Data

Transit Route Analysis and Planning

Route Analysis Factors

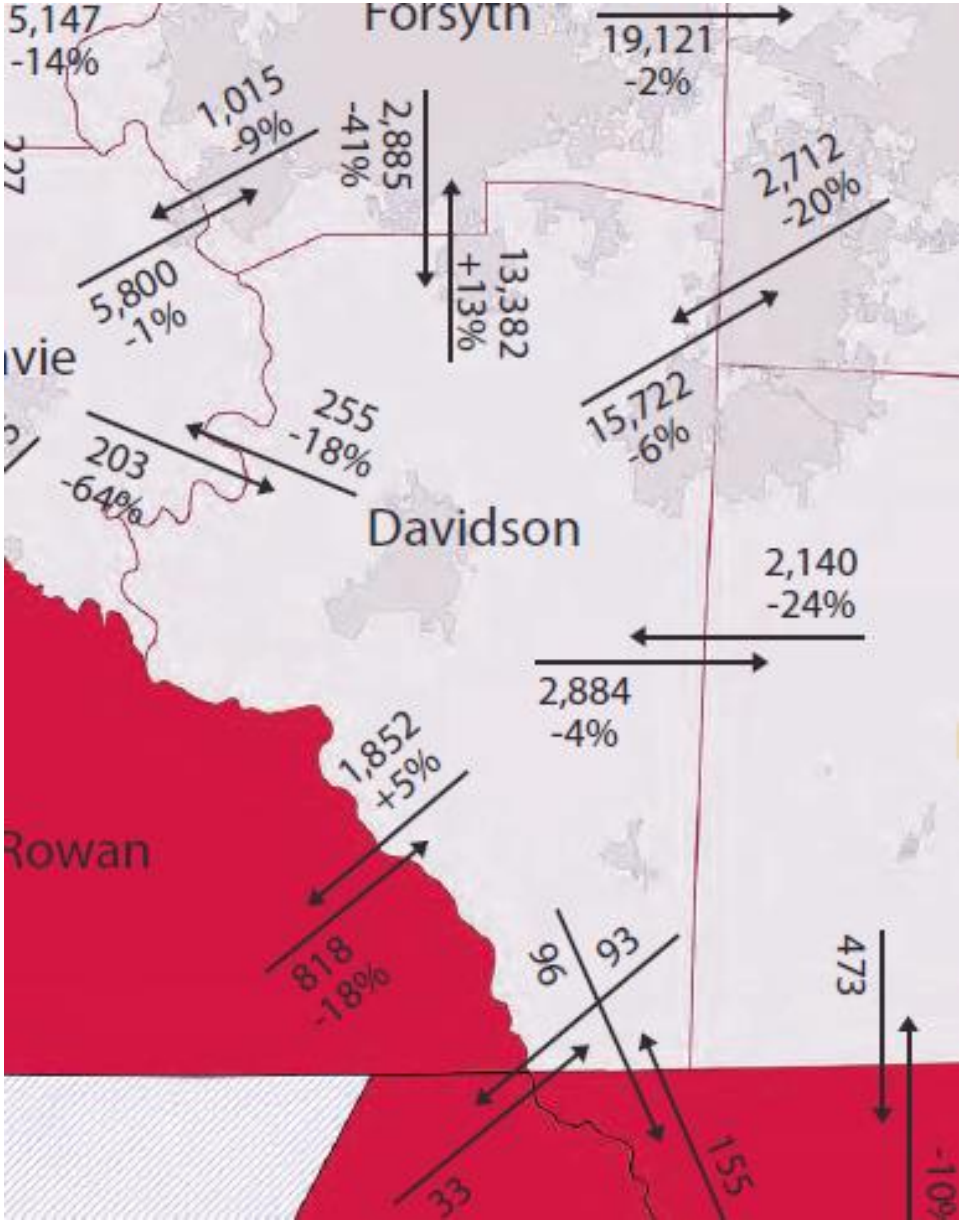
- Population density
- Employment density
- Existing bus routes and corridors
- Geographic coverage
- Timing
- Network connectivity
- Service equity
- Trip generators

Data Tools

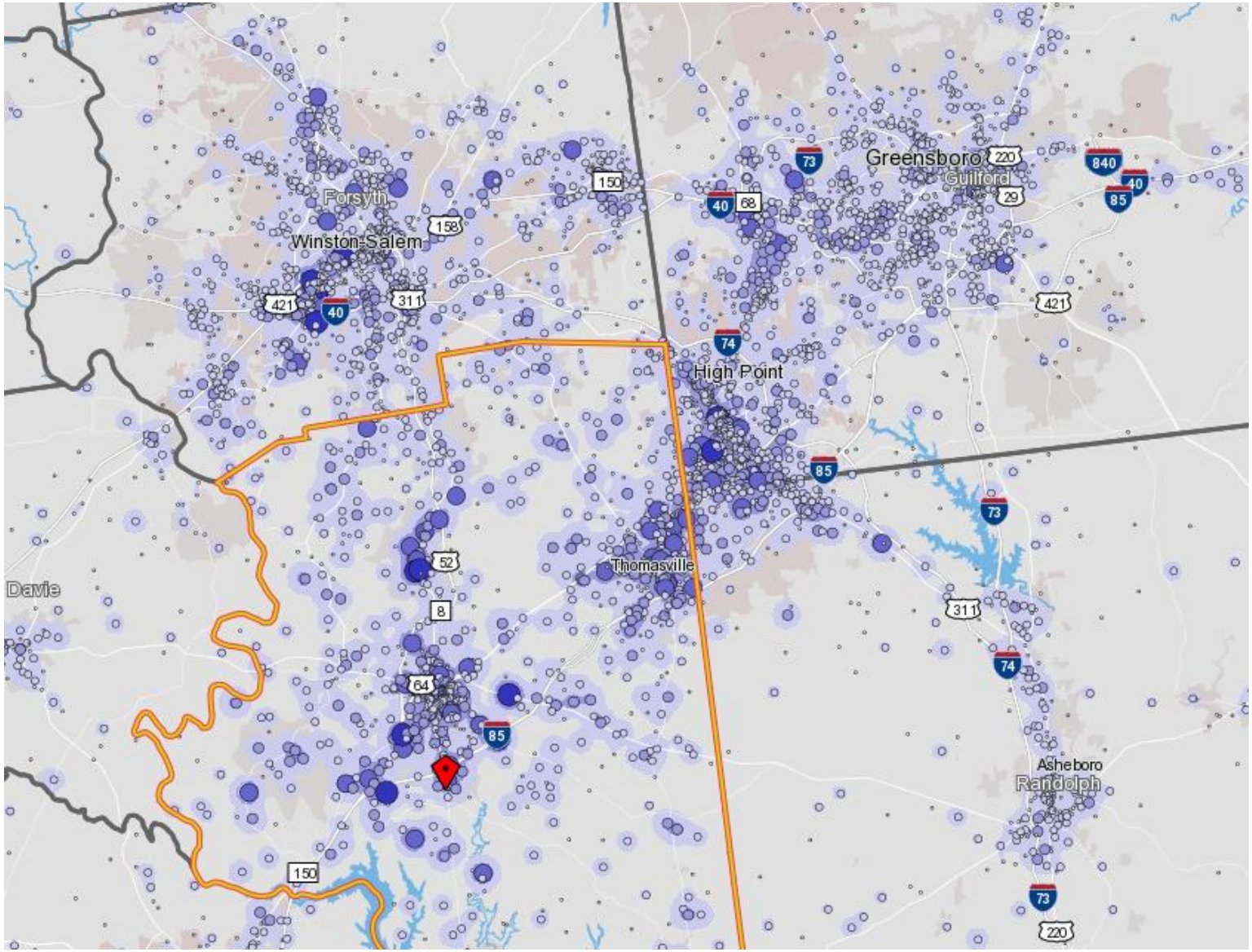
- APCs: Automatic Passenger Counters
- Catchment Area Analysis
- Transit Propensity Analysis
- New Projected and Potential Ridership Analysis
- Longitudinal Employer-Household Dynamics Program (LEHD)
- H+T
- Remix

Past Changes to Route 9

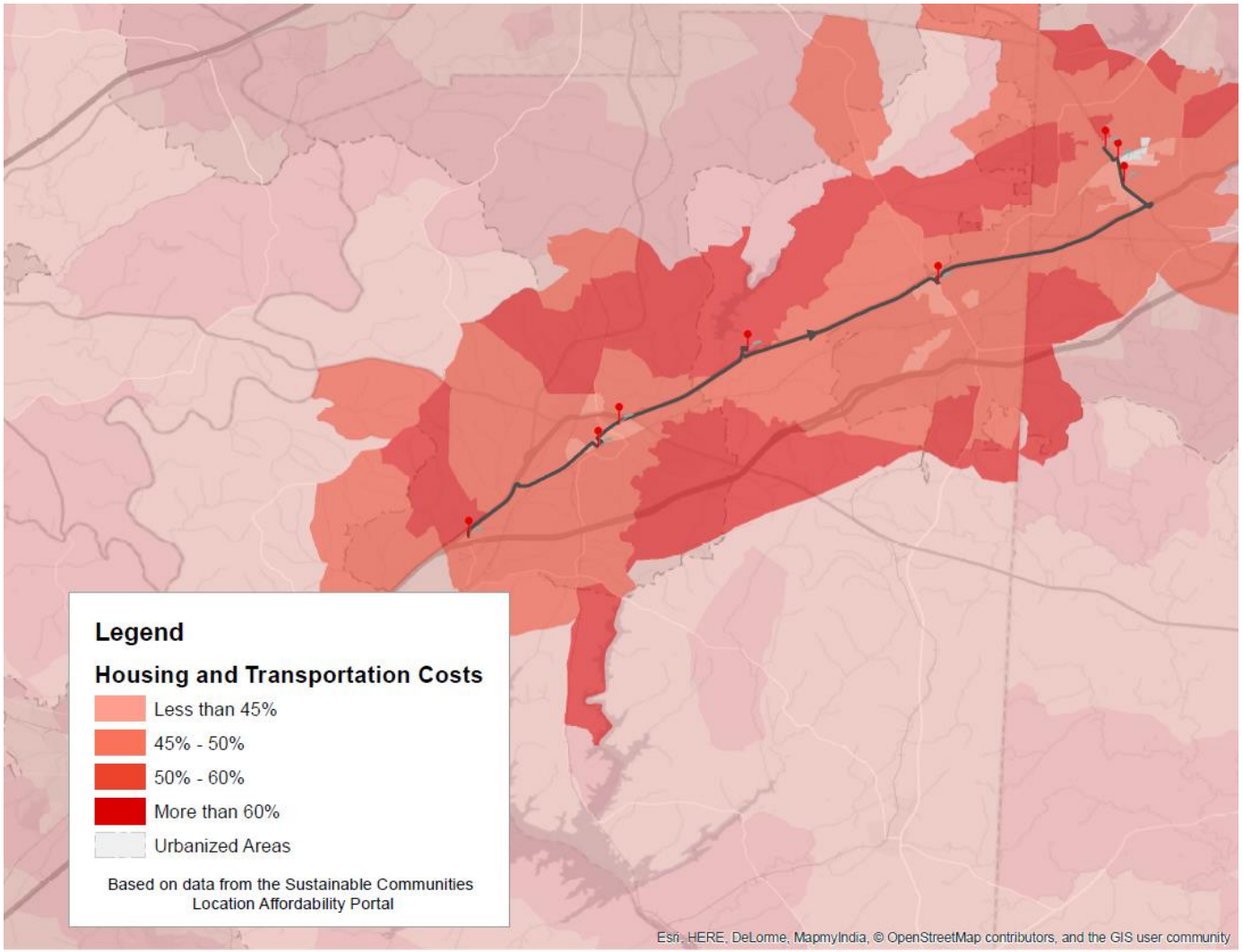
- Service reduction in June 2011
  - 3 roundtrips and 1 one-way to Lexington
  - Ridership fell by 19%
- Service reduction in November 2011
  - 2 roundtrips
  - Ridership fell by 44%


5,147
-14%
Forsyth
19,121
-2%
1,015
-9%
2,885
-41%
2,712
-20%
5,800
-1%
13,382
+13%
255
-18%
203
-64%
15,722
-6%
Davidson
2,140
-24%
2,884
-4%
1,852
+5%
Rowan
818
-18%
96
93
473
155

The Longitudinal Employer-Household Dynamics Program (LEHD)

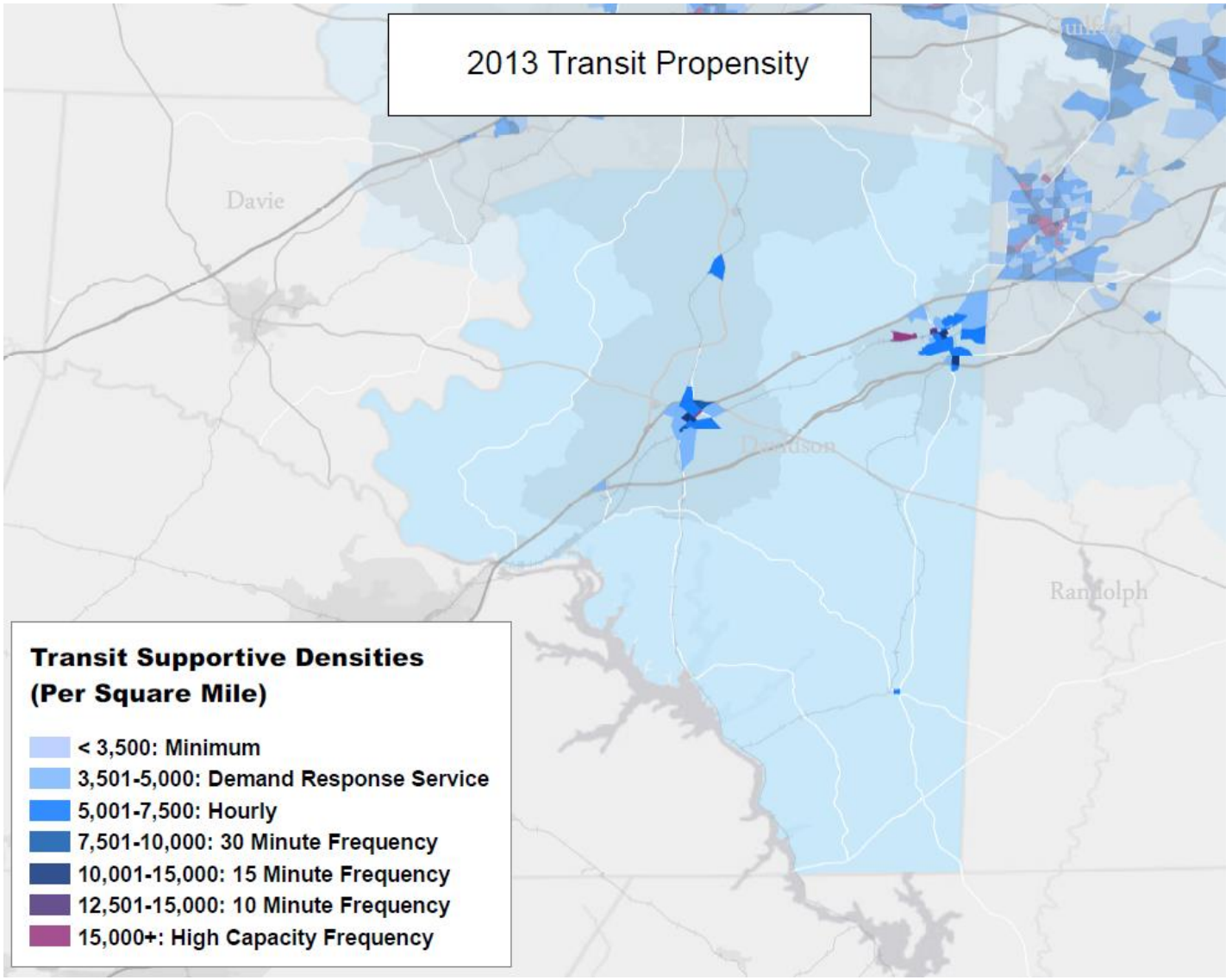


Housing + Transportation

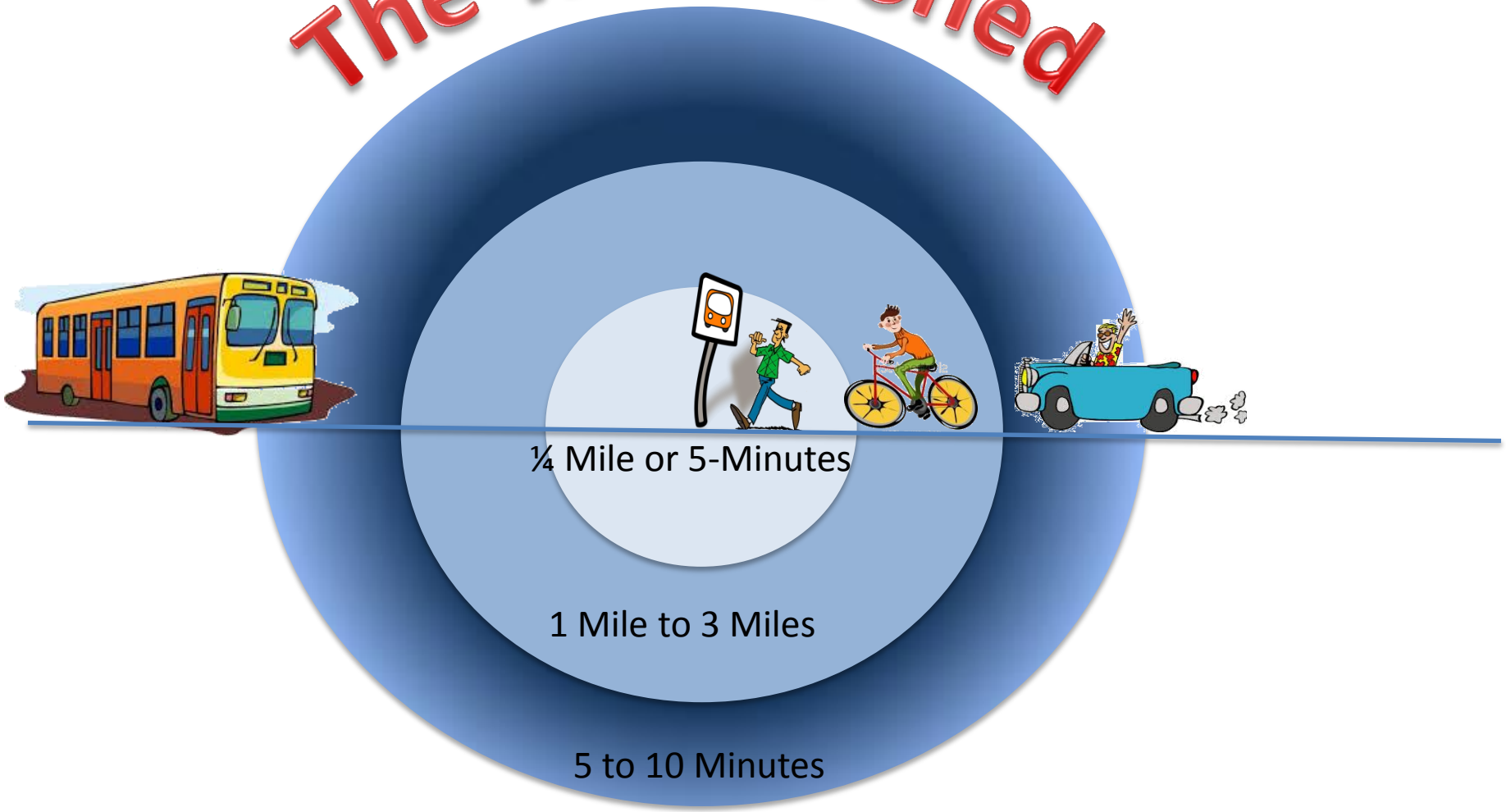


Transit Propensity

Transit Propensity = Population + (2 x Employment)

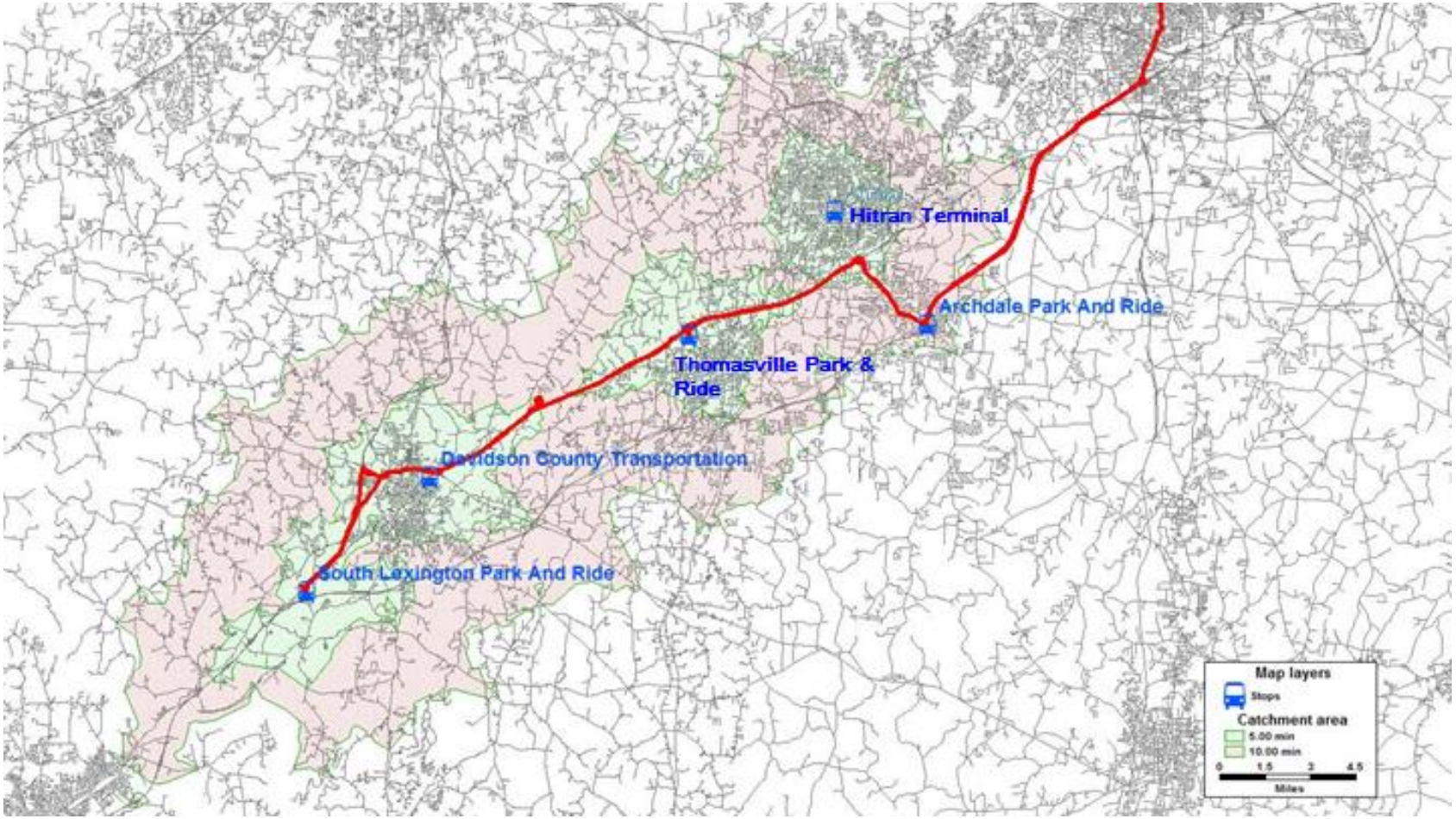


The Transit Shed



Concept Credit: Erin Walsh

Catchment Area

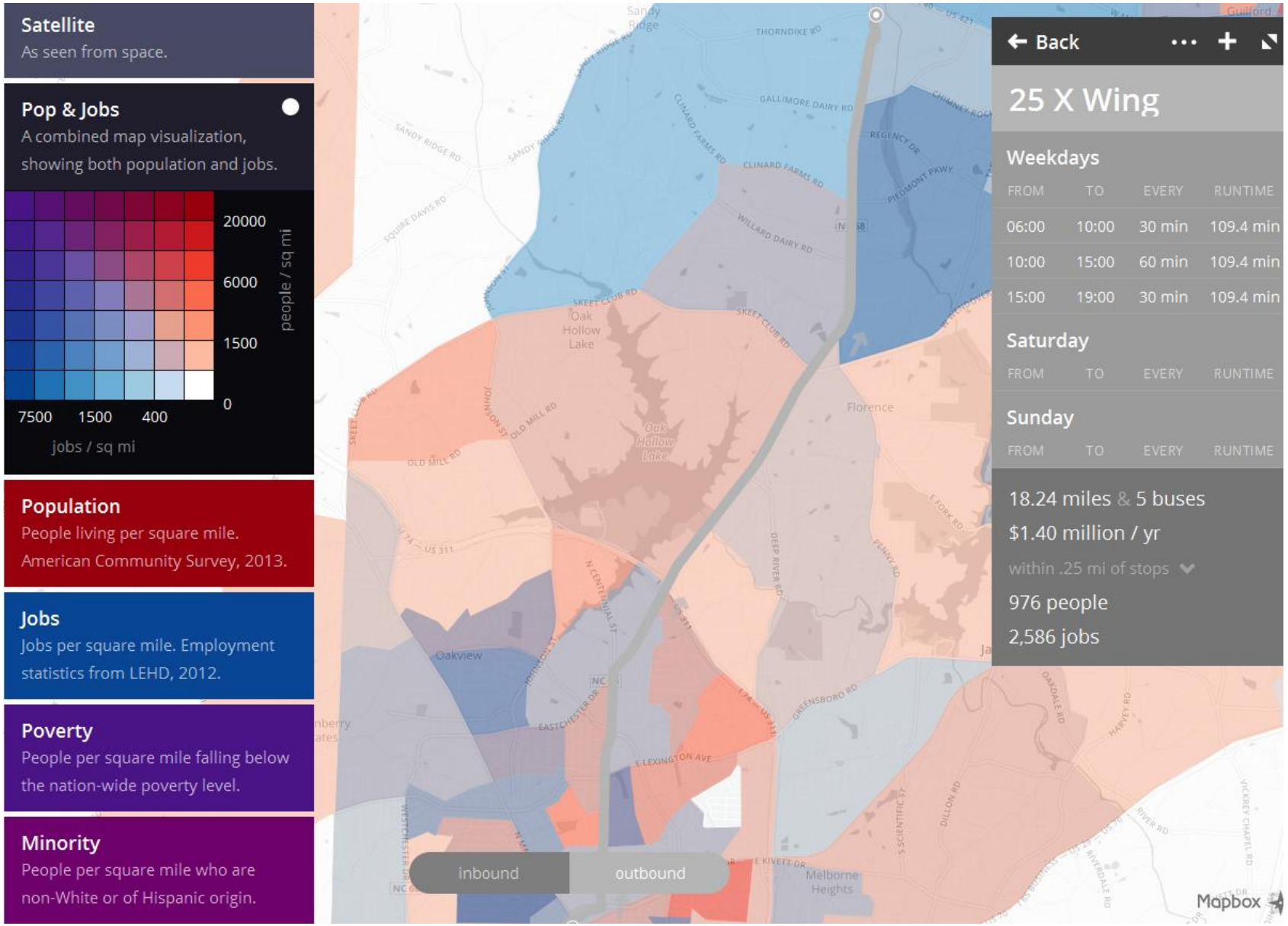


5 & 10 Minute Drive Zone Socio-Economic Data

Socio-economic Data		2013		2020	
		5 min[1)]	10 min[1)]	5 min[1)]	10 min[1)]
Population		86,363	194,512	89,652	201,311
Employment [2)]	Highway Retail	5,799	8,268	6,119	8,704
	Industry	18,550	33,715	19,291	34,840
	Retail	11,676	19,218	12,130	19,909
	Service	15,533	24,267	17,740	27,454
	Office	6,107	7,851	6,327	8,165
	School/University	2,704	6,266	2,853	6,564
Students	K12	13,098	35,279	13,356	36,035
	College/University	6,102	10,234	6,892	11,559

5-Minute Walk Zone
Socio-Economic Data

Socio-economic Data		South Lexington		Depot District		Davidson County Trans.		DCCC		Thomas-ville		GTCC High Point		Hitran Terminal		High Point Regional Hospital		Total	
		2013	2020	2013	2020	2013	2020	2013	2020	2013	2020	2013	2020	2013	2020	2013	2020	2013	2020
Population		30	38	104	250	82	90	7	7	210	213	128	130	71	96	77	78	709	902
Employ-ment	Highway Retail	0	3	35	41	9	10	0	0	3	3	2	2	89	90	5	5	143	154
	Industry	85	91	64	74	3	4	0	0	7	8	5	9	612	614	3	3	779	803
	Retail	1	4	54	57	3	4	0	0	15	16	18	19	799	808	22	23	912	931
	Service	8	21	161	187	4	7	0	0	9	13	27	30	402	431	316	353	927	1042
	Office	-	1	60	62	30	31	0	0	4	4	0	1	128	133	15	17	237	249
	School/ University	-	-	-	-	41	6	703	793	14	14	65	71	2	2	-	-	789	886
Students	K12	-	-	-	-	41	42	2	2	104	106	233	237	14	15	-	-	394	402
	College/ University	-	-	-	-	-	-	4,100	4,632	-	-	341	385	-	-	-	-	4,441	5,017


Satellite
As seen from space.
Pop & Jobs
A combined map visualization, showing both population and jobs.
20000
6000
1500
0
people / sq mi
7500
1500
400
jobs / sq mi
Population
People living per square mile. American Community Survey, 2013.
Jobs
Jobs per square mile. Employment statistics from LEHD, 2012.
Poverty
People per square mile falling below the nation-wide poverty level.
Minority
People per square mile who are non-White or of Hispanic origin.
Back
25 X Wing
Weekdays
FROM TO EVERY RUNTIME
06:00 10:00 30 min 109.4 min
10:00 15:00 60 min 109.4 min
15:00 19:00 30 min 109.4 min
Saturday
FROM TO EVERY RUNTIME
Sunday
FROM TO EVERY RUNTIME
18.24 miles & 5 buses
$1.40 million / yr
within .25 mi of stops
976 people
2,586 jobs
inbound
outbound
Florence
Oakview
Melborne Heights
Mapbox

Recommendations

- Eliminate Route 9 service within Greensboro
- One end of route will be downtown High Point
  - Serving hospital, community college, transit hub and train station
- Increase service to 2 morning, 1 mid-day and 2 evening roundtrips
- Extend service into Uptown Lexington and Downtown Thomasville

Potential Ridership

From Out Commute: CA X OC% x RMS = TOCR

78,971 x 9.1% x 0.83% = 63.6

CA = Total Population within a 5-minute drive of a park-n-ride lot
OC = Out of County Commuters
RMS = Regional Mode Split for Transit Ridership
TOCR = Total Riders from Out of County Commuters

TOCR + TICR = TPR

63.6 + 133.3 = **196.9**

TPR = Total Number of Potential Riders

From In Commute: AES x RMS = TICR

16,058 x 0.83% = 133.3

AES = Total number of employees and students with a 5-minute walk of a park-n-ride lot and stop, includes the entire college or hospital campus
RMS = Regional Mode Split for Transit Ridership
TICR = Total Riders from Into County Commuters

Potential Ridership

TPR x TpD x DpM = TPM
196.9 x 2 x 21 = **8,268**

TpR = Total Number of Potential Riders
TpD = Trips per Day
DpM = Days per Month
TPM = Trips per Month

Projected Ridership

CR x LOSF = PR

511 x 1.82% = 930

CR = Current Monthly Ridership

LOSF = Level of Service Factor (elasticity rate applied based on increase/decrease of headway)

PR = Projected Ridership

Route 9 Results

Old Route 9

- Takes 1 bus to operate
- 98.57 miles in length
- 1,600 revenue hours/annually
- 4 trips daily

New Route 9

- Takes 1 bus to operate
- 63.37 miles in length
- 2,051 revenue hours/annually
- 10 trips daily
- Monthly ridership increase avg: 25 passenger trips