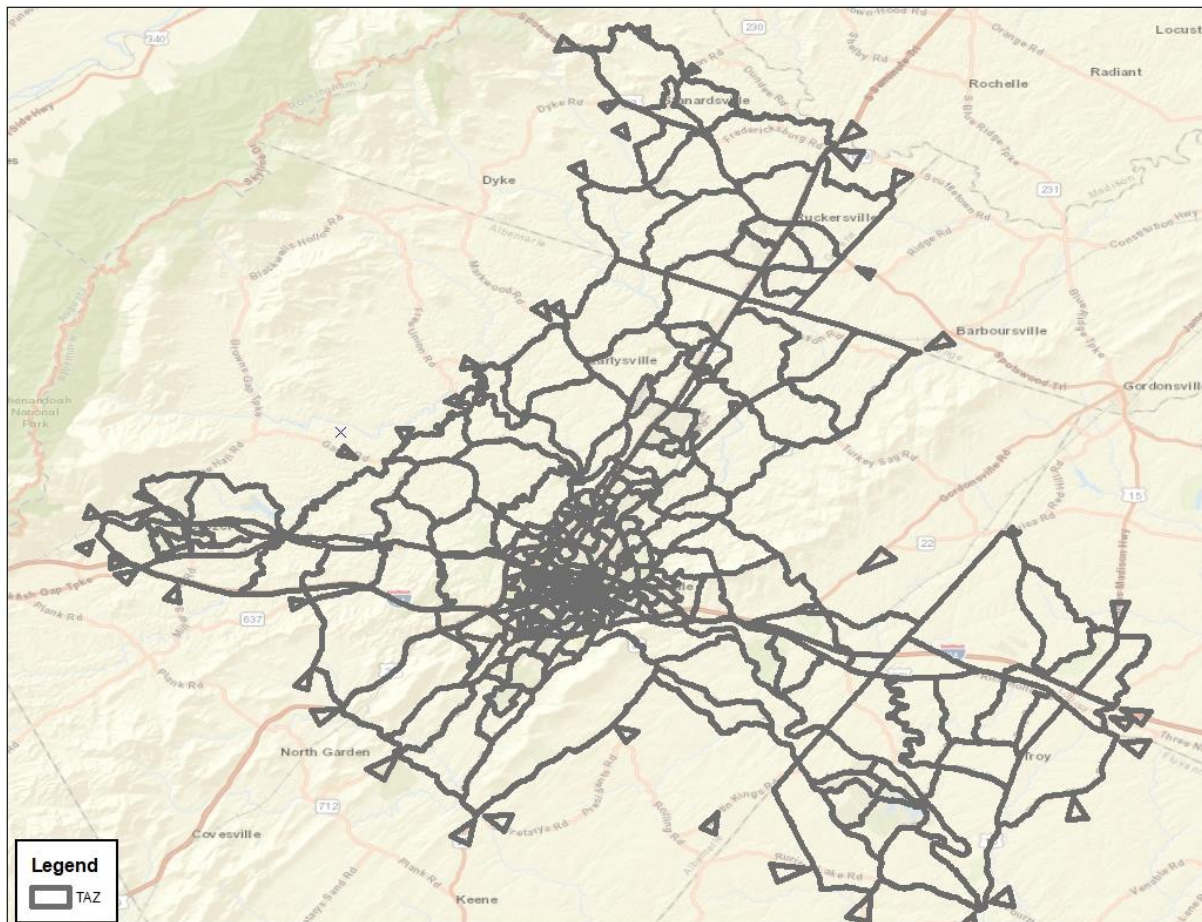


Charlottesville Regional Travel Demand Model Update

- Regional travel demand model in the process of being updated
- New model base year 2022
- Updated Traffic Analysis Zone (TAZ) boundaries
- Updated demographics for year 2022

Model Transportation Analysis Zones (TAZ)

- **New zone system based on Urbanized areas**
- **Includes City of Charlottesville and portions of Albermarle County**
- **Also includes portions from Greene, Louisa and Fluvanna counties**



Data Sources for Demographic Data

- **Three sources were used to assign each TAZ 2022 demographic and economic data:**
 - **Weldon-Cooper 2022 Population Estimates**
 - County/City Level Data
 - **Woods & Poole 2022 Employment Estimates**
 - County/City Level Data (NOTE: Charlottesville City and Albermarle County data is combined)
 - **2022 American Community Survey (ACS) 5-Year Estimates**
 - Block Group Level Data

Demographic Data

- Demographics variables and method of estimation:

Variable	Source	Notes
Total Population	2022 ACS 5-Year Estimates and 2022 Weldon Cooper Estimates	Initially assigned using ACS to improve granularity before converting to Weldon Cooper estimates.
Household Population		
Group Quarters Population		
Total Household Units	2022 ACS 5-Year Estimates	
Average Household Size	Calculated – ACS universe	TAZ ACS Population / TAZ Household Units. Weldon Cooper not used due to mixing of data universes and granularity differences
Average Household Income	2022 ACS 5-Year Estimates	Block Group Level assignment. Median Income not used due to Census constraints
Average Workers per Household	2022 ACS 5-Year Estimates	Adjustments made based on TAZ household units/group quarter population
K-12 Enrollment in Households		
University/College Enrollment in Households		
Average Vehicles per Household	2022 ACS 5-Year Estimates	Block Group Level Assignment
Average Students per Household	Calculated – ACS universe	TAZ K-12 and University/College Enrollment in Households / TAZ Household Units
Households with Seniors (65+)	2022 ACS 5-Year Estimates	Adjustments made based on TAZ household units

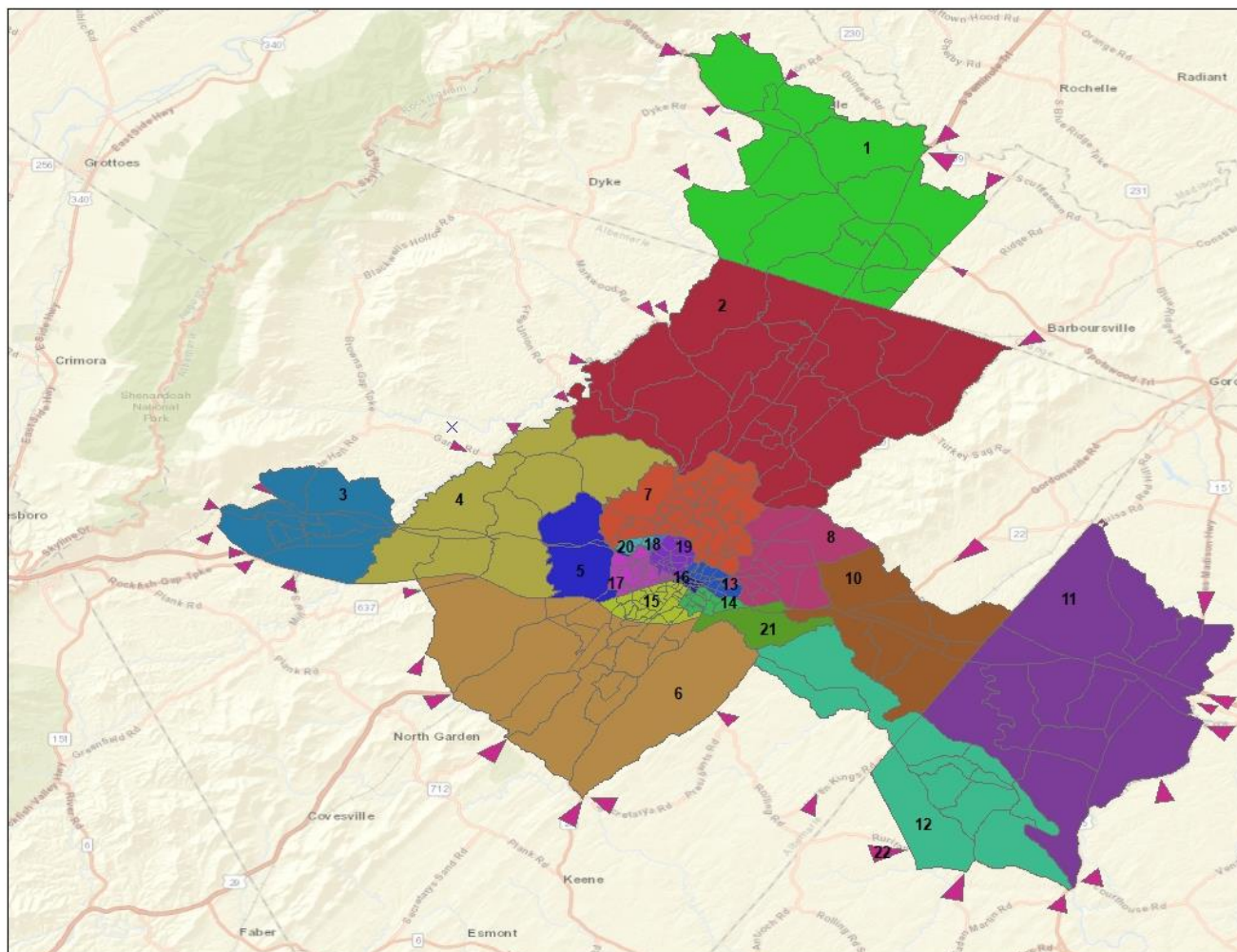
Demographic Data

- Demographics variables and method of estimation:

Variable	Source	Notes
Total Employment	Calculated	Summation of TAZ NAICS assignments
NAICS 11: Agriculture, Forestry, Fishing and Hunting	2022 Woods & Poole Estimates	Calculated as the proportion of employment type within the TAZ's county as purported in 2015
NAICS 21: Mining		
NAICS 22: Utilities		
NAICS 23: Construction		
NAICS 31-33: Manufacturing		
NAICS 42: Wholesale Trade		
NAICS 44-45: Retail Trade		
NAICS 48-49: Transportation and Warehousing		
NAICS 51: Information		
NAICS 52: Finance and Insurance		
NAICS 53: Real Estate Rental and Leasing		
NAICS 54: Professional, Scientific, and Technical Services		
NAICS 55: Management of Companies and Enterprises		
NAICS 56: Administrative and Support and Waste Management and Remediation Services		
NAICS 61: Educational Services		
NAICS 62: Health Care and Social Assistance		
NAICS 71: Arts, Entertainment, and Recreation		
NAICS 72: Accommodation & Food Services		
NAICS 81: Other Services (except Public Administration)		
NAICS 92: Public Administration		

Model Districts

- District definition



1	Greene
2	Hollymead
3	Crozet
4	W Albermarle
5	Ednam
6	S of Charlottesville
7	N of Charlottesville
8	E of Charlottesville
10	Keswick
11	Louisa
12	Fluvanna
13	N of Downtown
14	SE of Downtown
15	SW of Downtown
16	Downtown
17	University of Virginia
18	Barracks Road
19	Barracks Rugby
20	Darden UVA
21	Auburn Hills
22	Externals

2022 Demographics Summary

District		Total Population	Household Population	Group Quarters Population	Households	Total Employment
Greene	1	16,445	16,319	126	5,915	3,504
Hollymead	2	19,461	19,431	30	6,755	6,970
Crozet	3	9,956	9,948	8	3,766	1,596
W Albermarle	4	5,511	5,511	0	2,068	509
Ednam	5	1,708	1,693	15	737	3,976
S of Charlottesville	6	12,717	12,321	396	4,928	3,180
N of Charlottesville	7	29,971	29,318	653	13,417	18,110
E of Charlottesville	8	5,934	5,873	61	2,905	7,672
Keswick	10	3,443	3,441	2	1,452	1,211
Louisa	11	8,335	7,144	1,191	2,505	3,899
Fluvanna	12	14,015	14,015	0	5,316	2,433
N of Downtown	13	6,199	6,181	18	2,869	8,834
SE of Downtown	14	6,163	6,133	30	2,650	2,773
SW of Downtown	15	14,371	14,287	84	5,302	2,351
Downtown	16	1,697	1,666	31	873	8,249
University of Virginia	17	16,772	8,917	7,855	3,405	10,696
Barracks Road	18	1,326	841	485	484	2,805
Barracks Rugby	19	9,039	7,077	1,962	2,792	3,794
Darden UVA	20	1,050	1,009	41	591	958
Auburn Hills	21	90	90	0	36	364
	Total	184,203	171,215	12,988	68,766	93,884

Demographics Comparison

- Woods & Poole distribution between NAICS codes for 2015 similar to 2022

Model Variable	Description	All Counties					
		2015 W&P	2022 W&P	2015 Model	2022 Model	2015 Model - W&P	2022 Model - W&P
TOTEMP	TOTAL EMPLOYMENT	100%	100%	100%	100%	0%	0%
EMP11	FARM, FORESTRY, FISHING, RELATED ACTIVITIES and OTHER EMPLOYMENT EMPLOYMENT	2%	2%	0%	0%	-2%	-1%
EMP21	MINING EMPLOYMENT	0%	0%	1%	0%	0%	0%
EMP22	UTILITIES EMPLOYMENT	1%	1%	0%	0%	-1%	-1%
EMP23	CONSTRUCTION EMPLOYMENT	6%	5%	10%	8%	4%	3%
EMP3133	MANUFACTURING EMPLOYMENT	3%	3%	1%	1%	-2%	-2%
EMP42	WHOLESALE TRADE EMPLOYMENT	2%	2%	2%	2%	1%	1%
EMP4445	RETAIL TRADE EMPLOYMENT	9%	8%	10%	10%	1%	2%
EMP4849	TRANSPORTATION and WAREHOUSING EMPLOYMENT	2%	3%	0%	0%	-1%	-2%
EMP51	INFORMATION EMPLOYMENT	2%	2%	3%	3%	2%	1%
EMP52	FINANCE and INSURANCE EMPLOYMENT	4%	4%	4%	5%	0%	1%
EMP53	REAL ESTATE and RENTAL and LEASE EMPLOYMENT	5%	5%	4%	5%	0%	0%
EMP54	PROFESSIONAL and TECHNICAL SERVICES EMPLOYMENT	8%	9%	8%	10%	0%	1%
EMP55	MANAGEMENT of COMPANIES and ENTERPRISES EMPLOYMENT	1%	1%	1%	1%	0%	0%
EMP56	ADMINISTRATIVE and WASTE SERVICES EMPLOYMENT	5%	5%	2%	3%	-3%	-2%
EMP61	EDUCATIONAL SERVICES EMPLOYMENT	3%	2%	12%	5%	10%	2%
EMP62	HEALTH CARE and SOCIAL ASSISTANCE EMPLOYMENT	8%	9%	15%	15%	7%	6%
EMP71	ARTS, ENTERTAINMENT, and RECREATION EMPLOYMENT	3%	3%	1%	2%	-2%	-2%
EMP72	ACCOMMODATION and FOOD SERVICES EMPLOYMENT	7%	7%	12%	13%	5%	6%
EMP81	OTHER SERVICES, EXCEPT PUBLIC ADMINISTRATION EMPLOYMENT	6%	6%	3%	4%	-2%	-2%
EMP92	FEDERAL CIVILIAN GOVERNMENT, FEDERAL MILITARY, STATE and LOCAL GOVERNMENT EMPLOYMENT	23%	24%	5%	5%	-19%	-18%
EMP99	Others / Uncategorized	0%	0%	3%	7%	3%	7%

2015 Model data based on InfoGroup data

Demographics Comparison

- For Albermarle County + City of Charlottesville Area

Model Variable	Description	Albermarle County + City of Charlottesville					
		2015 W&P	2022 W&P	2015 Model	2022 Model	2015 Model - W&P	2022 Model - W&P
TOTEMP	TOTAL EMPLOYMENT	100%	100%	100%	100%	0%	0%
EMP11	FARM, FORESTRY, FISHING, RELATED ACTIVITIES and OTHER EMPLOYMENT EMPLOYMENT	1%	1%	0%	0%	-1%	-1%
EMP21	MINING EMPLOYMENT	0%	0%	1%	0%	0%	0%
EMP22	UTILITIES EMPLOYMENT	0%	0%	0%	0%	0%	0%
EMP23	CONSTRUCTION EMPLOYMENT	5%	4%	9%	7%	4%	3%
EMP3133	MANUFACTURING EMPLOYMENT	3%	2%	1%	2%	-1%	-1%
EMP42	WHOLESALE TRADE EMPLOYMENT	1%	1%	1%	2%	0%	0%
EMP4445	RETAIL TRADE EMPLOYMENT	9%	8%	8%	8%	-1%	1%
EMP4849	TRANSPORTATION and WAREHOUSING EMPLOYMENT	1%	2%	0%	0%	-1%	-2%
EMP51	INFORMATION EMPLOYMENT	2%	2%	4%	3%	2%	1%
EMP52	FINANCE and INSURANCE EMPLOYMENT	4%	4%	4%	6%	0%	1%
EMP53	REAL ESTATE and RENTAL and LEASE EMPLOYMENT	5%	5%	4%	6%	0%	0%
EMP54	PROFESSIONAL and TECHNICAL SERVICES EMPLOYMENT	9%	10%	8%	11%	0%	1%
EMP55	MANAGEMENT of COMPANIES and ENTERPRISES EMPLOYMENT	2%	2%	1%	1%	-1%	0%
EMP56	ADMINISTRATIVE and WASTE SERVICES EMPLOYMENT	5%	5%	3%	3%	-2%	-2%
EMP61	EDUCATIONAL SERVICES EMPLOYMENT	3%	3%	13%	4%	10%	2%
EMP62	HEALTH CARE and SOCIAL ASSISTANCE EMPLOYMENT	9%	9%	16%	16%	8%	6%
EMP71	ARTS, ENTERTAINMENT, and RECREATION EMPLOYMENT	3%	3%	1%	2%	-2%	-2%
EMP72	ACCOMMODATION and FOOD SERVICES EMPLOYMENT	8%	8%	13%	13%	5%	5%
EMP81	OTHER SERVICES, EXCEPT PUBLIC ADMINISTRATION EMPLOYMENT	6%	5%	4%	4%	-2%	-1%
EMP92	FEDERAL CIVILIAN GOVERNMENT, FEDERAL MILITARY, STATE and LOCAL GOVERNMENT EMPLOYMENT	25%	26%	5%	5%	-21%	-20%
EMP99	Others / Uncategorized	0%	0%	3%	7%	3%	7%

2015 Model data based on InfoGroup data

Demographics Comparison

- For Fluvanna County Area

Model Variable	Description	Fluvanna County					
		2015 W&P	2022 W&P	2015 Model	2022 Model	2015 Model - W&P	2022 Model - W&P
TOTEMP	TOTAL EMPLOYMENT	100%	100%	100%	100%	0%	0%
EMP11	FARM, FORESTRY, FISHING, RELATED ACTIVITIES and OTHER EMPLOYMENT EMPLOYMENT	5%	5%	0%	0%	-5%	-4%
EMP21	MINING EMPLOYMENT	0%	0%	0%	0%	0%	0%
EMP22	UTILITIES EMPLOYMENT	1%	1%	0%	0%	-1%	-1%
EMP23	CONSTRUCTION EMPLOYMENT	10%	13%	24%	26%	14%	13%
EMP3133	MANUFACTURING EMPLOYMENT	2%	3%	1%	1%	-1%	-2%
EMP42	WHOLESALE TRADE EMPLOYMENT	2%	2%	3%	2%	0%	0%
EMP4445	RETAIL TRADE EMPLOYMENT	7%	8%	13%	16%	6%	8%
EMP4849	TRANSPORTATION and WAREHOUSING EMPLOYMENT	2%	3%	0%	0%	-2%	-3%
EMP51	INFORMATION EMPLOYMENT	1%	1%	1%	1%	0%	0%
EMP52	FINANCE and INSURANCE EMPLOYMENT	3%	3%	1%	2%	-2%	-2%
EMP53	REAL ESTATE and RENTAL and LEASE EMPLOYMENT	4%	5%	4%	6%	0%	1%
EMP54	PROFESSIONAL and TECHNICAL SERVICES EMPLOYMENT	5%	6%	2%	3%	-3%	-3%
EMP55	MANAGEMENT of COMPANIES and ENTERPRISES EMPLOYMENT	0%	0%	0%	0%	0%	0%
EMP56	ADMINISTRATIVE and WASTE SERVICES EMPLOYMENT	11%	8%	2%	1%	-10%	-6%
EMP61	EDUCATIONAL SERVICES EMPLOYMENT	5%	4%	9%	8%	4%	4%
EMP62	HEALTH CARE and SOCIAL ASSISTANCE EMPLOYMENT	7%	6%	6%	7%	0%	1%
EMP71	ARTS, ENTERTAINMENT, and RECREATION EMPLOYMENT	3%	2%	2%	2%	-1%	-1%
EMP72	ACCOMMODATION and FOOD SERVICES EMPLOYMENT	4%	5%	8%	9%	4%	5%
EMP81	OTHER SERVICES, EXCEPT PUBLIC ADMINISTRATION EMPLOYMENT	8%	8%	1%	2%	-6%	-6%
EMP92	FEDERAL CIVILIAN GOVERNMENT, FEDERAL MILITARY, STATE and LOCAL GOVERNMENT EMPLOYMENT	18%	18%	5%	6%	-13%	-12%
EMP99	Others / Uncategorized	0%	0%	16%	8%	16%	8%

2015 Model data based on InfoGroup data

Demographics Comparison

- For Greene County Area

Model Variable	Description	Greene County					
		2015 W&P	2022 W&P	2015 Model	2022 Model	2015 Model - W&P	2022 Model - W&P
TOTEMP	TOTAL EMPLOYMENT	100%	100%	100%	100%	0%	0%
EMP11	FARM, FORESTRY, FISHING, RELATED ACTIVITIES and OTHER EMPLOYMENT EMPLOYMENT	4%	4%	0%	0%	-4%	-4%
EMP21	MINING EMPLOYMENT	0%	0%	0%	0%	0%	0%
EMP22	UTILITIES EMPLOYMENT	0%	0%	0%	0%	0%	0%
EMP23	CONSTRUCTION EMPLOYMENT	9%	10%	26%	20%	17%	10%
EMP3133	MANUFACTURING EMPLOYMENT	2%	1%	0%	0%	-2%	-1%
EMP42	WHOLESALE TRADE EMPLOYMENT	2%	2%	2%	1%	-1%	0%
EMP4445	RETAIL TRADE EMPLOYMENT	15%	16%	27%	32%	13%	16%
EMP4849	TRANSPORTATION and WAREHOUSING EMPLOYMENT	2%	3%	0%	0%	-2%	-3%
EMP51	INFORMATION EMPLOYMENT	1%	1%	1%	1%	0%	1%
EMP52	FINANCE and INSURANCE EMPLOYMENT	2%	2%	1%	1%	-1%	-1%
EMP53	REAL ESTATE and RENTAL and LEASE EMPLOYMENT	4%	5%	3%	4%	-2%	-1%
EMP54	PROFESSIONAL and TECHNICAL SERVICES EMPLOYMENT	8%	7%	3%	4%	-5%	-4%
EMP55	MANAGEMENT of COMPANIES and ENTERPRISES EMPLOYMENT	0%	0%	0%	0%	0%	0%
EMP56	ADMINISTRATIVE and WASTE SERVICES EMPLOYMENT	5%	6%	1%	1%	-4%	-4%
EMP61	EDUCATIONAL SERVICES EMPLOYMENT	2%	2%	12%	5%	10%	2%
EMP62	HEALTH CARE and SOCIAL ASSISTANCE EMPLOYMENT	10%	10%	6%	7%	-4%	-3%
EMP71	ARTS, ENTERTAINMENT, and RECREATION EMPLOYMENT	2%	3%	0%	0%	-2%	-3%
EMP72	ACCOMMODATION and FOOD SERVICES EMPLOYMENT	7%	7%	10%	13%	4%	6%
EMP81	OTHER SERVICES, EXCEPT PUBLIC ADMINISTRATION EMPLOYMENT	8%	8%	0%	1%	-8%	-8%
EMP92	FEDERAL CIVILIAN GOVERNMENT, FEDERAL MILITARY, STATE and LOCAL GOVERNMENT EMPLOYMENT	16%	13%	4%	4%	-11%	-9%
EMP99	Others / Uncategorized	0%	0%	2%	6%	2%	6%

2015 Model data based on InfoGroup data

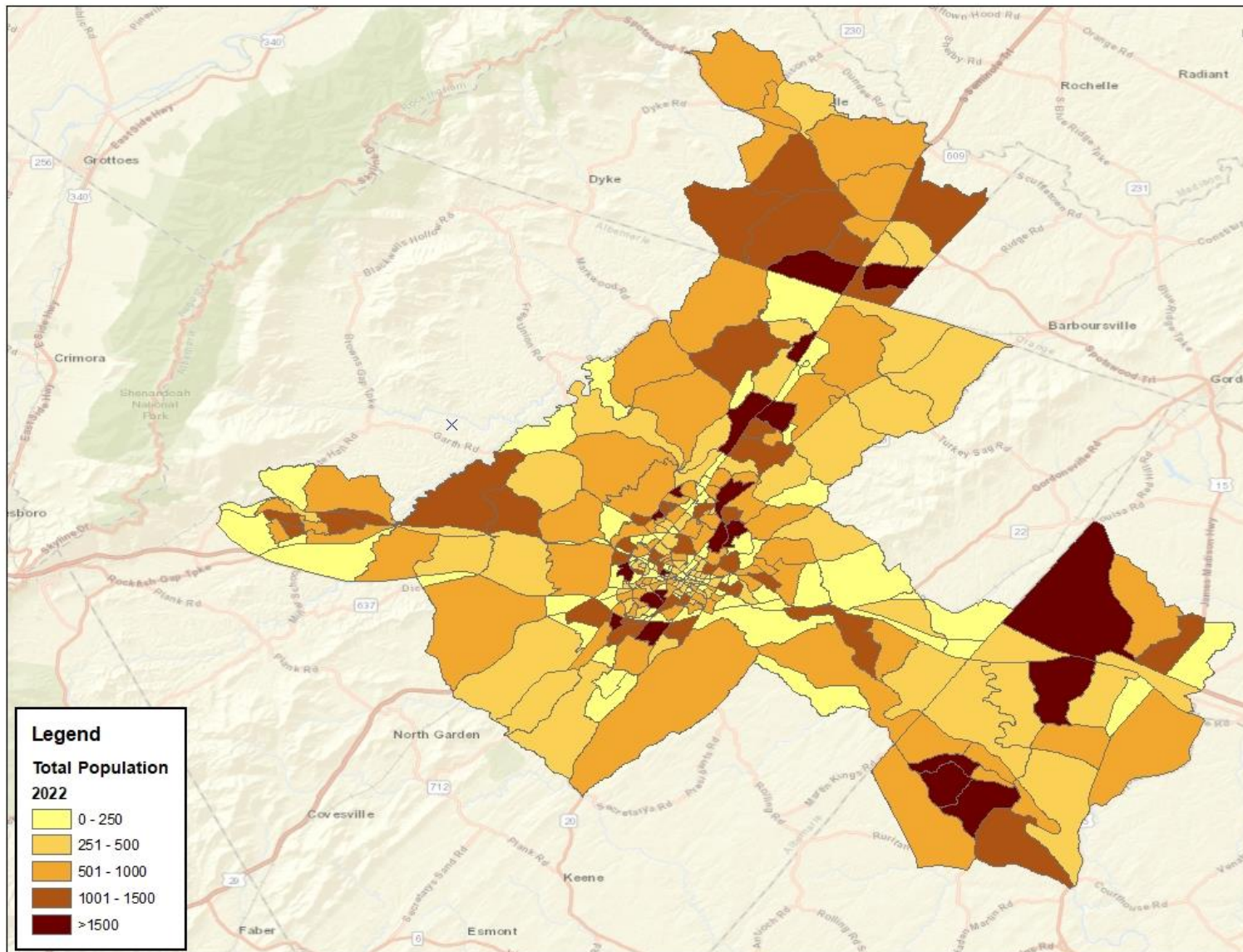
Demographics Comparison

- For Louisa County Area

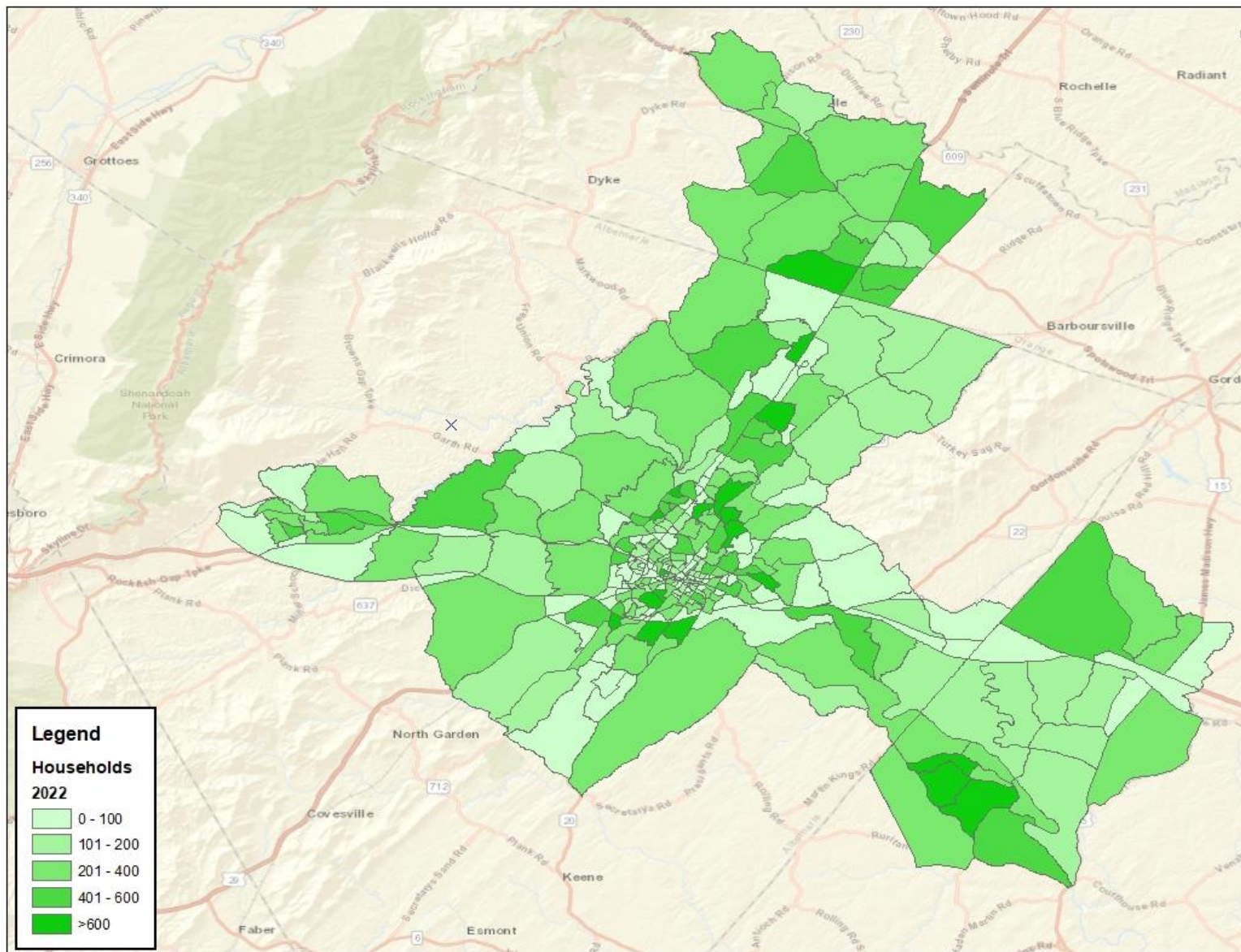
Model Variable	Description	Louisa County					
		2015 W&P	2022 W&P	2015 Model	2022 Model	2015 Model - W&P	2022 Model - W&P
TOTEMP	TOTAL EMPLOYMENT	100%	100%	100%	100%	0%	0%
EMP11	FARM, FORESTRY, FISHING, RELATED ACTIVITIES and OTHER EMPLOYMENT	5%	4%	0%	0%	-5%	-4%
EMP21	MINING EMPLOYMENT	1%	1%	0%	0%	-1%	-1%
EMP22	UTILITIES EMPLOYMENT	8%	7%	0%	0%	-8%	-7%
EMP23	CONSTRUCTION EMPLOYMENT	13%	10%	6%	5%	-7%	-5%
EMP3133	MANUFACTURING EMPLOYMENT	10%	8%	0%	0%	-9%	-8%
EMP42	WHOLESALE TRADE EMPLOYMENT	2%	2%	32%	17%	30%	15%
EMP4445	RETAIL TRADE EMPLOYMENT	11%	11%	42%	49%	31%	38%
EMP4849	TRANSPORTATION and WAREHOUSING EMPLOYMENT	4%	7%	0%	0%	-4%	-7%
EMP51	INFORMATION EMPLOYMENT	0%	0%	0%	0%	0%	0%
EMP52	FINANCE and INSURANCE EMPLOYMENT	2%	3%	1%	1%	-2%	-2%
EMP53	REAL ESTATE and RENTAL and LEASE EMPLOYMENT	4%	5%	2%	3%	-2%	-2%
EMP54	PROFESSIONAL and TECHNICAL SERVICES EMPLOYMENT	6%	5%	3%	3%	-3%	-2%
EMP55	MANAGEMENT of COMPANIES and ENTERPRISES EMPLOYMENT	1%	0%	0%	0%	-1%	0%
EMP56	ADMINISTRATIVE and WASTE SERVICES EMPLOYMENT	5%	6%	0%	0%	-5%	-6%
EMP61	EDUCATIONAL SERVICES EMPLOYMENT	0%	1%	0%	4%	0%	4%
EMP62	HEALTH CARE and SOCIAL ASSISTANCE EMPLOYMENT	5%	5%	0%	0%	-5%	-5%
EMP71	ARTS, ENTERTAINMENT, and RECREATION EMPLOYMENT	1%	2%	0%	1%	-1%	-1%
EMP72	ACCOMMODATION and FOOD SERVICES EMPLOYMENT	4%	5%	10%	12%	5%	7%
EMP81	OTHER SERVICES, EXCEPT PUBLIC ADMINISTRATION EMPLOYMENT	6%	6%	1%	1%	-5%	-5%
EMP92	FEDERAL CIVILIAN GOVERNMENT, FEDERAL MILITARY, STATE and LOCAL GOVERNMENT EMPLOYMENT	12%	12%	1%	1%	-11%	-10%
EMP99	Others / Uncategorized	0%	0%	1%	2%	1%	2%

2015 Model data based on InfoGroup data

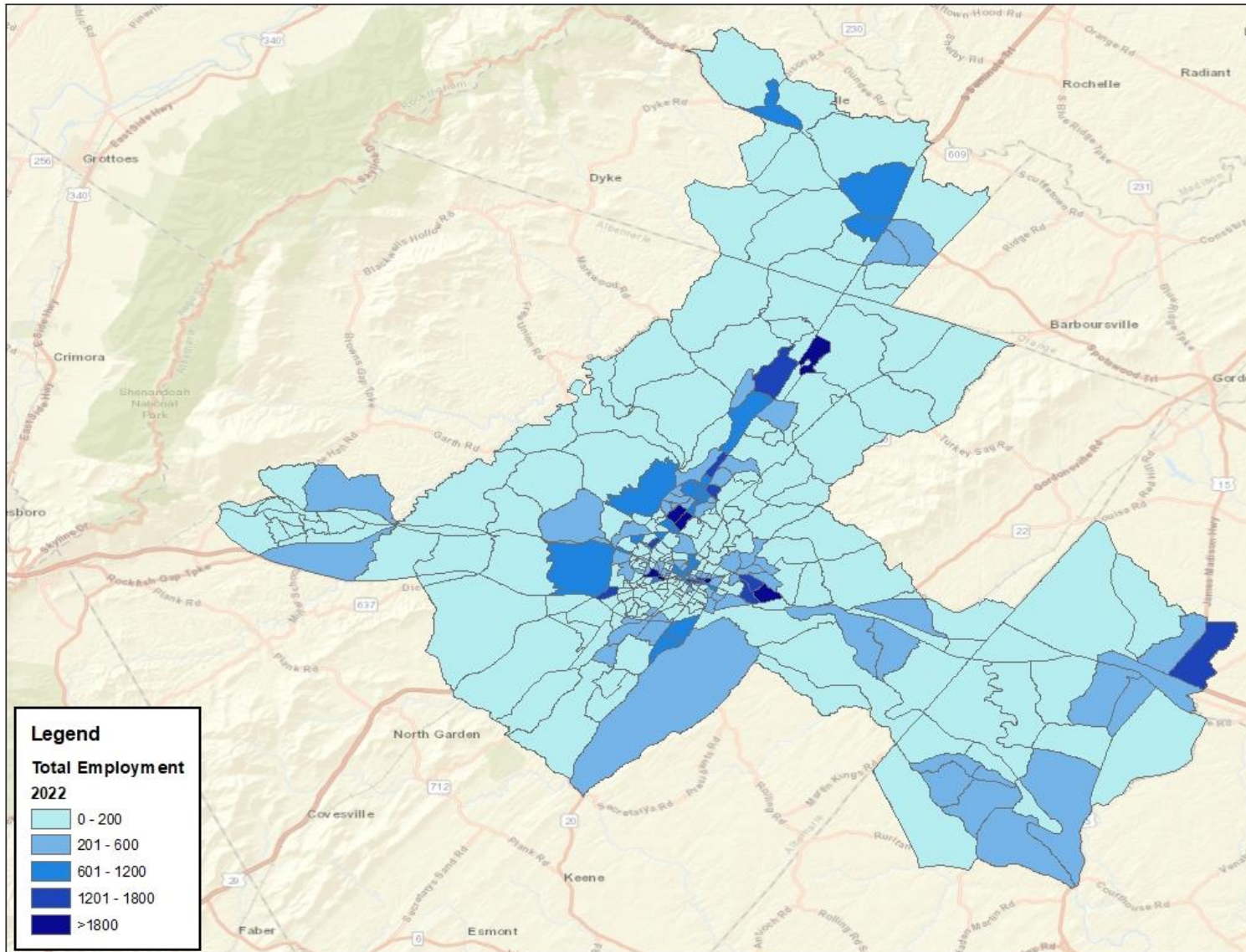
Total Population - 2022



Total Households - 2022

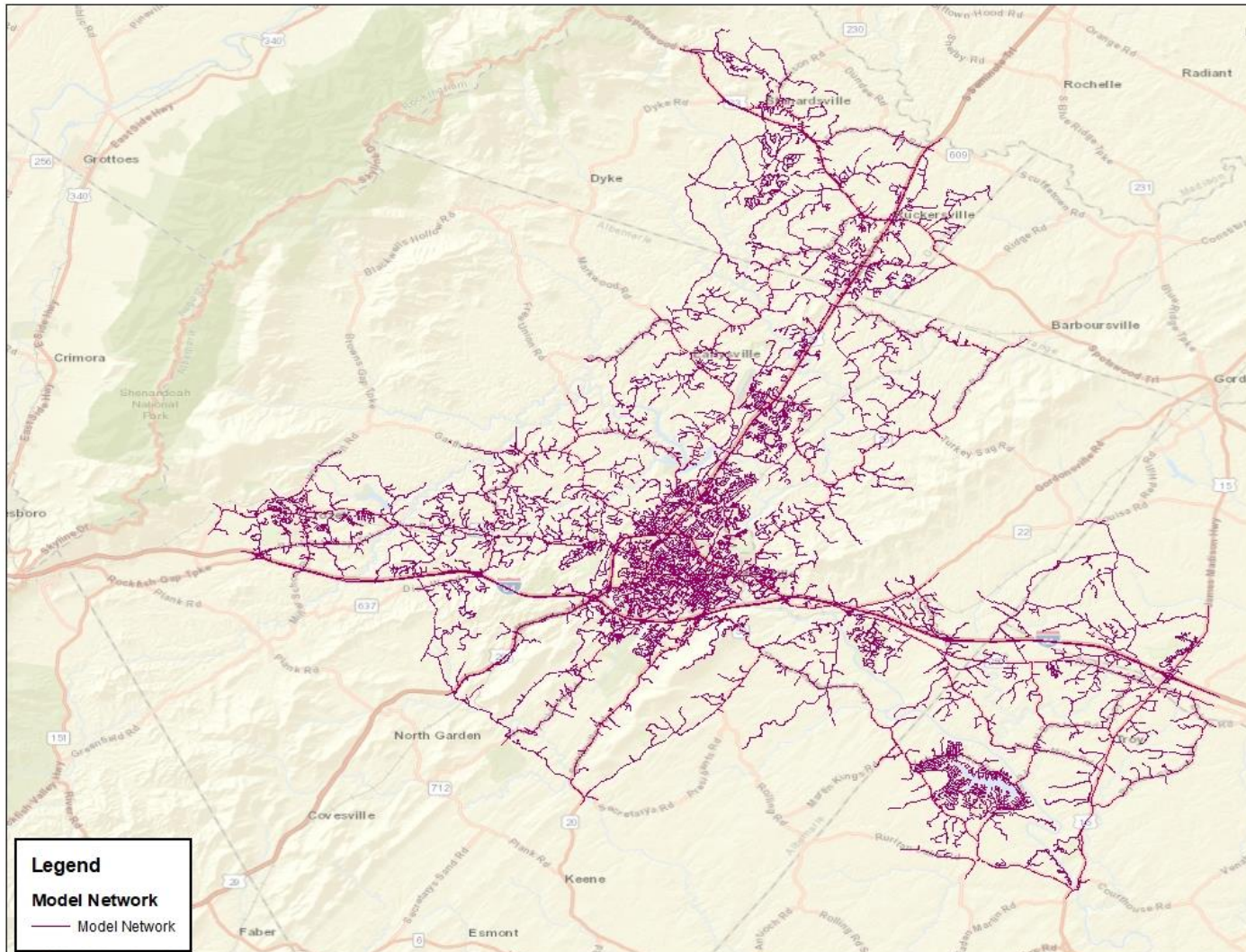


Total Employment - 2022



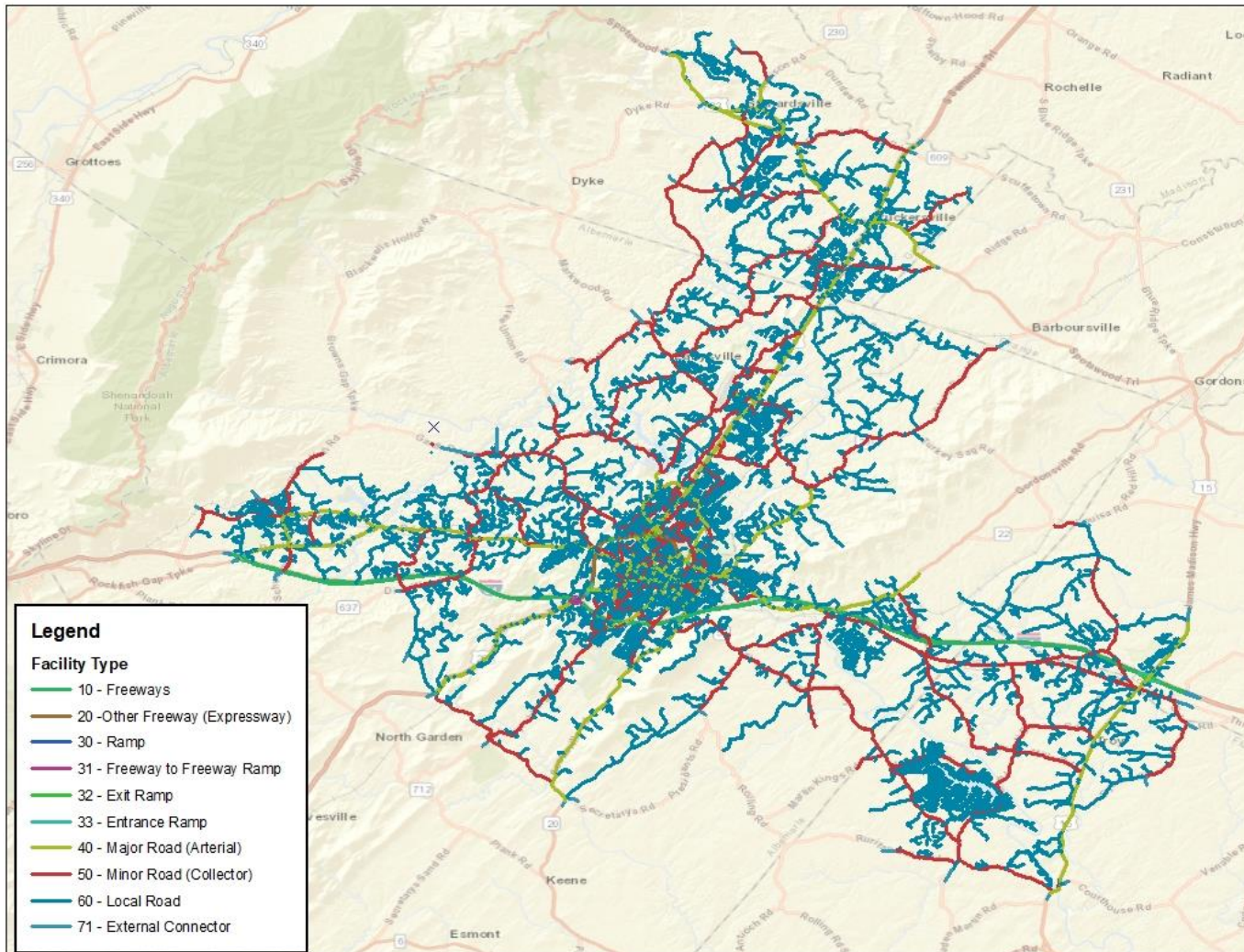
Model Network

- New network reflects updated roadways for the Y2022



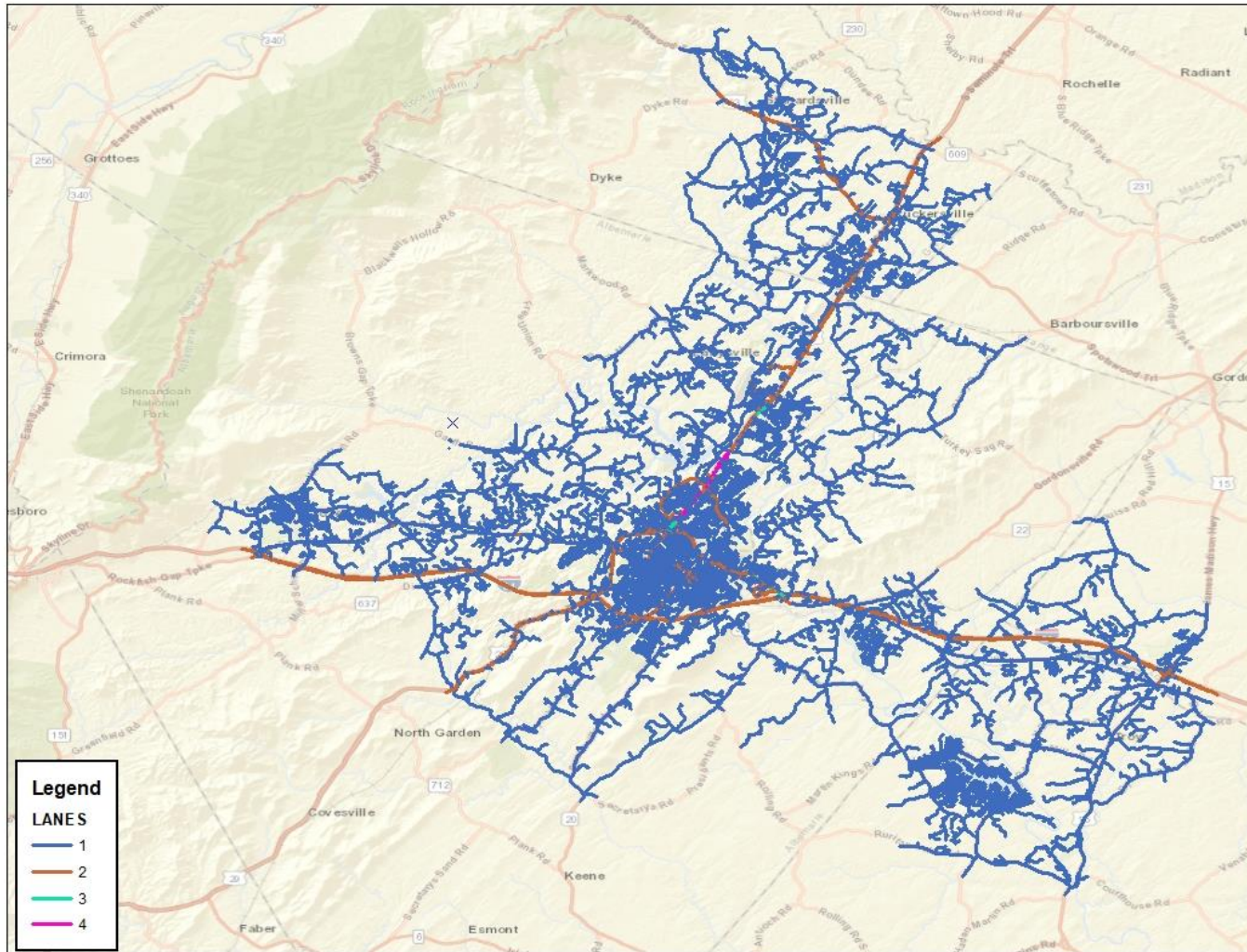
Model Network

- Model network by facility types



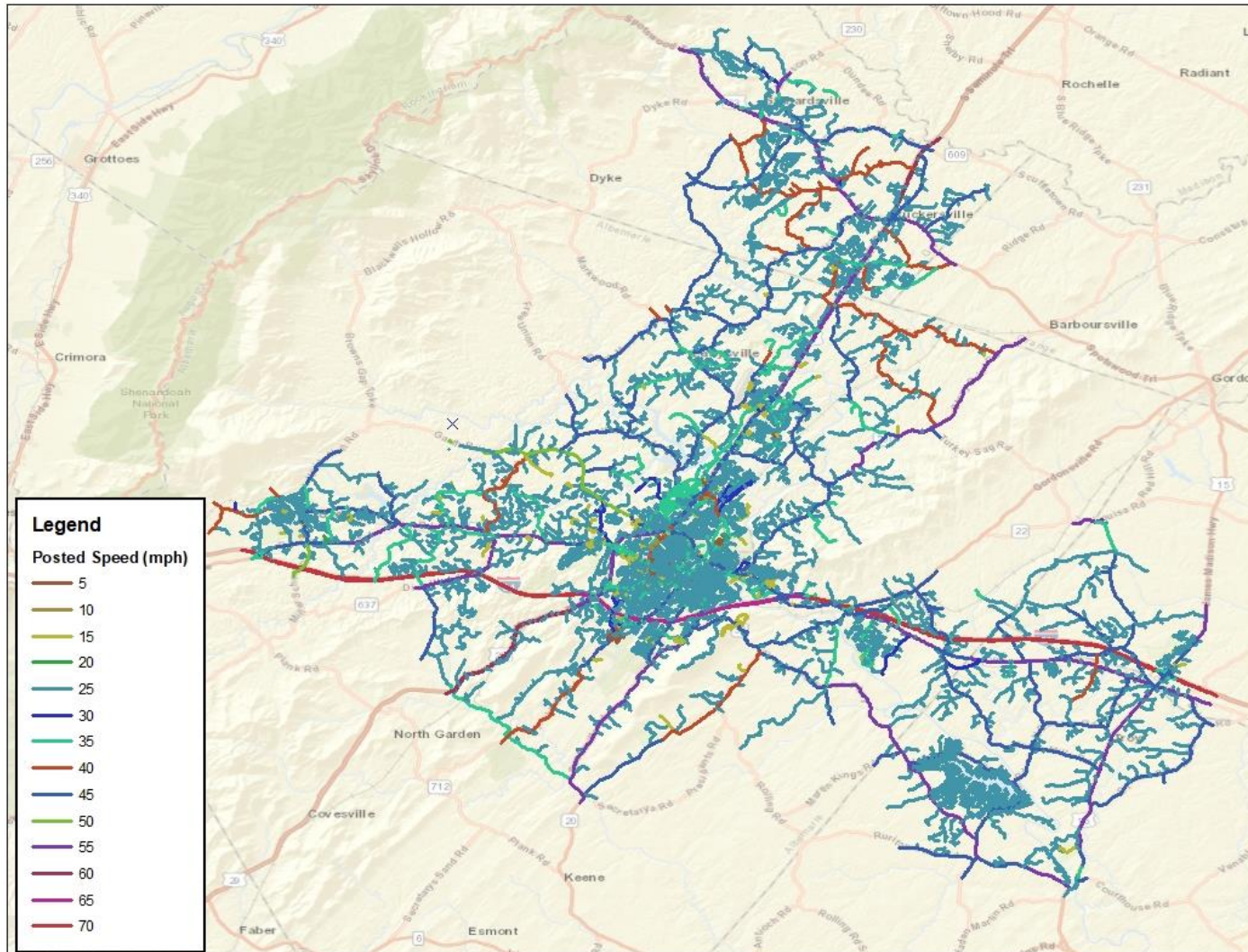
Model Network

- Model network by number of lanes



Model Network

- Model network by posted speed (mph)



Potential uses of the model

- **Congestion (measure by vehicle-hours of delay)**
- **Congestion maps showing road level-of-service**
- **Transit ridership**
- **Mode Share**
- **VMT per capita**
- **Average driving commute time**

Questions?