

Knoxville Transportation Authority

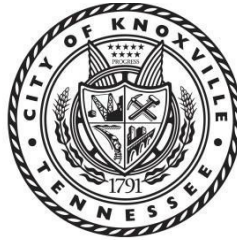
Meeting Date: Thursday, September 24th



Monthly Report

August 2026

Indya Kincannon
MAYOR
(865) 215-2040



CITY OF KNOXVILLE

Knoxville Transportation Authority

Dustin Durham
CHAIR

Rick Whitted
VICE-CHAIR

Sara May
RECORDING SECRETARY

Matthew DeBardelaben

Beth Miller

Aly Taylor

Mary Thom-Adams

Nancy Nabors

Eboni Winford

Zach Roskop

John Lawhorn
ATTORNEY TO KTA

AGENDA

Thursday, September 24th

City-County Building, Main Assembly Room

- I. Determination of Quorum
- II. Approval of Minutes – August
- III. Reports
 - a. KTA Chair
 - b. Commissioner's Comments
 - c. Staff
 - i. City of Knoxville Director of Transit
 - 1. Discuss KAT Integrated Microtransit and Paratransit Study
 - ii. TPO Transit Planner
- IV. New Business
 - a. No new Business
- V. Old Business
- VI. Public Comments
- VII. Set the next meeting for October 22nd, 2026 & Adjourn

I. Determination of Quorum

Chair Durham called the meeting to order at 3:00 PM.

John Lawhorn confirmed that seven members were present and that a quorum was established.

II. Approval of Minutes - July

Commissioner Winford moved to approve the July meeting minutes. **Commissioner Miller** seconded the motion. The minutes were approved.

III. Reports

a. KTA Chair

Chair Durham announced that the "Ride the Routes" program would resume following the meeting and continue after scheduled meetings through the end of the year. He stated that the program had been a valuable opportunity to learn more about KAT routes and encouraged commissioners, City Council members, and members of the media to participate.

Chair Durham also stated that he was working on several ideas to improve the transit system and hoped to bring them before the board in the coming months.

b. Director of Transit

Isaac Thorne reported that fixed-route ridership had increased 4% during the first month of the fiscal year and that on-time performance was 82%.

Thorne reported that the City and KAT had completed a study with Benesch regarding the possible integration of microtransit and paratransit. The report will be distributed to the board for review, with a presentation scheduled for September.

Commissioner Roskop asked about KAT's goal for on-time performance.

Isaac Thorne stated that the goal was 90% and explained that traffic congestion was a major factor affecting performance. Traffic signal improvements would help buses remain on schedule.

Chair Durham requested an update on the Broadway Accelerated Bus Corridor project.

Isaac Thorne reported that construction was expected to begin in 2027, with completion anticipated in 2030. The project would include sidewalk, roadway, traffic signal priority, and queue jump lane improvements. Service frequency along the corridor would increase from 30 minutes to 15 minutes. He explained that no additional board action was currently needed.

Commissioner Roskop asked which corridors experienced the greatest on-time performance challenges.

Isaac Thorne identified Broadway and Kingston Pike as significant areas of concern and noted that Chapman Highway also experienced some issues.

Chair Durham asked about the increase in revenue shown in the July system performance report.

Isaac Thorne stated that increased service contributed to the higher revenue but noted that the figures were unaudited. He also explained that passengers per hour was commonly used by transit agencies as a measure of productivity.

c. TPO Transit Planner

Doug Burton provided an expanded update on the “What’s Next Knoxville” Comprehensive Plan and distributed materials outlining the planning process and community feedback received to date. He stated that the consultant team was available to provide a more detailed presentation at the September meeting and requested that the presentation be placed early on the agenda due to the consultants’ travel schedule.

He reported that the community engagement phase had taken place from April through August and focused on identifying what residents valued about Knoxville and what they believed should be improved. He stated that the project was moving into the next phase, during which consultants would develop and present different scenarios for how Knoxville could grow over the next 25 years. He then stated that more than 6,000 people had participated in approximately 110 events, including listening sessions, pop-up meetings, stakeholder interviews, focus groups, and other community activities. More than 1,800 community surveys had been submitted, and the project website had received more than 22,000 views. A project headquarters had also been established on Market Square to provide another opportunity for residents to learn about the plan and participate.

He explained that an interactive online map had allowed residents to identify places they valued and areas they believed needed improvement. Popular locations included parks, greenways, natural areas, downtown public spaces, and walkable neighborhoods. Areas

identified for additional improvements included downtown, the waterfront, East Knoxville, major transportation corridors, parks, and other public spaces.

Burton said outreach included residents from a wide range of age groups. He noted that additional efforts had been made to engage younger residents because they would be directly affected by the City's long-term growth and development. Community feedback showed strong interest in improving transportation options. He shared that those safer ways to travel without a car, including walking, biking, and public transit, consistently ranked among residents' highest priorities. Other priorities included balanced and sustainable growth, quality housing, complete and walkable communities, infill and redevelopment, parks and greenways, and economic prosperity and equitable opportunities. He then said that preliminary goals were being developed based on the community feedback.

One proposed goal focused on connecting neighborhoods and destinations through safer walking and biking options, improved transit access and service, and expanded greenway connections. He then announced that another round of public engagement would take place during September and October. These sessions would allow residents to review possible growth scenarios and provide feedback on how they wanted Knoxville to develop. He emphasized that the way the city developed would directly affect the efficiency and accessibility of public transit. He noted that sidewalks, bikeways, greenways, land use, and development patterns all played important roles in supporting transit.

Burton encouraged commissioners and transit advocates to participate in the upcoming public meetings and provide feedback. He confirmed that the consultant team could attend the September 24 meeting to provide the board with a more detailed update on the next phase of the comprehensive plan.

Chair Durham agreed to schedule the presentation.

Commissioner Winford complimented the planning team on the thoroughness of the needs assessment and community data.

Chair Durham commended the planning team for its efforts to include residents of different ages, neighborhoods, and historically underrepresented communities.

Doug Burton stated that the project had included one of the most extensive public involvement efforts he had experienced during his time with Knoxville-Knox County Planning.

Commissioner Taylor asked about the next steps after community input was completed.

Doug Burton stated that the next round of public input was expected to conclude around Thanksgiving, with draft concepts anticipated in January.

Chair Durham asked whether the comprehensive plan would include specific zoning changes.

Doug Burton explained that the plan would provide broader guidance and could lead to future zoning changes, but it would not serve as a detailed zoning map.

IV. New Business

There was no new business.

V. Old Business

There was no old business.

VI. Public Comments

Martia Brown (no address provided), representing Enterprise, presented information about the Commute with Enterprise program. She explained that the vanpool program provided transportation options for employees and employers traveling to work, school, and other destinations.

Chair Durham asked how individuals could participate in the program.

Martia Brown stated that interested individuals could contact her directly or visit the Commute with Enterprise website.

Elliot Lloyd, 708 Morgan Street, Knoxville, Tennessee, discussed overcrowding and hourly service on Route 16. They stated that limited frequency created scheduling difficulties for riders traveling to work and medical appointments. They suggested increasing service frequency along portions of Route 16, particularly around medical facilities.

Lloyd also discussed the increase in ridership associated with fare-free service and suggested studying fare-free service during weekday peak travel periods. They stated that they are a University of Tennessee student interested in studying the effects of partial fare-free transit service.

Chair Durham thanked Lloyd for their comments.

VII. Next Meeting & Adjournment

Chair Durham announced that the next meeting would be held on September 24, 2026, at 3:00 p.m. in the Main Assembly Room.

With no further business, **Chair Durham** adjourned the meeting.

Respectfully Submitted,
Sara F. May
KTA Recording Secretary



KNOXVILLE AREA TRANSIT

ROUTE PERFORMANCE REPORT - August, 2026

ROUTE NUMBER	ROUTE NAME	RIDERSHIP	% of Ridership	MILES	% of Miles	HOURS	% of Hours	Passg/ Mile	Passg/ Hour
1	Downtown Connector	13,125	7.7%	7,409	3.4%	1,402	7.5%	1.77	9.36
10	Sequoyah Hills	0	0.0%	1,027	0.5%	121	0.7%	0.00	0.00
11	Kingston Pike	17,393	10.2%	15,117	7.0%	1,388	7.5%	1.15	12.53
12	Western Avenue	10,164	6.0%	14,822	6.9%	1,485	8.0%	0.69	6.84
15	Woodland Crosstown	8,943	5.3%	15,880	7.4%	1,459	7.8%	0.56	6.13
16	Cedar Bluff Connector	10,659	6.3%	11,371	5.3%	1,043	5.6%	0.94	10.22
17	Sutherland/Bearden	3,387	2.0%	4,644	2.2%	451	2.4%	0.73	7.51
20	Central Street	17,216	10.1%	18,716	8.7%	1,428	7.7%	0.92	12.06
22	Broadway	20,979	12.3%	10,558	4.9%	1,233	6.6%	1.99	17.01
23	Millertown	2,872	1.7%	5,059	2.4%	462	2.5%	0.57	6.22
24	Inskip/Breda	3,701	2.2%	5,498	2.6%	558	3.0%	0.67	6.63
31	Magnolia Avenue	17,830	10.5%	10,822	5.0%	1,146	6.2%	1.65	15.56
32	Dandridge Avenue	3,267	1.9%	3,750	1.7%	360	1.9%	0.87	9.08
34	Burlington	11,606	6.8%	12,952	6.0%	1,185	6.4%	0.90	9.79
37	Morningside/Riverside	5,392	3.2%	2,968	1.4%	458	2.5%	1.82	11.77
40	South Knoxville	0	0.0%	0	0.0%	0	0.0%	0.00	0.00
41	Chapman Highway	12,739	7.5%	12,319	5.7%	753	4.0%	1.03	16.92
42	Fort Sanders/UT Medical Centers	4,995	2.9%	4,206	2.0%	729	3.9%	1.19	6.85
44	University Park	0	0.0%	0	0.0%	0	0.0%	0.00	0.00
45	Vestal	0	0.0%	0	0.0%	0	0.0%	0.00	0.00
	Other/ Unknown								

SUB TOTAL LINE SERVICE	164,268	96.5%	157,118	73.1%	15,661	84.2%	1.05	10.49
LIFT SERVICE	5,868	3.4%	57,881	26.9%	2,934	15.8%	0.10	2.00
katConnect	14	0.0%	0	0.0%	0	0.0%	0.00	0.00
Charter Services	0	0.0%	0	0.0%	0	0.0%	0.00	0.00
GRAND TOTAL ALL KAT SERVICES	170,150	100.0%	214,999	100.0%	18,595	100.0%	0.79	9.15



KNOXVILLE AREA TRANSIT

SYSTEM PERFORMANCE REPORT — August, 2026

	THIS MONTH			FISCAL YEAR-TO-DATE		
	This Year	Last Year	Change	This Year	Last Year	Change
FIXED ROUTE SERVICE						
Total Passengers	164,268	193,218	-15%	164,268	389,060	-58%
System Generated Revenue				\$175,137	\$157,177	11%
Revenue Veh. Miles	157,118	211,876	-26%	157,118	427,110	-63%
Revenue Veh. Hours	15,661	17,105	-8%	15,661	34,425	-55%
Passengers/Mile	1.05	0.91	15%	1.05	0.91	15%
Passengers/Hour	10.49	11.30	-7%	10.49	11.30	-7%
Preventable Accidents	5	3	67%	5	7	-29%
Mechanical Road Calls	53	42	26%	53	80	-34%
Accidents/100,000 Miles	3.18	1.42	125%	3.18	1.64	94%
Miles/Road Failure	2,964.49	5,044.67	-41%	2,964.49	5,338.88	-44%
DEMAND RESPONSE						
Total Passengers	5,868	5,712	3%	5,868	11,533	-49%
System Generated Revenue				\$23,335	\$33,494	-30%
Revenue Veh. Miles	57,881	36,822	57%	57,881	74,063	-22%
Revenue Veh. Hours	2,934	2,720	8%	2,934	5,484	-46%
Passengers/Mile	0.10	0.16	-35%	0.10	0.16	-35%
Passengers/Hour	2.00	2.10	-5%	2.00	2.10	-5%
Preventable Accidents	5.00	0.00	N/A	0.00	5.00	N/A
Mechanical Road Calls	10.00	3.00	233%	10.00	6.00	67%
Accidents/100,000 Miles	0.00	0.00	N/A	0.00	0.00	N/A
Miles/Road Failure	5,788.10	12,274.00	-53%	5,788.10	12,343.83	-53%
CHARTER SERVICE						
Charters	5	245	-98%	5	245	-98%
Sports Charters	0	0	N/A	0	0	N/A
Total Passengers	0	44,300	-100%	0	44,300	-100%
Revenue						
Football Shuttle Charters	\$0	\$0	N/A	\$0	\$0	N/A
Other Sports - Boyd Sports, LLC	\$0	\$0	N/A	\$0	\$0	N/A
Total Miles	0.00	8,600.00	-100%	0.00	8,600.00	-100%
Total Hours	0.00	1,520.00	-100%	0.00	1,520.00	-100%

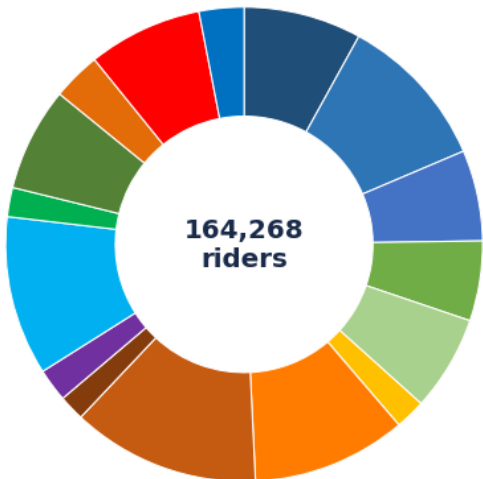
KAT RIDERSHIP CHARTS

August, 2026

Knoxville Area Transit · Route Performance & System Overview

Fixed route riders	LIFT passengers	Charter passengers	Total all services
164,268	5,868	0	170,136
▼ 15.0% vs AUG-25	▲ 2.7% vs AUG-25	▼ 100.0% vs AUG-25	▼ 30.1% vs AUG-25

RIDERSHIP BY ROUTE — AUG-26



1 - Downtown Connector: 13,125 (8.0%)	11 - Kingston Pike: 17,393 (10.6%)
12 - Western Ave: 10,164 (6.2%)	15 - Woodland Crosstown: 8,943 (5.4%)
16 - Cedar Bluff: 10,659 (6.5%)	17 - Sutherland/Bearden: 3,387 (2.1%)
20 - Central Street: 17,216 (10.5%)	22 - Broadway: 20,979 (12.8%)
23 - Millertown: 2,872 (1.7%)	24 - Inskip/Breda: 3,701 (2.3%)
31 - Magnolia Ave: 17,830 (10.9%)	32 - Dandridge Ave: 3,267 (2.0%)
34 - Burlington: 11,606 (7.1%)	37 - Morningside/Riverside: 5,392 (3.3%)
41 - Chapman Hwy: 12,739 (7.8%)	42 - Ft Sanders/UT: 4,995 (3.0%)

ROUTE TRENDS — JUL-25 TO AUG-26

See following pages for all 20 route trend charts

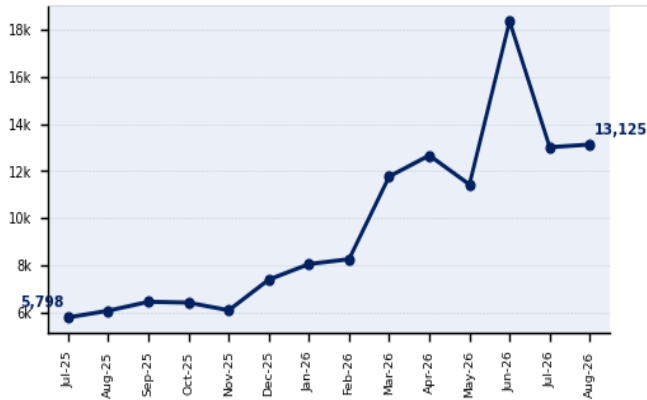


KAT RIDERSHIP CHARTS

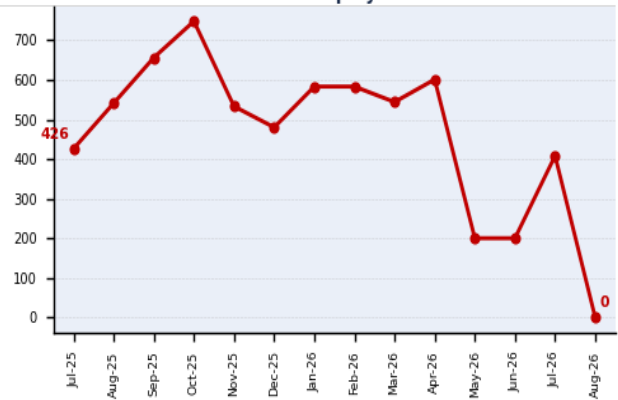
August, 2026

Route Trend Charts · January 2025 to August, 2026

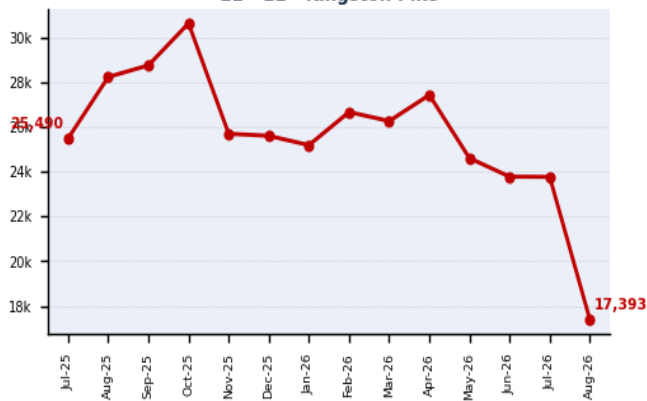
1 - 1 - Downtown Connector



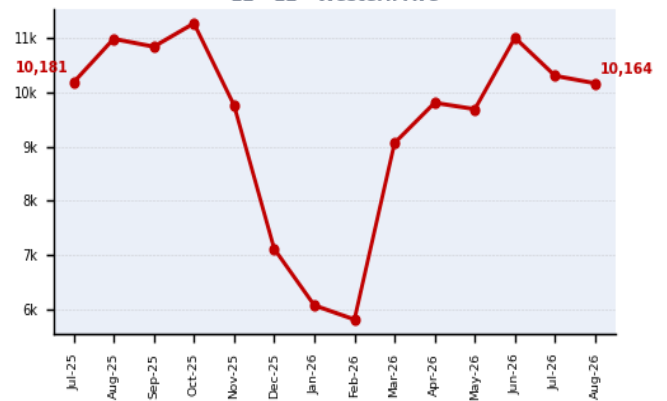
10 - 10 - Sequoyah Hills



11 - 11 - Kingston Pike



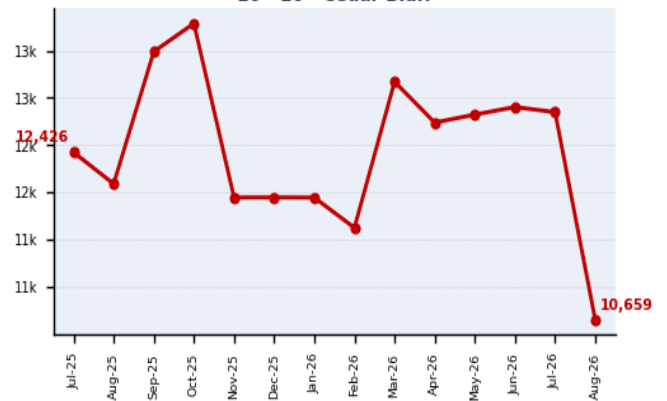
12 - 12 - Western Ave



15 - 15 - Woodland Crosstown



16 - 16 - Cedar Bluff



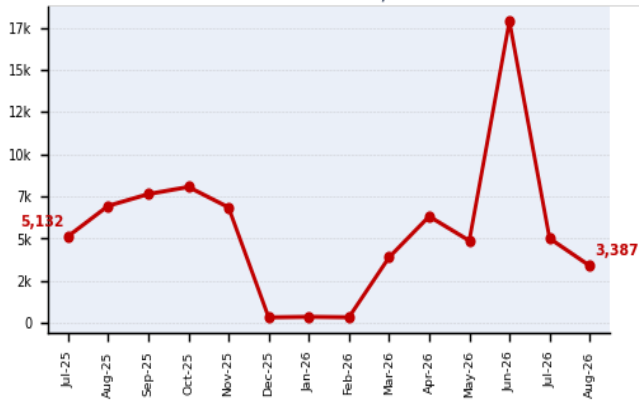


KAT RIDERSHIP CHARTS

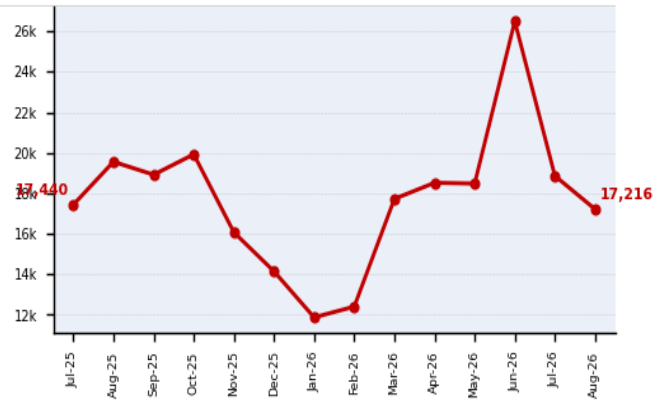
August, 2026

Route Trend Charts · January 2025 to August, 2026

17 - 17 - Sutherland/Bearden



20 - 20 - Central Street



22 - 22 - Broadway



23 - 23 - Millertown



24 - 24 - Inskip/Breda



31 - 31 - Magnolia Ave





KAT RIDERSHIP CHARTS

August, 2026

Route Trend Charts · January 2025 to August, 2026

32 - 32 - Dandridge Ave



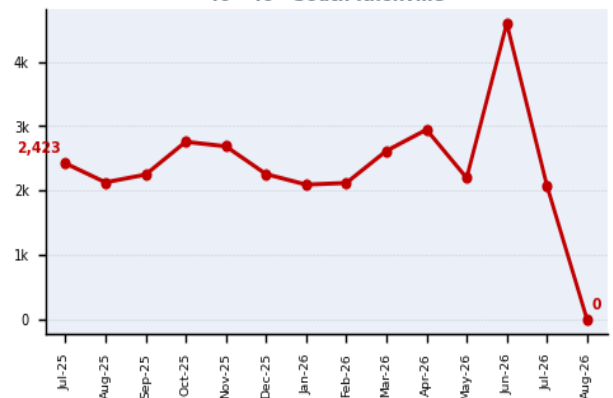
34 - 34 - Burlington



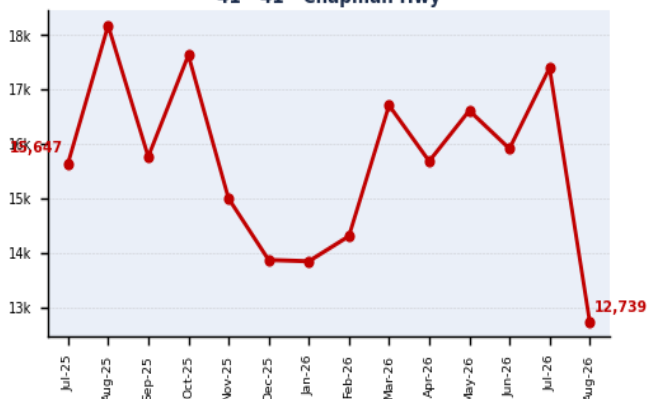
37 - 37 - Morningside/Riverside



40 - 40 - South Knoxville



41 - 41 - Chapman Hwy



42 - 42 - Ft Sanders/UT





KAT RIDERSHIP CHARTS

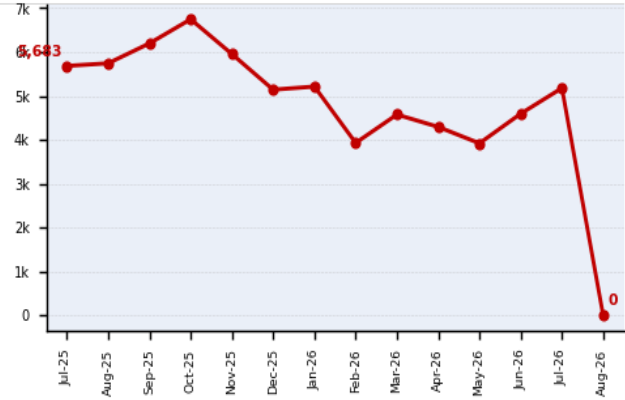
August, 2026

Route Trend Charts · January 2025 to August, 2026

44 - 44 - University Park



45 - 45 - Vestal





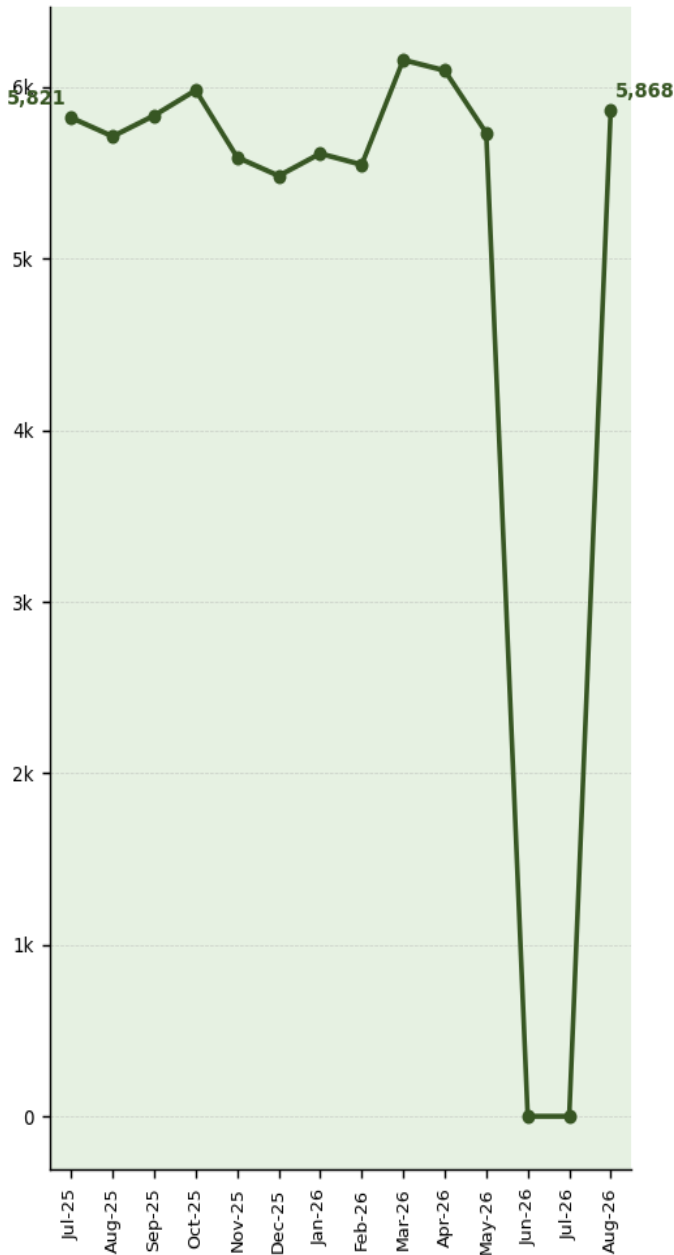
KAT RIDERSHIP CHARTS

August, 2026

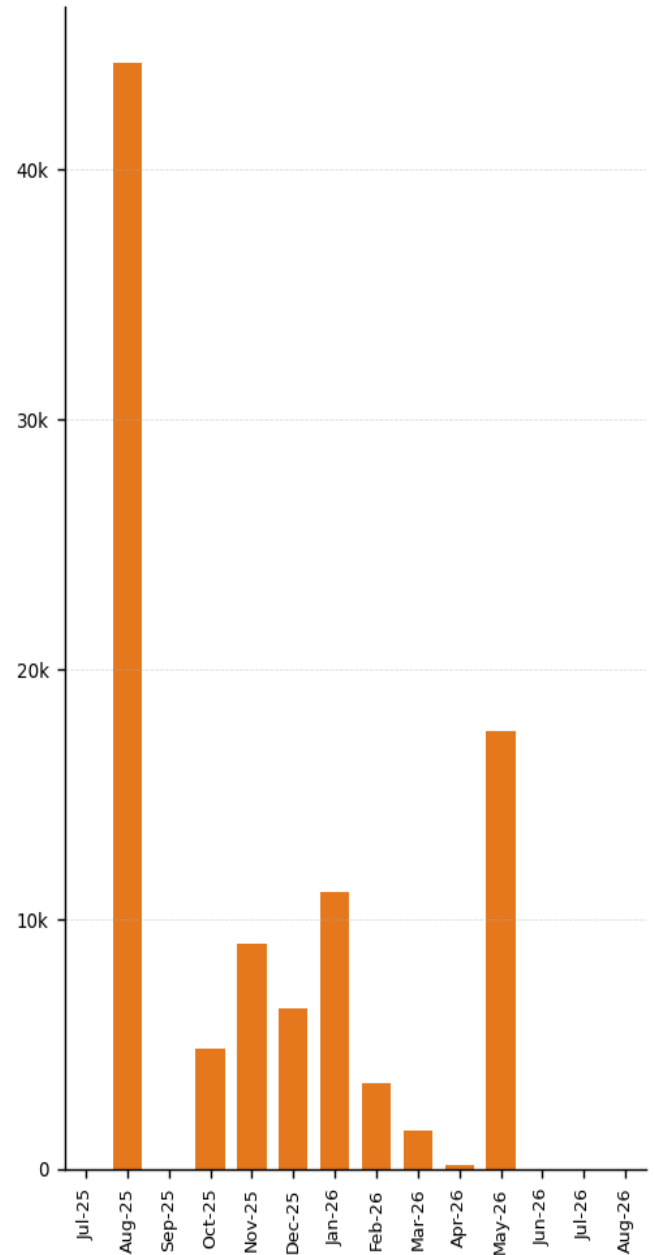
LIFT Demand Response & Charter Services

LIFT & CHARTER SERVICES

Lift — demand response



Charter services passengers



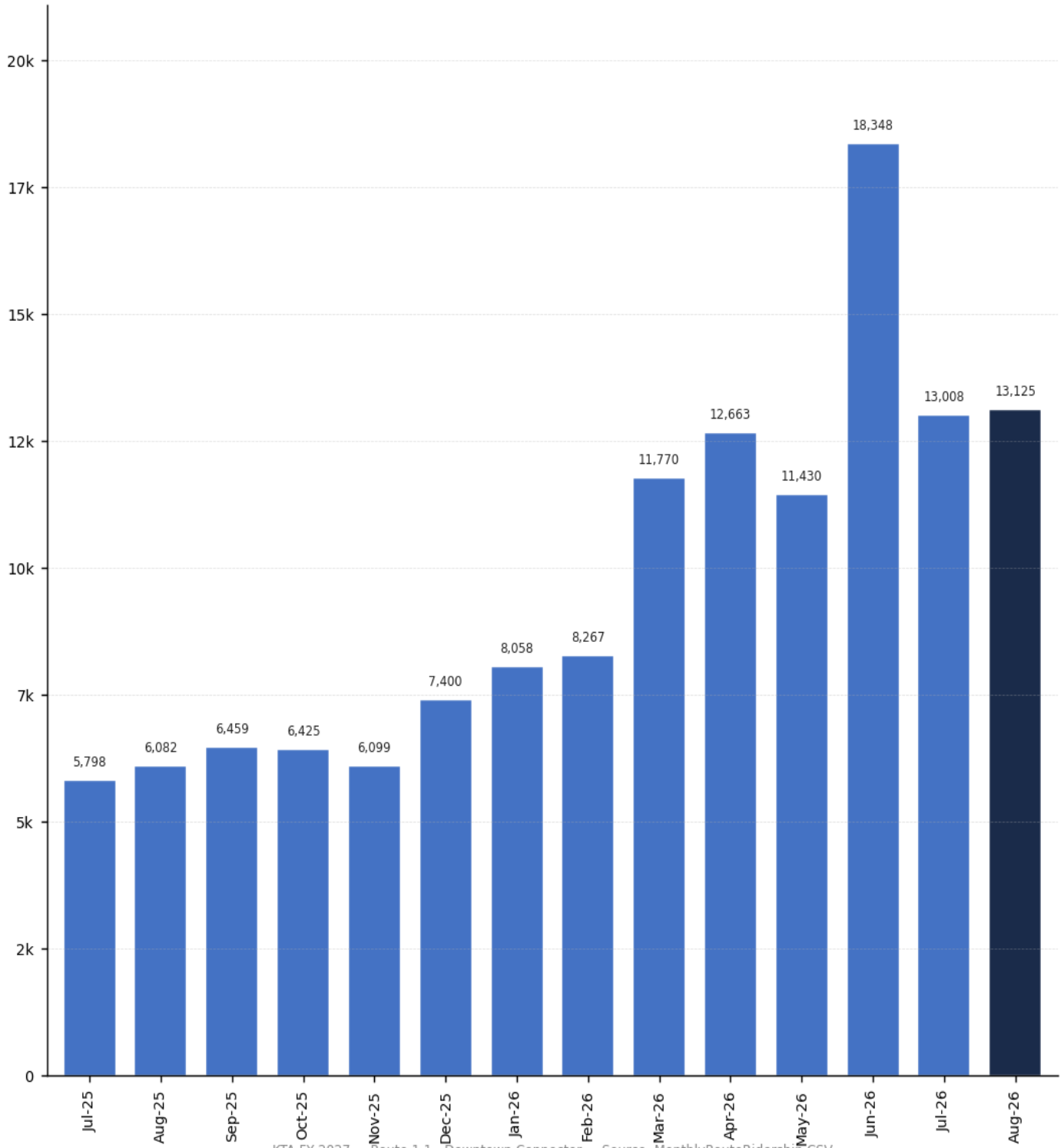


KAT RIDERSHIP CHARTS

1 — 1 - Downtown Connector

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



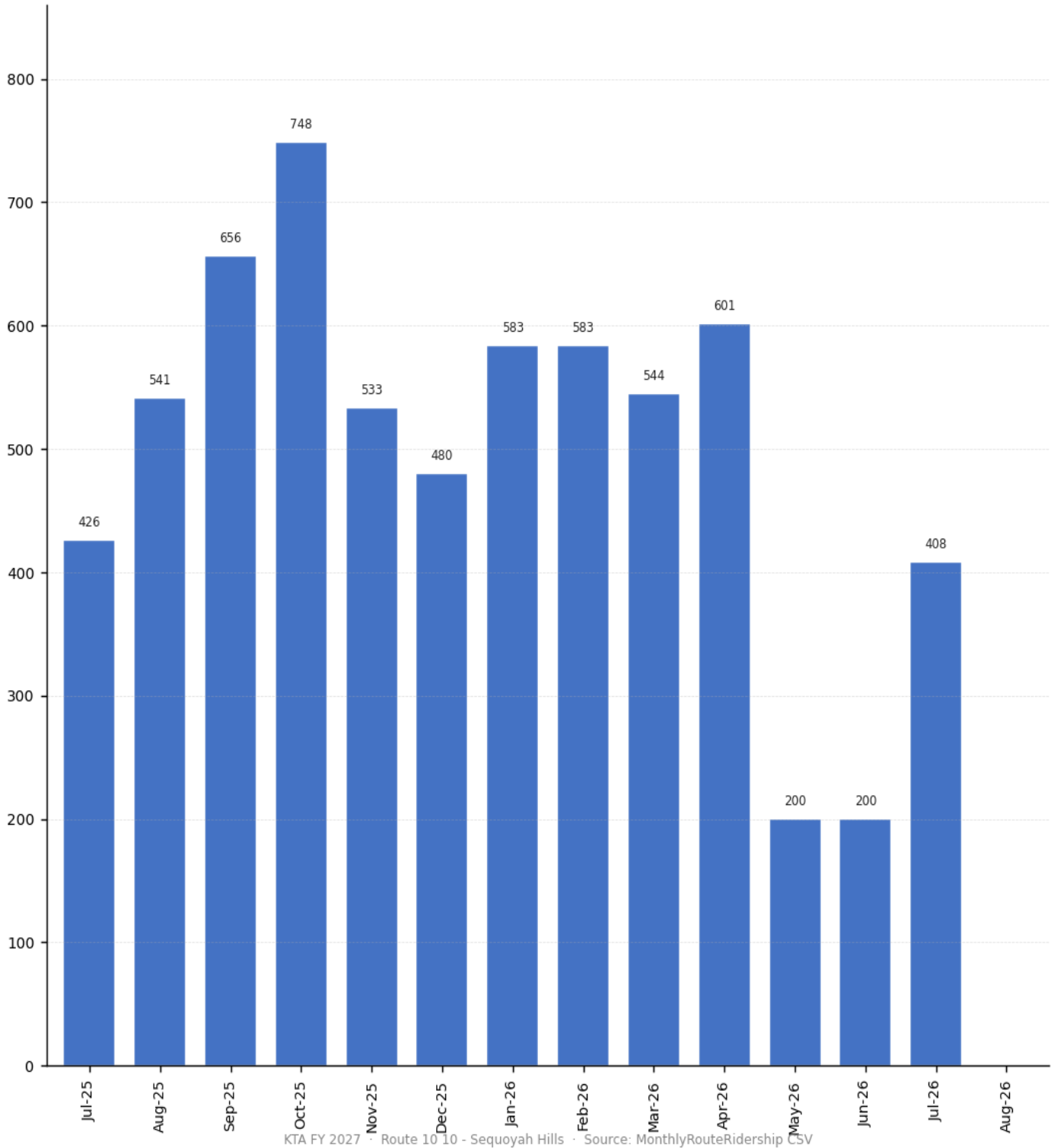


KAT RIDERSHIP CHARTS

10 — 10 - Sequoyah Hills

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



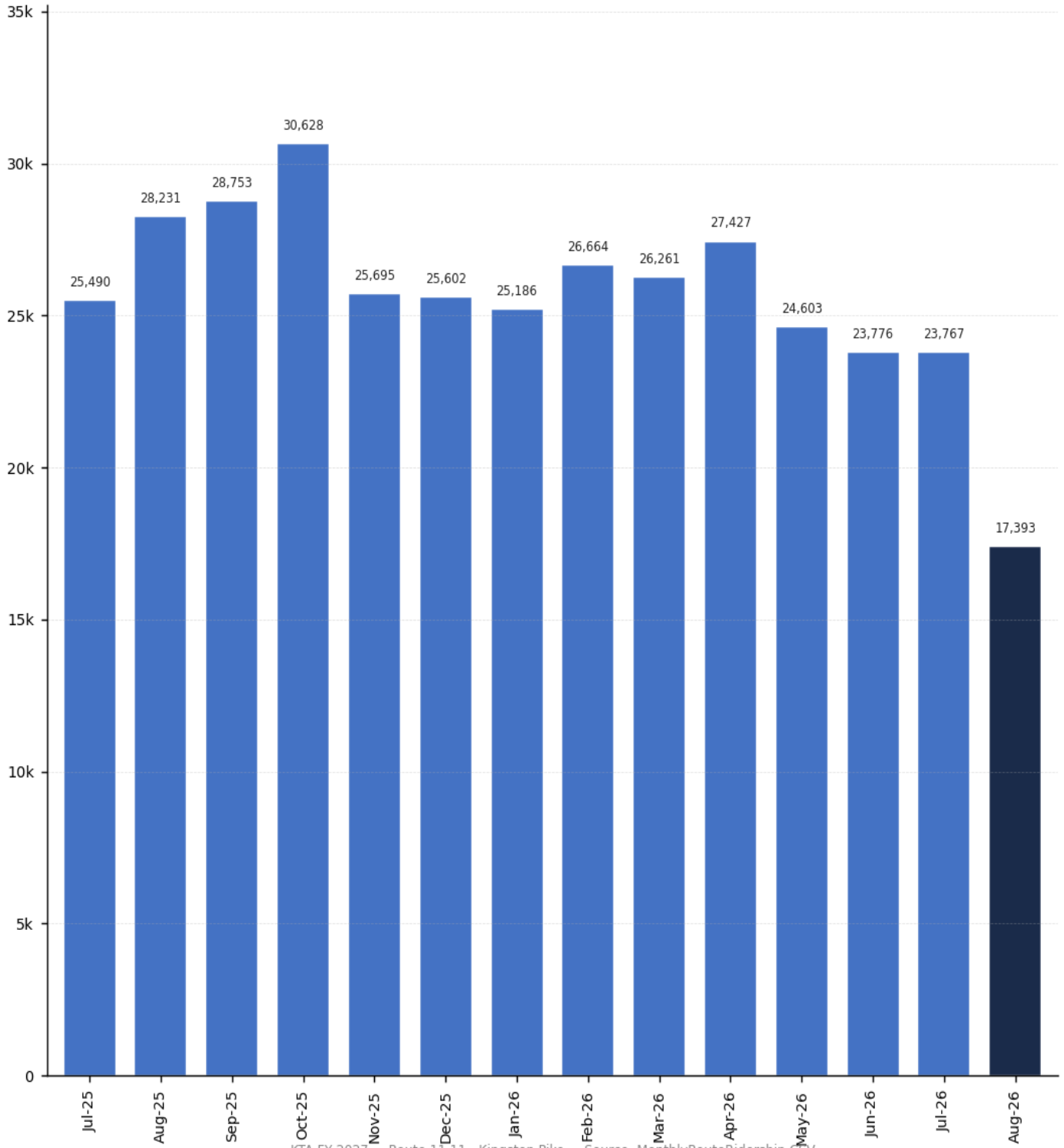


KAT RIDERSHIP CHARTS

11 — 11 - Kingston Pike

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



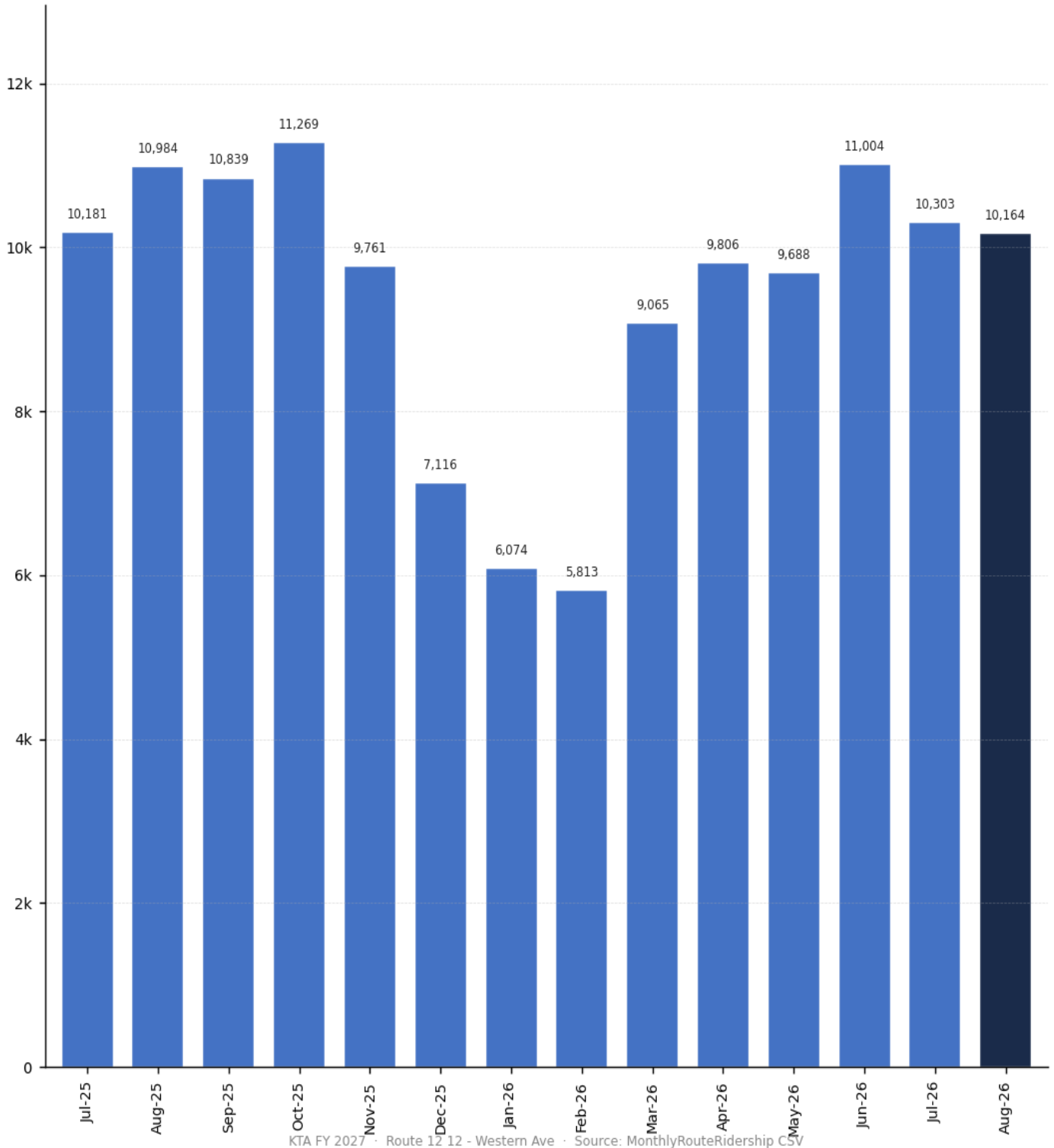


KAT RIDERSHIP CHARTS

12 — 12 - Western Ave

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



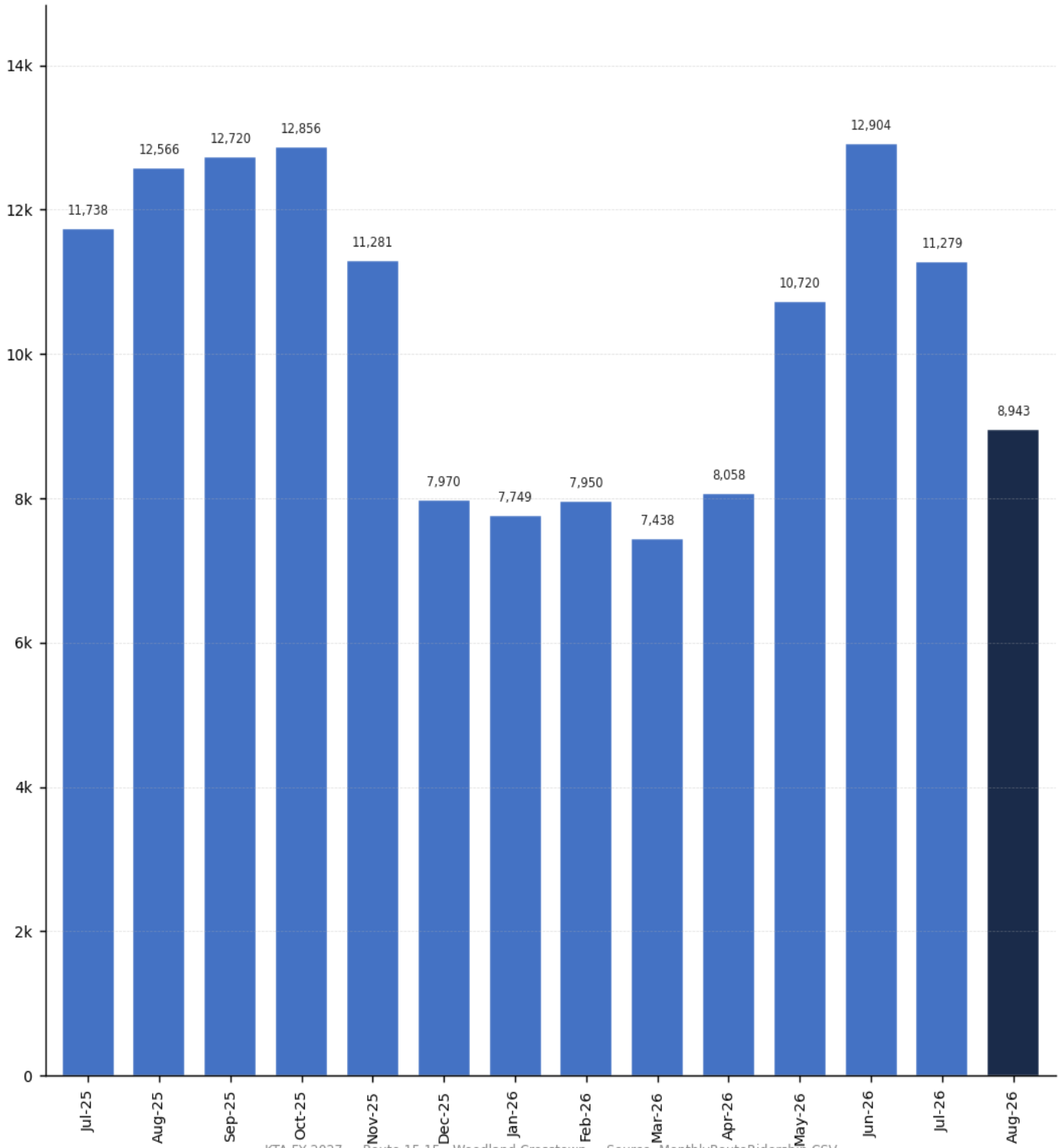


KAT RIDERSHIP CHARTS

15 — 15 - Woodland Crosstown

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



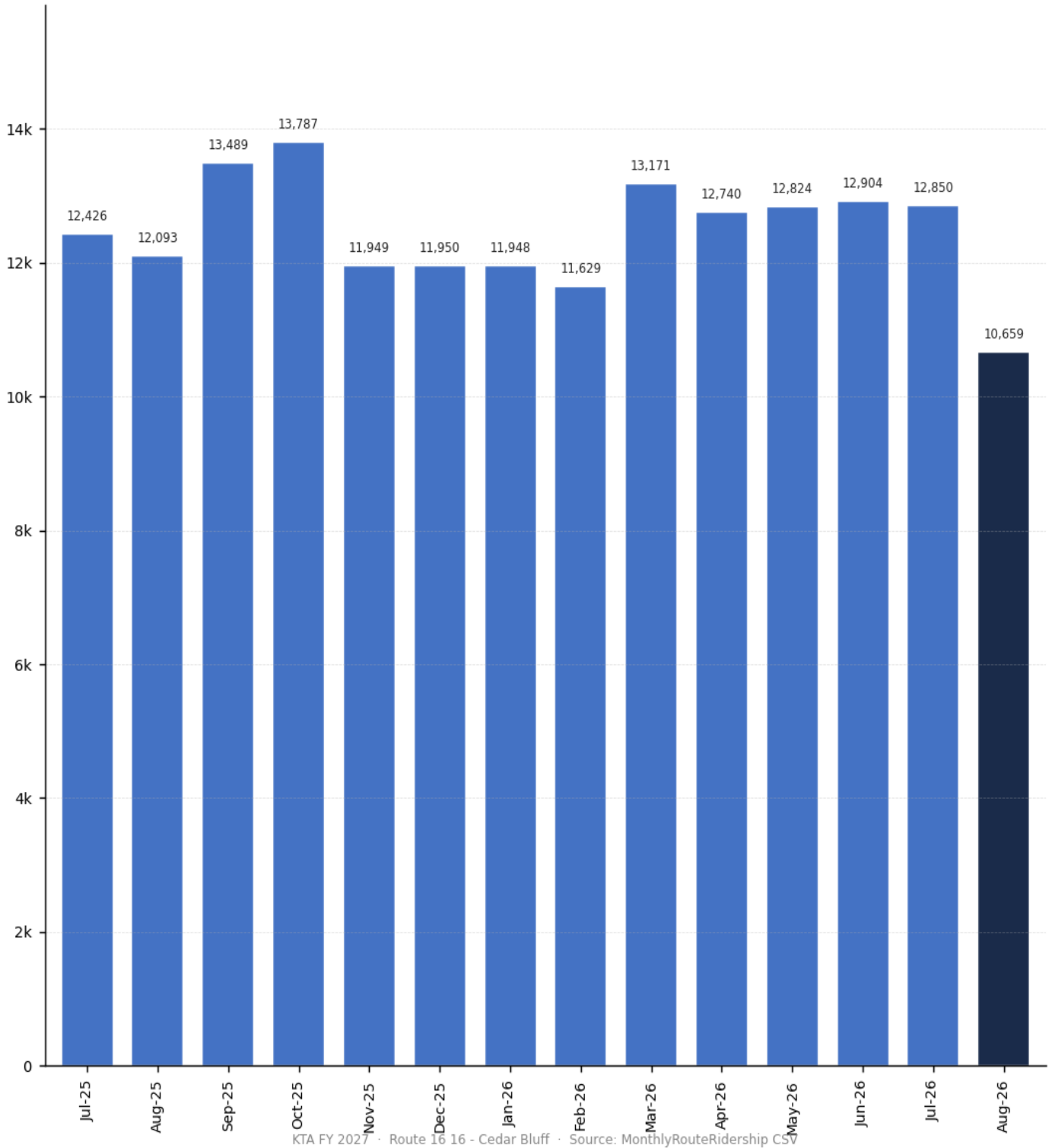


KAT RIDERSHIP CHARTS

16 — 16 - Cedar Bluff

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



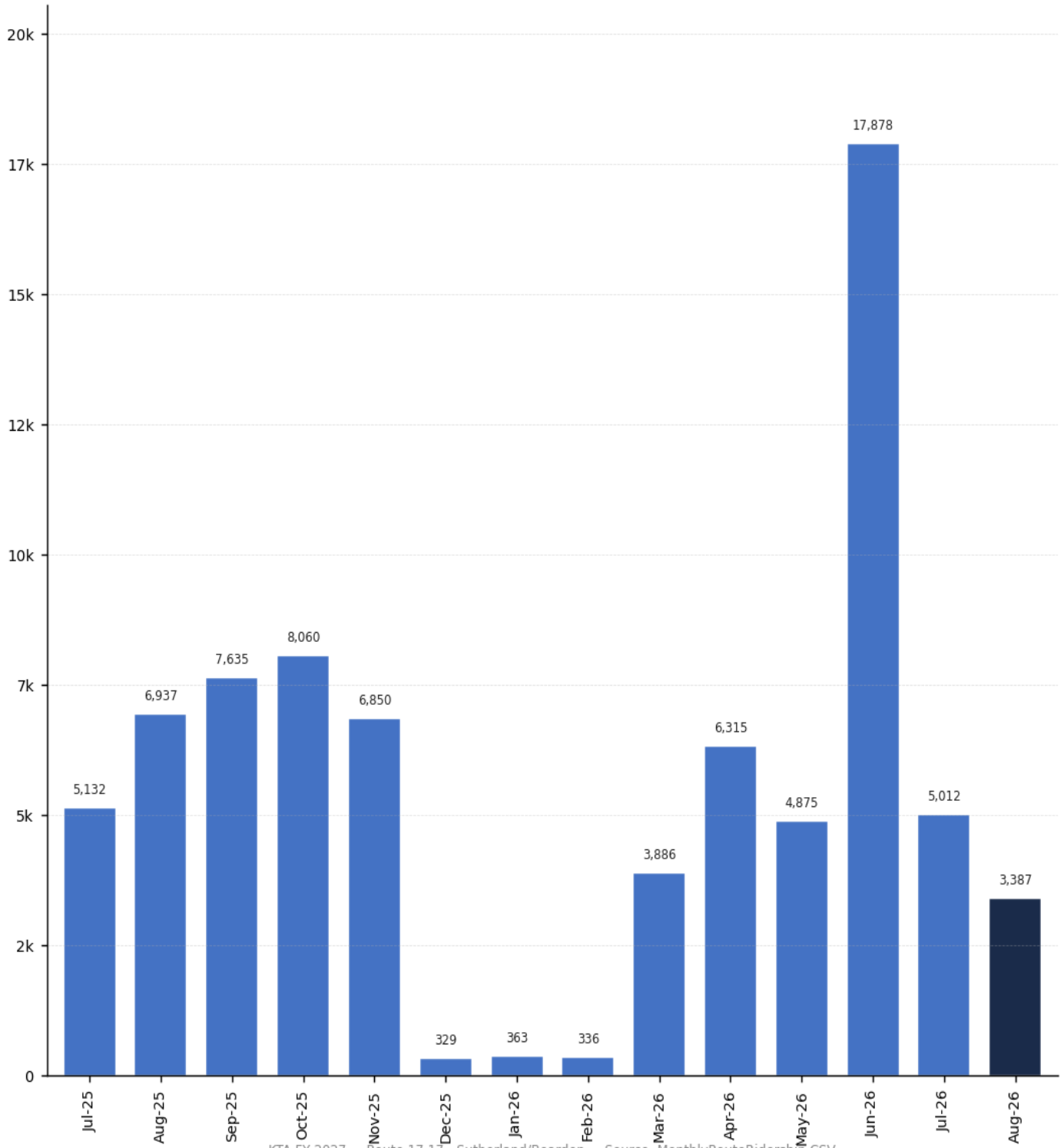


KAT RIDERSHIP CHARTS

17 — 17 - Sutherland/Bearden

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



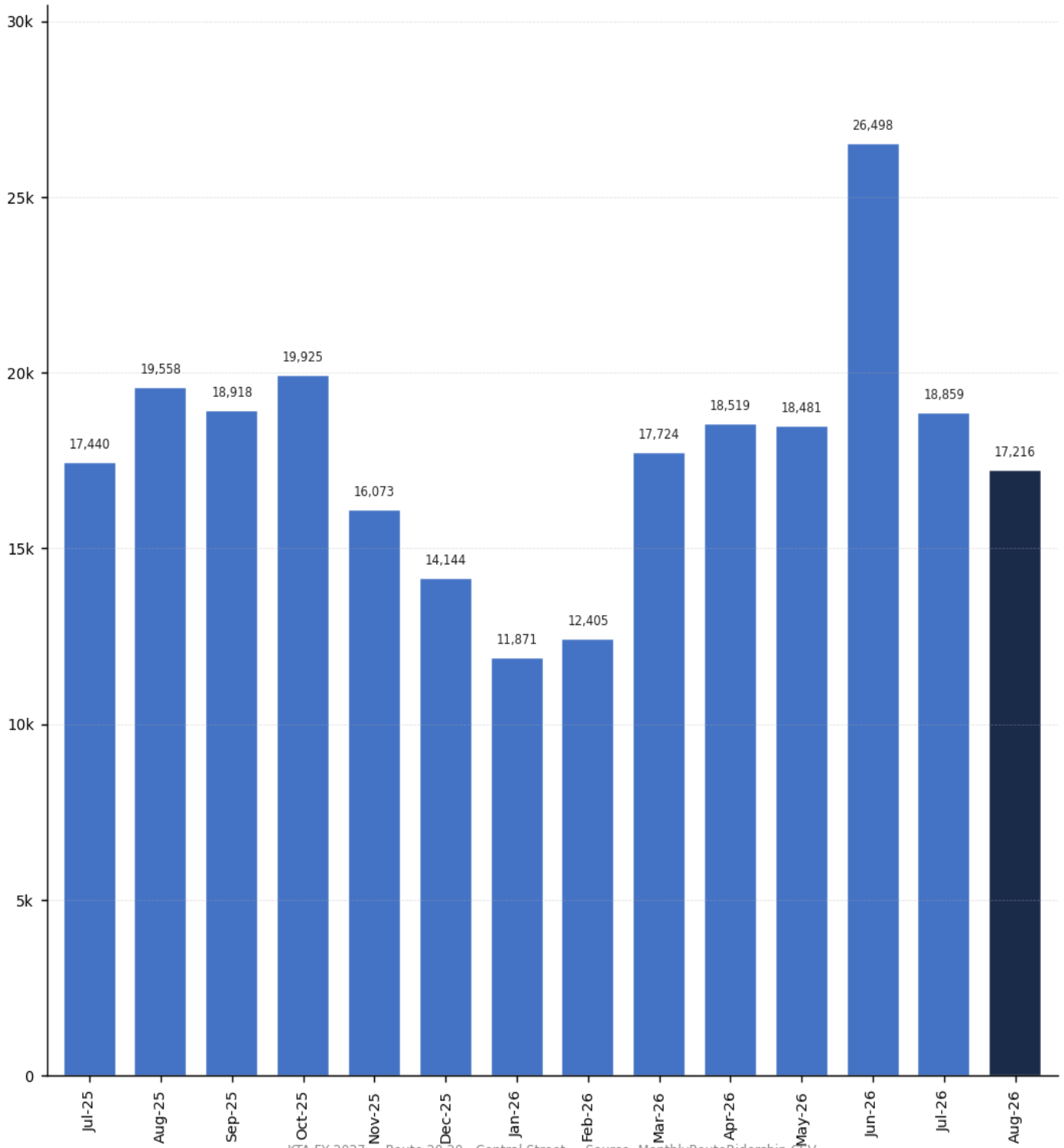


KAT RIDERSHIP CHARTS

20 — 20 - Central Street

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



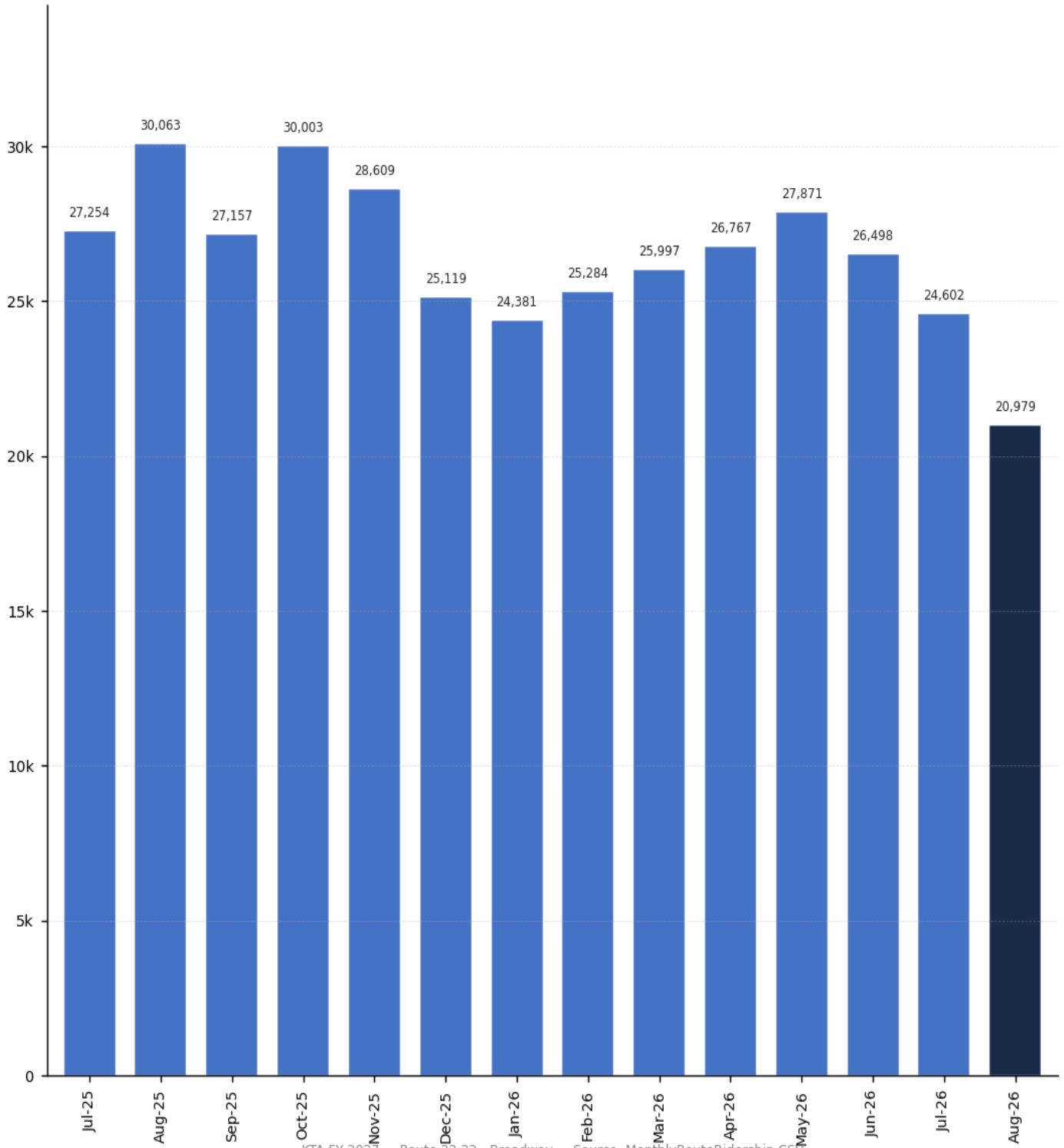


KAT RIDERSHIP CHARTS

22 — 22 - Broadway

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



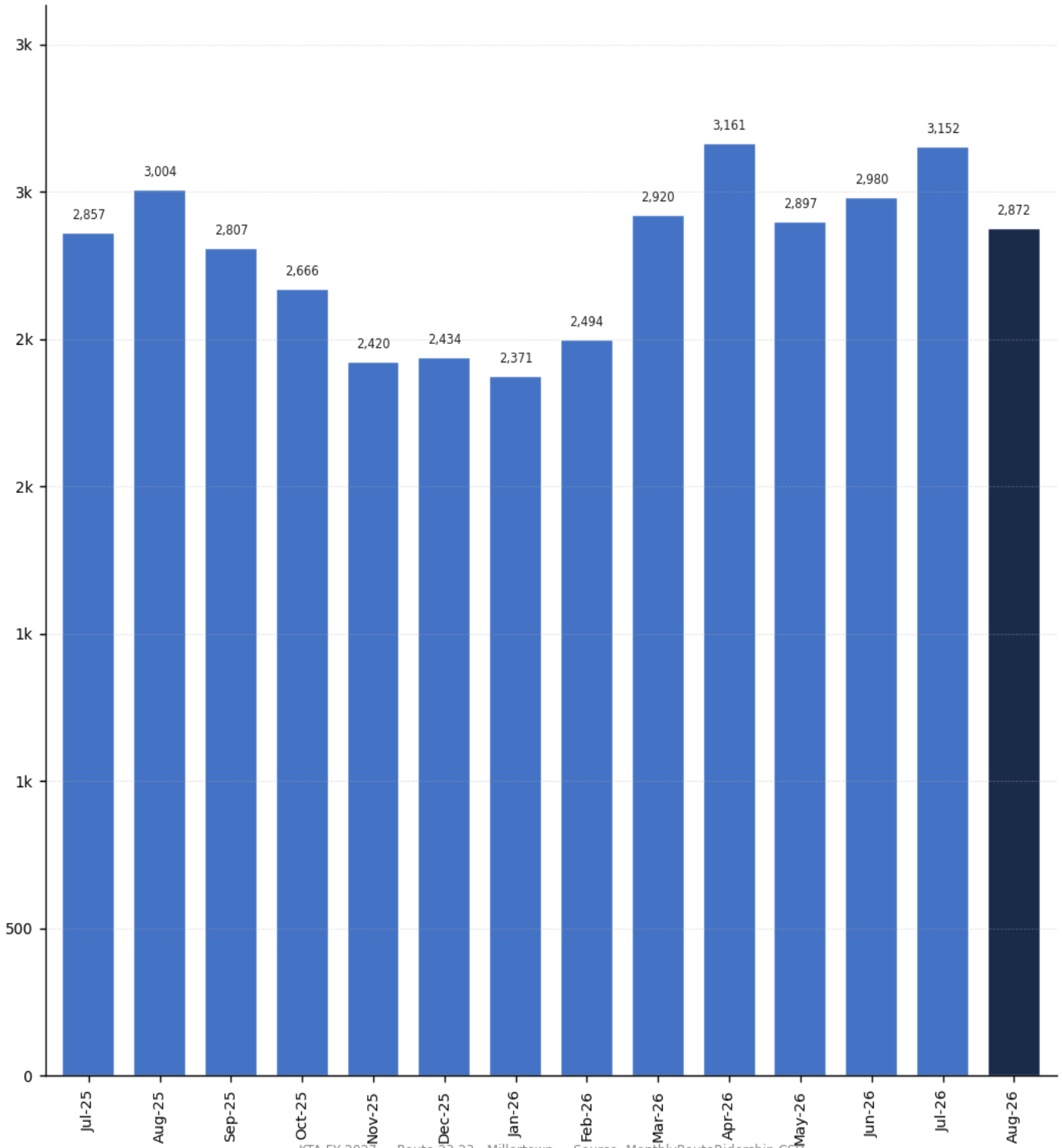


KAT RIDERSHIP CHARTS

23 — 23 - Millertown

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



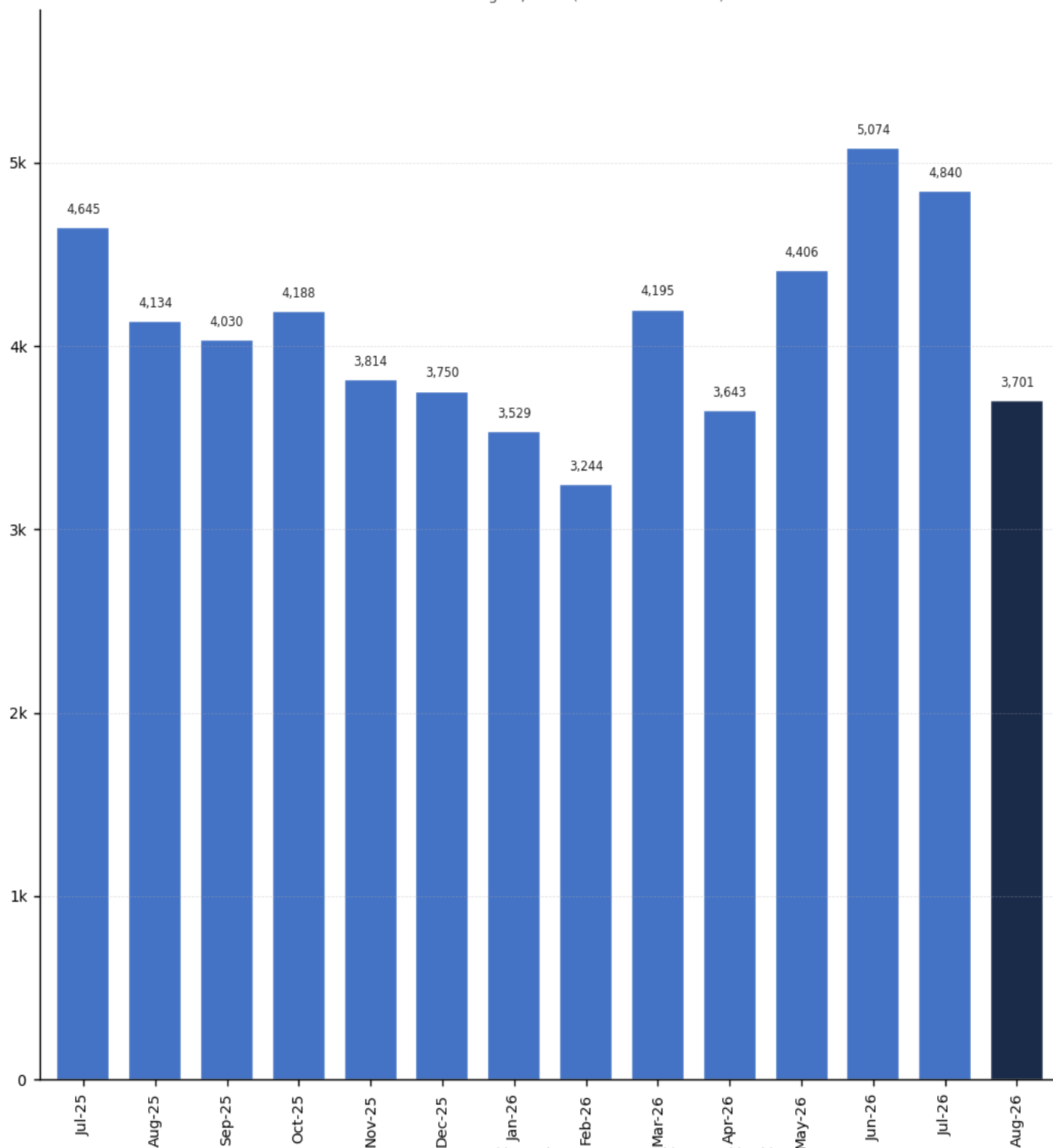


KAT RIDERSHIP CHARTS

24 — 24 - Inskip/Breda

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



KTA FY 2027 · Route 24 24 - Inskip/Breda · Source: MonthlyRouteRidership CSV

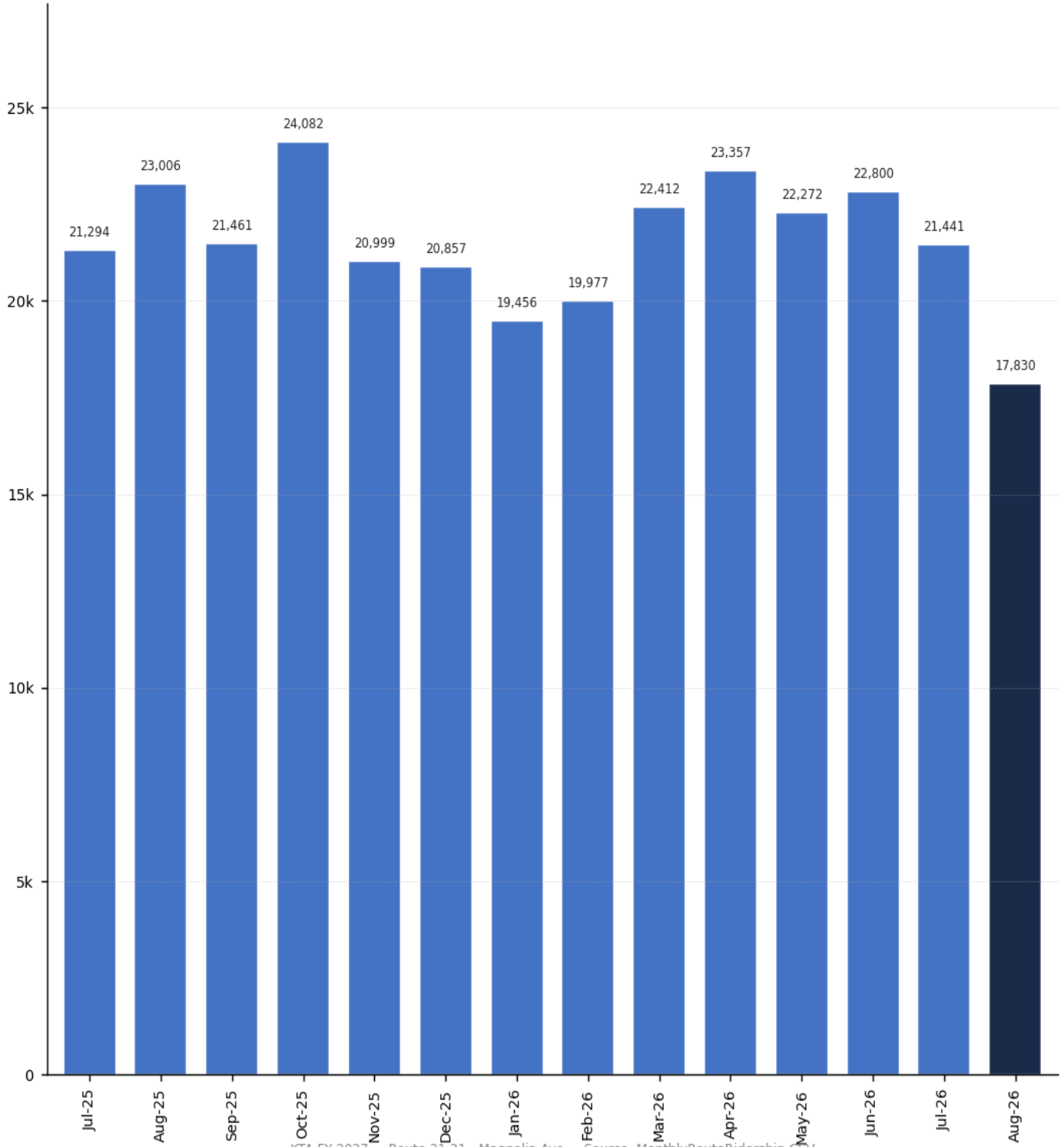


KAT RIDERSHIP CHARTS

31 — 31 - Magnolia Ave

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



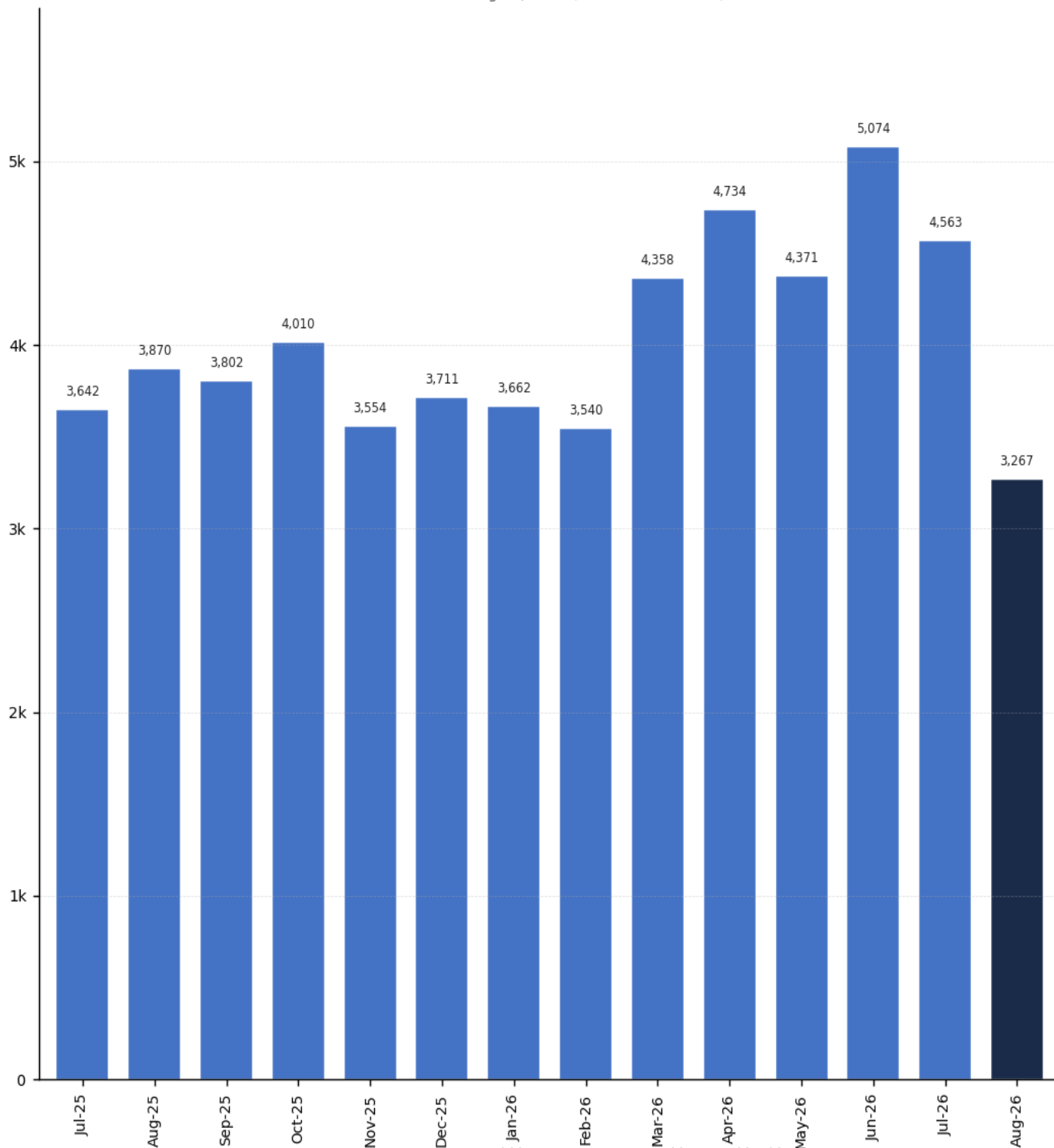


KAT RIDERSHIP CHARTS

32 — 32 - Dandridge Ave

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



KTA FY 2027 · Route 32 32 - Dandridge Ave · Source: MonthlyRouteRidership CSV

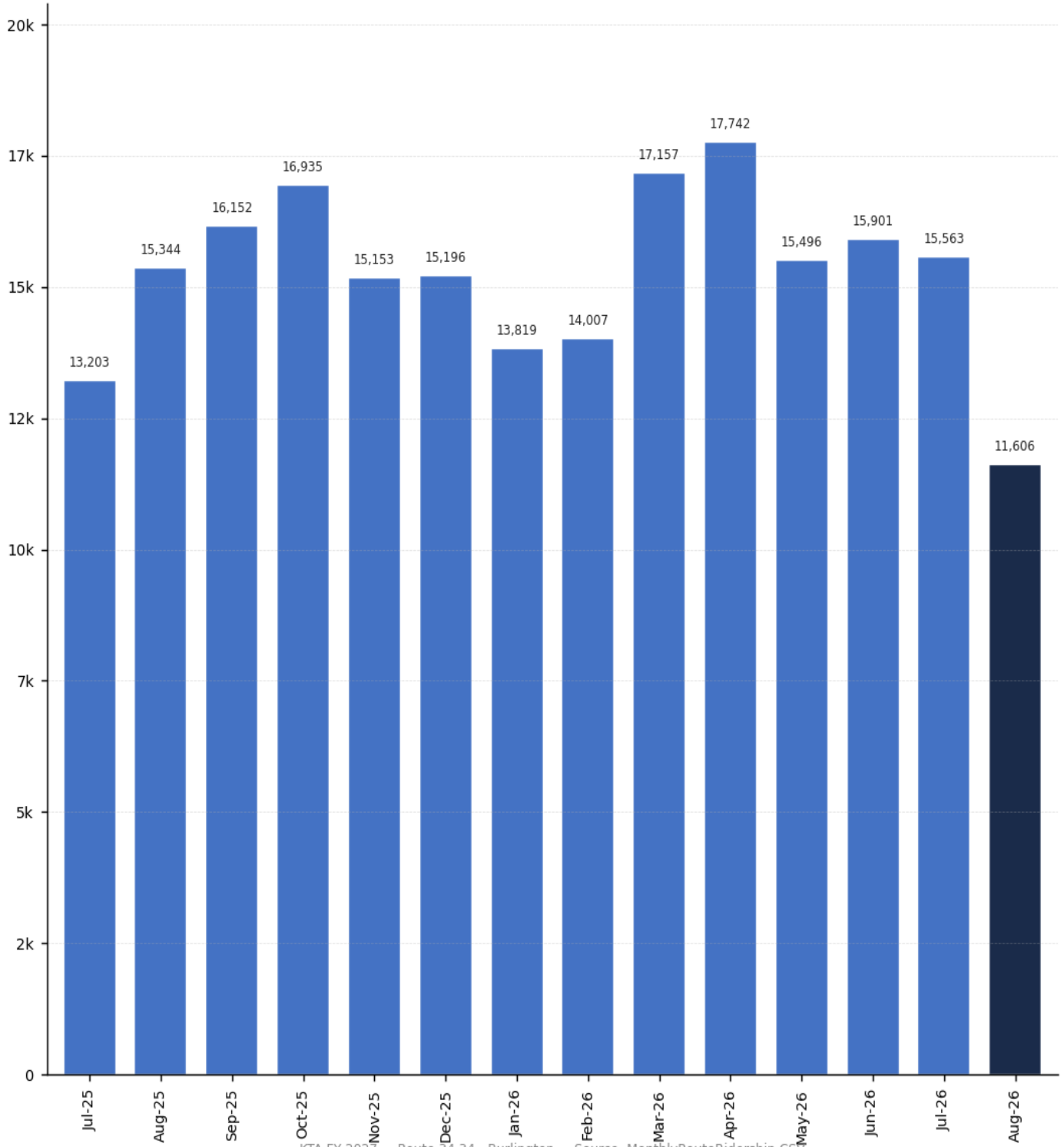


KAT RIDERSHIP CHARTS

34 — 34 - Burlington

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



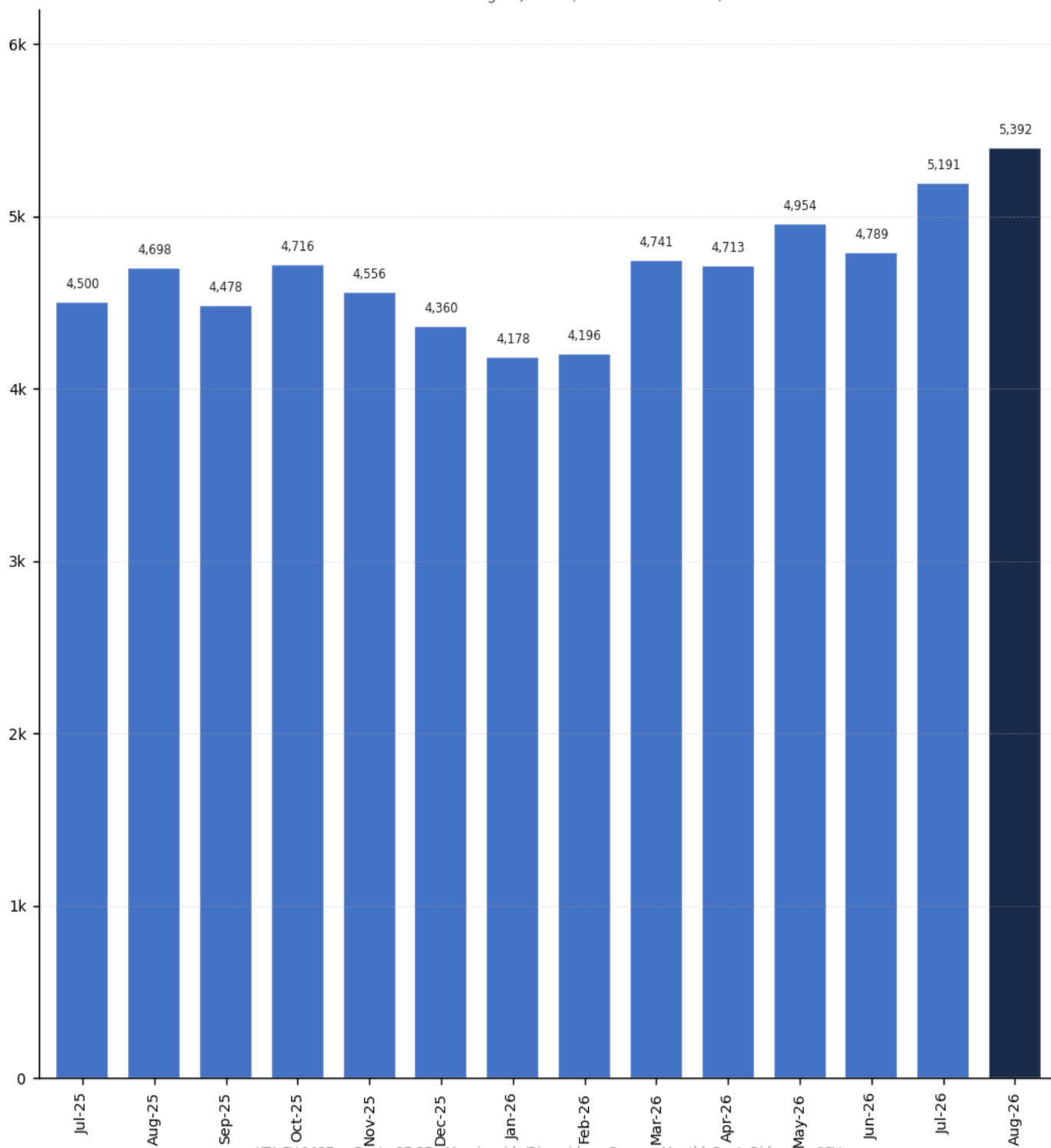


KAT RIDERSHIP CHARTS

37 — 37 - Morningside/Riverside

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



KTA FY 2027 · Route 37 37 - Morningside/Riverside · Source: MonthlyRouteRidership CSV

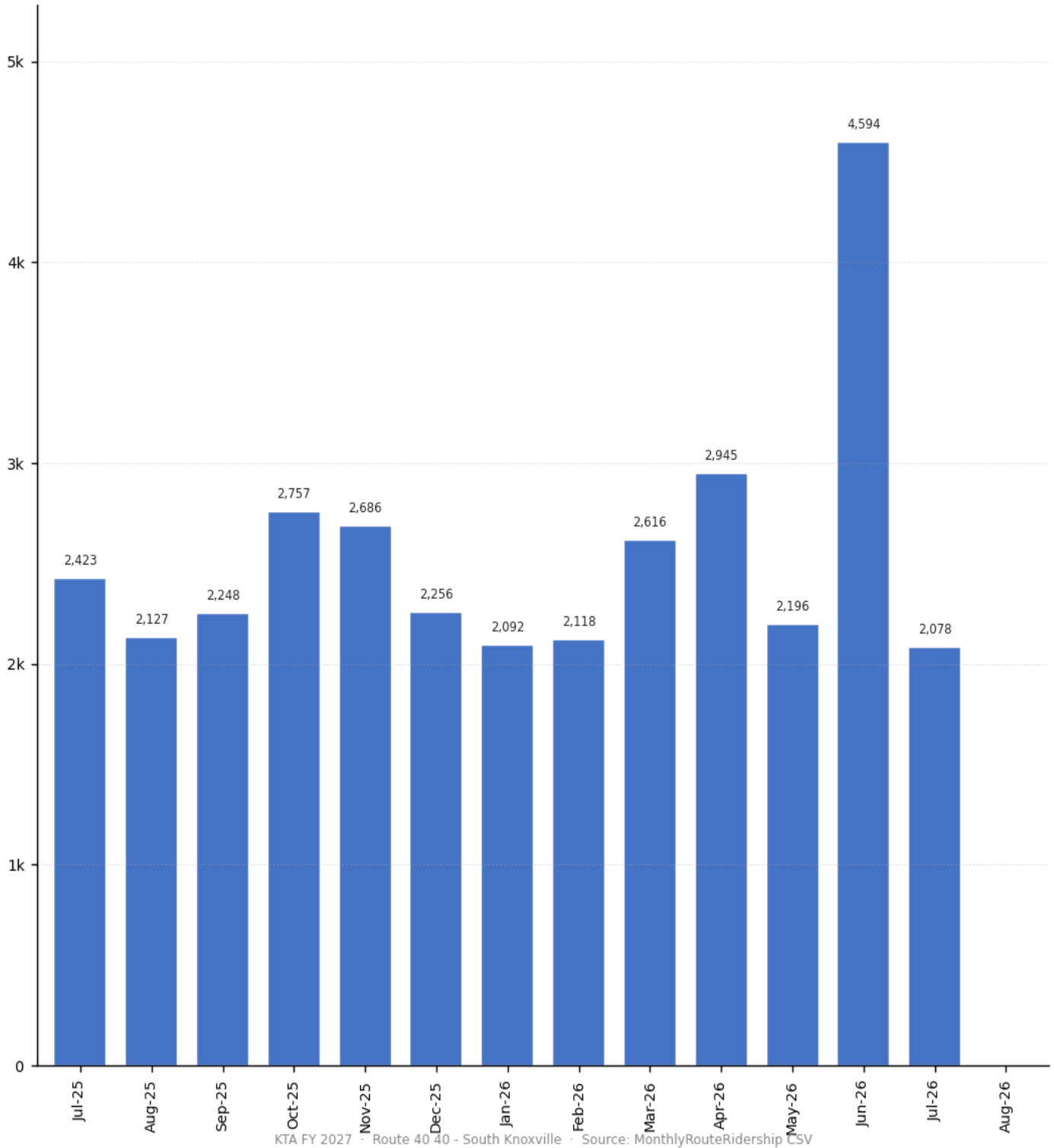


KAT RIDERSHIP CHARTS

40 — 40 - South Knoxville

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



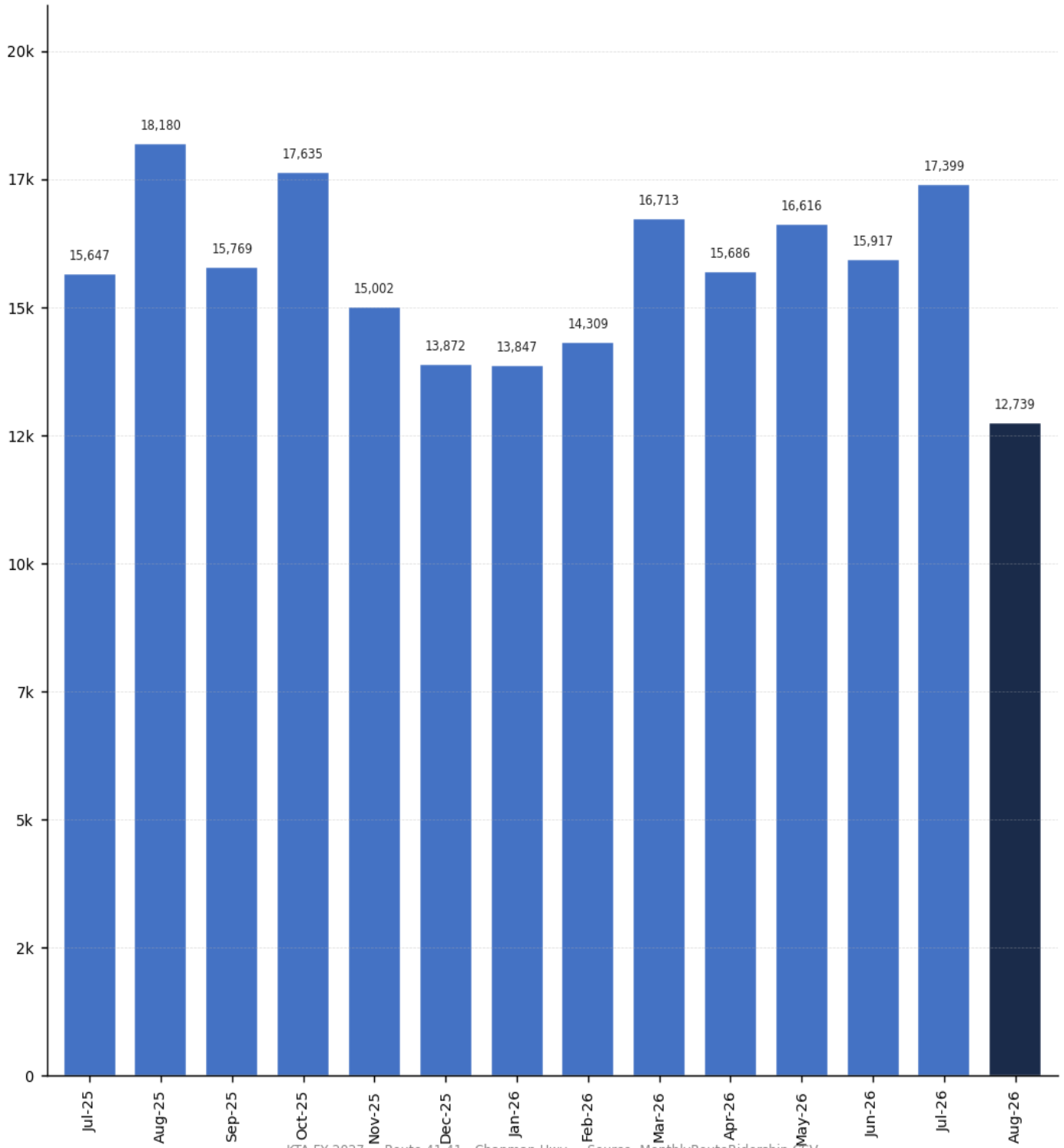


KAT RIDERSHIP CHARTS

41 — 41 - Chapman Hwy

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



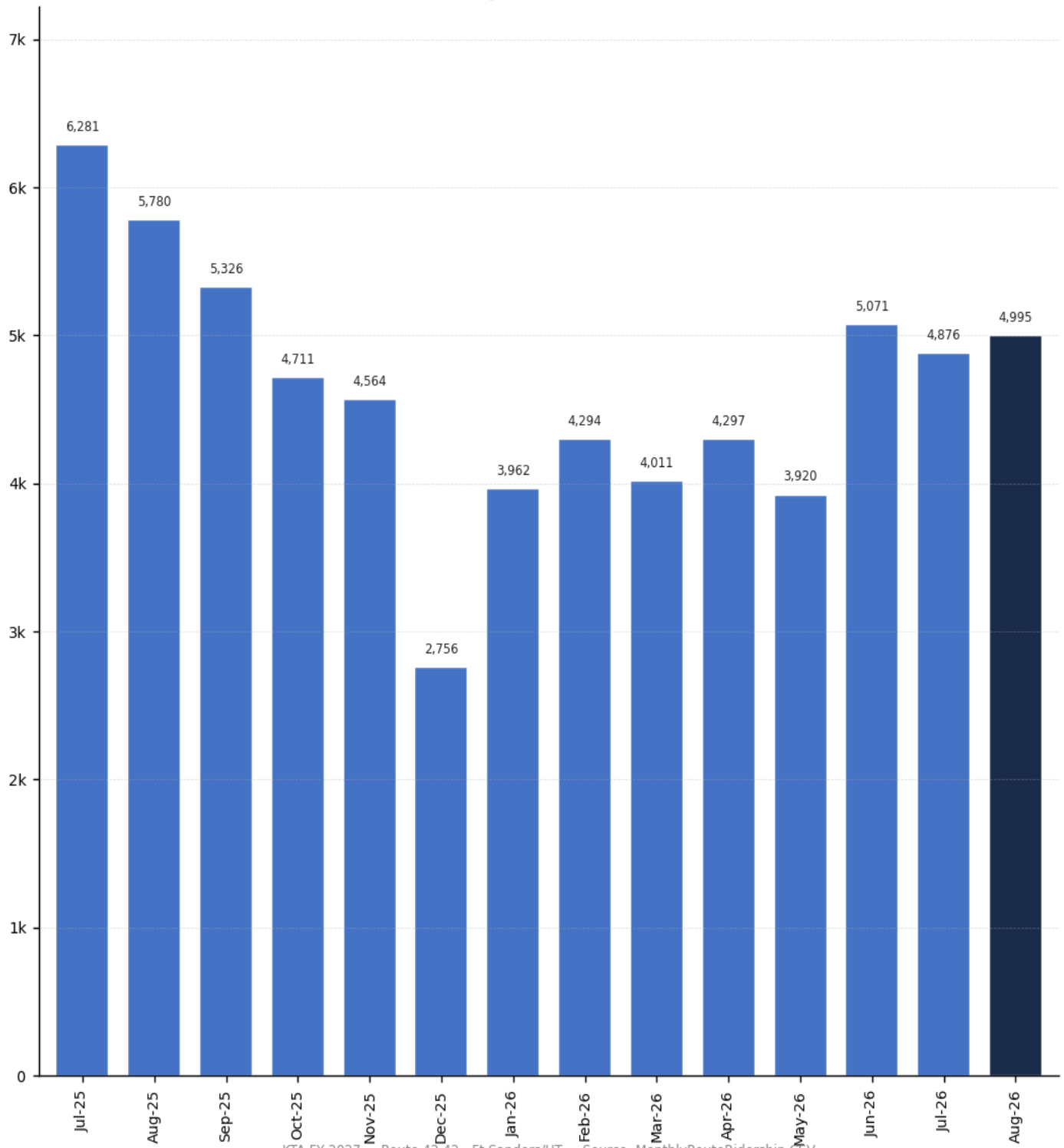


KAT RIDERSHIP CHARTS

42 — 42 - Ft Sanders/UT

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



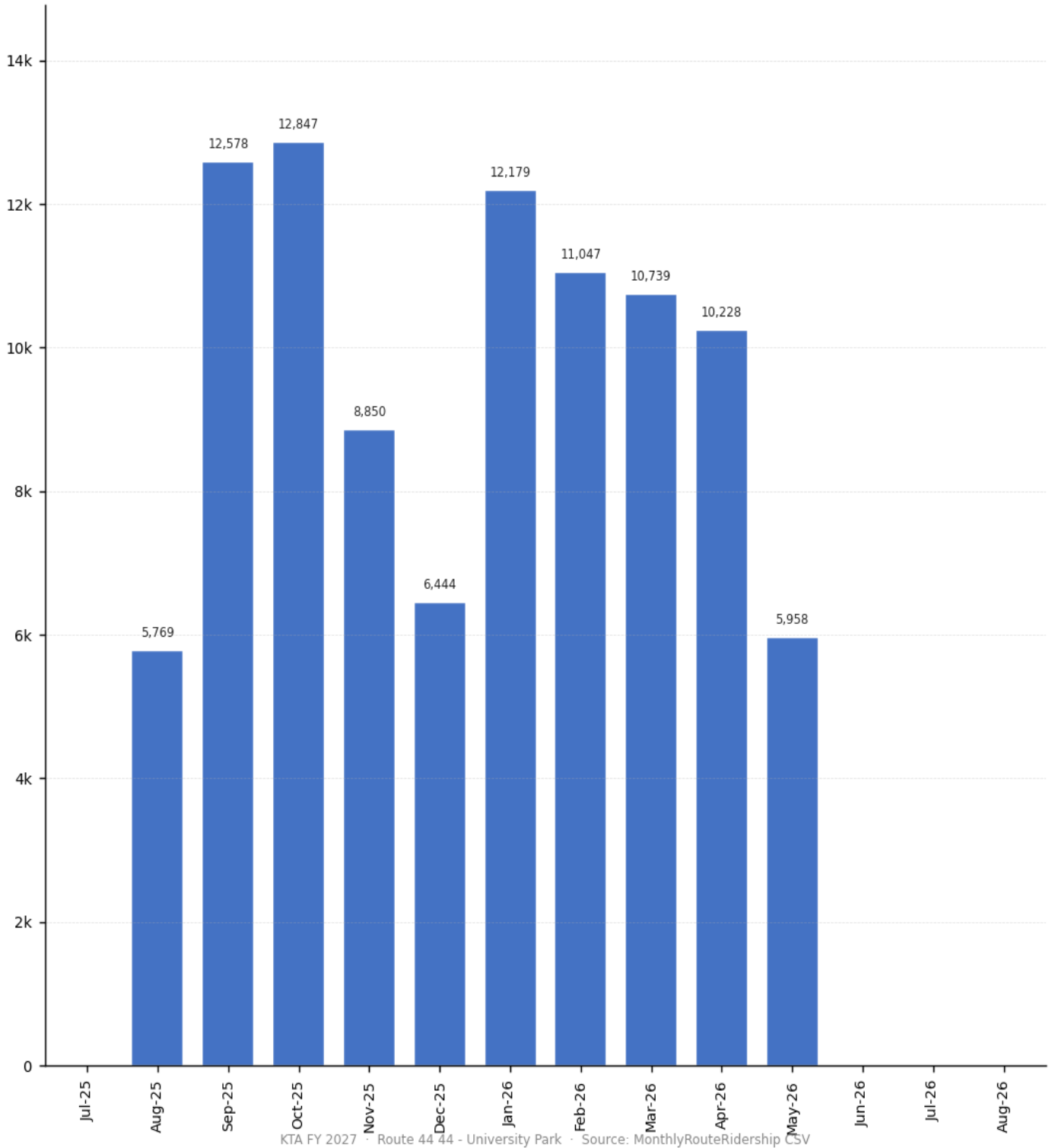


KAT RIDERSHIP CHARTS

44 — 44 - University Park

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)



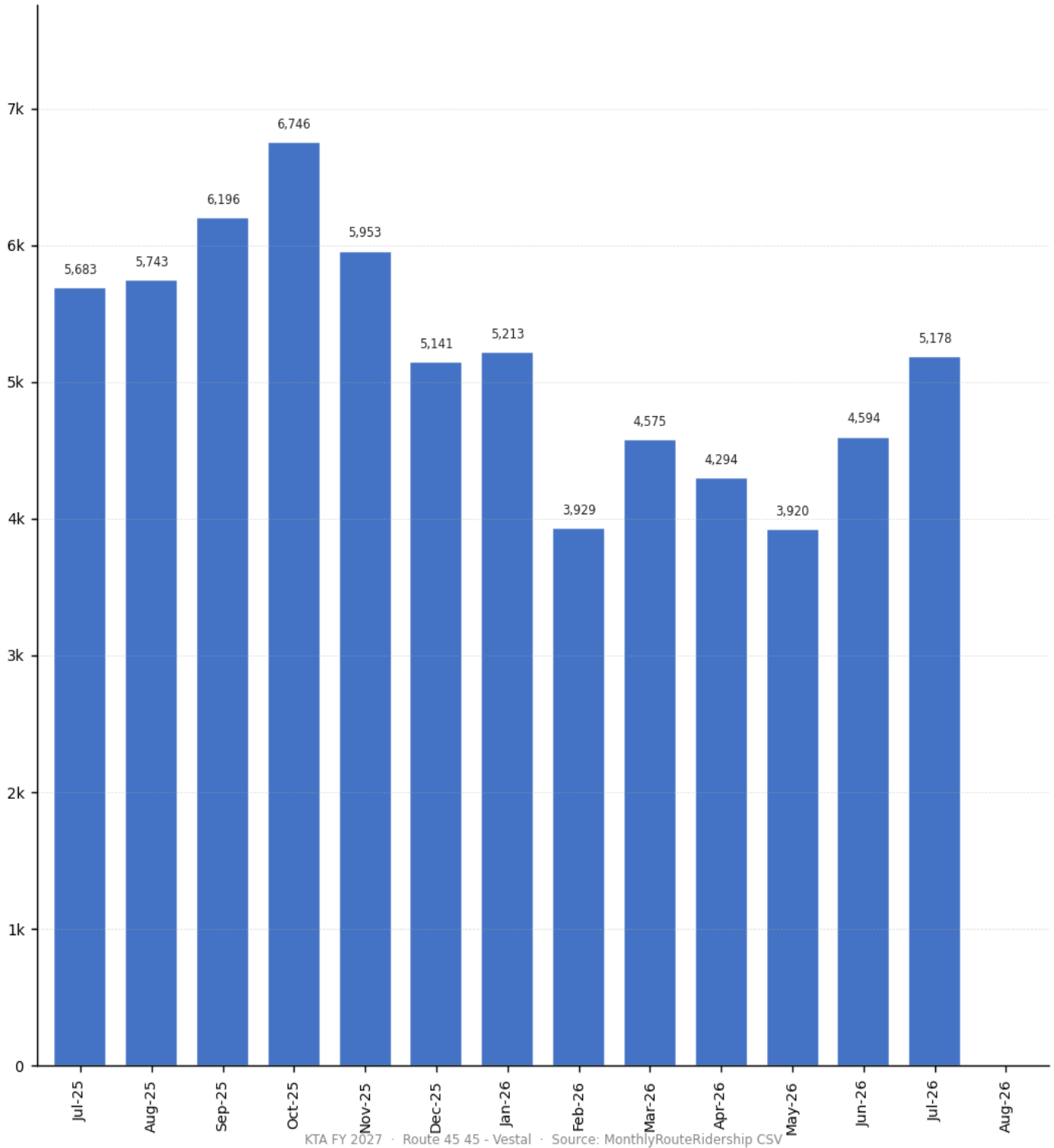


KAT RIDERSHIP CHARTS

45 — 45 - Vestal

Monthly Ridership · January 2025 to August, 2026

Dark blue = August, 2026 (most recent month)





KAT RIDERSHIP

August 2019



ROUTE #	ROUTE NAME	FY20	FY19	% CHANGE	YTD/FY20	YTD/FY19	% CHANGE
10	Sequoyah Hills	252	361	-30.2%	406	627	-35.2%
11	Kingston Pike	29,834	29,530	1.0%	55,237	55,716	-0.9%
12	Western Ave	13,823	14,171	-2.5%	26,987	26,791	0.7%
13	Beaumont	3,139	3,213	-2.3%	6,492	5,892	10.2%
16	Cedar Bluff Connector	3,230	3,136	3.0%	5,911	6,108	-3.2%
17	Sutherland/Bearden	8,852	7,982	10.9%	16,093	14,407	11.7%
19	Lakeshore / Lonas Connector	473	582	-18.7%	935	1,188	-21.3%
20	Central Ave. / Clinton Hwy	12,738	12,773	-0.3%	24,508	24,444	0.3%
21	Lincoln Park	3,438	4,269	-19.5%	6,547	7,750	-15.5%
22	Broadway	29,018	27,873	4.1%	55,346	51,779	6.9%
23	Millertown	6,281	5,850	7.4%	11,617	11,319	2.6%
24	Inskip/Breda Rd	3,008	2,897	3.8%	5,796	5,589	3.7%
30	Parkridge	3,348	2,980	12.3%	6,548	5,557	17.8%
31	Magnolia Ave.	20,538	21,162	-2.9%	38,619	39,606	-2.5%
32	Dandridge	7,561	6,753	12.0%	14,303	12,799	11.8%
33	M.L.K.	4,111	3,853	6.7%	7,672	7,425	3.3%
34	Burlington	6,856	6,847	0.1%	13,072	12,936	1.1%
40	South Knoxville	4,417	3,603	22.6%	8,316	7,041	18.1%
41	Chapman Hwy	14,356	12,855	11.7%	27,304	24,074	13.4%
42	UT/Ft. Sanders Hospitals	4,051	3,789	6.9%	7,929	7,106	11.6%
44	University Park	4,070	3,370	20.8%	4,070	3,370	20.8%
45	Vestal	5,860	5,595	4.7%	10,849	10,423	4.1%
90	Crosstown	8,399	7,909	6.2%	16,003	15,129	5.8%
	Other	-	-	0.0%	-	-	0.0%
SUBTOTAL		197,653	191,353	3.3%	370,560	357,076	3.8%
82	Orange Line Trolley	19,143	22,579	-15.2%	39,361	45,451	-13.4%
84	Green Line Trolley	12,649	13,156	-3.9%	26,471	24,923	6.2%
86	Blue Line Trolley	23,796	23,414	1.6%	45,872	44,820	2.3%
88	Red Line Trolley	1,634	-	100.0%	1,634	-	100.0%
SUBTOTAL		57,222	59,149	-3.3%	113,338	115,194	-1.6%
TOTAL PASSENGERS WITH TROLLEYS		254,875	250,502	1.7%	483,898	472,270	2.5%
LIFT SERVICE		5,849	5,974	-2.1%	11,180	11,440	-2.3%
TOTAL SCHEDULED SERVICES		260,724	256,476	1.7%	495,078	483,710	2.4%
TOTAL CHARTER SERVICES		5,100	535	853.3%	5,616	1,627	245.2%
GRAND TOTAL ALL KAT SERVICES		265,824	257,011	3.4%	500,694	485,337	3.2%



KAT RIDERSHIP_APC

August 2026



ROUTE #	ROUTE NAME	FY27	FY26	% CHANGE	YTD/FY27	YTD/FY26	% CHANGE
1	Downtown Connector	13,125	6,082	115.8%	26,133	11,880	120.0%
10	Sequoyah Hills	-	541	-100.0%	408	967	-57.8%
11	Kingston Pike	17,393	28,231	-38.4%	41,160	53,721	-23.4%
12	Western Ave	10,164	10,984	-7.5%	20,467	21,165	-3.3%
13	Beaumont	-	-	0.0%	-	-	0.0%
15	Woodland Crosstown	8,943	12,566	-28.8%	20,222	24,304	-16.8%
16	Cedar Bluff Connector	10,659	12,093	-11.9%	23,509	24,519	-4.1%
17	Sutherland/Bearden	3,387	6,937	-51.2%	8,399	12,069	-30.4%
20	Central Ave/Clinton Hwy	17,216	19,558	-12.0%	36,075	36,998	-2.5%
21	Lincoln Park	-	-	0.0%	-	-	0.0%
22	Broadway	20,979	30,063	-30.2%	45,581	57,317	-20.5%
23	Millertown	2,872	3,004	-4.4%	6,024	5,861	2.8%
24	Inskip/Breda Rd	3,701	4,134	-10.5%	8,541	8,779	-2.7%
30	Parkridge	-	-	0.0%	-	-	0.0%
31	Magnolia Ave.	17,830	23,006	-22.5%	39,271	44,300	-11.4%
32	Dandridge	3,267	3,870	-15.6%	7,830	7,512	4.2%
33	M.L.K.	-	-	0.0%	-	-	0.0%
34	Burlington	11,606	15,344	-24.4%	27,169	28,547	-4.8%
37	Morningside/Riverside	5,392	4,698	14.8%	10,583	9,198	15.1%
40	South Knoxville	-	2,127	-100.0%	2,078	4,550	-54.3%
41	Chapman Hwy	12,739	18,180	-29.9%	30,138	33,827	-10.9%
42	UT/Ft Sanders Hospitals	4,995	5,780	-13.6%	9,871	12,061	-18.2%
44	University Park	-	5,769	-100.0%	-	5,769	-100.0%
45	Vestal	-	5,743	-100.0%	5,178	11,426	-54.7%
90	Crosstown	-	-	0.0%	-	-	0.0%
	Other	-	-	0.0%	-	-	0.0%
SUBTOTAL		164,268	218,710	-24.9%	368,637	414,770	-11.1%
82	Orange Line Trolley	-	-	0.0%	-	-	0.0%
84	Green Line Trolley	-	-	0.0%	-	-	0.0%
86	Blue Line Trolley	-	-	0.0%	-	-	0.0%
SUBTOTAL		-	-	0.0%	-	-	0.0%
TOTAL PASSENGERS WITH TROLLEYS		164,268	218,710	-24.9%	368,637	414,770	-11.1%
LIFT SERVICE		5,868	6,674	-12.1%	12,007	12,813	-6.3%
KAT CONNECT		14	2	600.0%	25	18	38.9%
TOTAL SCHEDULED SERVICES		170,150	225,386	-24.5%	380,644	427,583	-11.0%
TOTAL CHARTER SERVICES		960	-	100.0%	960	14,165	-93.2%
GRAND TOTAL ALL KAT SERVICES		171,110	225,386	-24.1%	381,604	441,748	-13.6%

AUGUST 2026

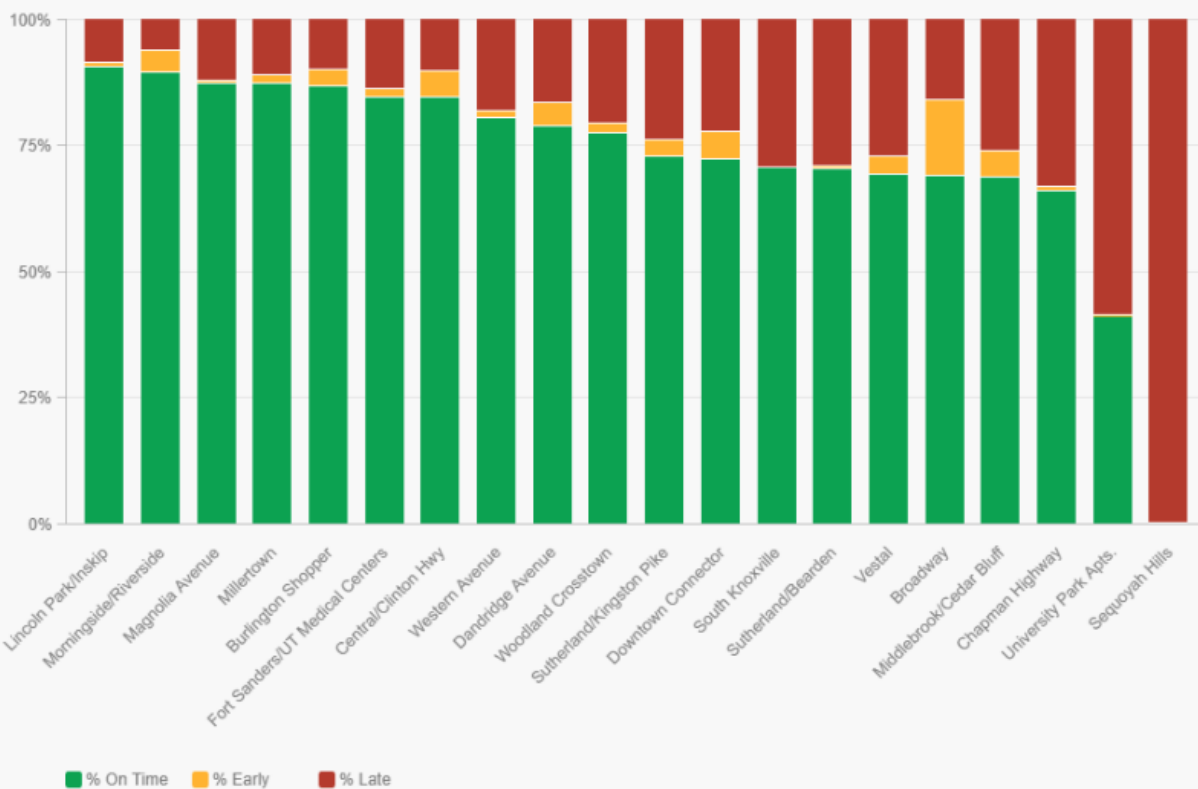
ON-TIME PERFORMANCE

Route Performance

ON TIME: 79.4%

EARLY: 3.5%

LATE: 17.0%



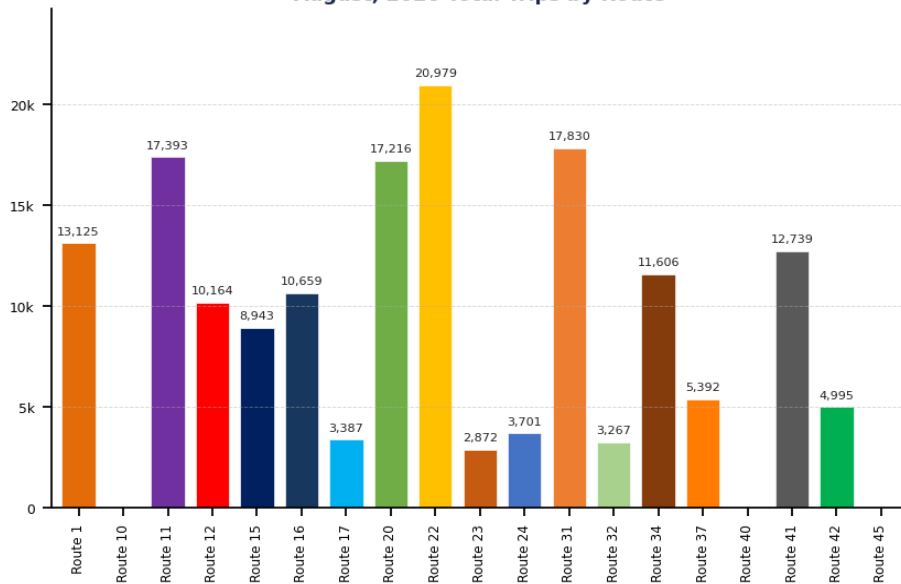


KNOXVILLE AREA TRANSIT — FY27 ROUTE RIDERSHIP

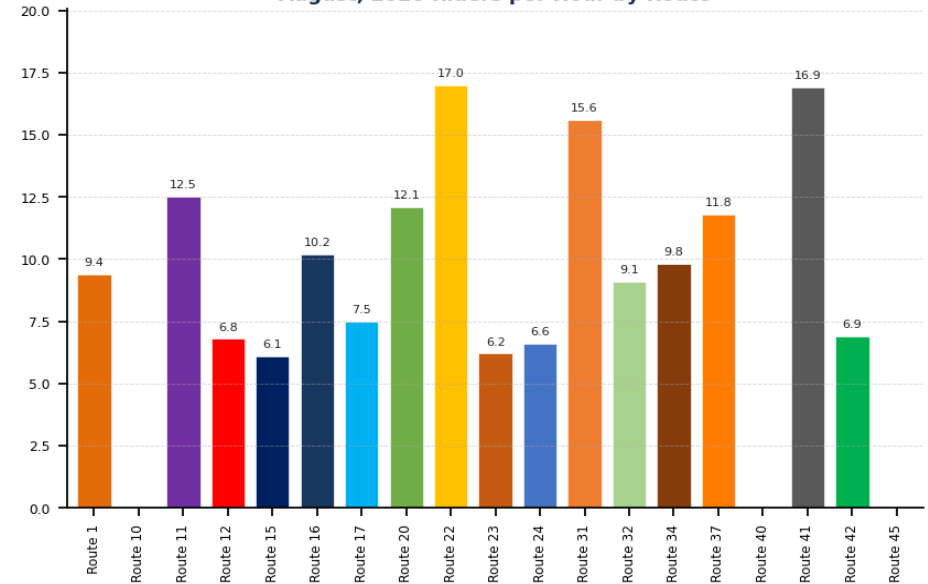
July 2026 — August, 2026 · Prepared by U. Tennessee, Planning Manager

Route	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Annual
1 - Downtown Connector	13,008	13,125											26,133
10 - Sequoyah Hills	408												408
11 - Kingston Pike	23,767	17,393											41,160
12 - Western Ave	10,303	10,164											20,467
15 - Woodland Crosstown	11,279	8,943											20,222
16 - Cedar Bluff	12,850	10,659											23,509
17 - Sutherland/Bearden	5,012	3,387											8,399
20 - Central Street	18,859	17,216											36,075
22 - Broadway	24,602	20,979											45,581
23 - Millertown	3,152	2,872											6,024
24 - Inskip/Breda	4,840	3,701											8,541
31 - Magnolia Ave	21,441	17,830											39,271
32 - Dandridge Ave	4,563	3,267											7,830
34 - Burlington	15,563	11,606											27,169
37 - Morningside/Riverside	5,191	5,392											10,583
40 - South Knoxville	2,078												2,078
41 - Chapman Hwy	17,399	12,739											30,138
42 - Ft Sanders/UT	4,876	4,995											9,871
45 - Vestal	5,178												5,178
TOTAL	204,369	164,268											368,637

August, 2026 Total Trips by Route



August, 2026 Riders per Hour by Route





MONTHLY RIDERSHIP
AUGUST REPORT FY2026

Month	Booked Trips	Completed Trips	No- Show/Cancel	Unique Riders	Connected w/ Route 12	Connected w/ Route 20	Ineligible Trip Requests	On-Time Performance
July	23	11	12	2	5	6	0	100.00%
August	25	14	11	2	6	8	0	100.00%



Knoxville Area Transit (KAT) Integrated Microtransit + Paratransit Study

Final Draft – August 2026

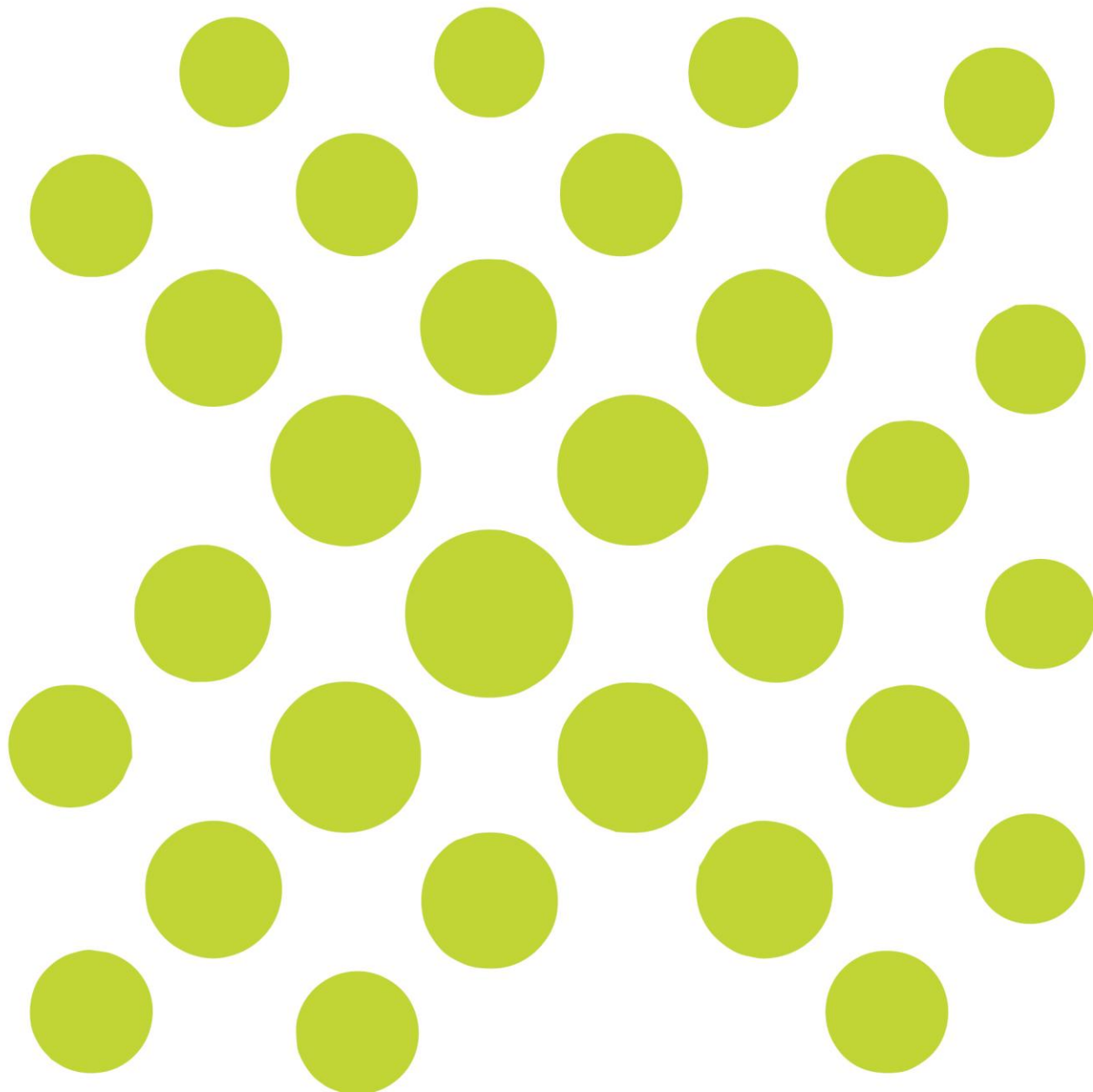


TABLE OF CONTENTS

1	INTRODUCTION	1
2	MARKET ANALYSIS	1
2.1	<i>Socioeconomic and Mobility Needs Analysis</i>	<i>1</i>
2.1.1	Population	2
2.1.2	Young Adult Population	5
2.1.3	Older Adult Population.....	5
2.1.4	Minority Populations	8
2.1.5	Limited English Proficiency	10
2.1.6	Persons with Disabilities	12
2.1.7	Employment	13
2.1.8	Income	14
2.1.9	Households Below the Poverty Line	17
2.1.10	Zero-Vehicle Households	19
2.1.11	Unemployment	20
2.2	<i>Demand Assessments</i>	<i>21</i>
2.2.1	Traditional Transit Market	22
2.2.2	Transit Orientation Index	22
2.2.3	Bivariate Analysis of Transit Orientation Index and Population Density	27
2.2.4	Discretionary Rider Markets	29
2.3	<i>Major Trip Generators and Travel Flows</i>	<i>29</i>
2.3.1	Activity Centers	29
2.3.2	Travel Flows	30
3	Existing Services Overview	35
3.1	<i>Fixed Route Service Overview</i>	<i>35</i>
3.2	<i>Demand Response Overview</i>	<i>39</i>
4	Field Review	42
4.1	<i>Existing Transit Network Observations</i>	<i>42</i>
4.2	<i>Key Areas Identified During Field Review</i>	<i>43</i>
4.3	<i>Preliminary Field Review Findings</i>	<i>44</i>
5	Microtransit Service Area Development and Evaluation	47
5.1	<i>Goals and Objectives</i>	<i>48</i>
5.2	<i>Microtransit Service and Operating Concept Screening Overview</i>	<i>49</i>
5.3	<i>Preliminary Service Area Screening</i>	<i>51</i>
5.4	<i>Secondary Refined Screening</i>	<i>52</i>

6	Microtransit Recommendations Overview	53
6.2	<i>Microtransit Operational Summary</i>	62
7	Comingled Operating Analysis and Concept Overview	63
7.1	<i>Existing LIFT Service Operational Analysis</i>	63
7.2	<i>Recommendations for Refining Existing Operations</i>	67
7.2.1	Summary of Findings	69
7.3	<i>Comingled Service Operational Overview/Recommendations</i>	70
7.3.1	SaaS Platform Procurement	72
8	Next Steps	73
8.1	<i>Select Microtransit Pilot Zone</i>	73
8.2	<i>Education Campaign</i>	74
8.3	<i>Other Technology Improvements</i>	75
8.4	<i>Exploration of Additional Funding</i>	76
8.5	<i>Service Performance Evaluation</i>	76

List of Figures

Figure 1: Population Age Groups By County And City Of Knoxville	4
Figure 2: Racial and Ethnic Composition – Knox County and City of Knoxville	8
Figure 3: Limited English Proficiency Households – Knox County and City of Knoxville	10
Figure 4: Household Income Distribution - Knox County and City of Knoxville	16
Figure 5: Percent of Population Below the Poverty Line – Knox County and City of Knoxville	17
Figure 6: Vehicle Availability by Household – Knox County and City of Knoxville	19
Figure 7: Transit Orientation Index Methodology	22
Figure 8: Systemwide Ridership (FY 2024 – FY 2026)	36
Figure 9: Ridership FY 2026 YTD (July 2025 - March 2026)	37
Figure 10: Productivity by Route (March 2026)	38
Figure 11: LIFT Trips (Oct. 2025)	40
Figure 12: katConnect Service Area	41
Figure 13: Performance Metrics and Associated Objectives	50
Figure 14: Microtransit Concepts	56
Figure 15: Northeast Microtransit Concept	57
Figure 16: East Microtransit Concept	58
Figure 17: South Microtransit Concept	59
Figure 18: West Microtransit Concept	60
Figure 19: Northwest Microtransit Concept	61
Figure 20: Avg Vehicles Operating vs. Avg Completed Trips by Hour	64
Figure 21: Total Idle/Gap Time by Hour (All vehicles)	65

Figure 22: Percentage of Same-day Trips vs. Idle/Gap Hours by Hour by Day	66
Figure 23: Daily Peak Vehicle Analysis	68

List of Maps

Map 1: Total Population	3
Map 2: Young Adult Population (15–29)	5
Map 3: Older Adult Population (55–74)	6
Map 4: Older Adult Population (65+)	7
Map 5: Non-White Population	9
Map 6: Limited English Proficiency Households	11
Map 7: Households with a Disability	12
Map 8: Median Household Income	16
Map 9: Households Below the Poverty Line	18
Map 10: Zero Vehicle Households	20
Map 11: Percent of Unemployed Population	21
Map 12: Transit Orientation Index	23
Map 13: Quarter Mile Gap Analysis	24
Map 14: Half-Mile Gap Analysis	25
Map 15: Three-Quarter Mile Gap Analysis	26
Map 16: Transit Orientation Index With 2020 Population Density By Census Block	28
Map 17: Activity Centers	30
Map 18: Trip Origins - Replica	32
Map 19: Trip Destinations - Replica	33
Map 20: Travel Flows - Replica	34
Map 21: KAT Existing Service Area	35

List of Tables

Table 1: Leading Industries for Employment in the Knoxville MSA	13
Table 2: Knox County’s Ten Largest Employers	14
Table 3: Microtransit Preliminary Screening Results	52
Table 4: Microtransit Secondary Screening Results	53
Table 5: Microtransit Operational Summary	62
Table 6: Comingled Service Model Operational Considerations by Zone	72

1 INTRODUCTION

Knoxville Area Transit (KAT) currently provides fixed route and ADA complementary paratransit service throughout Knox County, connecting residents to major employment centers, educational institutions, medical facilities, shopping destinations, and other daily activities. While the existing network serves many of the county's established transit markets, continued growth, changing development patterns, and evolving travel needs create an opportunity to evaluate how well current services align with today's mobility demands.

KAT is conducting a Microtransit and Operational Analysis to assess existing service performance and identify opportunities to improve mobility, productivity, and service effectiveness. The study examines how demographic characteristics, employment concentrations, land use patterns, activity centers, and travel demand influence transit use across Knox County. Attention is given to understanding how well the existing network serves areas with demonstrated transit demand and where mobility needs may not be adequately addressed through the current service structure.

This technical memorandum documents existing conditions and the operating environment within Knox County. The analysis includes a review of demographic and socioeconomic characteristics, transit market indicators, employment patterns, activity centers, land use conditions, travel demand indicators, and existing transit service characteristics. Findings from this effort will establish the foundation for subsequent phases of the study and support the development and evaluation of service alternatives designed to improve mobility and strengthen overall system performance.

2 MARKET ANALYSIS

This section reviews the demographic, socioeconomic, employment, land use, and travel demand characteristics that influence transit demand within Knox County. The purpose of the analysis is to identify transit-supportive markets, understand existing mobility needs, and document conditions that may affect future service planning efforts.

The findings presented in this section establish a baseline understanding of the transit market and will be used in conjunction with existing service performance, stakeholder input, and operational analyses to support the development and evaluation of service alternatives.

2.1 Socioeconomic and Mobility Needs Analysis

This section reviews the demographic and socioeconomic characteristics that influence transit demand within Knox County. The analysis focuses on population, age, income, disability status, minority populations, limited English proficiency, employment, and vehicle availability to identify areas with higher concentrations of residents who may be more likely to rely on public transportation.

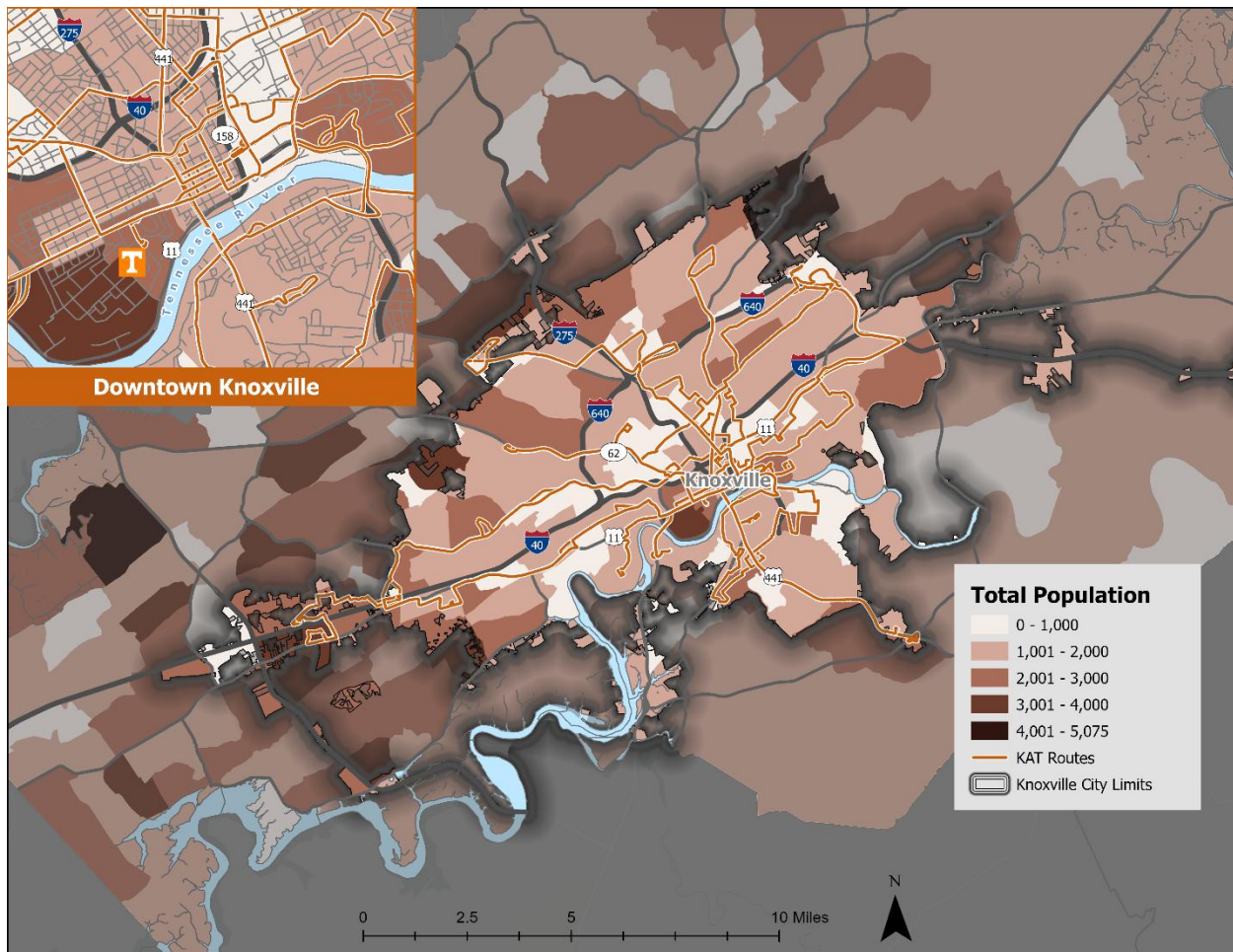
A series of maps, figures, and tables illustrate key demographic and economic characteristics across Knox County. All data are from the 2023 American Community Survey (ACS) 5-Year Estimates at the census block group level, unless otherwise noted.

2.1.1 Population

According to the 2023 ACS 5-Year Estimates, Knox County had a total population of approximately 478,971 residents. The City of Knoxville accounted for approximately 196,831 residents, representing about 41 percent of the countywide population. As the county's largest population center, Knoxville also contains a significant concentration of employment, educational institutions, medical facilities, and other major activity centers.

Population distribution provides an important indicator of potential transit demand. Areas with higher residential concentrations generally support a larger base of potential transit riders and can more effectively sustain fixed route service. As shown in Map 1, the highest population concentrations are located within the City of Knoxville and surrounding urbanized areas. Several clusters of higher-population block groups are evident throughout the central portion of the county, while population becomes less concentrated toward the suburban and rural edges of Knox County. This development pattern suggests that the strongest transit markets are likely to be located within and adjacent to the county's urban core, where population and activity are most concentrated.

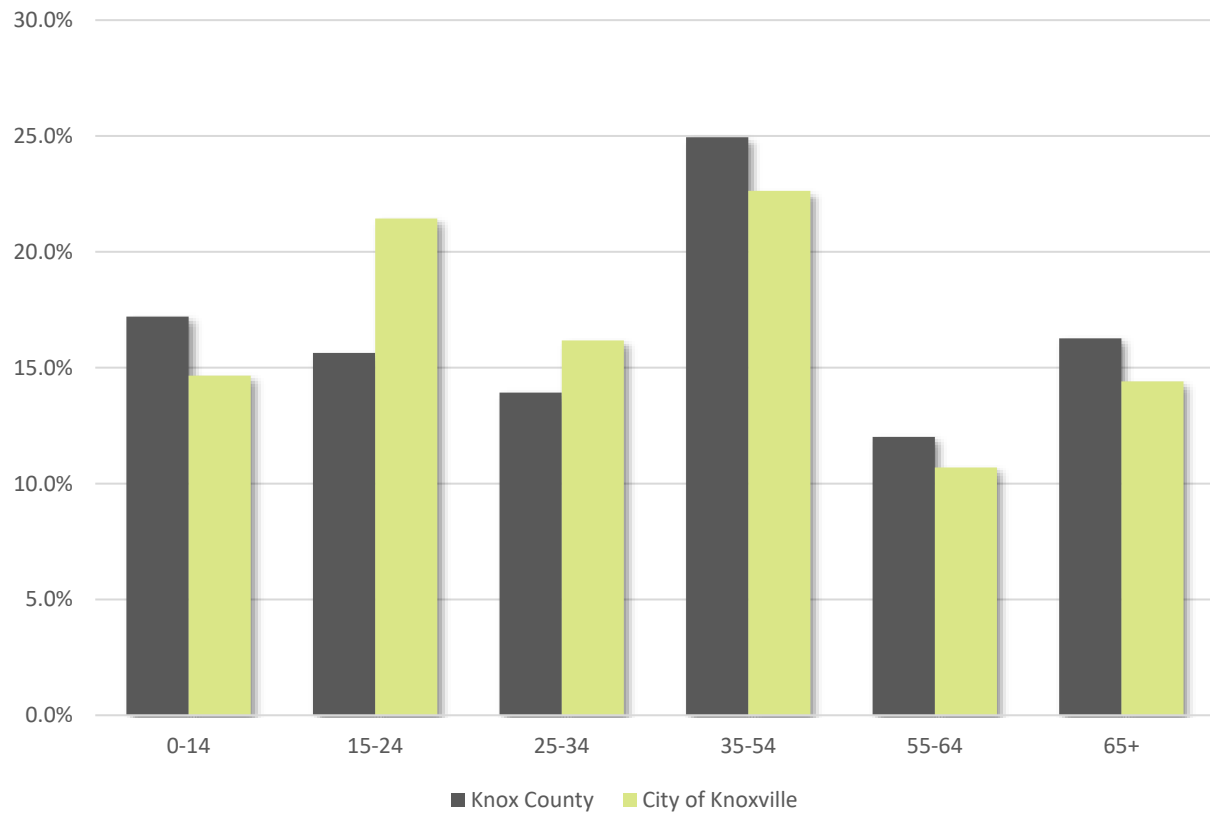
MAP 1: TOTAL POPULATION



Age distribution is an important component of the transit market analysis because different age groups often have different mobility needs and travel behaviors. Young adults and older adults are typically reviewed as part of this analysis due to their higher potential reliance on transit, paratransit, shared mobility, or other non-driving options.

Knox County's age profile is influenced in part by the presence of the University of Tennessee, which contributes to a notable concentration of young adults in and around Knoxville. Residents aged 65 and older account for approximately 16 percent of the countywide population. This group is also important to consider in service planning because mobility needs may change as residents age, particularly in areas where access to fixed route service, medical destinations, and daily services are limited. Figure 1 illustrates the distribution of population age groups for Knox County and the City of Knoxville. The University of Tennessee contributes to a notably high share of young adults in the city, while residents 65 and older make up 16 percent countywide, a share that will grow with time.

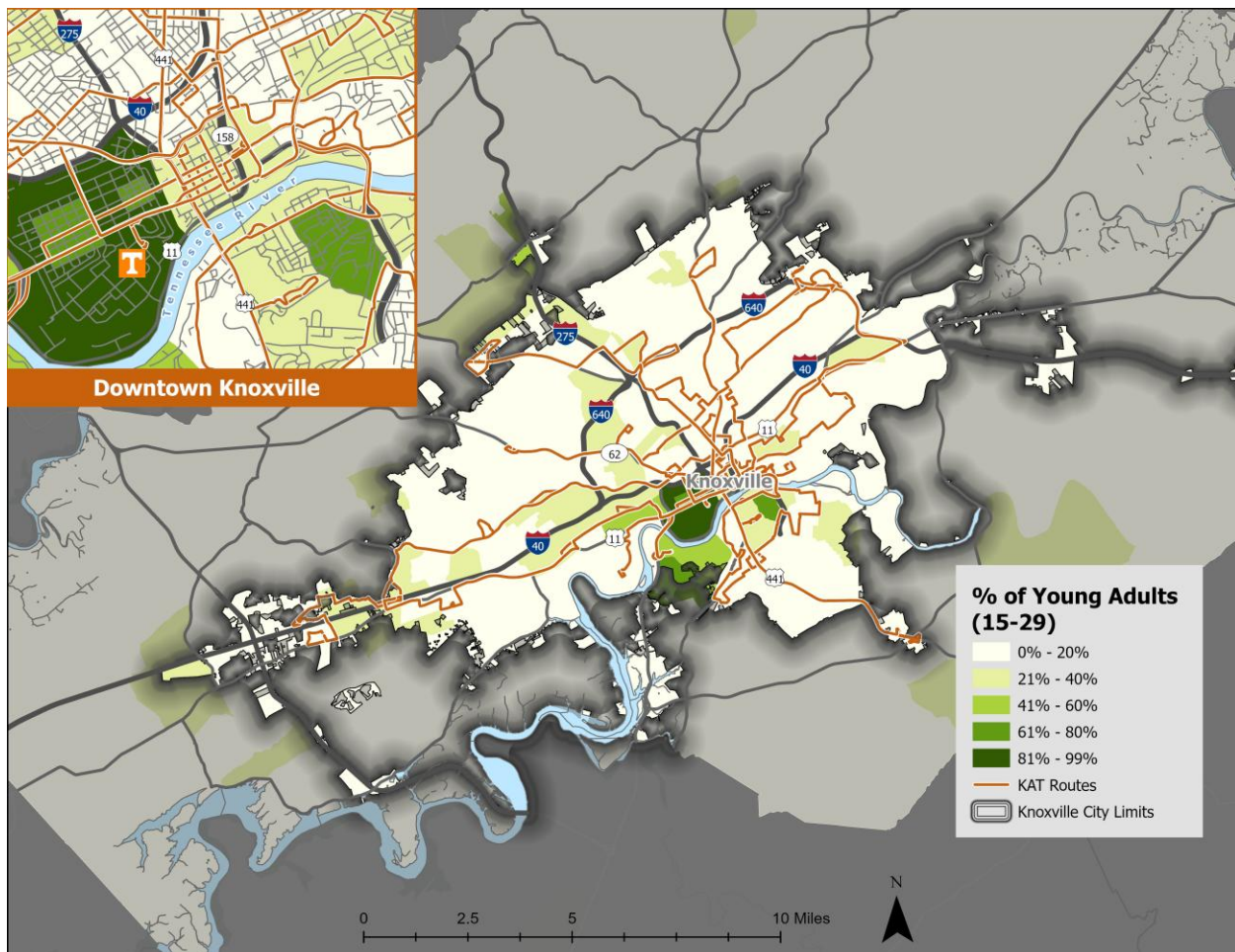
FIGURE 1: POPULATION AGE GROUPS BY COUNTY AND CITY OF KNOXVILLE



2.1.2 Young Adult Population

Young adults represent an important transit market within Knox County, particularly in areas with higher concentrations of students, early-career workers, and households with lower rates of vehicle ownership. As shown in Map 2, the highest concentrations of residents between the ages of 15 and 29 are in and around downtown Knoxville and the University of Tennessee campus. Additional concentrations are present in neighborhoods immediately north and west of downtown. These areas correspond closely with KAT's existing fixed route network and include many of the county's major educational, employment, and activity centers. The concentration of young adults within Knoxville's urban core reflects one of the county's strongest transit-supportive markets. The presence of the University of Tennessee, along with surrounding residential neighborhoods and activity centers, generates travel demand that is generally well-suited to fixed route transit service.

MAP 2: YOUNG ADULT POPULATION (15-29)



2.1.3 Older Adult Population

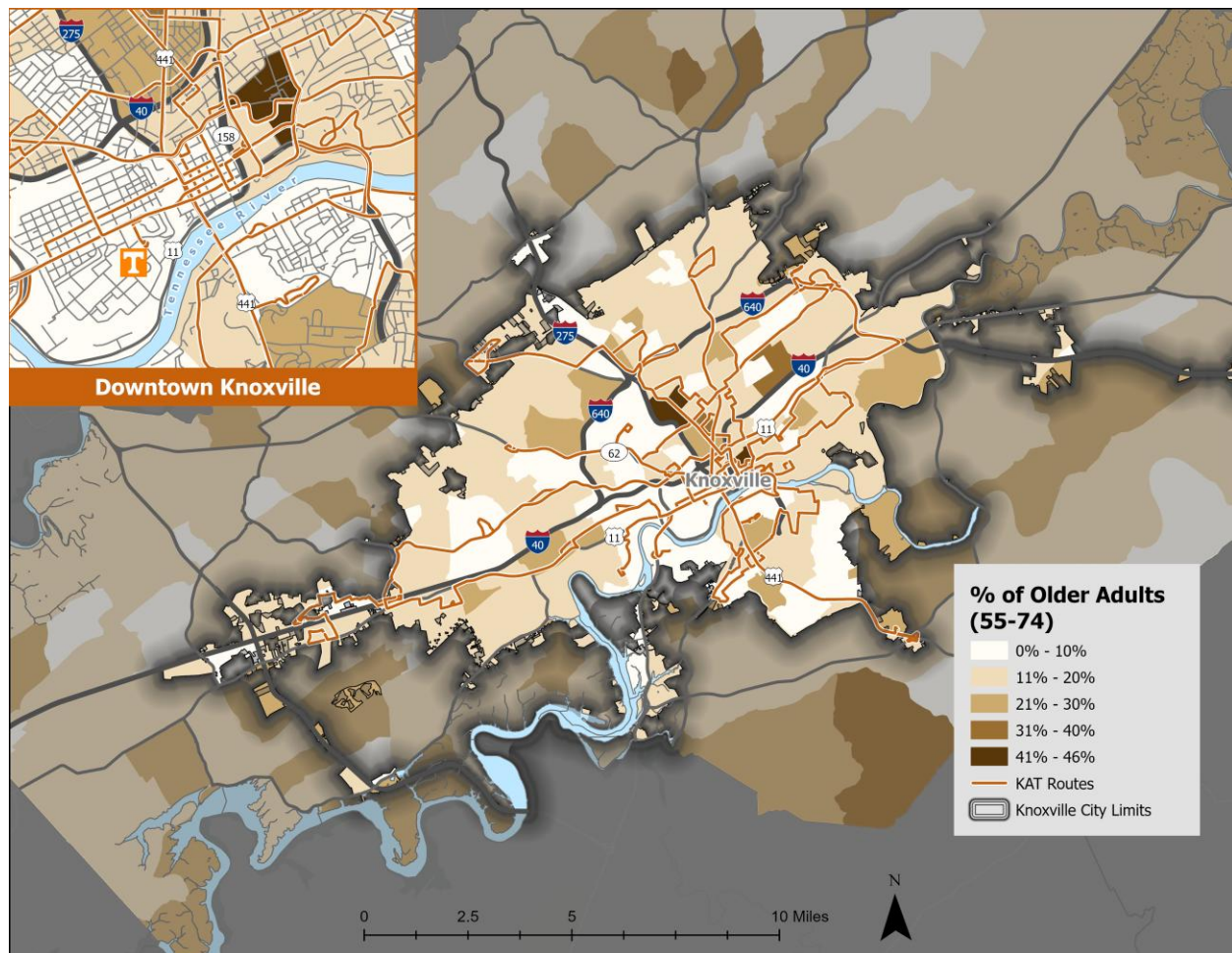
Older adult populations are an important consideration in transit planning because mobility needs often change with age. Understanding where older residents live help identify areas where access to fixed

route transit, ADA complementary paratransit, and other mobility options may be increasingly important.

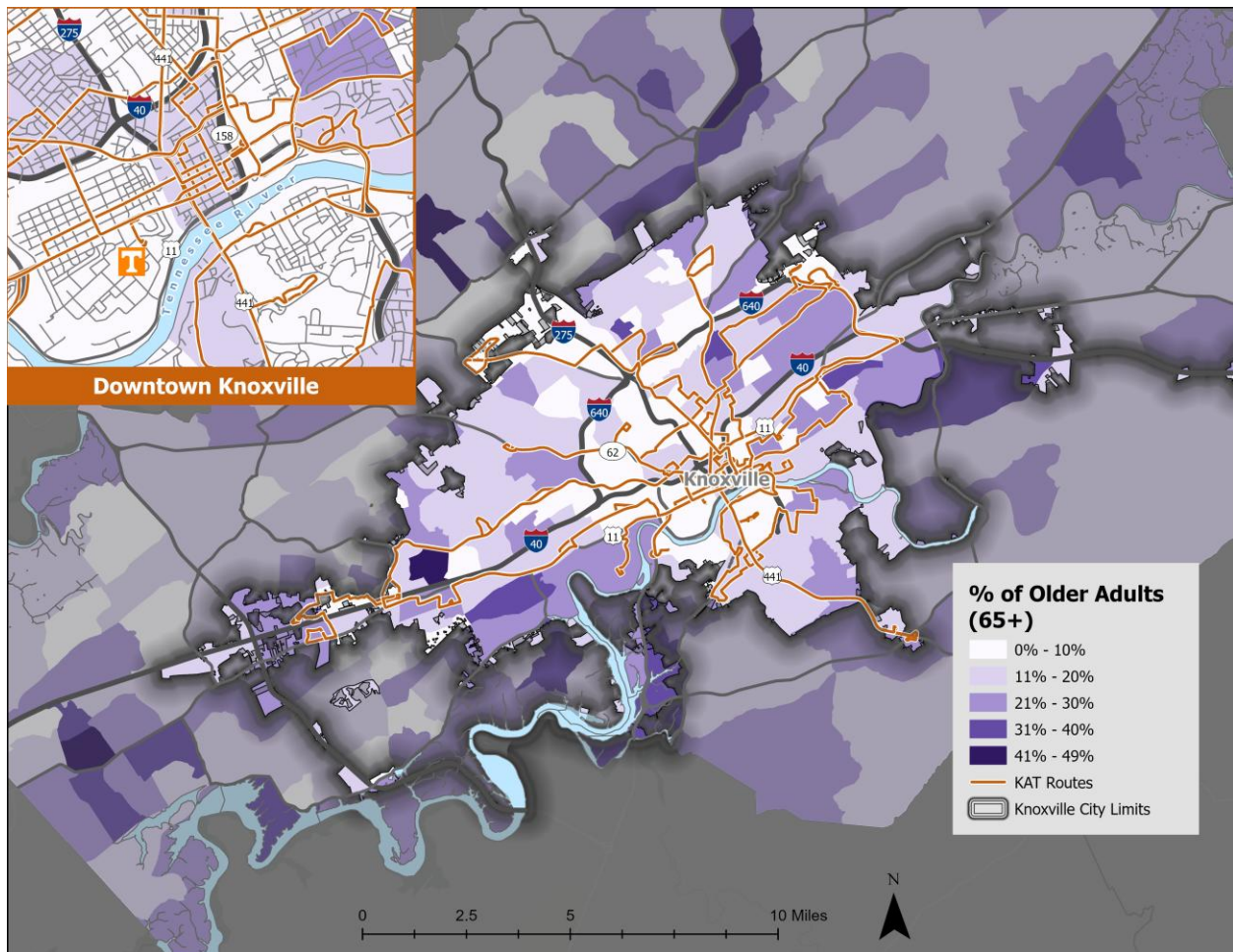
Maps 3 and 4 illustrate the distribution of residents ages 55 to 74 and residents ages 65 and older throughout Knox County. The 55 to 74 population provides insight into areas where age-related mobility needs may increase over time, while the 65 and older population reflects residents who may already have a greater need for transportation alternatives.

The maps show that older adult populations are distributed throughout the county, with concentrations occurring in both Knoxville and surrounding suburban areas. While the downtown Knoxville and University of Tennessee areas contain relatively lower percentages of older residents, several higher-concentration areas are located outside the urban core. This pattern suggests that future mobility needs associated with aging populations will extend beyond traditional transit markets and may require a combination of fixed route, paratransit, and flexible transportation options to maintain access to essential destinations and services.

MAP 3: OLDER ADULT POPULATION (55-74)



MAP 4: OLDER ADULT POPULATION (65+)

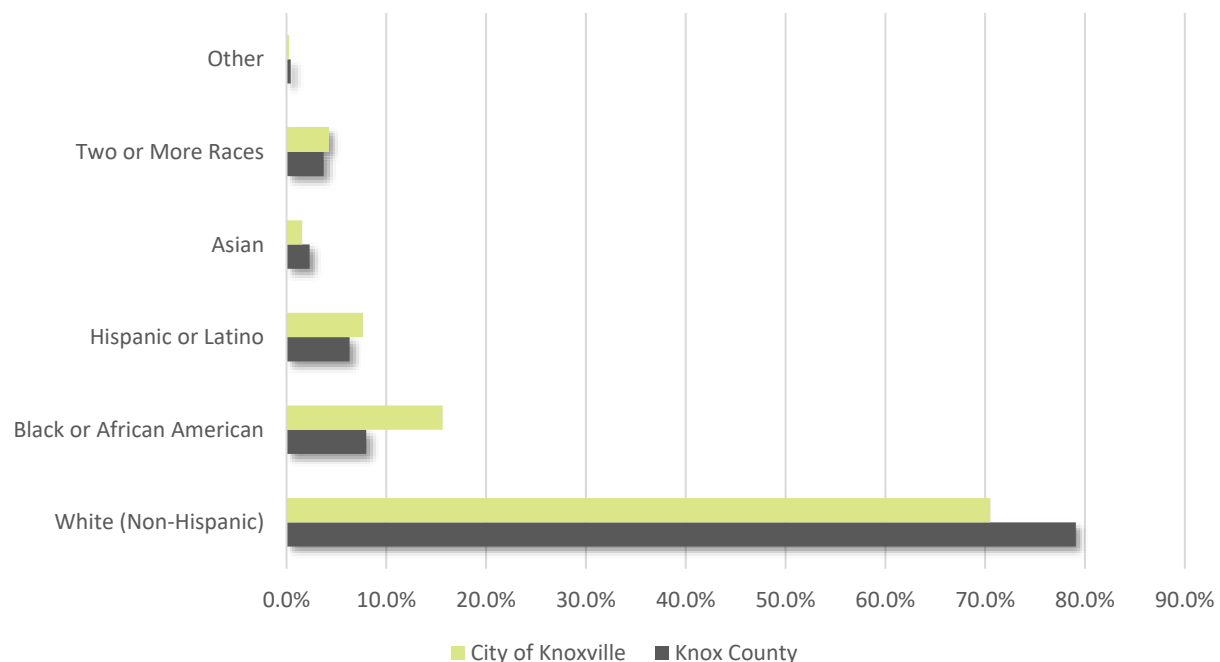


2.1.4 Minority Populations

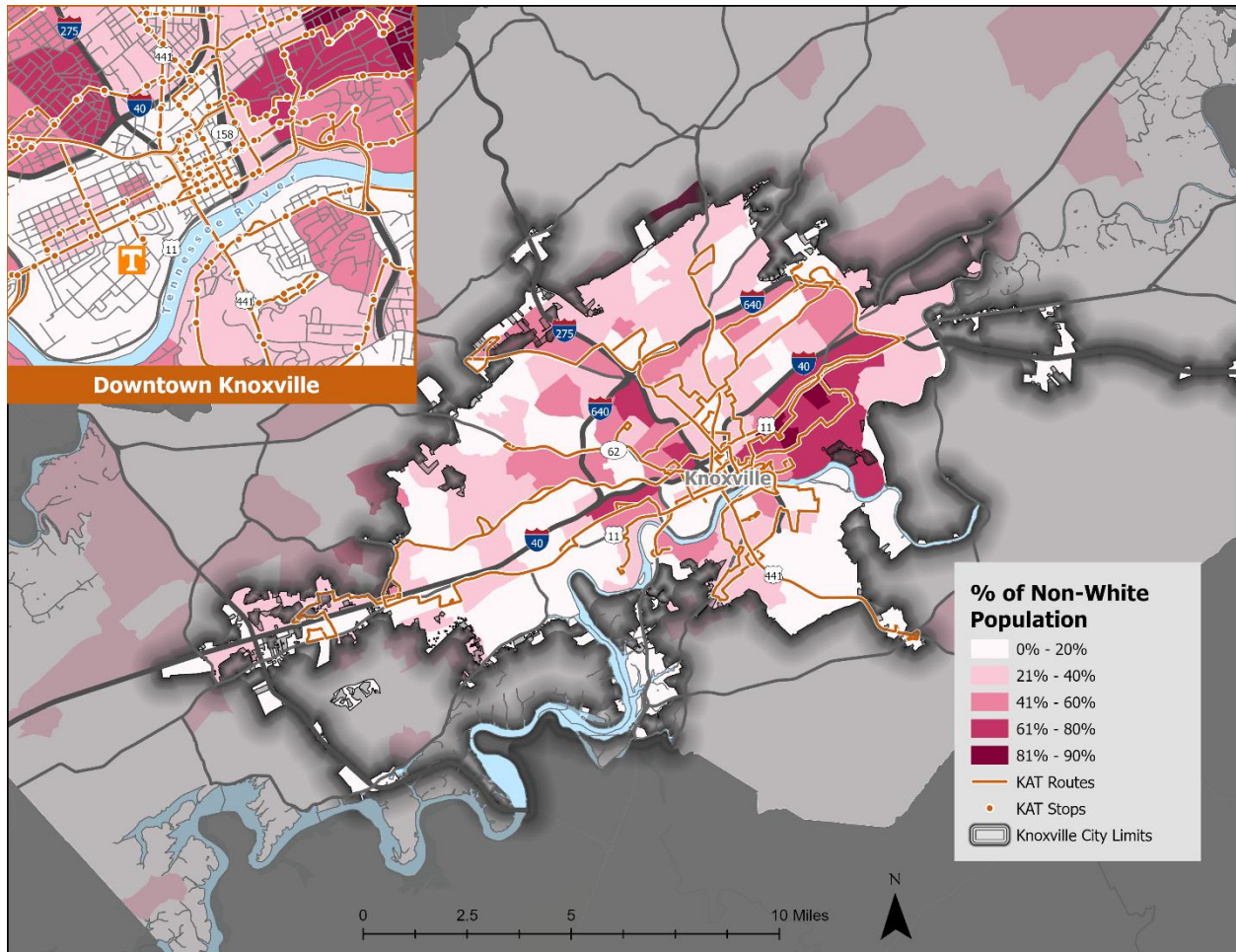
The distribution of minority populations is reviewed to help assess whether existing transit services are located near communities that may require additional consideration under federal Title VI and environmental justice guidance. This analysis also helps identify areas where service changes should be evaluated for potential equity impacts.

Approximately 82 percent of Knox County residents identify as White. Black or African American residents make up about nine percent of the county’s population, with Hispanic or Latino, Asian, and multiracial residents making up most of the remaining population. Minority populations are more concentrated, particularly in East Knoxville, where Black or African American residents make up a higher share of several neighborhoods. Figure 2 summarizes the racial and ethnic composition of Knox County and the City of Knoxville. The county is predominantly White at 82 percent, but the City of Knoxville has notably higher minority concentrations, particularly in East Knoxville neighborhoods along existing KAT corridors. As shown in Map 5, higher concentrations of non-White residents are located primarily within Knoxville, especially east and northeast of downtown, as well as in portions of the central city. Several of these areas are located along or near existing KAT routes, indicating that the current fixed route network serves many of the county’s higher-minority population areas. These locations should be considered carefully during later service planning to ensure that proposed changes do not disproportionately affect minority communities.

FIGURE 2: RACIAL AND ETHNIC COMPOSITION – KNOX COUNTY AND CITY OF KNOXVILLE



MAP 5: NON-WHITE POPULATION

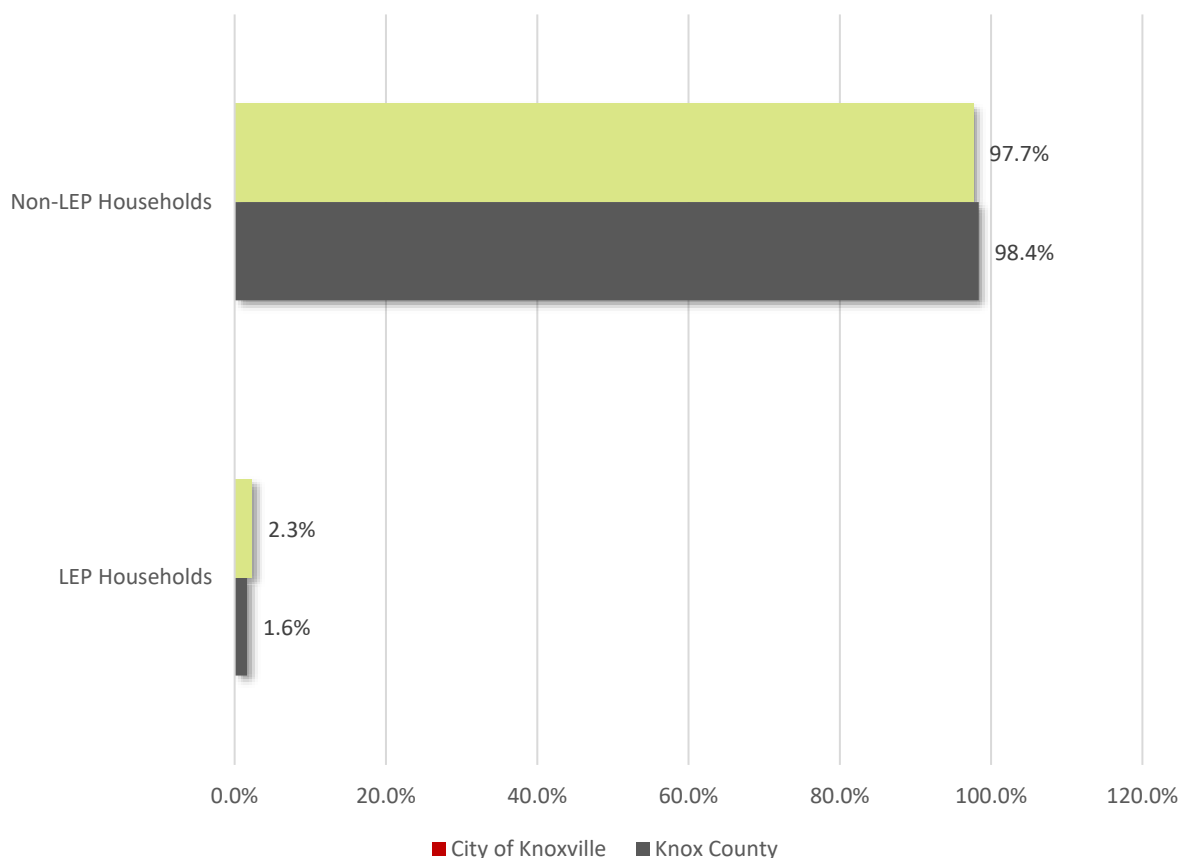


2.1.5 Limited English Proficiency

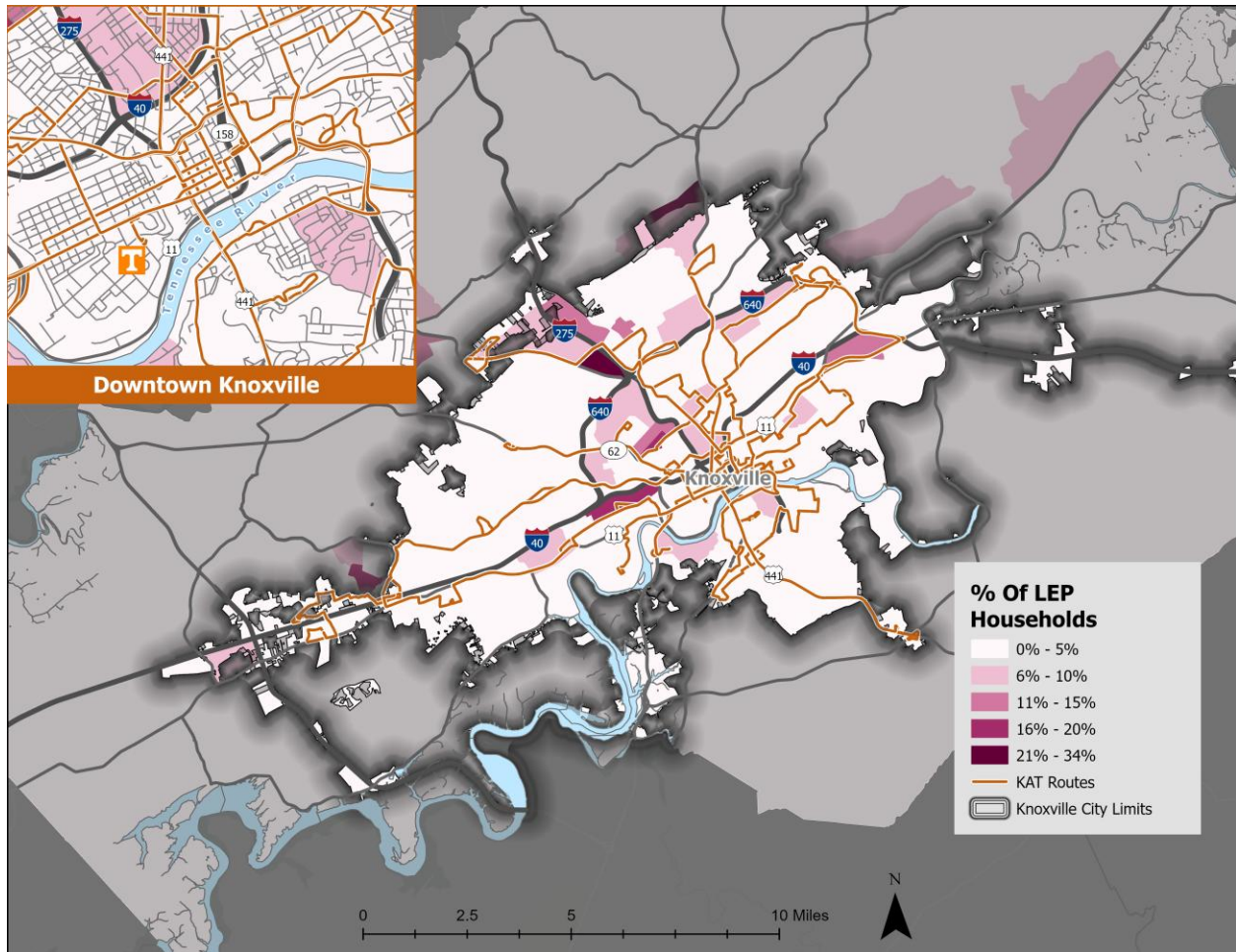
Limited English proficiency (LEP) is reviewed as part of the market analysis to identify areas where language access may affect how residents obtain transit information, understand schedules, or use available services. For transit agencies, LEP concentrations are also important to consider when developing rider information, public outreach materials, and service change communications.

Approximately four percent of Knox County households are classified as limited English proficient (LEP). Within the City of Knoxville, this rises to about six percent. As shown in Map 6, higher concentrations of LEP households are found in parts of central and western Knoxville, with some clusters along major commercial corridors. Figure 3 illustrates the share of LEP and non-LEP households for Knox County and the City of Knoxville. Though a small share overall, LEP households are concentrated near existing KAT service corridors in north and central Knoxville, making language access planning an important consideration for those areas. The highest LEP concentrations are not widespread across the county, but several clusters appear near existing KAT service areas, including portions of north, west, and central Knoxville. These areas should be considered when developing public information materials, conducting outreach, and evaluating how future service changes are communicated to riders.

FIGURE 3: LIMITED ENGLISH PROFICIENCY HOUSEHOLDS – KNOX COUNTY AND CITY OF KNOXVILLE



MAP 6: LIMITED ENGLISH PROFICIENCY HOUSEHOLDS



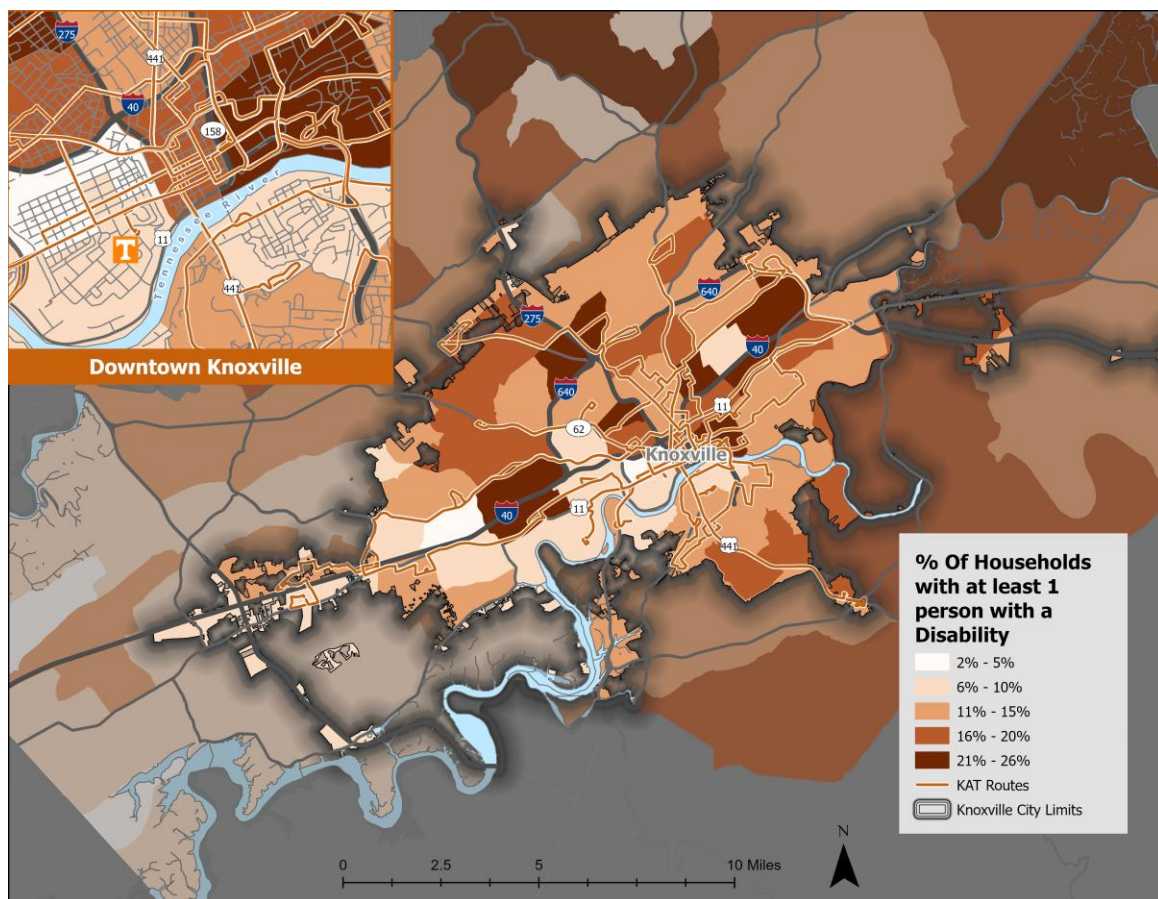
2.1.6 Persons with Disabilities

Households with persons with disabilities are reviewed to help identify areas where accessible transit service, ADA complementary paratransit, and other mobility options may be especially important. Approximately 14 percent of Knox County households include at least one person with a disability, with a slightly higher share reported within the City of Knoxville.

As shown in Map 7, households with at least one person with a disability are distributed throughout Knox County, with several higher-concentration block groups located both inside and outside the Knoxville city limits. Within Knoxville, higher shares appear in portions of north, east, and south Knoxville, as well as selected areas west of downtown. Several of these areas are located near existing KAT routes, while other higher-concentration areas are farther from the core fixed route network.

This distribution is important for evaluating both fixed route accessibility and potential paratransit demand. Areas with higher disability concentrations outside the strongest fixed route markets may require additional consideration when assessing service coverage, stop access, and opportunities for flexible mobility options.

MAP 7: HOUSEHOLDS WITH A DISABILITY



2.1.7 Employment

Employment patterns are a key consideration in evaluating transit demand because job centers generate recurring travel activity throughout the day. Areas with high employment concentrations, including downtown districts, medical campuses, universities, government centers, and major commercial corridors, typically support stronger transit markets when they are paired with nearby residential density and reliable service.

Knox County’s employment rate is approximately 61 percent. The region’s largest employment sectors include education and health services, trade, transportation, utilities, government, and professional and business services, as shown in Table 1. These sectors are important to the transit market because many of the county’s largest trip generators are tied to education, healthcare, public administration, retail, and service-based employment.

TABLE 1: LEADING INDUSTRIES FOR EMPLOYMENT IN THE KNOXVILLE MSA

Industry	Number of Jobs
Education and Health Services	47,800
Government	22,100
Trade, Transportation, and Utilities	23,600
Leisure and Hospitality	16,400
Professional and Business Services	15,200
Manufacturing	10,800
Financial Activities	6,100
Construction	7,300
Other Services	5,400
Information	3,200

Source: U.S. Bureau of Labor Statistics, 2023

Table 2 identifies the ten largest employers in Knox County. The University of Tennessee, Knox County Schools, Covenant Health, UT Medical Center, Knox County Government, and the City of Knoxville represent major institutional and public-sector employers. Many of these destinations are located within or near Knoxville’s urban core and are served by existing KAT routes. This concentration of employment reinforces the importance of maintaining strong transit connections to downtown Knoxville, the University of Tennessee area, major medical facilities, and other high-activity employment centers.

Employment locations outside the core service area should also be reviewed during later phases of the study to determine whether existing fixed route service, regional connections, or flexible mobility options are appropriate based on worker travel demand, shift times, and surrounding land use conditions.

TABLE 2: KNOX COUNTY'S TEN LARGEST EMPLOYERS

Employer	Industry	Number of Employees
University of Tennessee	Education	10,000+
Knox County Schools	Education	8,500
Covenant Health	Healthcare	7,200
UT Medical Center	Healthcare	5,800
Knox County Government	Government	4,200
City of Knoxville	Government	3,600
Tennessee Valley Authority	Utilities/Government	3,200
Pilot Flying J	Retail/Corporate	2,800
Oak Ridge National Laboratory	Research/Government	2,600
Walmart	Retail	2,400

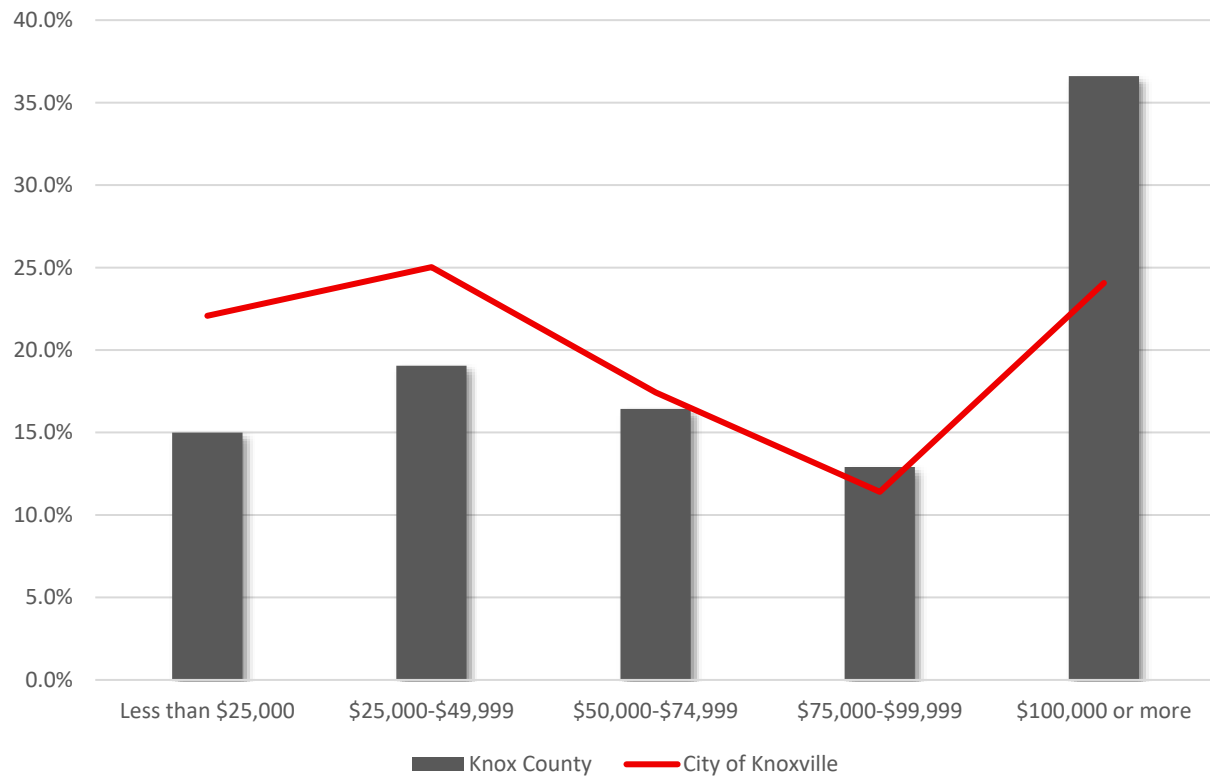
Source: Knox County Economic Development, 2023.

2.1.8 Income

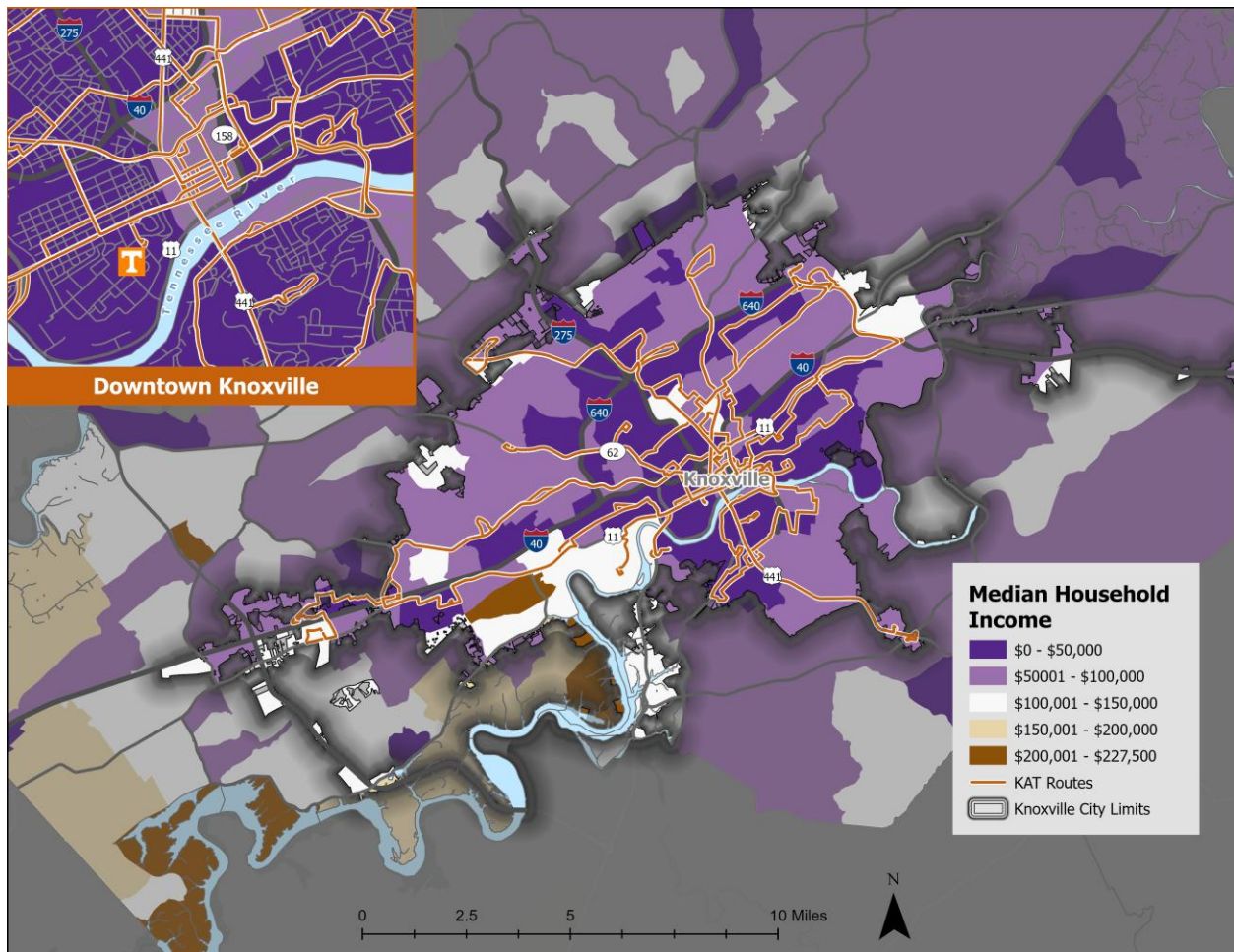
Household income is reviewed as part of the market analysis because income levels are closely related to transportation choice, vehicle availability, and the ability to absorb transportation costs. Lower-income households are more likely to depend on public transit, walking, biking, rides from others, or other lower-cost mobility options.

In Knox County, approximately 20 percent of households earn less than \$25,000 per year, and approximately 42 percent earn less than \$50,000. Median household income varies considerably across the county, with lower-income block groups concentrated in and around the Knoxville urban core, including areas near downtown and the University of Tennessee. Higher-income areas are more common in suburban and peripheral portions of the county. Figure 4 illustrates the distribution of household income for Knox County and the City of Knoxville. About 42 percent of households earn below \$50,000, with the lowest-income areas concentrated in the urban core and UT corridor where KAT already provides service. As shown in Map 8, many of the lower-income areas are located within or near KAT's existing fixed route network. This suggests that current service generally aligns with several areas where cost-sensitive transportation needs may be greatest. These areas should remain important when evaluating future service changes, fare impacts, and potential mobility gaps.

FIGURE 4 HOUSEHOLD INCOME DISTRIBUTION - KNOX COUNTY AND CITY OF KNOXVILLE



MAP 8: MEDIAN HOUSEHOLD INCOME



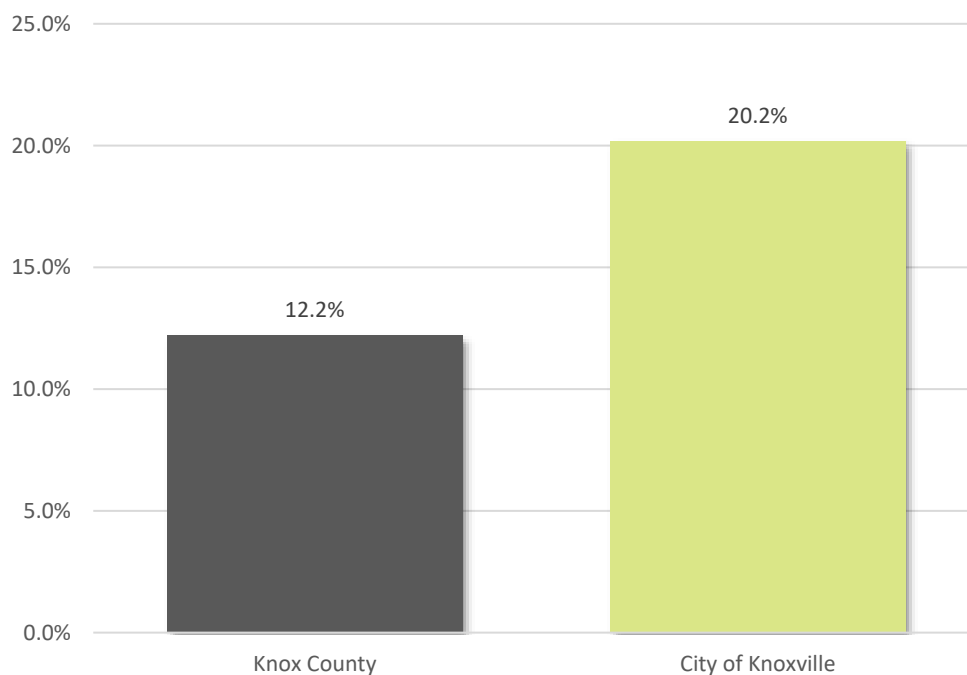
2.1.9 Households Below the Poverty Line

Poverty status is reviewed as part of the market analysis because households with limited financial resources are more likely to face transportation cost burdens and may have fewer available mobility options. For these households, access to transit can play an important role in connecting residents to employment, education, healthcare, grocery stores, and other daily needs.

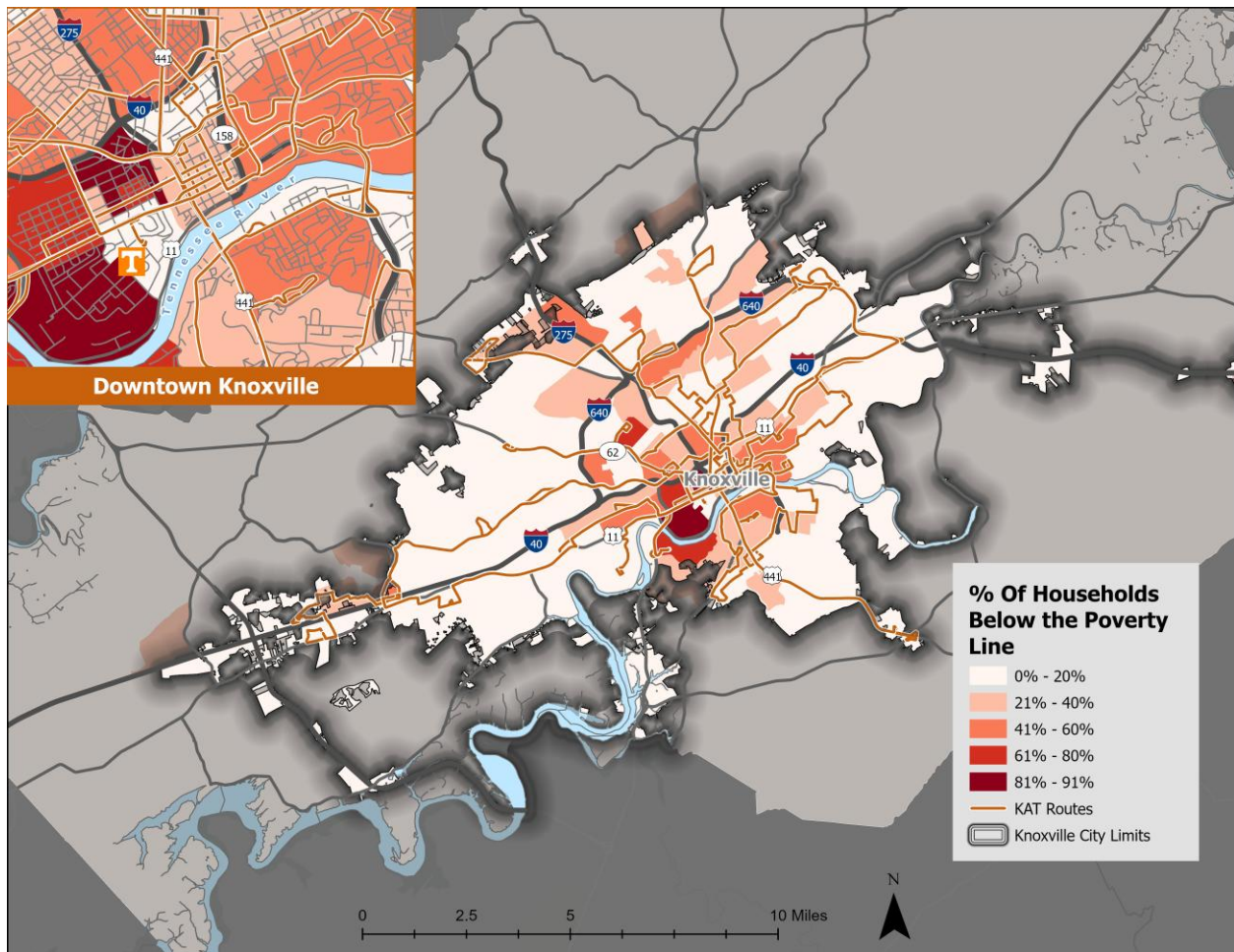
Approximately 14 percent of Knox County residents live below the poverty line. Within the City of Knoxville, the share is approximately 22 percent, reflecting higher concentrations of lower-income households in the urban core and near the University of Tennessee area. Figure 5 compares the share of residents below the poverty line for Knox County and the City of Knoxville. The city poverty rate is nearly double the county average, driven in part by the student population and concentrated poverty in East and South Knoxville neighborhoods.

As shown in Map 9, most areas of Knox County have poverty rates below 20 percent; however, several higher-poverty block groups are located within Knoxville. The highest concentrations appear near downtown Knoxville and the University of Tennessee area, with additional pockets located in selected areas east and south of the urban core. Many of these areas are located within or near KAT’s existing fixed route network, indicating that current service generally reaches several of the county’s highest-need areas.

FIGURE 5: PERCENT OF POPULATION BELOW THE POVERTY LINE – KNOX COUNTY AND CITY OF KNOXVILLE



MAP 9: HOUSEHOLDS BELOW THE POVERTY LINE

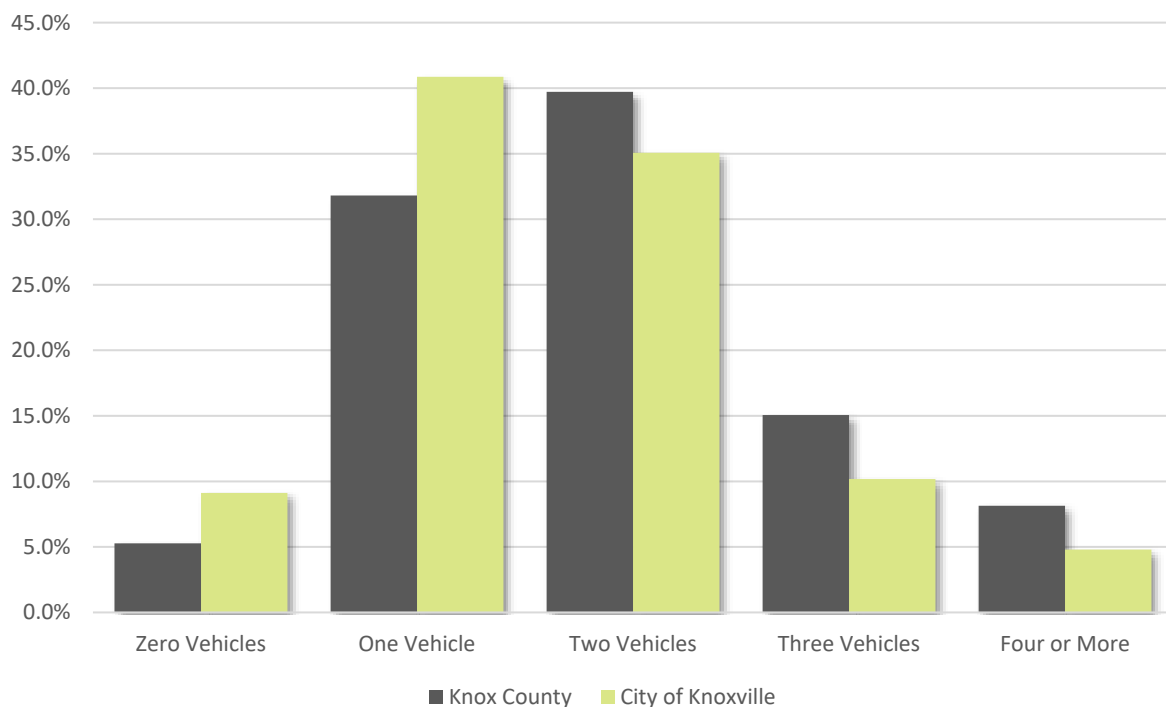


2.1.10 Zero-Vehicle Households

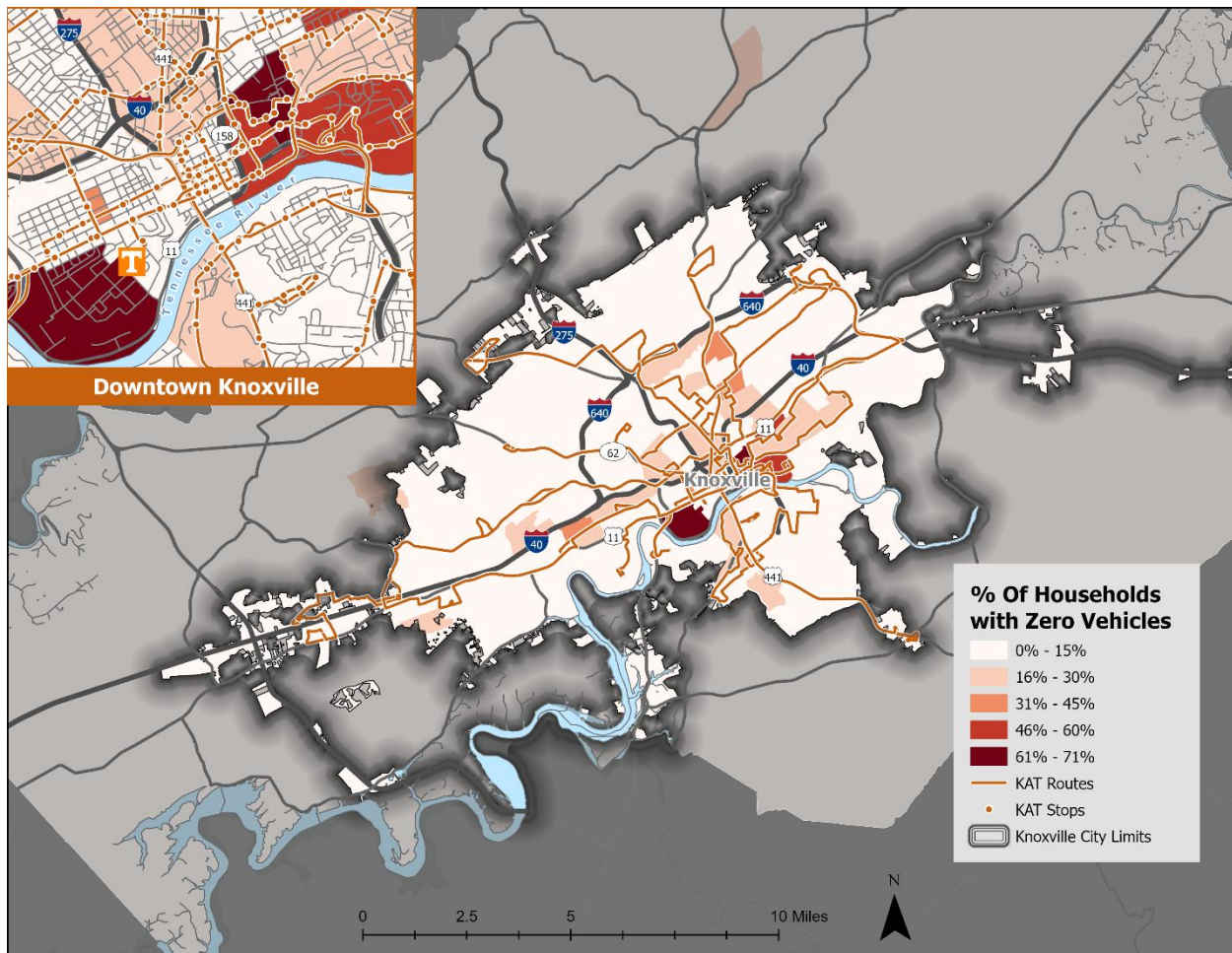
Zero-vehicle households are a key indicator of transit dependency because residents without access to a personal vehicle typically rely on transit, walking, biking, rides from others, or other mobility options to complete daily trips. In Knox County, approximately seven percent of households do not own a vehicle. Within the City of Knoxville, the share increases to approximately 12 percent. Figure 6 illustrates the distribution of vehicle availability by household for Knox County and the City of Knoxville. City households are nearly twice as likely to be car-free as the county overall, and those without a vehicle are concentrated in the downtown core, the UT campus area, and north and east Knoxville. As shown in Map 10, the highest concentrations of zero-vehicle households are located within the Knoxville urban core, particularly near downtown Knoxville and the University of Tennessee area. Additional concentrations are present in portions of north and east Knoxville. These areas are generally located within or near KAT’s existing fixed route network.

The concentration of zero-vehicle households near existing KAT service indicates that the current network serves several of the county’s most transit-dependent areas. These locations should remain a priority when evaluating future service changes, as reductions in coverage or frequency could have a greater effect on residents with limited access to personal vehicles.

FIGURE 6: VEHICLE AVAILABILITY BY HOUSEHOLD – KNOX COUNTY AND CITY OF KNOXVILLE



MAP 10: ZERO VEHICLE HOUSEHOLDS



2.1.11 Unemployment

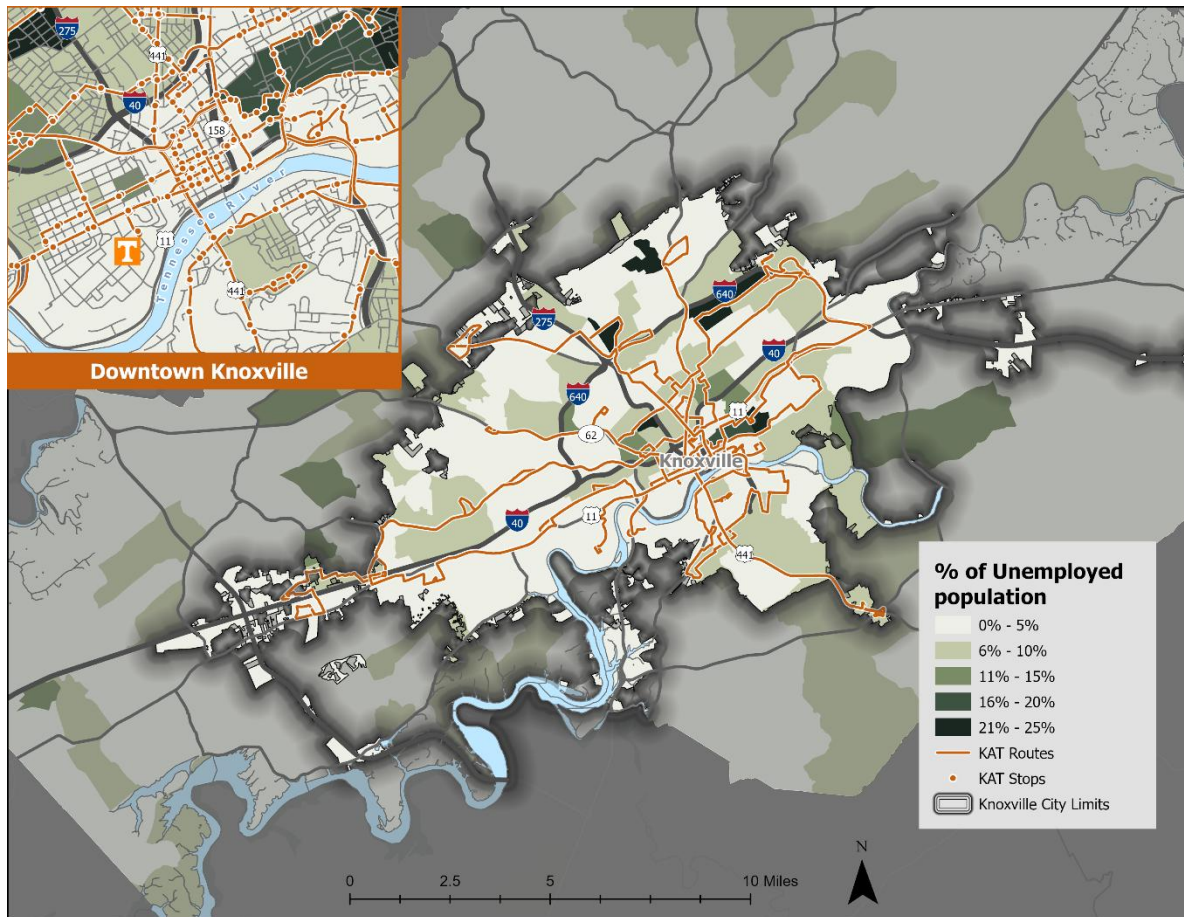
Unemployment is reviewed as part of the market analysis because areas with higher unemployment may indicate a greater need for affordable transportation connections to job centers, workforce services, education, and training opportunities. Unemployment can also overlap with other indicators of transit need, including lower household income and lower vehicle availability.

Knox County's overall unemployment rate is approximately 4.5 percent. As shown in Map 11, most areas within Knoxville and Knox County have unemployment rates below 10 percent; however, several block groups report elevated unemployment rates.

Higher unemployment concentrations are not limited to the downtown core. The map shows selected higher-unemployment block groups in north Knoxville, east Knoxville, and portions of the surrounding county. Several of these areas are located near existing KAT routes, while others are more peripheral.

These locations should be considered when evaluating access to employment opportunities and identifying potential mobility gaps between residential areas and major job centers.

MAP 11: PERCENT OF UNEMPLOYED POPULATION



2.2 Demand Assessments

This section evaluates areas of higher transit demand within the City of Knoxville using demographic indicators and existing service coverage. The analysis helps identify where current KAT service aligns with transit-supportive markets and where mobility needs may not be fully addressed by the existing network.

The demand assessment is intended to be used with other study components, including existing service performance, operating conditions, public and stakeholder input, and later alternatives analysis. Together, these findings will help determine where fixed route service should be maintained or strengthened and where other service models may be appropriate.

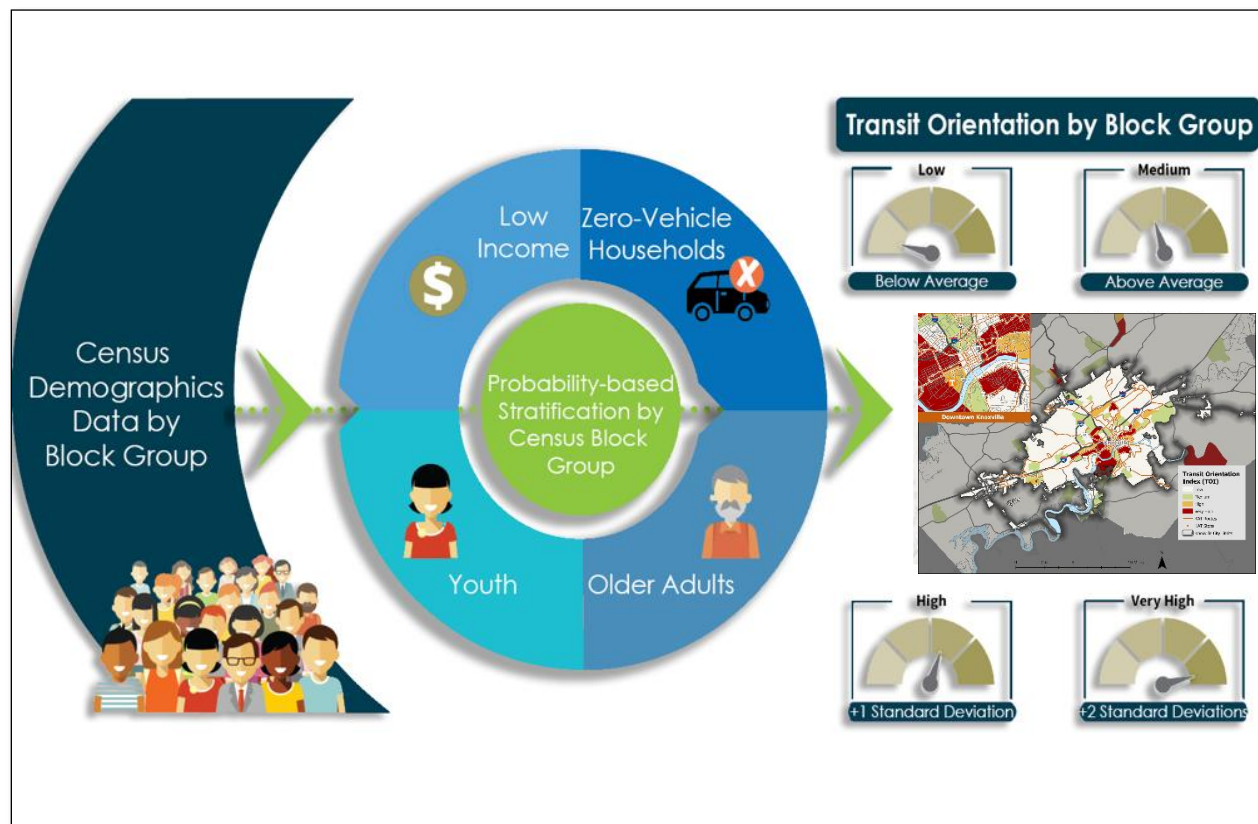
2.2.1 Traditional Transit Market

The traditional transit market includes population groups that are more likely to rely on public transportation or have a higher propensity to use transit. For this analysis, the traditional transit market is evaluated using the Transit Orientation Index (TOI), which identifies areas with higher concentrations of residents who may have greater mobility needs.

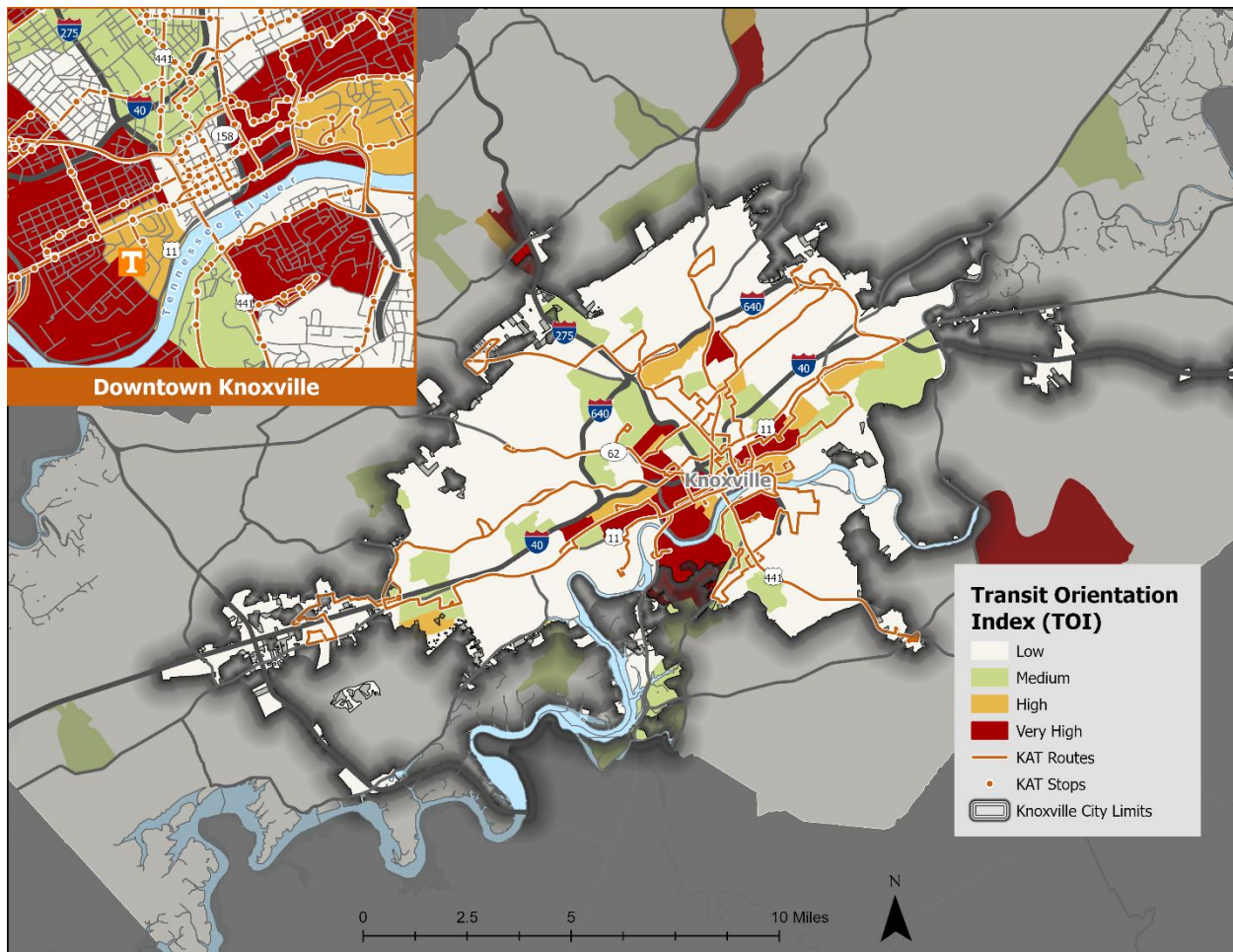
The TOI was developed using four demographic and socioeconomic indicators from the 2023 ACS 5-Year Estimates at the census block group level:

- Share of residents between the ages of 15 and 29 (young adults)
- Share of residents aged 65 and older (older adults)
- Share of households with income below the poverty level
- Share of households with no vehicle

FIGURE 7: TRANSIT ORIENTATION INDEX METHODOLOGY



MAP 12: TRANSIT ORIENTATION INDEX



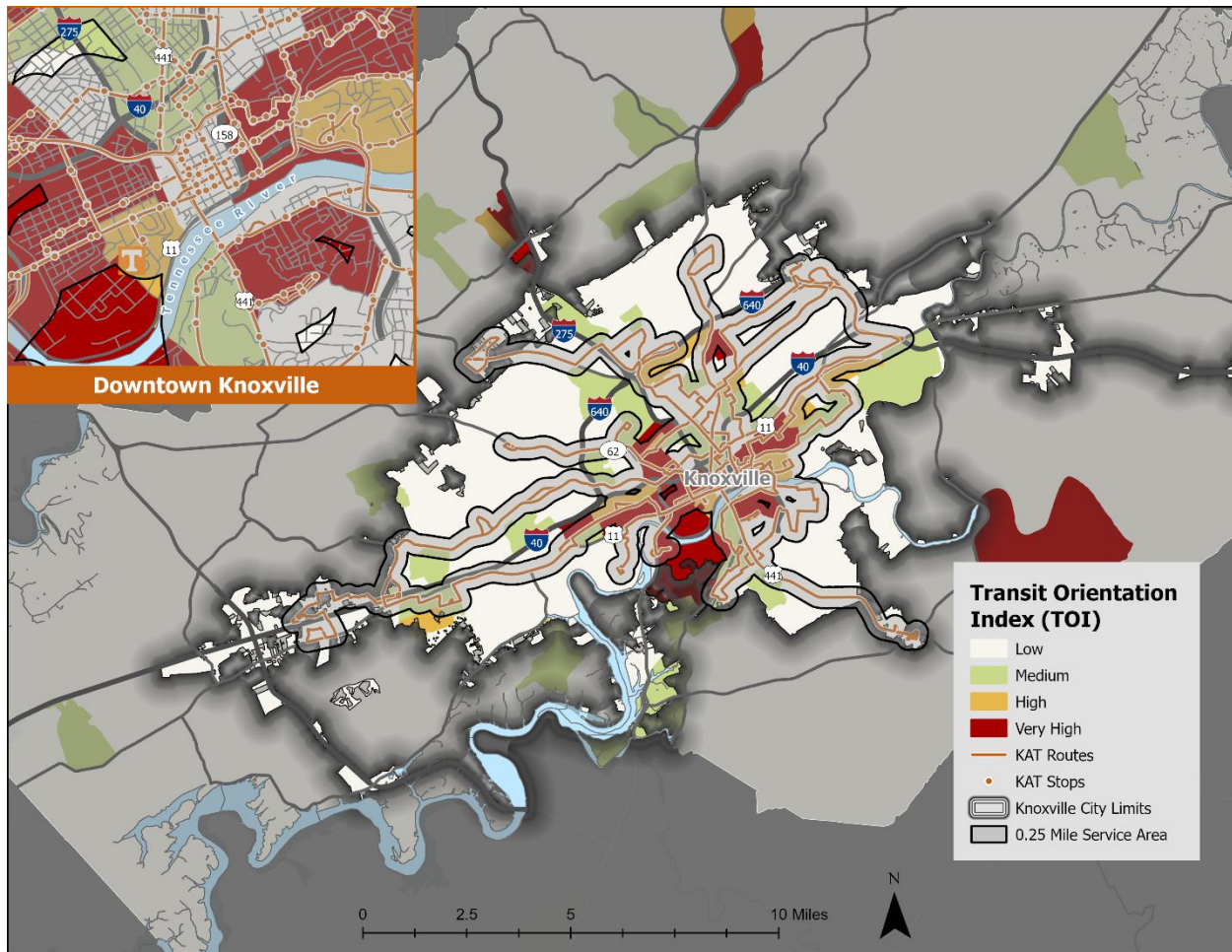
Maps 13 through 15 compare the Transit Orientation Index (TOI) with KAT's existing fixed route network using service areas of one-quarter mile, one-half mile, and three-quarters mile. This comparison helps evaluate how well existing service aligns with areas that exhibit the strongest underlying demand for transit.

Overall, the analysis indicates that KAT's existing network serves many of the city's highest TOI areas. The strongest concentrations of transit-supportive populations are located within Knoxville's urban core, including downtown Knoxville, the University of Tennessee area, and surrounding neighborhoods that currently receive fixed route service.

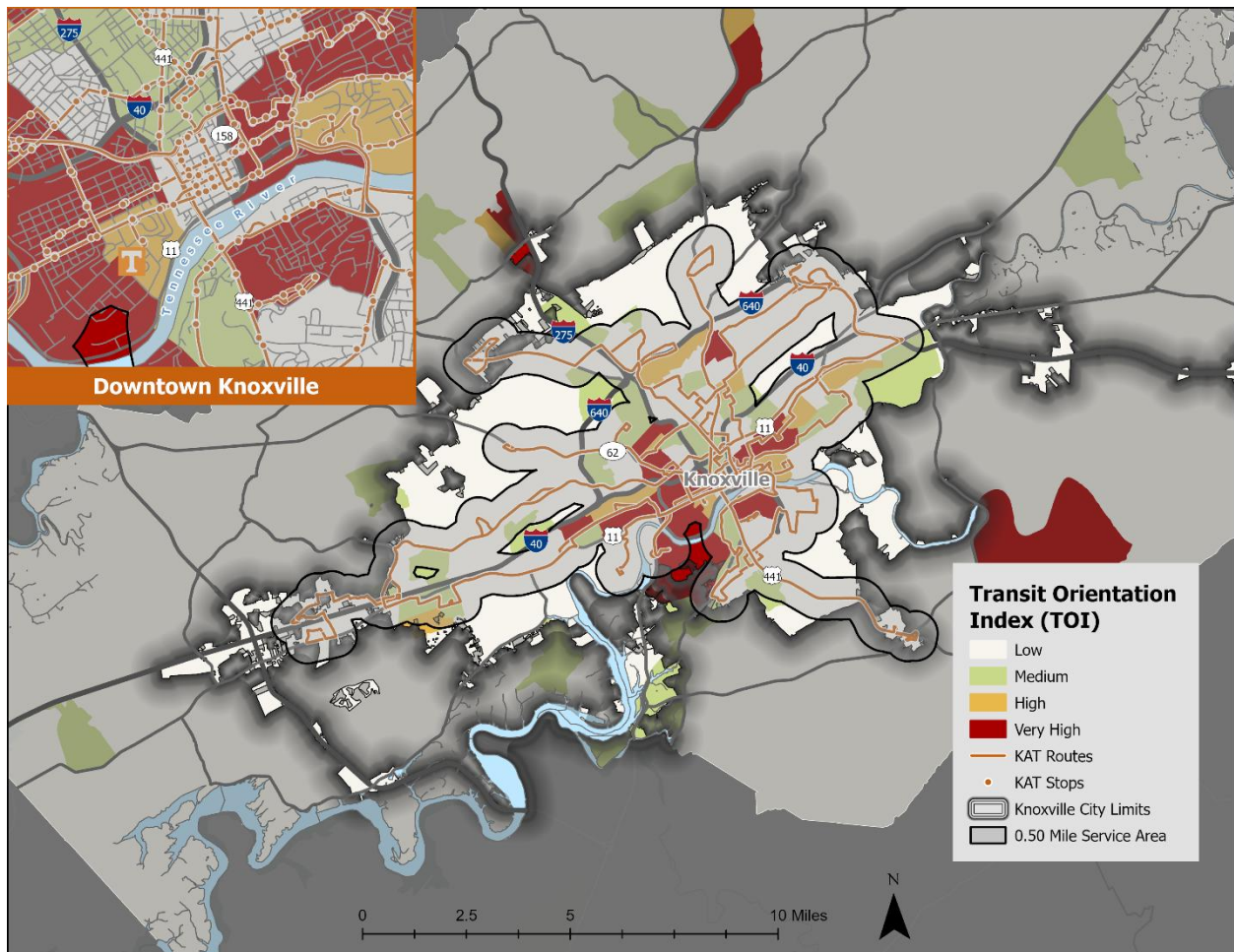
At the one-quarter-mile distance, several High and Very High TOI areas fall outside the immediate service area. Coverage improves substantially at the one-half-mile distance, with a greater share of the county's strongest transit markets located within walking distance of existing routes. At the three-quarter-mile distance, most High and Very High TOI areas are encompassed by the existing network.

While the analysis suggests that KAT's current route structure generally aligns with the city's strongest transit markets, several higher-need areas remain on the edges of the service area or beyond comfortable walking distance of transit. These locations warrant additional review during later phases of the study to determine whether service modifications, improved pedestrian access, microtransit, or other mobility strategies may be appropriate.

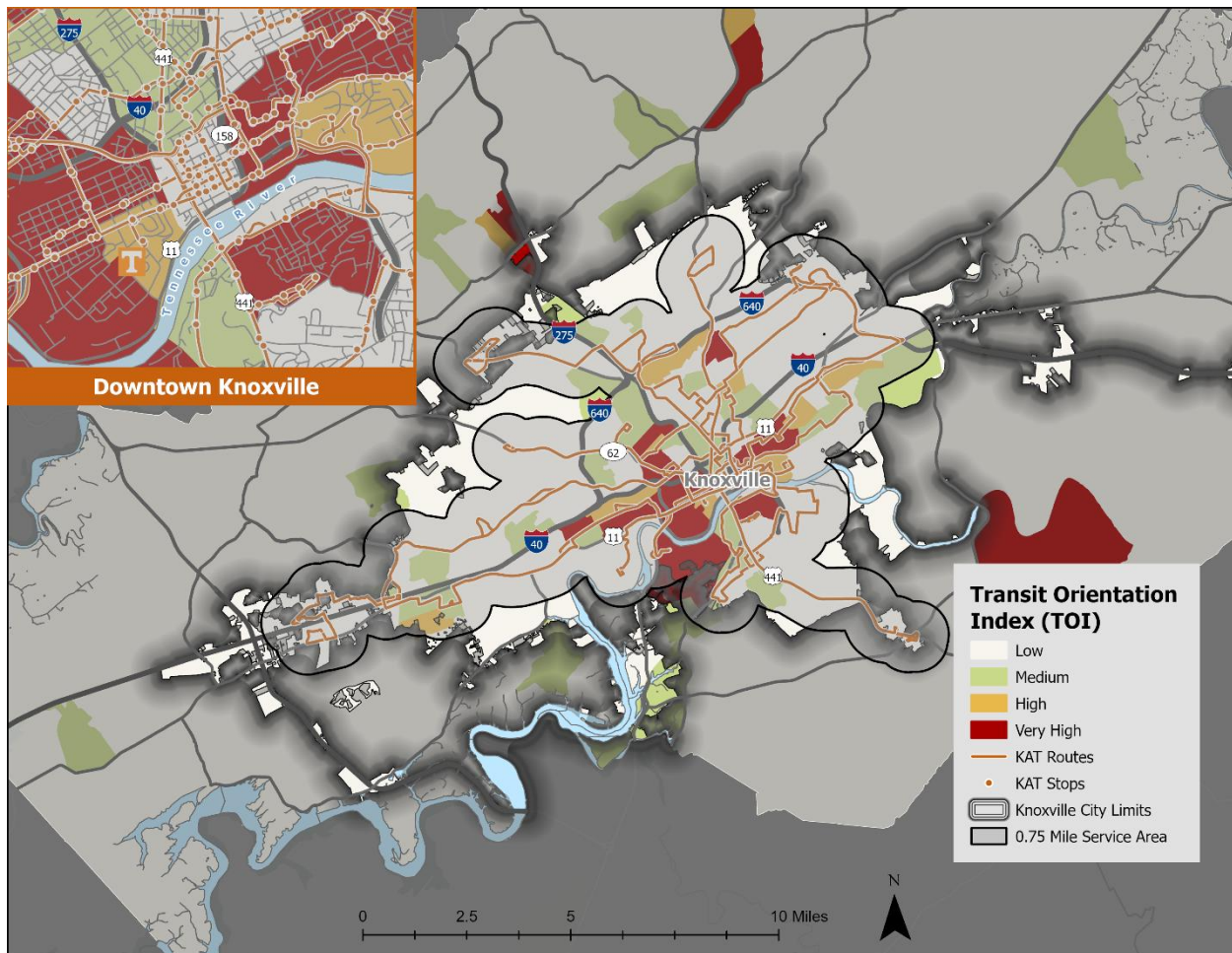
MAP 13: QUARTER MILE GAP ANALYSIS



MAP 14: HALF-MILE GAP ANALYSIS



MAP 15: THREE-QUARTER MILE GAP ANALYSIS



2.2.3 Bivariate Analysis of Transit Orientation Index and Population Density

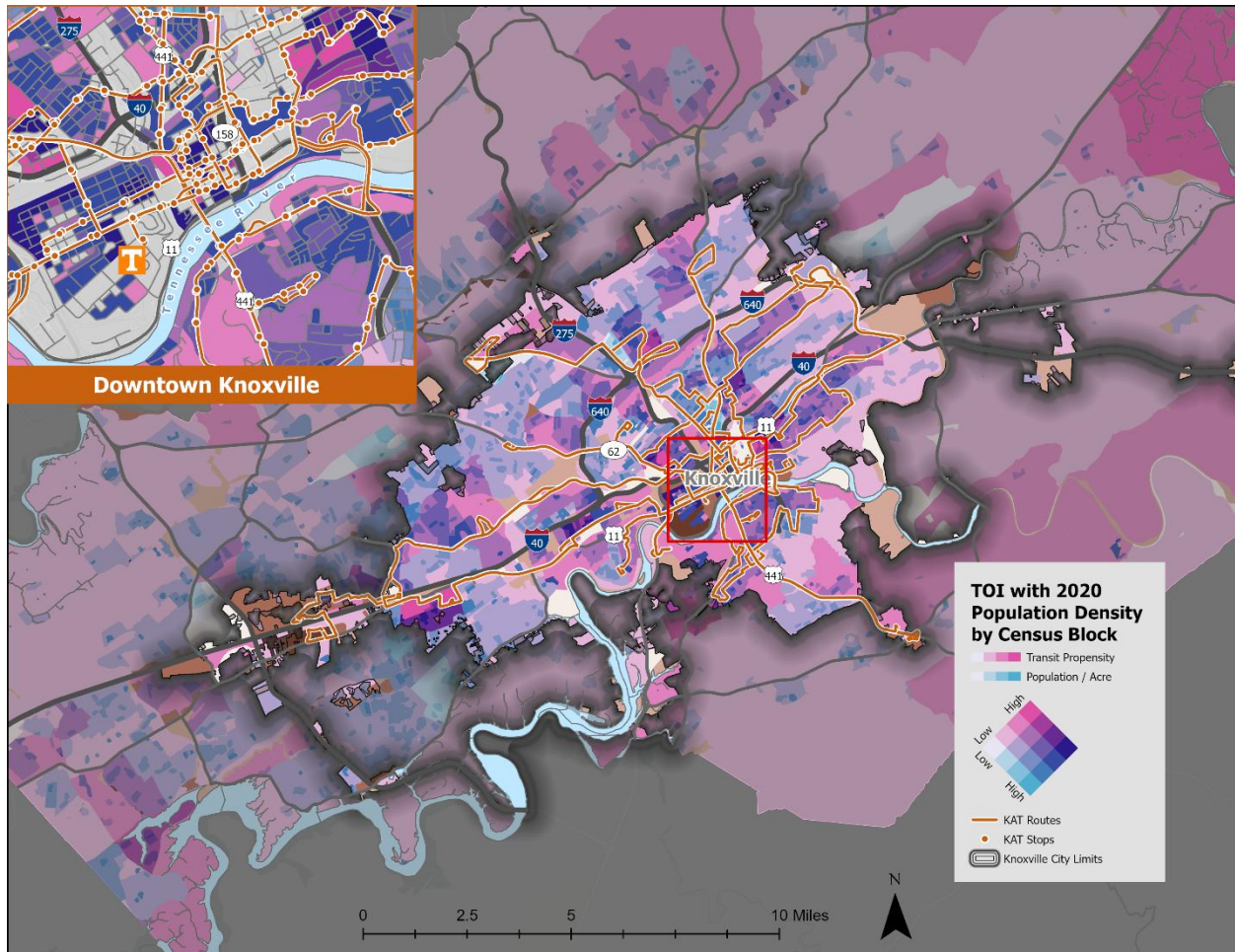
To further examine transit demand conditions across the City of Knoxville, a bivariate analysis was conducted combining the TOI composite score at the census block group level with population density at the census block level. The analysis draws on population data from the 2020 Decennial Census and TOI scores derived from the 2023 ACS 5-Year Estimates. By evaluating transit propensity and population density together, this approach provides a more detailed picture of where both the need for transit and the concentration of potential riders are present at the same time.

The value of this analysis is that it identifies not just where transit needs are high, but where that need is paired with enough population density to support cost-effective service. A block group with a Very High TOI score but very low residential density may represent a genuine mobility challenge for individual residents but may not generate enough ridership to sustain a fixed route stop or route segment. Conversely, areas with high density but only moderate transit propensity may represent discretionary rider markets where service improvements could attract new riders. The areas of greatest interest for service investment are those where both conditions are elevated at the same time.

As shown in Map 16, the strongest overlap between high transit propensity and high population density is concentrated within the Knoxville city limits, particularly in the downtown core, the neighborhoods of inner East Knoxville, and the area surrounding the University of Tennessee campus in West Knoxville. These locations reflect the intersection of young adult populations, low-income households, zero-vehicle households, and older adults with above-average residential density, and they align closely with the corridors currently served by KAT's core fixed route network. The University of Tennessee stands out as a location where all four TOI indicators converge with some of the highest population densities in the county.

In contrast, most of outer Knox County shows low values on both dimensions, consistent with the predominantly suburban and rural character of those areas. Several locations in north and east Knoxville show moderate transit propensity despite lower density, suggesting pockets of need that may warrant targeted service evaluation even if a full fixed route extension is not warranted. These locations may be well-suited to on-demand or microtransit service models that can provide connections to the fixed route network without requiring the ridership levels that traditional fixed route service depends on.

MAP 16: TRANSIT ORIENTATION INDEX WITH 2020 POPULATION DENSITY BY CENSUS BLOCK



2.2.4 Discretionary Rider Markets

The discretionary market includes potential riders who live or work in higher-density areas and may choose to use transit as an alternative to driving. These riders are not transit-dependent, but they can be attracted to transit when service is frequent, reliable, and competitive with driving in terms of travel time and convenience. Identifying where this market exists helps KAT prioritize corridors where service improvements could attract new riders and grow overall ridership beyond the core transit-dependent population.

Discretionary riders are most likely to be found in areas with higher residential or employment density that are also well-connected to major destinations. In the City of Knoxville, the strongest discretionary rider markets are likely concentrated along major commercial and employment corridors in and around Knoxville, including the downtown core, the University of Tennessee area, and major corridors such as Chapman Highway, Western Avenue, and Broadway. These areas combine density, activity, and an existing pedestrian environment that can support transit use even for those who have access to a personal vehicle.

Service reliability, frequency, and competitive travel times are the most important factors in attracting discretionary riders. As later phases of this study identify service improvement opportunities, discretionary rider potential should be weighed alongside traditional transit market strength to ensure recommendations reflect the full range of potential ridership.

2.3 Major Trip Generators and Travel Flows

The location of major activity centers and the travel patterns connecting them provide important context for evaluating the effectiveness of the existing transit network. Employment centers, educational institutions, medical facilities, retail destinations, government offices, and other regional attractors generate recurring travel demand and influence where transit service is most likely to be effective.

This section examines the distribution of major trip generators throughout the City of Knoxville and surrounding areas, and reviews available travel flow data to better understand how residents move within and beyond the KAT service area. Together, these analyses help identify whether existing routes connect the county's primary origins and destinations, highlight corridors with strong underlying travel demand, and identify areas where mobility needs may not align with the current service structure. Findings from this assessment will inform subsequent evaluations of service performance and support the development of service alternatives intended to improve connectivity between major destinations and the populations they serve.

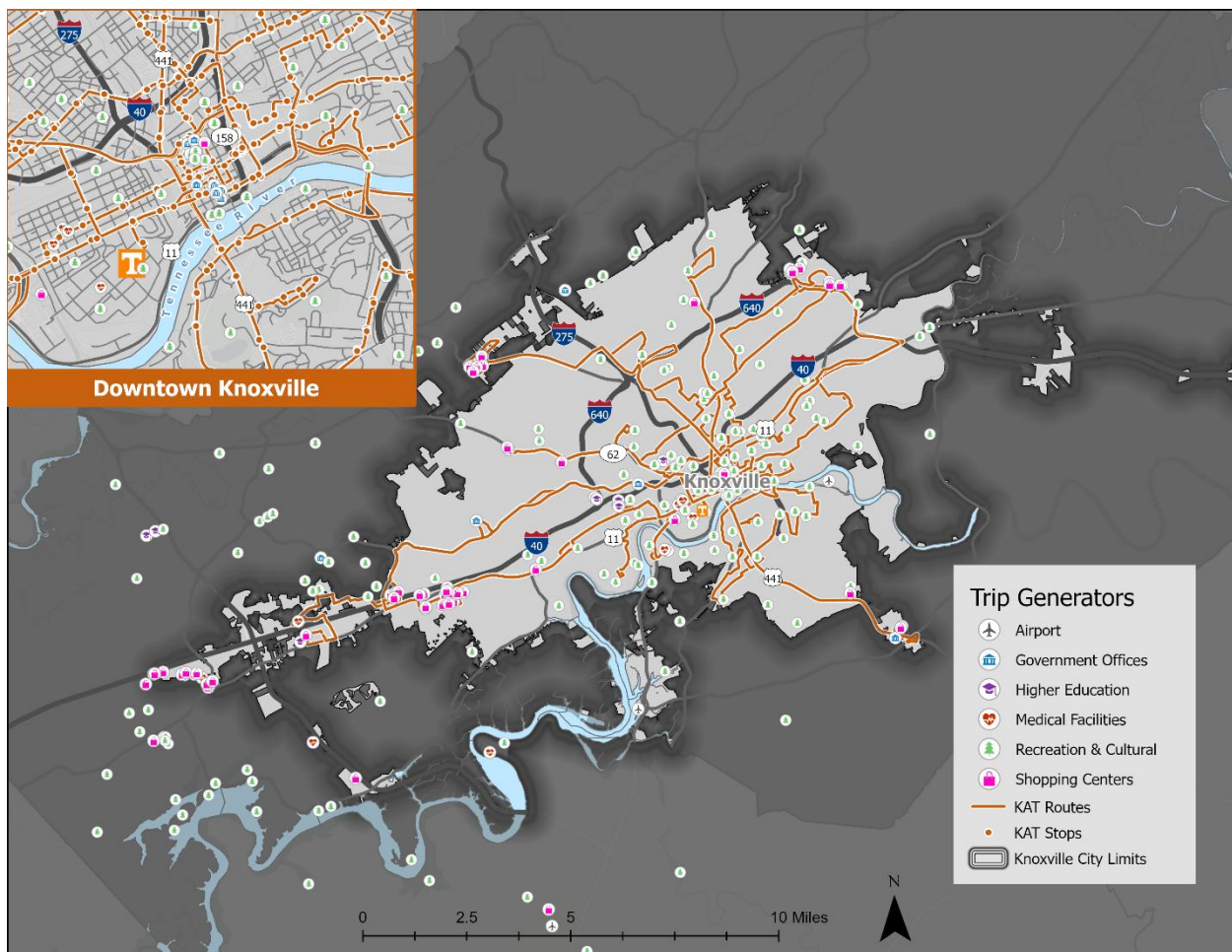
2.3.1 Activity Centers

Activity centers are places that generate many trips such as universities, shopping centers, government offices, and similar destinations. These locations typically anchor one end of most transit trips, making their relationship with the existing route network a key indicator of how well service is aligned with

demand. Map 17 shows the major activity centers identified within and around the KAT service area. The following categories of trip generators were included in the analysis:

- Higher Education (University of Tennessee, Pellissippi State Community College, Tennessee College of Applied Technology)
- Medical Facilities (University of Tennessee Medical Center, Covenant Health system hospitals and clinics)
- Shopping Centers (West Town Mall, East Towne Mall, Turkey Creek shopping area)
- Government Offices and Courthouses
- Public Housing Communities
- Recreation and Cultural Attractions (World's Fair Park, Market Square, Old City)
- McGhee Tyson Airport

MAP 17: ACTIVITY CENTERS



2.3.2 Travel Flows

To better understand how people move within Knox County, travel flow data was analyzed using Replica, a third-party mobility analytics platform. Rather than relying on traffic data supplied directly by KAT or Knox County, Replica develops modeled estimates of travel patterns using aggregated data

sources, including road traffic data, mobile location data, and financial transaction records. The tool produces estimates of how many trips occur between areas on a typical day, helping identify general travel patterns and locations where demand for transit connections may be strongest.

For this analysis, the study area was divided into a grid of hexagons, each covering approximately 0.3 square miles. Each hexagon represents a small geographic area, and trips are summarized based on where they start and where they end. This approach makes it easier to see concentrations of trip activity across the county without getting lost in individual street-level detail. The analysis uses a typical Thursday from Spring 2025 as the primary reference day.

Trips that begin and end within the same hexagon are not shown as flow lines on the travel flow maps because they cannot form a connecting line between two points. However, these internal trips often represent some of the highest activity locations. The University of Tennessee campus and the downtown Knoxville core consistently show the highest concentrations of both internal trips and outbound travel, reflecting their roles as major destinations for students, workers, and visitors throughout the day.

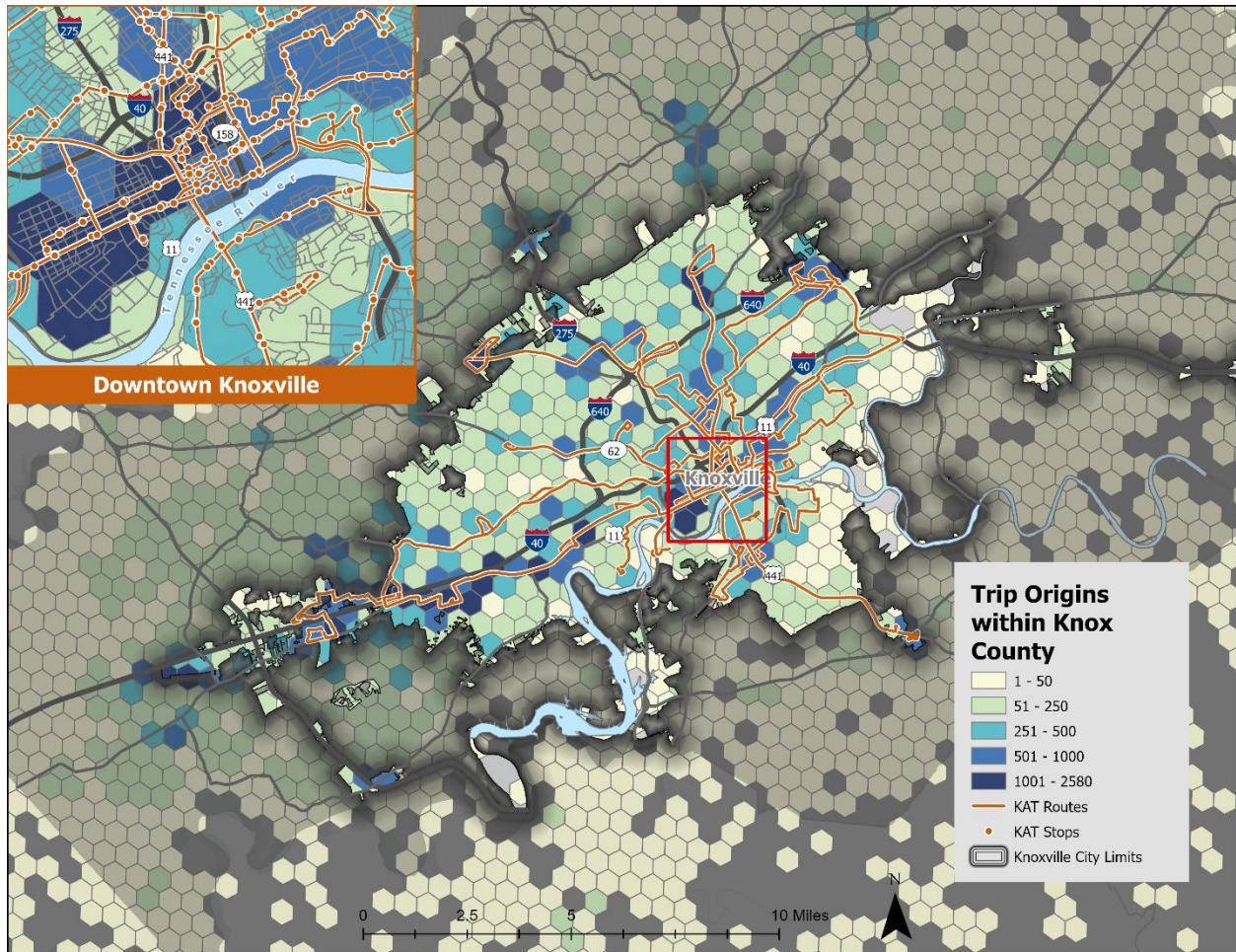
Maps 18 through 20 provide a comprehensive view of travel activity by illustrating where trips begin, where they end, and how people move between those locations on a typical weekday. Together, these analyses provide insight into the travel markets that KAT's existing network is intended to serve and help identify corridors where transit demand may be strongest.

Maps 18 and 19 indicate that both trip origins and destinations are concentrated within the Knoxville urban core and surrounding neighborhoods. Downtown Knoxville remains one of the county's most significant travel markets; however, elevated trip activity also extends west of downtown along the I-40 corridor. Additional concentrations are evident in portions of north and south Knoxville, reflecting the distribution of residential areas, employment centers, commercial destinations, and other major activity centers throughout the county.

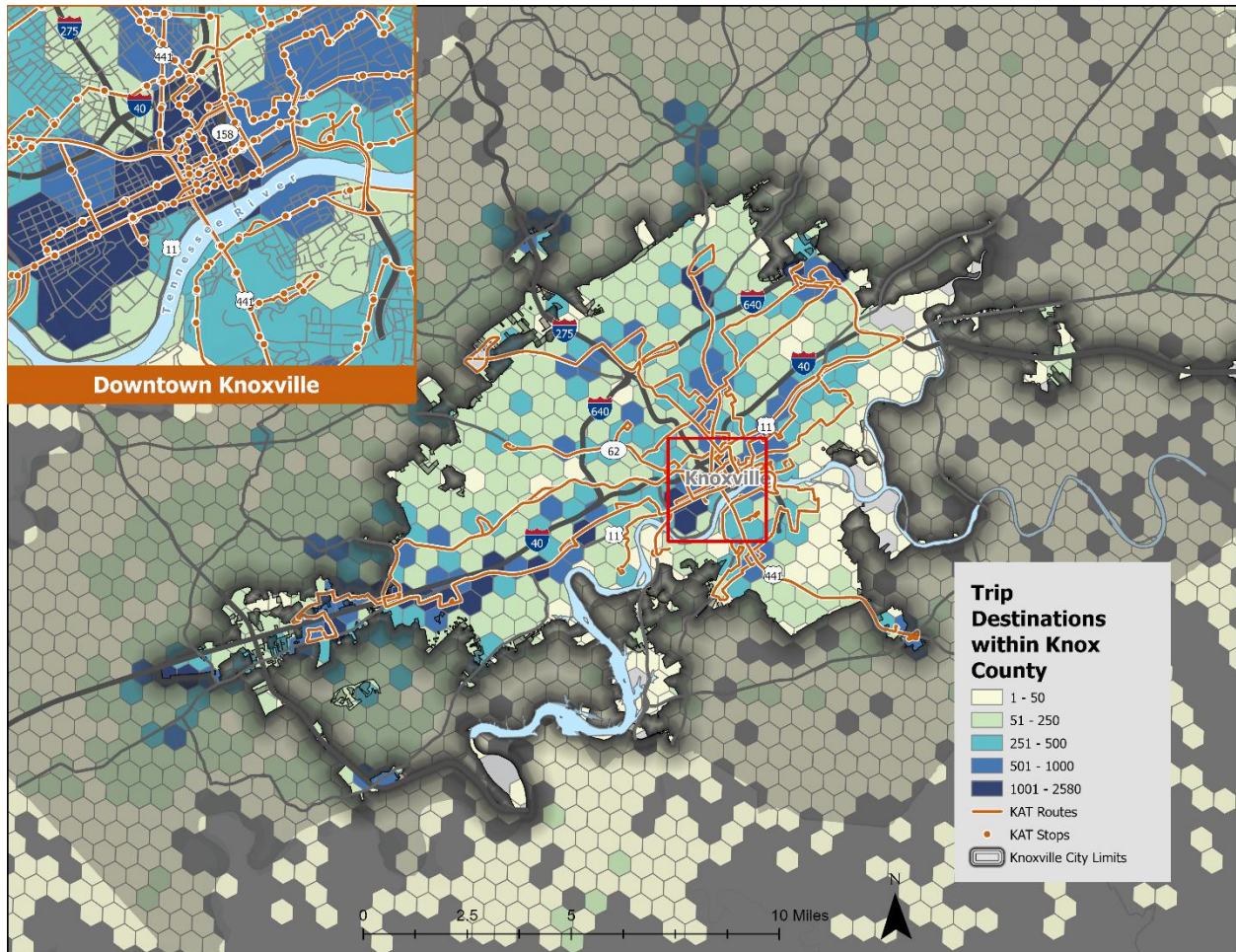
Map 20 further illustrates that many of the strongest travel movements occur along east-west corridors connecting downtown Knoxville with western portions of the county. While the urban core serves as an important focal point for countywide travel, the flow patterns suggest that a substantial share of trips occur between multiple activity centers rather than solely as downtown-oriented movements. Several of these higher-volume travel patterns correspond closely with KAT's existing fixed route network, indicating that the current system generally aligns with the county's strongest travel markets.

At the same time, the travel flow analysis highlights opportunities for further evaluation during subsequent phases of the study. Understanding whether existing routes provide direct and convenient connections between major origins and destinations will be important in identifying opportunities to improve travel times, strengthen corridor performance, and determine where service modifications, new connections, or flexible mobility options may better address observed travel patterns.

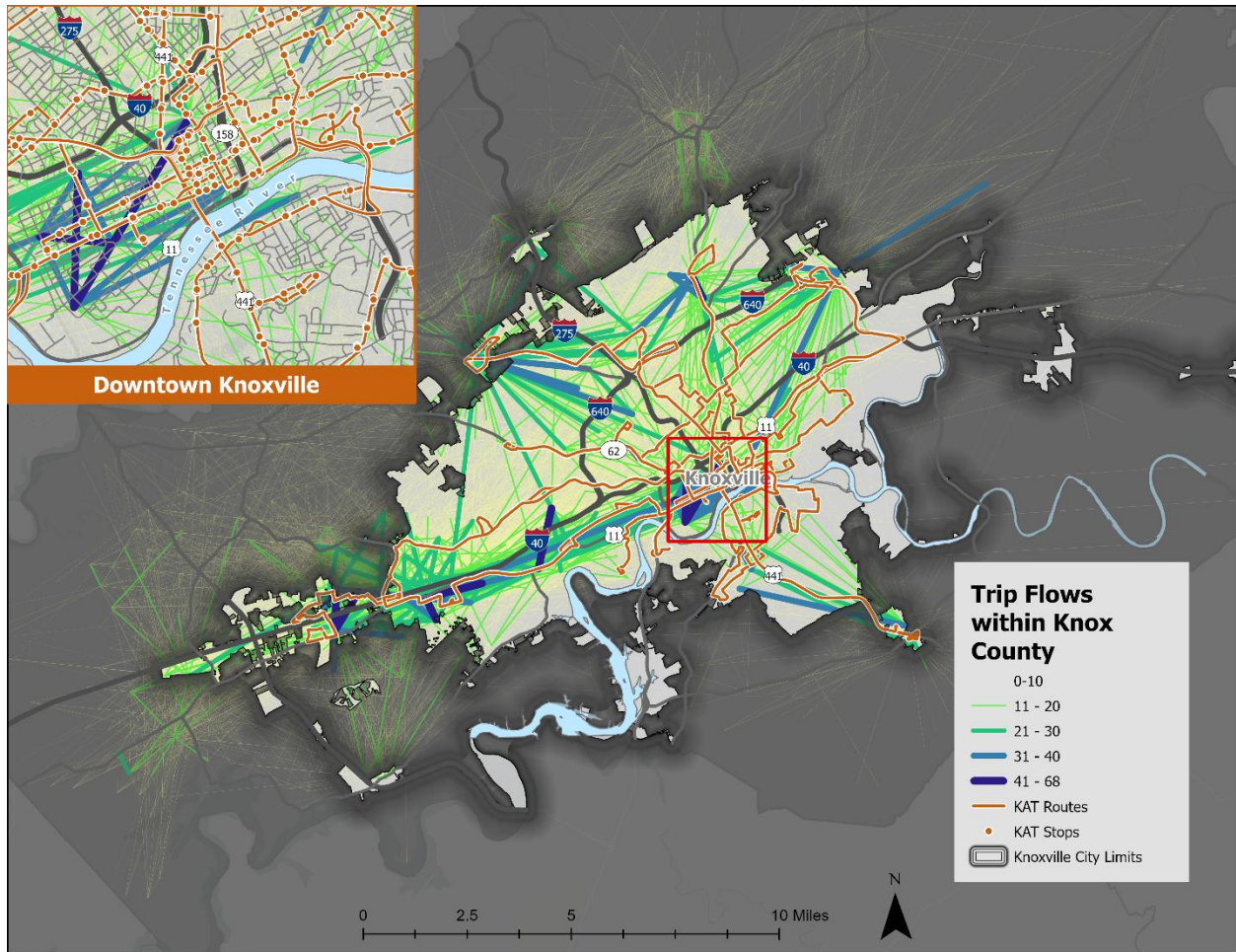
MAP 18: TRIP ORIGINS - REPLICA



MAP 19: TRIP DESTINATIONS - REPLICA



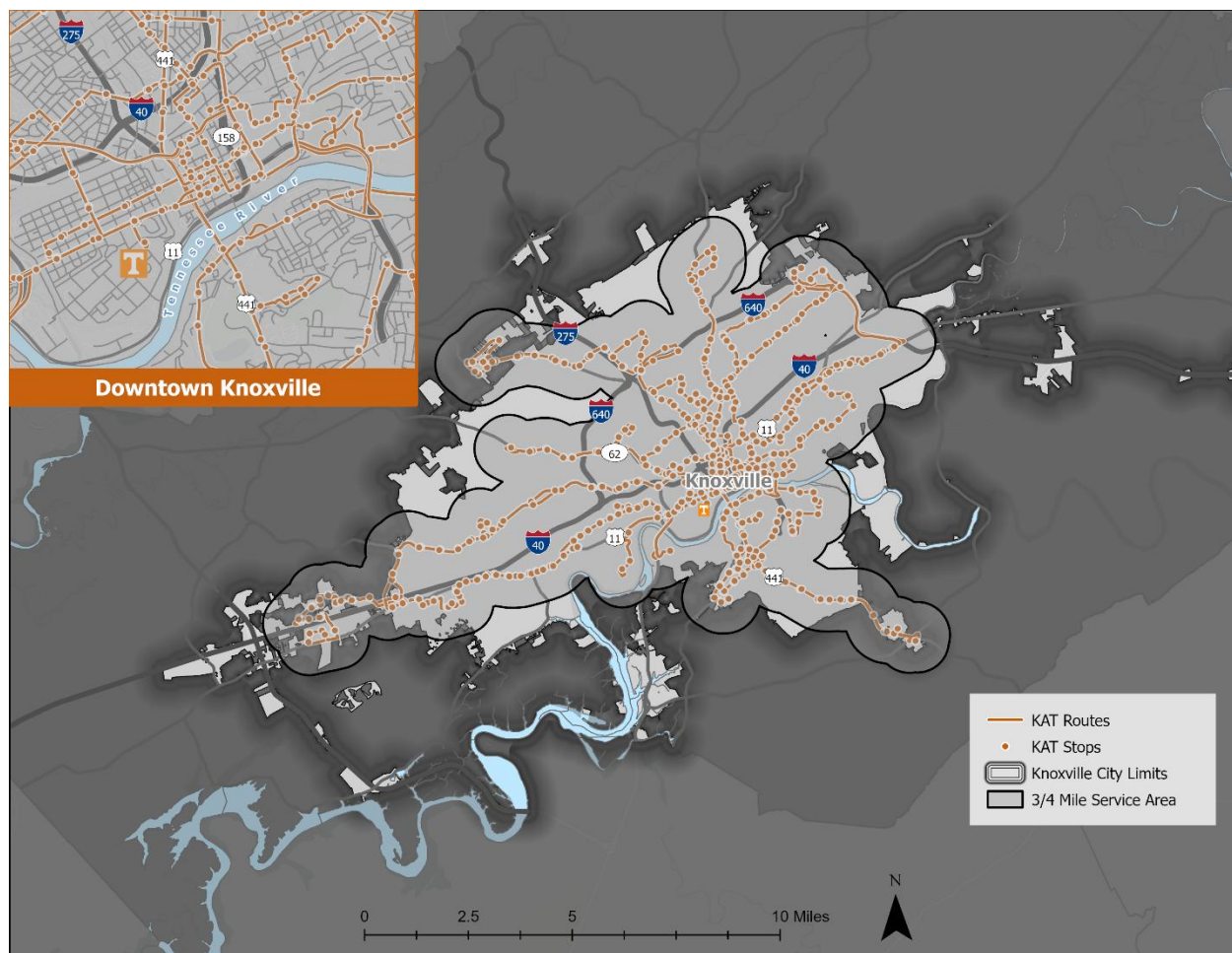
MAP 20: TRAVEL FLOWS - REPLICA



3 EXISTING SERVICES OVERVIEW

This section summarizes KAT's existing services. KAT currently operates 20 fixed route bus routes serving more than 500 stops across the city. Routes operate seven days a week, with service levels varying by day. KAT also provides ADA complementary paratransit through KAT LIFT, a reservation-based service for eligible riders that generally operates within three-quarters of a mile of fixed route service. In addition, KAT operates katConnect, a small-scale on-demand service that connects Holston Ridge, Cassel Ridge, and Elk Hill Way Apartments with designated stops on Routes 12 and 20. Map 21 below highlights the existing KAT fixed route network and stops, along with the ¾ mile service area buffer included.

MAP 21: KAT EXISTING SERVICE AREA

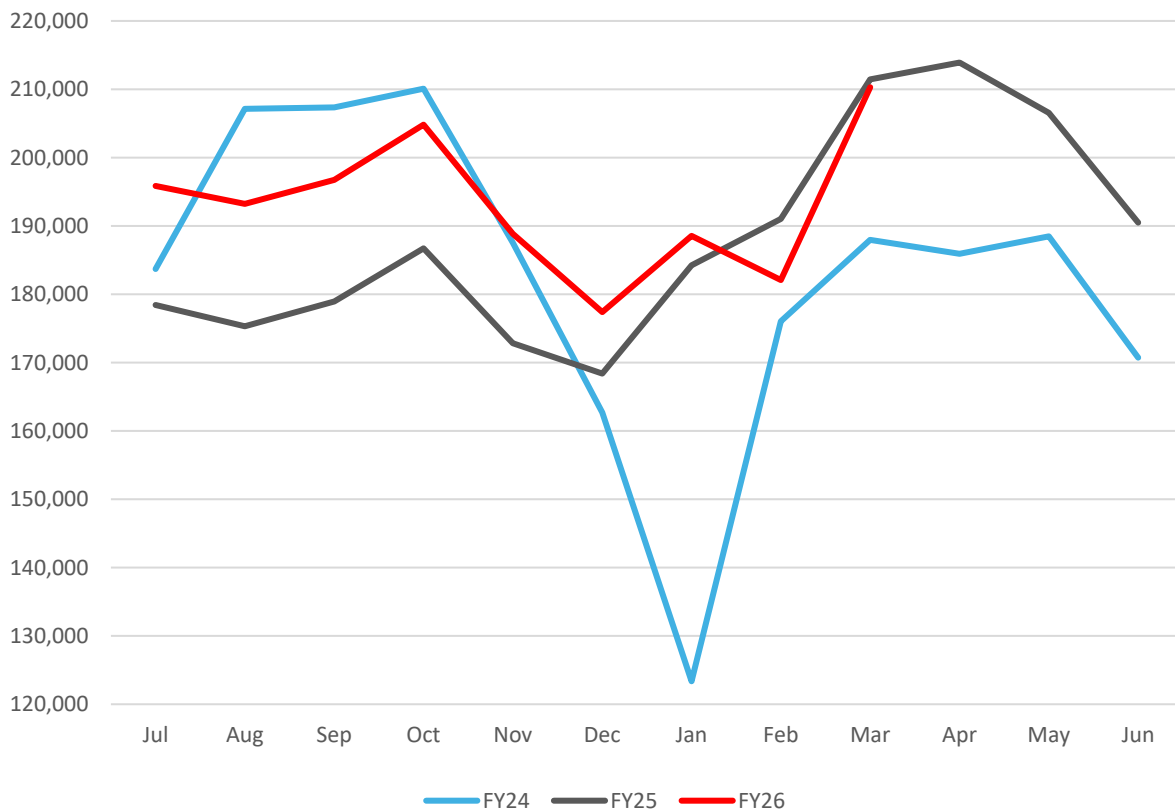


3.1 Fixed Route Service Overview

As part of the microtransit study, KAT's existing services were analyzed to identify areas where microtransit could complement the current network or provide a more effective alternative. Ridership is a key consideration in microtransit planning because it helps indicate potential demand and opportunities for service integration.

Figure 8 summarizes systemwide ridership for FY 2024, FY 2025, and FY 2026 year-to-date. As shown, FY 2024 ridership was generally higher than FY 2025 and FY 2026 year-to-date levels until a sharp decline occurred in October, when monthly ridership fell from more than 200,000 rides to fewer than 130,000 rides by January 2025. Ridership rebounded slightly later in FY 2024 but remained below 190,000 rides per month through the end of the fiscal year. Similar seasonal patterns were observed in FY 2025 and FY 2026 to date, although the October-to-January declines were less pronounced and ridership in FY 2026 to date is trending to potentially surpass the peak ridership observed in FY 2024.

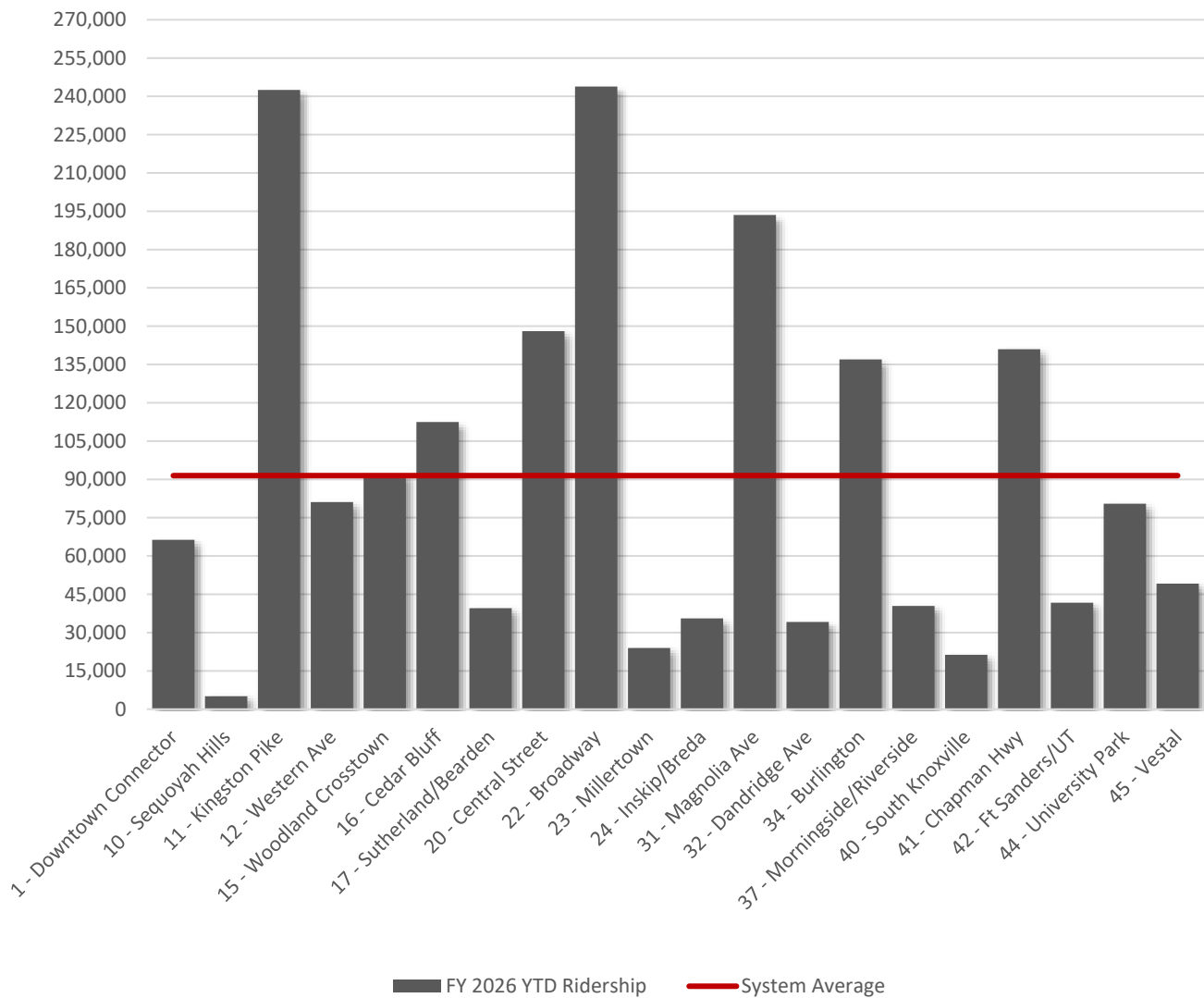
FIGURE 8: SYSTEMWIDE RIDERSHIP (FY 2024 – FY 2026)



Source: KAT 2026

Figure 9 below summarizes FY 2026 year-to-date ridership by route compared to the system route level average. As shown, ridership varies considerably across the KAT network, with a few routes accounting for a large share of total ridership. Such as, Route 11 (Kingston Pike) and Route 22 (Broadways) being the highest performing routes in the system with each route exceeding 240,000 riders to date. Routes 16, 20, 31, 34, and 41 all perform above the system average as well. The remaining routes fall below that threshold. Routes 10 (Sequoyah Hills), 23 (Millertown), and 40 (South Knoxville) record the lowest ridership in the system, each with fewer than 35,000 year-to-date boardings. These patterns suggest that service productivity is concentrated on a core set of corridors.

FIGURE 9: RIDERSHIP FY 2026 YTD (JULY 2025 - MARCH 2026)

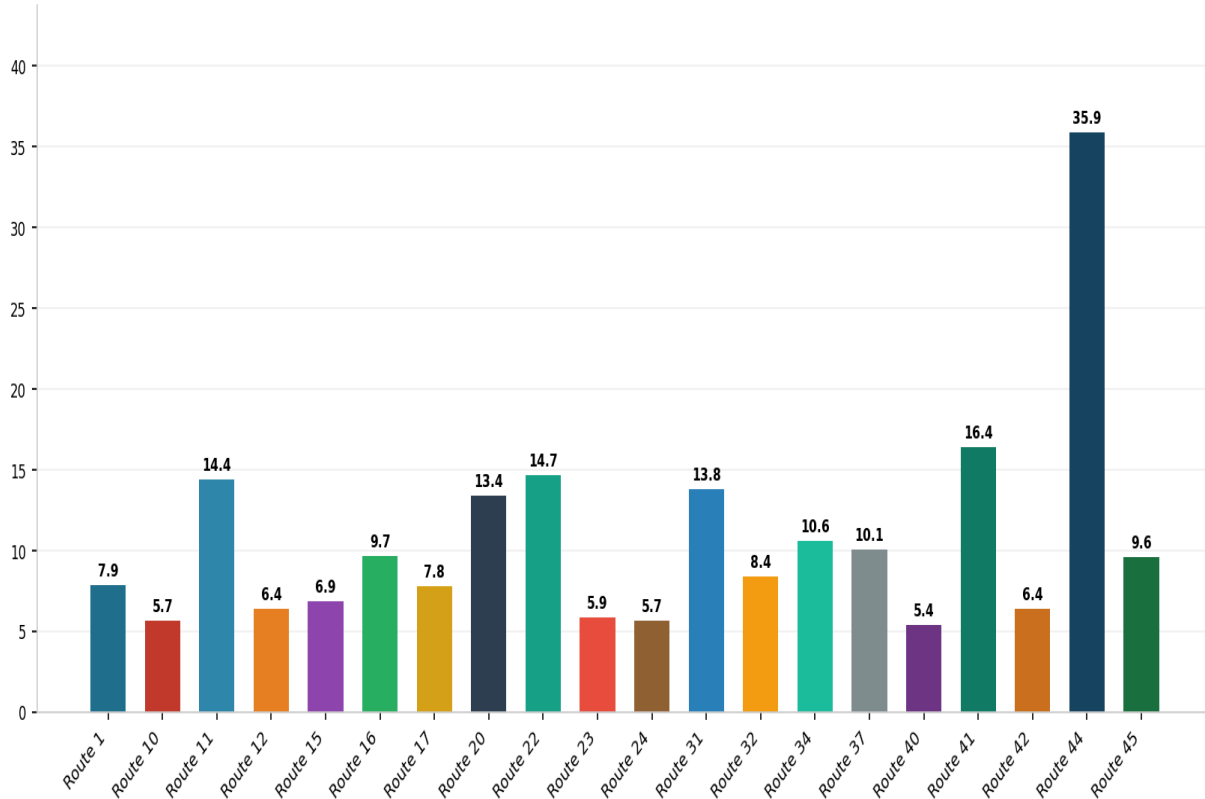


Source: KAT 2026

Further expanding on the systemwide ridership presented in the previous two figures, Figure 10 below highlights the existing productivity of each route in March 2026 based on data provided by KAT to support the project efforts. As shown, Route 44 has the highest productivity at 35.9 riders per hour, likely reflecting its dense student housing-based catchment area and proximity to the University of Tennessee. Routes 41, 22, 11, 31, and 20 also perform well, each exceeding 13 riders per hour, while most remaining routes cluster between 6 and 11. Routes 10, 40, 24, and 23 record the lowest productivity at fewer than 6 riders per hour, consistent with their lower overall ridership volumes. Lower performing routes should be evaluated for potential removal so that their resources can be reallocated to stronger performing areas of the network. These patterns suggest that demand is concentrated on a core set of corridors, and routes with persistently low productivity may warrant further evaluation.

FIGURE 10: PRODUCTIVITY BY ROUTE (MARCH 2026)

March 2026 Riders per Hour by Route



Source: KAT 2026

The project team also analyzed the stop-level ridership for existing KAT fixed route services as previously presented with the system level Automatic Passenger Counters (APC) map from the previous section of the report. Detailed route-level APC maps for weekday, Saturday, and Sunday service are included in Appendix A for reference.

3.2 Demand Response Overview

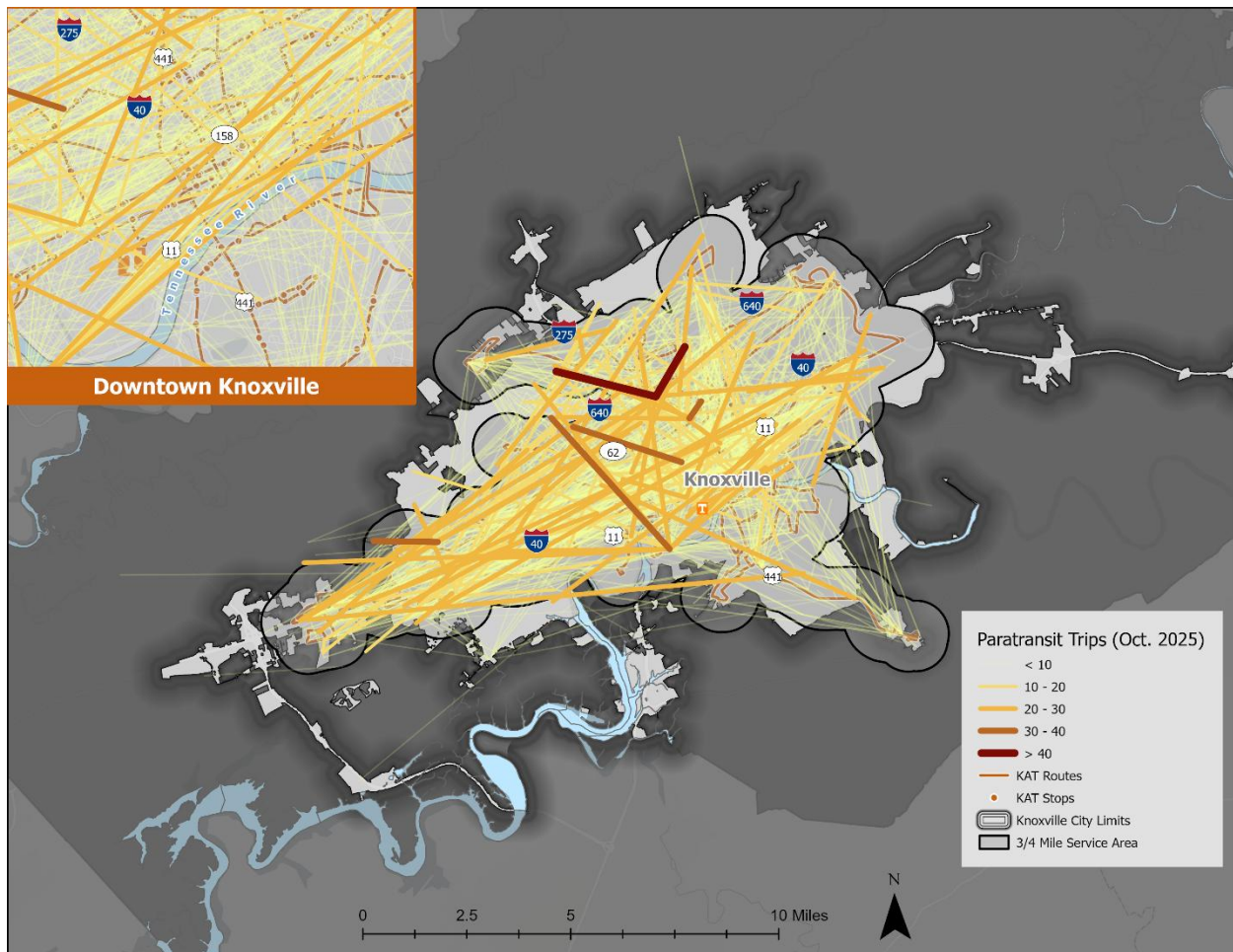
As previously stated, KAT operates two demand response services: The LIFT (paratransit) and katConnect (microtransit).

The LIFT is KAT's ADA paratransit service, providing door-to-door transportation for riders who are unable to use fixed route buses due to a qualifying disability. The service is provided by reservation only, and passengers must be certified by KAT prior to using the service, with recertification required every two years. Trips must be scheduled by 4:00 p.m. the day before service is requested, with a seven day advance notice recommended; trips may be booked up to 10 days in advance. The fare is \$2.00 per trip (\$4.00 round-trip). Visitors from other areas may use the service by providing documentation of ADA paratransit eligibility from their home transit agency. KatConnect is KAT's on-demand microtransit service that operates similarly to ride-sharing services and is designed to connect passengers to fixed route services. katConnect expands access to the broader KAT network by providing first/last mile connectivity in areas or at times where fixed route service may be limited.

Together, these two services begin to complement KAT's fixed route network by extending mobility options to riders with disabilities and those in areas with lower fixed route coverage. The following section provides a snapshot into the operations and generalized trip distribution associated with the existing on-demand services provided by KAT. Analyzing the existing on-demand services for KAT allows the project team to gain a better understanding of existing mobility patterns and to what degree potential trip mitigation might occur with proposed refined microtransit services within the KAT service area.

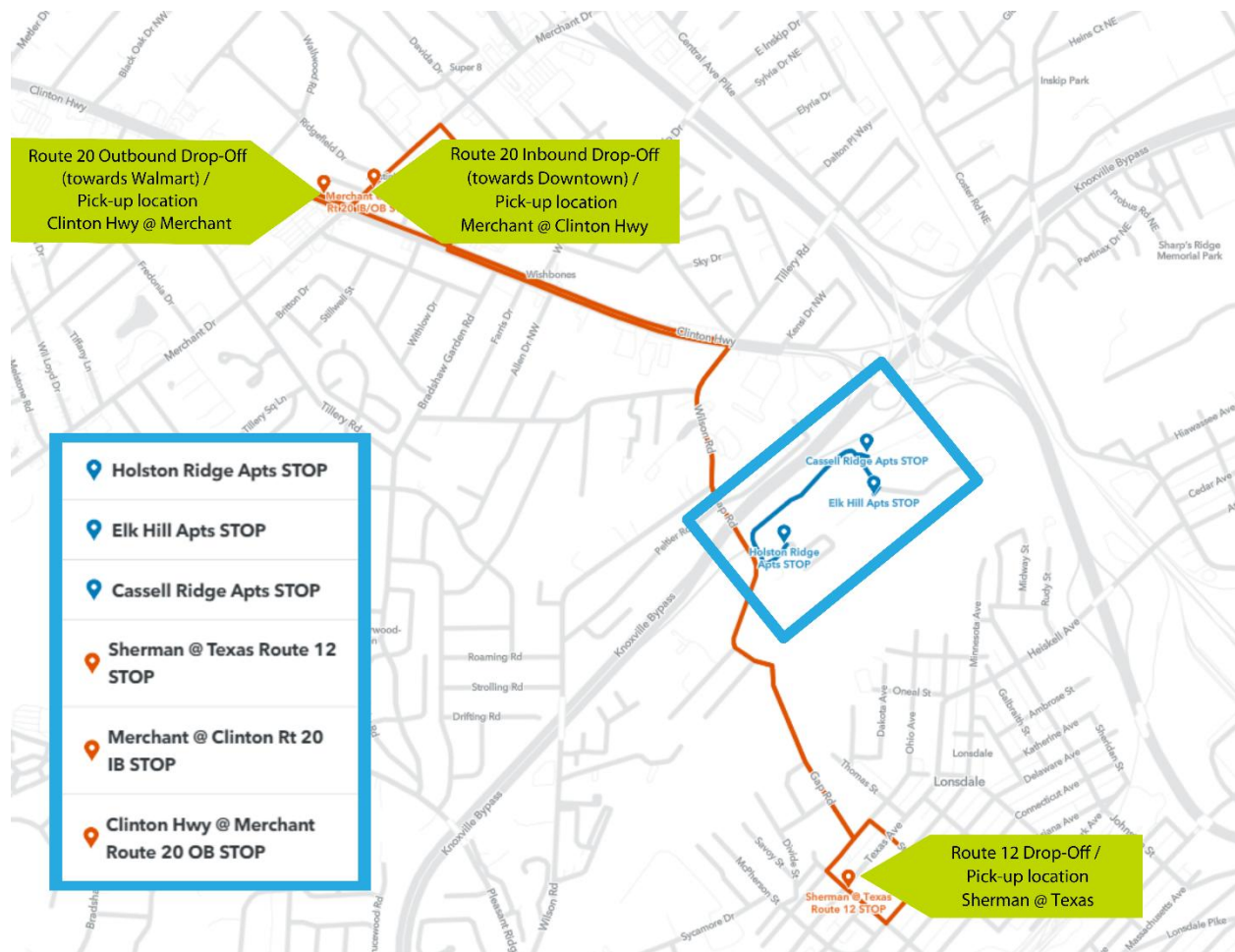
Figure 11 below illustrates the LIFT trips that occurred in October 2025, consisting of both completed and canceled trips for count and demand analysis purposes. The following paints a picture of the current distribution and demand for paratransit trips within KAT's current service area. Generally, demand is evenly distributed throughout the service area with some notable travel flows occurring in the central portion of the service area to what appears to be Sunshine Services Knox. Generally, there are a high concentration of trips starting or ending at the University of Tennessee Medical Center as well distinguishing itself as a regional trip generator.

FIGURE 11: LIFT TRIPS (OCT. 2025)



As stated, KAT currently operates katConnect as an on-demand service connecting select residential apartment complexes to two fixed routes within the KAT network. While this service provides value for riders within those specific complexes, its coverage is limited and does not address the broader mobility needs of surrounding areas. Expanding microtransit solutions beyond the current katConnect model could fill gaps in service provision, improve first and last mile connectivity, and extend the overall reach of the KAT fixed route network to underserved areas and populations. Figure 12 below shows the katConnect service area.

FIGURE 12: KATCONNECT SERVICE AREA



Source: KAT 2026

4 FIELD REVIEW

Between June 15th and June 17th, 2026, the Benesch project management team conducted an on-site field review throughout the City of Knoxville with assistance from Justice Knox. The purpose of the review was to gain a firsthand understanding of the community, identify mobility barriers experienced by residents, observe the existing transit environment, and evaluate areas where microtransit may improve access to jobs, education, healthcare, shopping, and other essential destinations.

The field review focused on neighborhoods and corridors that have historically experienced transportation challenges, including areas with concentrations of affordable housing, transit-dependent populations, limited vehicle ownership, and physical barriers that can make fixed route transit less convenient or accessible. The review also examined major employment centers, retail destinations, educational institutions, and medical facilities to better understand travel patterns and mobility needs throughout Knoxville.

4.1 Existing Transit Network Observations

KAT implemented its KAT Reimagined network in August 2024 following a Comprehensive Operational Analysis (COA) that sought to improve service frequency, consistency, and overall network efficiency. The redesign modernized many routes and improved service along key corridors while maintaining Knoxville Station as the primary transfer hub for the system.

While the updated network provides improved frequency and reliability along several major corridors, field observations confirmed that much of the system continues to function as a modified hub-and-spoke network. Many trips between neighborhoods require travel through the downtown core or Knoxville Station before connecting to another route. For riders traveling between suburban areas, employment centers, educational campuses, and residential neighborhoods outside Downtown Knoxville, this can result in indirect travel paths, multiple transfers, and significantly longer travel times compared to automobile travel.

These conditions create challenges for individuals with limited mobility, households without access to a personal vehicle, shift workers with non-traditional schedules, and residents living beyond convenient walking distance of fixed route transit service. As Knoxville continues to grow and development expands beyond traditional transit corridors, these mobility gaps present opportunities for supplemental mobility options such as microtransit.

4.1.1 Accessibility and Mobility Barriers Observed

During the field review the project team aimed to gain a better understanding of potential mobility barriers impacting access to and from existing KAT services throughout the region. Several common themes emerged during the field review:

- Significant topography, including steep grades and hills, can create challenges for pedestrians attempting to access transit stops.
- Sidewalk gaps and incomplete pedestrian networks were observed in several neighborhoods, limiting safe access to bus stops.

- Major arterial roadways often create barriers for pedestrians due to high traffic volumes, limited crossing opportunities, and long distances between signalized crossings.
- Some residential areas are located beyond comfortable walking distances from fixed route transit service.
- Employment centers, healthcare facilities, educational institutions, and retail destinations are often dispersed throughout the city, making direct fixed route connections difficult.
- Travel between neighborhoods frequently requires one or more transfers, increasing overall travel times and reducing system convenience.
- Certain residential developments contain concentrations of transit-dependent populations but have limited direct access to major activity centers.

4.2 Key Areas Identified During Field Review

4.2.1 Castle Ridge Apartments

The Castle Ridge Apartments area contains a concentration of multifamily housing and residents who may benefit from improved connections to employment, healthcare, grocery stores, and educational opportunities. The area's street network and distance from some major destinations suggest potential opportunities for first-mile/last-mile mobility solutions.

4.2.2 Keith Avenue Corridor

The Keith Avenue Corridor contains a mixture of industrial, employment, and commercial uses. The corridor serves as an important employment destination but presents challenges for pedestrian access due to roadway conditions, land use patterns, and distances between destinations.

4.2.3 Vestal Community

The Vestal community represents an established residential area with a mix of housing types and neighborhood-serving destinations. While fixed route transit service is available, travel to destinations outside South Knoxville can require indirect routing and transfers through the downtown network.

4.2.4 Middlebrook Pike Corridor

The Middlebrook Pike Corridor contains major employment, retail, healthcare, and educational destinations. Activity generators are distributed along a lengthy corridor, creating opportunities for improved local circulation and connections between neighborhoods and key destinations.

4.2.5 Liberty Street Area

The Liberty Street area contains residential neighborhoods situated near major destinations but can experience challenges related to pedestrian connectivity and access to higher-frequency transit services.

4.2.6 Division Street Corridor

The Division Street Corridor includes residential neighborhoods with populations that may benefit from enhanced access to employment centers, educational institutions, healthcare facilities, and commercial services located throughout Knoxville.

4.2.7 Linden Avenue and Nash Street Area

The Linden Avenue and Nash Street area contains a concentration of residential uses and transit-dependent populations. The area presents opportunities to improve connectivity to employment centers, shopping destinations, and regional transportation services.

4.2.8 Wimpole, Wilson Avenue, Ault, and Skyline Drive Area

The neighborhoods located south of Holston Drive and Martin Luther King Jr. Avenue in East Knoxville include a mix of residential development, challenging topography, and limited direct access to major destinations. These areas may particularly benefit from mobility options that reduce walking distances and improve connections to the broader transit network.

4.3 Preliminary Field Review Findings

Field observations, stakeholder discussions, and review of the KAT fixed route network indicate that Knoxville's transit system continues to provide strong coverage along major corridors and into Downtown Knoxville, where the majority of route connections occur. However, several areas identified during the field review are located outside the highest-frequency transit corridors or require indirect travel patterns involving one or more transfers to reach major destinations.

The Benesch and Justice Knox team highlighted areas on the system map which revealed a recurring pattern: many of the neighborhoods identified as potential microtransit service areas contain concentrations of multifamily housing, affordable housing developments, workforce housing, senior populations, and households with limited transportation options. These neighborhoods are often separated from major activity centers by topography, limited pedestrian infrastructure, arterial roadways, or indirect fixed route travel paths.

Several of the highlighted areas, including the Castle Ridge Apartments area, Vestal community, East Knoxville neighborhoods near Linden Avenue, Nash Street, Wimpole, Wilson Avenue, Ault, and Skyline Drive, as well as portions of the Keith Avenue and Division Street corridors, function as residential trip generators that require access to employment, education, healthcare, and shopping destinations distributed throughout the city. While fixed route service is generally available nearby, reaching key destinations often requires travel into Downtown Knoxville or Knoxville Station before transferring to another route, resulting in travel times that can be significantly longer than automobile trips.

The map also highlights several major destination clusters that consistently emerged during the field review, including:

- University of Tennessee and associated student housing areas
- Knoxville Center for Developmental Disabilities (KCDC) and public housing communities
- Downtown Knoxville and Knoxville Station
- University of Tennessee Medical Center and regional healthcare facilities
- Major retail corridors along Kingston Pike, Western Avenue, Chapman Highway, and Broadway
- Industrial and employment areas along Keith Avenue and surrounding corridors

- Educational campuses and workforce training centers throughout the city

A review of these origins and destinations suggests that many trips are not necessarily destined for Downtown Knoxville but instead represent cross-town travel movements between residential neighborhoods and employment, healthcare, retail, and educational destinations. While the current fixed route network effectively supports radial travel into the city center, these cross-town travel patterns can be difficult to accommodate efficiently through a traditional hub-and-spoke structure.

The highlighted service gaps also demonstrate that many of the potential microtransit areas are geographically dispersed around the periphery of the fixed route network. These locations may not generate sufficient demand to justify frequent fixed route service but could benefit from flexible, demand-responsive transportation that provides direct access to major destinations or strategically connects riders to high-frequency transit corridors. Based on field observations and network review, microtransit appears particularly well-suited to address the following mobility needs:

- First-mile/last-mile connections to KAT's higher-frequency corridors.
- Improved access from affordable housing and KCDC communities to employment centers.
- Connections between residential neighborhoods and healthcare facilities, including UT Medical Center and major medical campuses.
- Enhanced mobility for seniors, persons with disabilities, and households with limited vehicle availability.
- Cross-town trips that currently require multiple transfers through Downtown Knoxville.
- Improved access to educational institutions, workforce development programs, and retail destinations.
- Service in areas where topography, sidewalk gaps, or roadway conditions create barriers to fixed route access.

The field review further suggests that a successful microtransit program should not be viewed as a replacement for the KAT fixed route network, but rather as a complementary mobility tool that expands access to the existing system. Opportunities may exist to design service zones that improve connectivity to frequent transit corridors while also accommodating trips to major activity centers that are difficult to reach efficiently through the current route structure. As the study advances, demographic analysis, stakeholder input, travel demand data, and operational evaluations will be used to further refine potential microtransit service zones and identify where demand-responsive service can provide the greatest mobility benefit while supporting the long-term goals of the KAT network.

4.3.1 Stakeholder Interviews and Takeaways

As part of the study, the project team met with key community stakeholders to gather feedback on existing transit services, mobility needs, service challenges, and opportunities for future improvements.

The list of stakeholders interviewed are as follows:

- **Covenant Health** – Kandis Smith / Lexy White – Written responses received
- **University of Tennessee, Knoxville** – Jason Pedone, Tanara Teal-Tate, and Ricky Whitted – Interview completed July 16
- **Knoxville Chamber** – Amy Nolan – Interview completed July 1
- **UT Medical Center** – Liliana Burbano – Interview completed July 2
- **United Way Knox** – Blake Valentine and Matthew Magráns-Tillery – Interview completed July 15
- **Knoxville-Knox County CAC** – Karen Estes – Interview completed July 7

Overall, stakeholders viewed KAT as an important community resource but identified opportunities to make transit more frequent, reliable, accessible, and better aligned with how people actually travel. Common concerns included limited service during early morning, evening, overnight, and weekend periods; service schedules that do not align with employment and healthcare shifts; long travel times and transfers; and first/last-mile barriers, particularly for people living or working outside convenient walking distance of fixed-route service.

Stakeholders also emphasized the need for better connections to employment, healthcare, education, and growing residential areas. UT representatives identified overcrowding and the need for greater frequency and capacity on high-demand routes, while healthcare and workforce stakeholders highlighted the importance of coordinating transit with nontraditional work schedules.

Microtransit was generally viewed positively as a complement to fixed route service, particularly for first/last-mile connections, lower-density areas, healthcare trips, and locations or times where traditional transit is difficult to provide. However, stakeholders cautioned that microtransit should not replace productive fixed routes and stressed that reliability, manageable service areas, and connections to the broader transit network will be important to its success.

Finally, stakeholders identified greater public awareness and stronger community partnerships as important opportunities. Improved communication about available services, collaboration with employers and healthcare providers, and outreach through trusted organizations such as schools, libraries, nonprofits, and faith-based organizations could help connect more people with KAT services.

4.3.2 Additional Observation from the Service Map

One notable finding from the review is that many of the highlighted opportunity areas are located near the outer edges of the existing transit network, where route coverage exists but service frequencies and transfer opportunities are generally lower. This creates a common challenge in which riders may have transit access in theory, but practical access is limited by travel time, transfer requirements, or walking distance. Microtransit could serve an important role in bridging this gap by improving access to the broader network while reducing the burden of long, indirect trips for residents in these communities.

5 MICROTRANSIT SERVICE AREA DEVELOPMENT AND EVALUATION

Microtransit service design and service delivery goals and objectives were defined to improve access to mobility for individuals and communities in Knoxville. Microtransit services typically use multi-passenger vehicles (like vans or shuttles) that can carry more people than the typical car and at least a representative proportion of the vehicle fleet is designed to be fully ADA compliant based on population characteristics and the expected ridership demand.

Microtransit focuses on creating shared-ride solutions to reduce the number of vehicles on the road by moving multiple people at once. Microtransit services provide a curb-to-curb solution, often using “virtual stops” to direct multiple individuals to create group pick-ups at a common location. Over time, the algorithms may create “virtual routes” that adapt based on demand to follow a general path between common service locations. This structure supports higher efficiency and enables more predictable real-time dynamic routing and scheduling for agencies to better allocate resources and vehicles to specific areas.

The microtransit service is generally intended to expand access to mobility in areas not served or not well served by traditional transit. This is accomplished by providing curb-to-curb service within defined zones if a connection to/from a fixed route is not available or a reasonable option for the requested trip. Microtransit also covers “first-mile” and “last-mile” gaps by connecting riders to the fixed route network at key locations, usually key activity centers.

Focusing on combining trips at activity centers creates a more efficient network and service because it serves people going to the activity center (say a shopping plaza) as well as those who need to transfer at the shopping plaza to connect to a fixed route bus or rail to reach a destination outside of the microtransit zone (such as a downtown or employment center). Microtransit is intended to increase accessibility and reduce reliance on personal vehicles in specific areas. It is typically subsidized and operated by or on behalf of public transit agencies or local jurisdictions, so the service can be affordable, safe, reliable, and compliant with relevant regulations.

The intent is to design services and service zones to best meet the needs of the individuals and community being served. To this end, recognizing that mobility is a critical function and need for individuals and communities to prosper, our approach to service design includes developing a set of goals and objectives for the service.

5.1 Goals and Objectives

The intent of the project is to design services and service zones to best meet the needs of the individuals and community being served. To this end, recognizing that mobility is a critical function and need for individuals and communities to prosper, the project teams' approach to service design includes developing a set of goals and objectives for the service. The following section provides an overview of these goals and objectives, laying the foundation for the development of proposed additional microtransit service areas.

5.1.1 Goal 1: Connect People and Places

Objectives

- Provide flexible first/last-mile connections with the fixed route network
- Integrate new technologies to supplement the transit system
- Deliver localized mobility
- Offer enhanced access to the greater metropolitan area
- Prioritize directness of travel
- Promote the adoption and growth of alternative transportation options for both commuting and leisure activities
- Connect high-use jobs, housing, and major activity centers with greater transit options

5.1.2 Support Economic Growth

Objectives

- Facilitate access to employment, particularly from high ridership areas
- Ensure the efficient movement of people to support and drive economic growth
- Reduce travel time to retail
- Enable access to healthcare
- Expand access to education

5.1.3 Improve Quality of Life for Individuals and Communities

Objectives

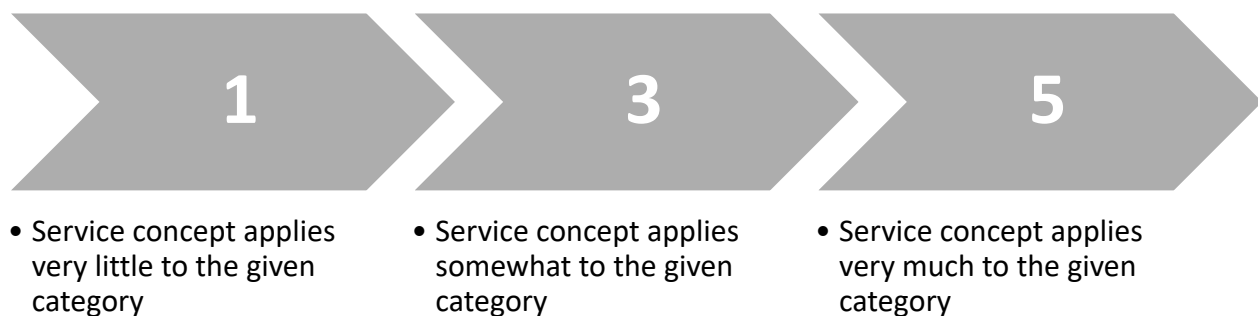
- Eliminate transportation as a barrier
- Expand access to travel choices
- Facilitate access to life services locally and by connection to the fixed route network
- Provide safe, equitable mobility for all road users in the City of Knoxville
- Provide safe, equitable mobility for all residents and transit users within the City of Knoxville and KAT service area

5.2 Microtransit Service and Operating Concept Screening Overview

A screening methodology was created to support the evaluation and evolution of proposed microtransit service concepts in alignment with the goals and objectives. The outcome of the initial screening evaluation is a graded set of proposed microtransit service focus area concepts that are then further developed and refined to create the recommended service areas for implementation in the following section of the report.

Evaluation Criteria

To aid in the evaluation of microtransit service concepts for the City of Knoxville, a methodology to score the concepts was developed. Ultimately, each concept received a final score, which indicates the preferability in terms of alignment to the goals and objectives established in Section 6. The final score is the weighted sum of the scores of each individual category of evaluation, which mirror each performance measure established in the Goals and Objectives section of this study. Each microtransit service concept received a score of 1, 3, or 5 for each category, as shown in the infographic below, and is weighted based on several factors. For the purposes of quantifying viable options or recommendations to be refined for proposal, a score above 50 is considered a viable option for further refinement and assessment for refined concepts in the following section. While some zones might score lower than this target, other factors influence the recommendations outside of what is quantifiable in the evaluation. The resulting cumulative score reveals the relative desirability for the implementation of each service concept based on the criteria in the evaluation process, recommendations may differ from the relative desirability as previously mentioned.



Performance Measures

From the goals and objectives established in the previous section, specific performance measures are defined in this section to evaluate which microtransit alternatives are best suited for the City of Knoxville. An example is the identification of areas for which access to transportation is a barrier, and therefore, the performance measure would measure how well the new microtransit service will improve access for transit-oriented populations to mobility options. The performance measures for this study are described and listed in Figure 5 below, as well as their connection to the objectives identified above. Figure 13 below highlights the performance metrics in more detail.

Figure 13: Performance Metrics and Associated Objectives

Number of people served (total)	• Provide safe, equitable mobility for all road users • Facilitate access to employment, particularly from high ridership areas
Fixed route connection with zone	• Provide flexible first/last mile connections with the fixed route network • Facilitate access to life services locally and by connection to the fixed route network • Offer enhanced access to transit services
Percent of people served who are transit oriented	• Eliminate transportation as a barrier • Provide safe, equitable mobility for all road users
Number of employees served	• Connect high-use jobs, housing, and major activity centers with greater transit options • Facilitate access to employment, particularly from high ridership areas
Number of activity centers served	• Connect high-use jobs, housing, and major activity centers with greater transit options • Enable access to healthcare • Expand access to education
Projected travel time and directness	• Prioritize directness of travel • Ensure the efficient movement of people to support and drive economic growth • Reduce travel time to retail
Paratransit trips within zone	• Integrate new technologies to supplement the transit system • Expand access to travel choices
Promote connectivity (person trips/connections)	• Support localized mobility • Promote the adoption and growth of alternative transportation options for both commuting and leisure activities
Operational Impacts	• Minimal impacts to existing operational and capital costs

5.3 Preliminary Service Area Screening

The following section presents an overview of the potential service areas evaluated as part of the study. This overview summarizes the initial concepts assessed, some were refined throughout the study, forming the basis for the recommendations and findings discussed in the following section of the report. Detailed overviews of the recommendations based on the screening efforts are highlighted with the recommendations section of the report. The following sections provide a summary of the results for both the preliminary screening focus area analysis and the secondary screening of the refined service concepts.

The microtransit service concept evaluation produced scores for each concept, with higher scores indicating greater suitability for restructuring and refinement at this time. A higher score does not mean a concept is inherently "good," nor does a lower score mean it is "bad." Rather, the scores prioritize concepts based on the goals and objectives established for this evaluation, identifying which concepts are best suited for further refinement, be it expansion or consolidation into service areas for implementation.

This initial evaluation served as a preliminary screening to identify focus areas within each geographic region of the KAT service area. As shown in Table 3, the top-scoring zone within each region was identified as the recommended concept for that region, shown bolded in the table below. These top zones then advanced to a secondary screening outlined in the following section, where they were further refined and evaluated to determine the final service concept recommended for implementation in each region.

TABLE 3: MICROTRANSIT PRELIMINARY SCREENING RESULTS

Screening Focus Area Concept	Preliminary Screening Suitability Score
Northwest Concept 1	68
Northwest Concept 2	78
Northwest Concept 3	66
Northwest Concept 4	54
Northeast Concept 1	68
East Concept 1	66
East Concept 2	84
East Concept 3	94
West Concept 1	60
West Concept 2	56
West Concept 3	60
West Concept 4	56
Southwest Concept 1	64
Southwest Concept 2	58
Southeast Concept 1	52
Colonial Village	40

5.4 Secondary Refined Screening

As noted above, several concepts scored higher in the preliminary screening and advanced for further development and refinement in coordination with staff and key stakeholders involved in the project. These focus areas were refined into proposed microtransit service areas and reevaluated through a secondary screening process that considered an expanded focus on operational feasibility and accessibility needs (such as sidewalk connectivity and presence), among the aforementioned criteria. The resulting service areas thus offer a combination of the strongest elements of the initial concepts and were further adjusted to improve operability and better serve the communities within each area. Note that the names used in this section do not directly correspond to the concepts listed above, as they reflect the more refined service areas rather than the initial focus area concepts. Table 4 highlights the results of the secondary screening.

TABLE 4: MICROTRANSIT SECONDARY SCREENING RESULTS

Screening Focus Area Concept	Secondary Screening Suitability Score
Northwest Refined Concept	77
South Refined Concept	77
East Refined Concept	95
West Refined Concept	69
Northeast Refined Concept	67

6 MICROTRANSIT RECOMMENDATIONS OVERVIEW

Based on the final screening results, the project team coordinated with KAT staff and stakeholders to refine the proposed service areas, so they better respond to community needs and operational constraints. This section presents further refined concepts and summarizes the operational analysis for the five proposed microtransit service areas, including relevant fixed route changes that may support microtransit operations within each zone. Because implementation depends on a range of factors, KAT staff can refer to the weighted scoring results to determine the best fit based on current needs and fiscal capacity. The following section provides an overview of microtransit services.

6.1.1 Microtransit Service Overview

The recommended microtransit service will operate as a mobility-for-all solution by responding to customer requests and providing a shared-ride solution. This means the microtransit service is equally available to the general public, as well as people with disabilities as described in Section 7.1 of the Federal Transit Administration (FTA) Circular describing dial-a-ride demand responsive service type provisions of the ADA. The microtransit service was developed to operate in conjunction with and in support of the fixed route network and ADA paratransit services. **The proposed service will be designed and operated in accordance with applicable ADA requirements.** The microtransit service will be designed to provide accessible and equitable service, including multiple trip-request options (phone/call center and mobile app), accessible vehicles, and service for riders with disabilities that is equivalent to the service provided to the general public in accordance with applicable ADA requirements in accordance with FTA ADA Circular 4710.1.

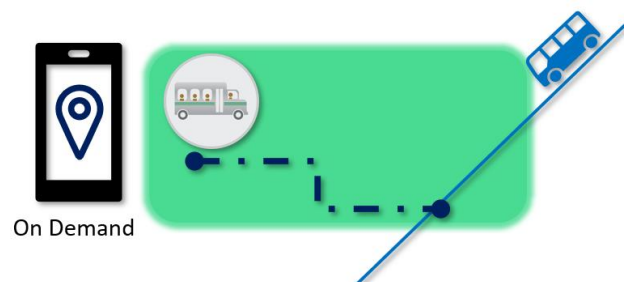
In addition to improving accessibility, the creation of ADA-compliant microtransit zones offers the potential to reduce the long-term cost of paratransit operations. By allowing for the commingling of general public and ADA-eligible riders in the same service areas and vehicles, agencies can serve more passengers with fewer resources. This approach can relieve pressure on traditional paratransit services, especially for non-medical, local trips, while still meeting regulatory requirements and improving service quality for all users. A more detailed overview of the proposed comingled operating model is included in Section 7 of the report.

Microtransit service typically utilizes shared vehicles, such as vans, cutaway buses, or small shuttles, that can accommodate multiple passengers at a time. Unlike a typical passenger vehicle, these vehicles are designed to support shared rides and, in most cases, are ADA accessible, allowing individuals who use wheelchairs or other mobility devices to travel safely and comfortably. Microtransit focuses on shared rides for small groups, aiming to reduce the number of vehicles on the road by moving multiple people at once. In addition, microtransit services often operate on a “virtual route” that adapts based on demand but follows a general path. This structure supports greater operational efficiency while enabling more direct and predictable service patterns. Microtransit is generally intended to complement and extend public transportation networks by providing flexible, demand-responsive service in areas where traditional fixed route transit may be difficult to operate effectively and efficiently. Common applications include bridging first-mile/last-mile connections, serving lower-density areas, and providing mobility options where fixed route demand is insufficient to justify regular bus service.

In KAT’s case, the proposed microtransit service is intended to provide neighborhood-level coverage in areas that are currently underserved or difficult to serve efficiently with traditional fixed route service. This includes residential neighborhoods, lower-density developments, and areas with disconnected street and sidewalk networks that require buses to make time-consuming deviations away from major corridors. By providing flexible service within these areas, microtransit can improve access to jobs, healthcare, education, shopping, and other essential destinations while also connecting riders to the broader fixed route network. This approach allows fixed route service to remain focused on high-demand corridors while ensuring that residents throughout the service area continue to have access to public transportation.

The deployment of refined microtransit is supported by proposed refinements to existing fixed routes to operate along optimized routing, improve service reliability, on-time performance, and reduce travel times. The objective is to create a better-functioning and more attractive mobility network for current riders and new riders by overlaying and integrating microtransit services to the fixed route network at key mobility hubs.

It should also be noted that the service uses a mobile application and call center to schedule trips, at this time the application or call center will determine if a rider should use a fixed route or microtransit by analyzing the rider’s origin and destination, comparing travel times and distances to nearby fixed routes, and suggesting the most efficient option based on real-time data like vehicle availability and current traffic conditions, essentially prioritizing the fixed route if it provides a faster or more convenient option for the rider.



Microtransit service models and zones were defined to provide mobility services within defined service areas with the following characteristics:

- A concentration of persons with mobility needs

- The coincident absence of transit service within walking distance (½-mile)
- Proximity to the KAT fixed route network
- Fulfillment of the mobility service goals and objectives.

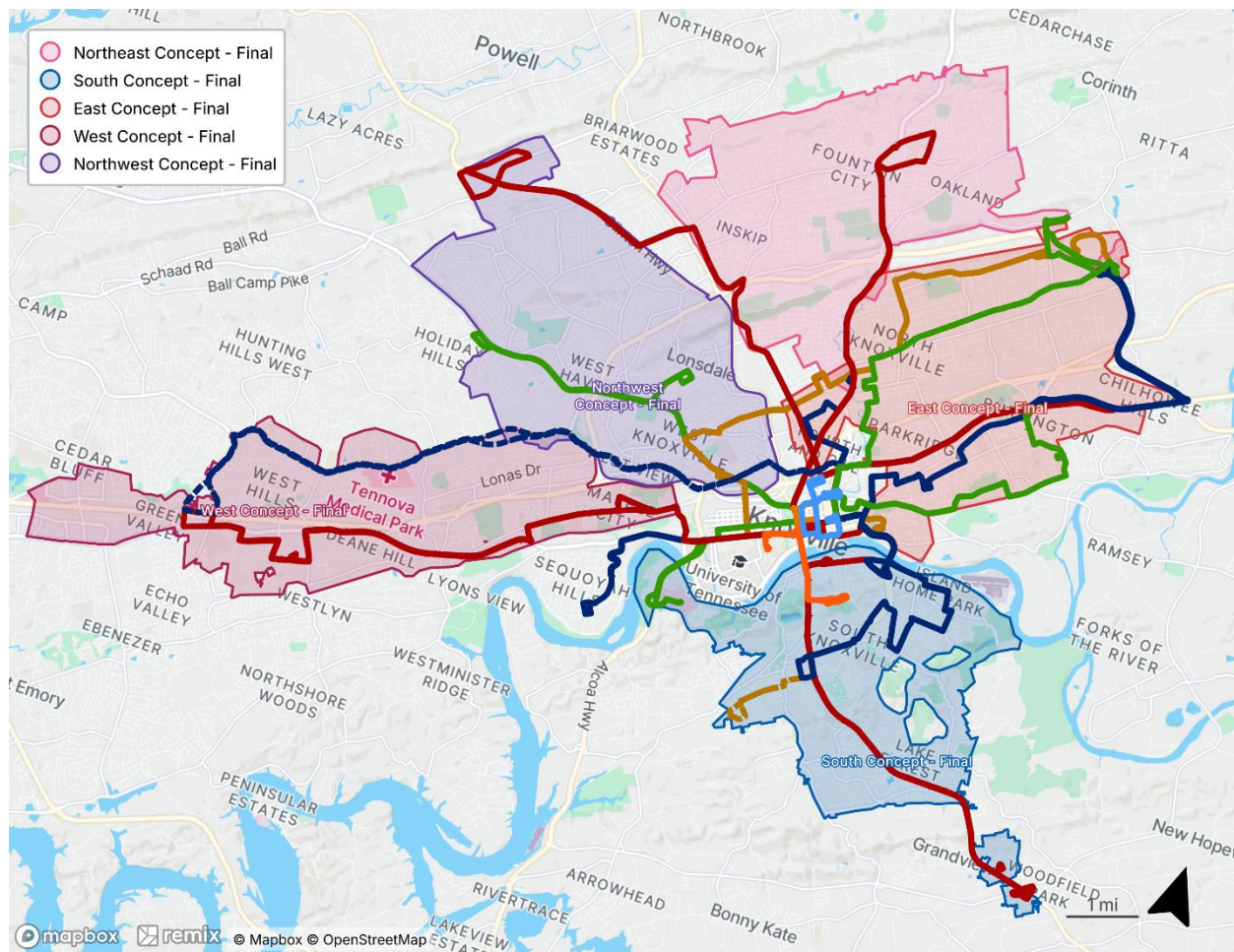
As microtransit service is introduced in Knoxville, customer reliance on services such as KAT paratransit may decrease because many riders may find the improved service levels, efficiency, travel times, scheduling flexibility, and convenience to be more attractive than existing options. **Nevertheless**, the proposed microtransit service concepts are intended to complement existing specialized transit services rather than replace them, as they do not provide the same geographic coverage or ADA-specific accommodations currently available through those services.

Considering the mobility demands that microtransit does and does not meet in Knoxville, a certain percentage of transit trips carried out by KAT paratransit services may no longer need to be fulfilled by paratransit service, they can instead be completed by the proposed microtransit service. A percentage of transit trips will still need to be completed by the existing transit services because either the trip occurs outside the proposed microtransit service area or because a passenger requires assistance beyond what is required to navigate a traditional curb-to-curb microtransit trip.

For the operational considerations presented in the following section a standard mitigation approach was applied to account for potential paratransit riders transitioning to microtransit services within their respective service areas. Drawing on the project team's experience with service transition and commingled operations, a conservative transition rate of about twenty percent was applied, additional details on the impacts of these projections on a comingled operating model are provided in Section 7 of the report, supported by a detailed analysis of current paratransit operations. The resulting mitigated costs and operational impacts are reflected in the operational characteristics outlined in the following sections and applied to all scenarios where microtransit is present.

Figure 14 below highlights the proposed microtransit service areas below.

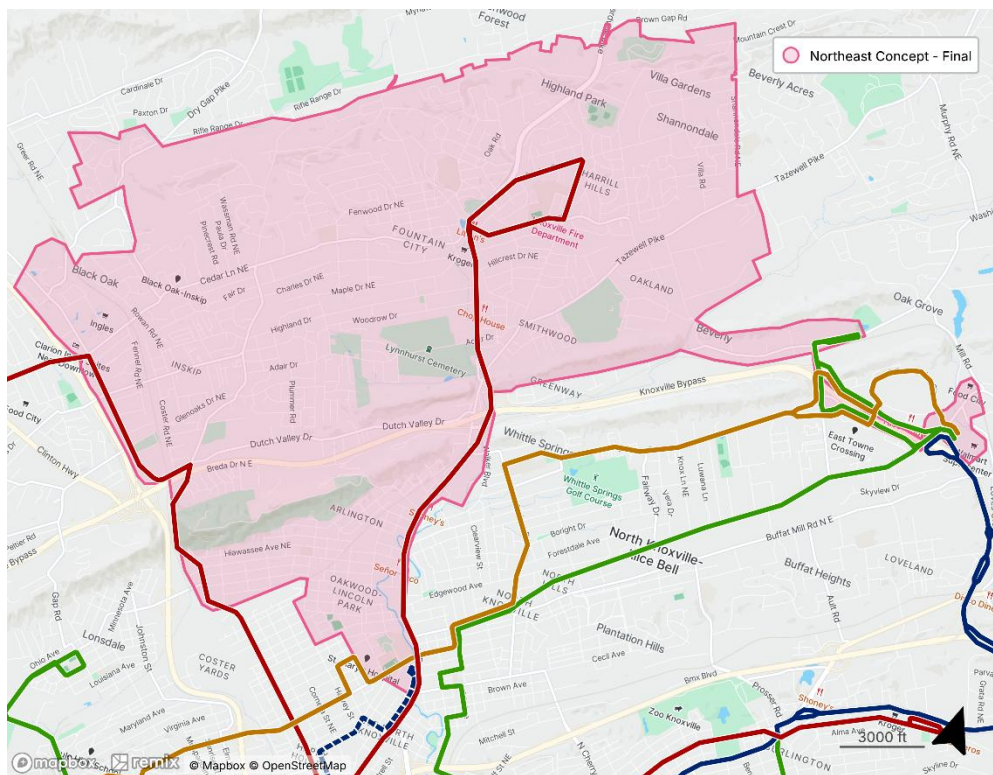
FIGURE 14: MICROTRANSIT CONCEPTS



Microtransit – Northeast Refined Concept

This zone covers approximately 12.4 square miles in northeast Knoxville, including Oakland, Smithwood, Arlington, Oakwood, Inskip, Shannondale, Highland Park, and several other smaller neighborhoods. The proposed microtransit zone is intended to expand transit access across established residential communities north of downtown while serving key trip generators that support transfers and connections to fixed route service, including the Miller Town development. The southern portion extends below the Knoxville Bypass corridor, connecting communities with greater transportation needs, such as Arlington and the Oakwood-Lincoln Park area anchored by the Broadway Shopping Center. The zone could also support future adjustments to fixed route service, allowing resources to be reallocated to other parts of the network as routes within the proposed service area are refined. The zone can improve access to essential destinations, strengthen first- and last-mile connections, and support more frequent fixed route service along key corridors by serving lower-density areas more efficiently.

FIGURE 15: NORTHEAST MICROTRANSIT CONCEPT

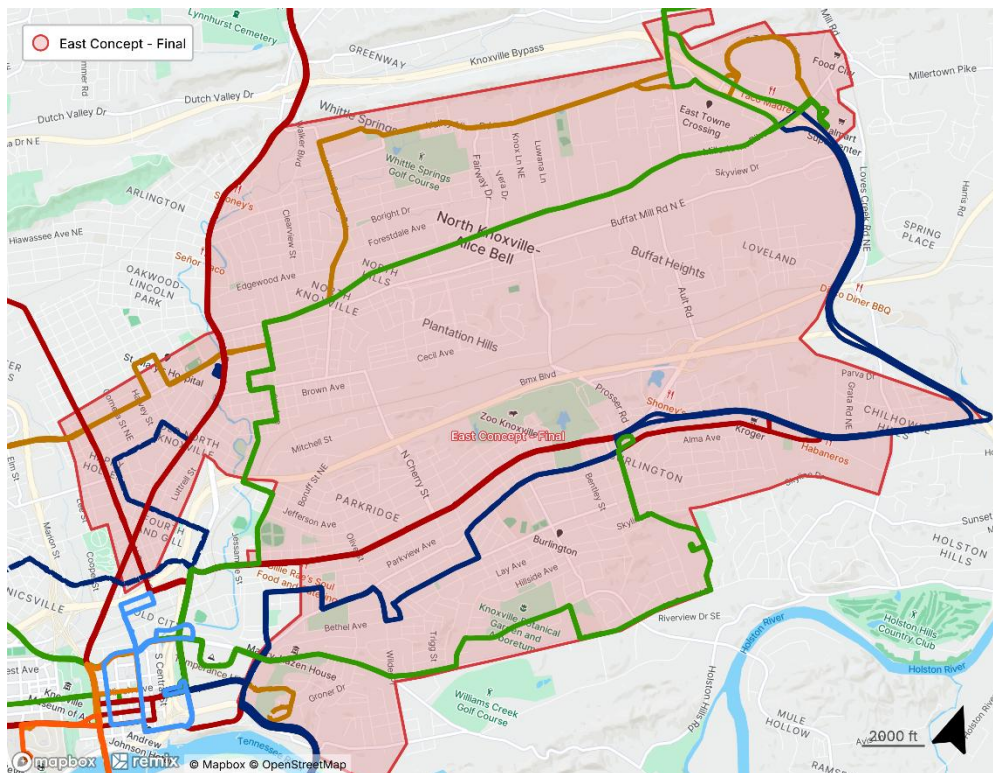


If the proposed zone is implemented as intended, it is recommended that the current Route 24 should be truncated, with the proposed end of line at the Broadway shopping center. Implemented alongside the proposed microtransit service, this truncation can enhance ridership and improve operability by reducing the resource burden, saving nearly 5,000 revenue hours annually that can be reallocated to other KAT services.

Microtransit – East Refined Concept

This zone covers approximately 13.4 square miles in east Knoxville, including Old North Knoxville, North Hills, Plantation Hills, and Buffat Heights. As the largest of the five zones, it captures a broad section of high-need communities east of downtown where additional transit access is proposed. The zone overlaps with the Northeast concept in areas such as Miller Town and Oakwood-Lincoln Park, using shared fixed route hubs to strengthen connections to the broader transit network. The zone could also support future adjustments to fixed route service, allowing resources to be reallocated to other parts of the network as routes within the proposed service area are refined as much of the current alignments are located within ¼-mile of each other or they will now be served by more productive microtransit services. The zone can improve access to essential destinations, strengthen first- and last-mile connections, and support more frequent fixed route service along key corridors by serving lower-density areas more efficiently.

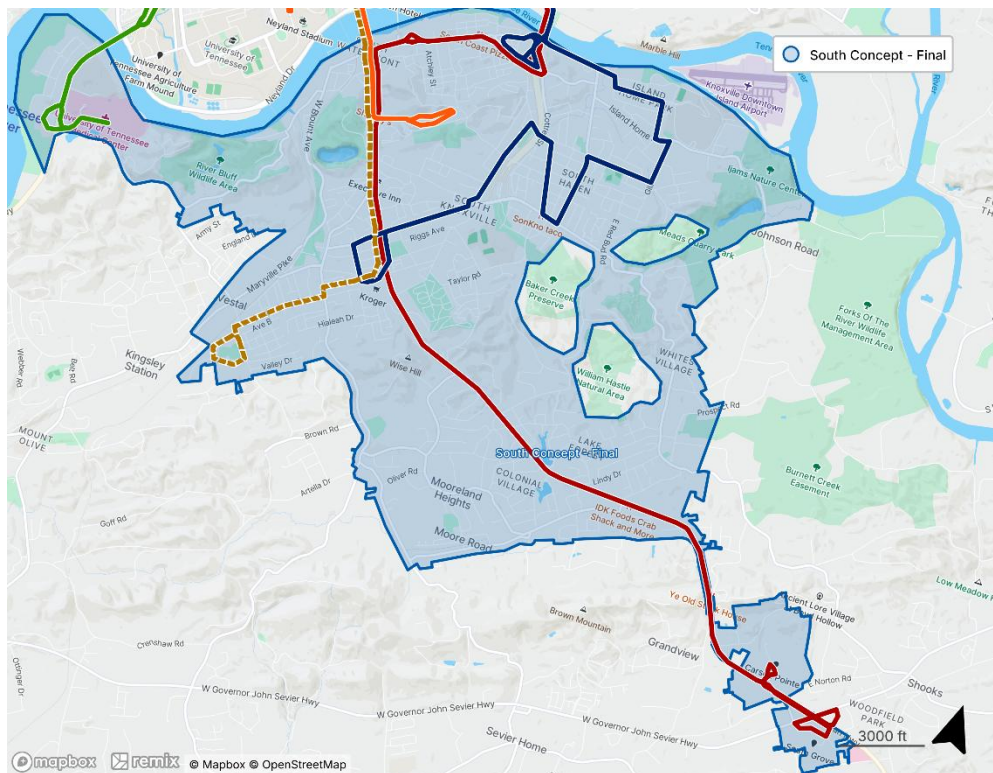
FIGURE 16: EAST MICROTRANSIT CONCEPT



Microtransit – South Refined Concept

This zone covers approximately 10.7 square miles in south Knoxville, including South Knoxville, Vestal, Island Home Park, and Colonial Village. It is intended to serve one of the lower-density and least-connected portions of the KAT service area, where transit needs are especially notable due to gaps in accessibility due to lacking infrastructure and topographic challenges, and overall connectivity. The northern edge is anchored by Vestal and Island Home Park, while the southern boundary extends through Colonial Village near the outer edge of the current service area. The zone also improves access to the University of Tennessee Medical Center, identified as a key trip generator. The zone could also support future adjustments to fixed route service, allowing resources to be reallocated to other parts of the network as routes within the proposed service area are refined. The zone can improve access to essential destinations, strengthen first- and last-mile connections, and support more frequent fixed route service along key corridors by serving lower-density areas more efficiently.

FIGURE 17: SOUTH MICROTRANSIT CONCEPT

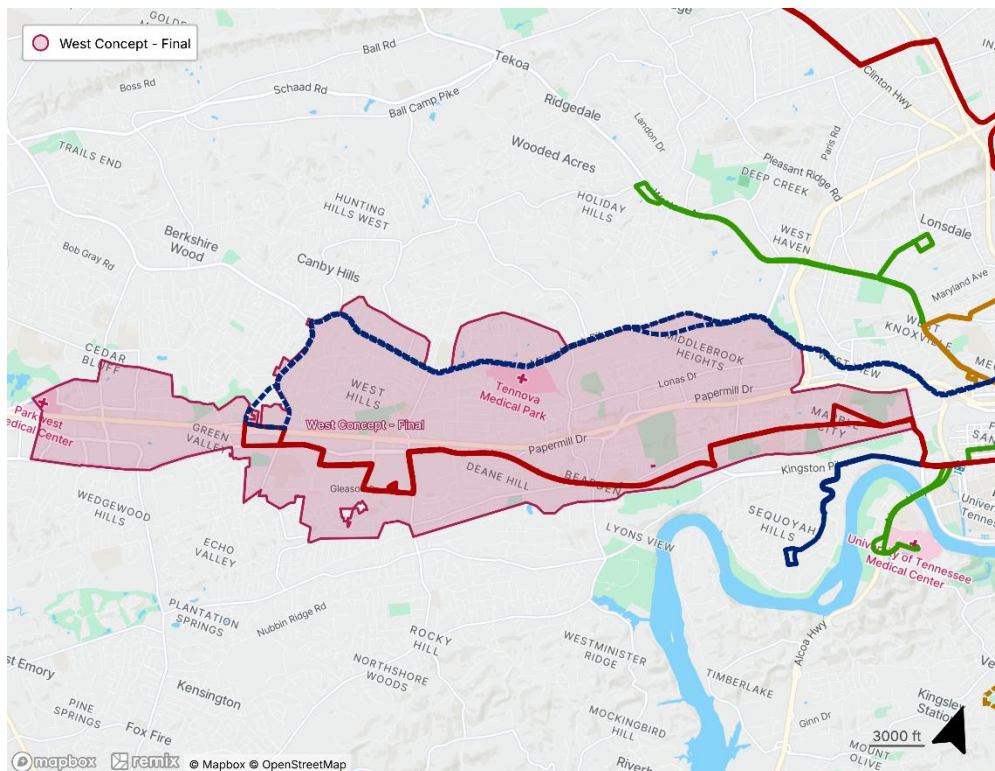


If implemented as intended, the proposed zone would streamline Route 45 to operate along Chapman Highway to West Young High Parkway and Avenue A, ending at Montgomery Village while preserving many of the current route's high ridership stops. Implemented with the proposed microtransit service, this truncation could improve ridership and operations by reducing resource needs and saving more than 2,000 annual revenue hours for reallocation to other KAT services.

Microtransit – West Refined Concept

This zone covers approximately 12.1 square miles in west Knoxville, including Middlebrook Heights, Timbercrest, Forest Heights, Westwood, Deane Hill, Kingston Hills, Greenvalley, and other neighborhoods along the I-40 corridor. It is the most compact of the five zones, reflecting a focused service area in the commercially dense corridor west of downtown that this concept was designed to capture. The zone could also support future adjustments to fixed route service, allowing resources to be reallocated to other parts of the network as routes within the proposed service area are refined. The zone can improve access to essential destinations, strengthen first- and last-mile connections, and support more frequent fixed route service along key corridors by serving lower-density areas more efficiently.

FIGURE 18: WEST MICROTRANSIT CONCEPT

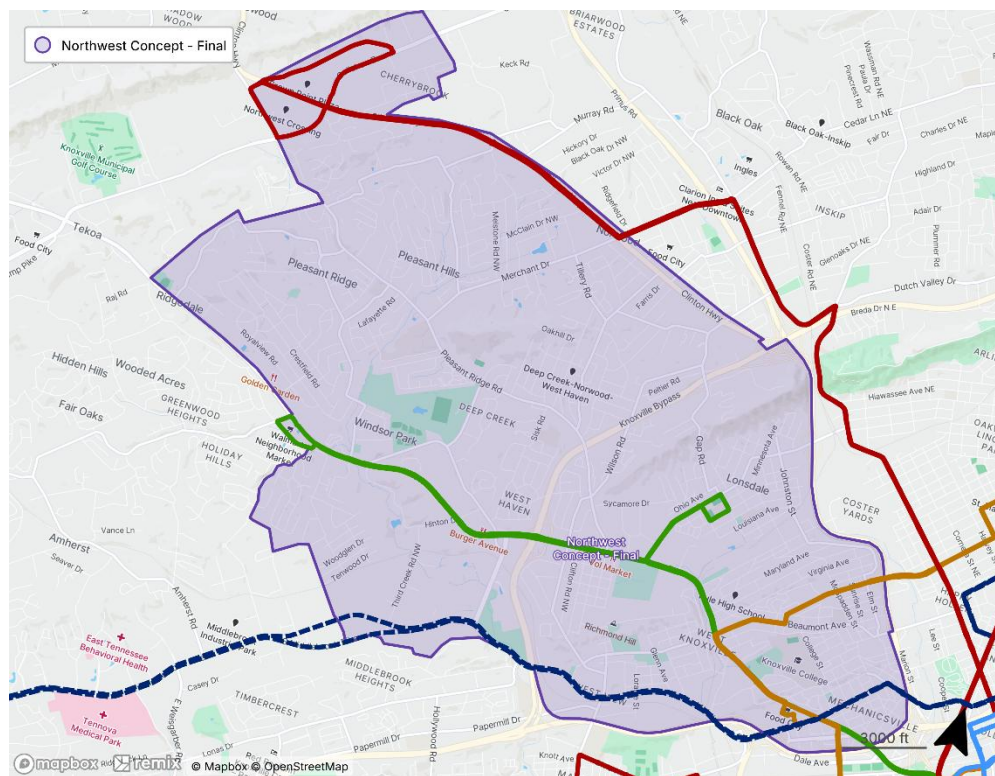


If the proposed zone is implemented as intended, it is recommended that the current Route 16 be truncated, with the proposed end of line at the Wallbrook Centre, along with that due to duplication of service provided by Route 11 it is recommended that Route 17 be eliminated. Implemented alongside the proposed microtransit service, this truncation and removal can enhance ridership on other corridors and microtransit service and improve operability by reducing the resource burden, saving over 9,000 revenue hours annually that can be reallocated to other KAT services.

Microtransit – Northwest Refined Concept

This zone covers approximately 13.4 square miles in northwest Knoxville, including West Knoxville, Deep Creek, Lonsdale, Cherokee Ridge, Ridgedale, Mechanicsville, and other nearby areas. With limited existing transit connections in this part of the city, the proposed service area is intended to improve links to fixed route service and expand mobility for more Knoxville residents. The zone could also support future adjustments to fixed route service, allowing resources to be reallocated to other parts of the network as routes within the proposed service area are refined. The zone can improve access to essential destinations, strengthen first- and last-mile connections, and support more frequent fixed route service along key corridors by serving lower-density areas more efficiently.

FIGURE 19: NORTHWEST MICROTRANSIT CONCEPT



6.2 Microtransit Operational Summary

This section summarizes the operational assumptions and cost metrics for the five proposed microtransit zones. Each concept includes a consistent set of service and cost measures to support direct comparison across zones. While these metrics do not determine implementation on their own, they provide an operational foundation for evaluating potential service deployment.

Table 5 summarizes key operational considerations, including service area size, Vehicles Operated in Maximum Service (VOMS), annual revenue hours, projected weekly and annual ridership, rides per hour, annual operating cost, and cost per trip. These figures reflect the refined zone boundaries and the assumed service parameters for each area, providing a basis for comparing the relative efficiency of the proposed concepts. The five proposed concepts range from 10.7 to 13.4 square miles and from 20,800 to 60,320 projected annual trips. Four of the five zones are designed around two vehicles in maximum service, based on Remix projections and an assumed shift of twenty (20%) percent of LIFT trips to microtransit. The West Concept is the exception, requiring four vehicles and additional annual revenue hours. Productivity varies across each zone, as shown in Table 5. The Northwest Concept is projected to be the most productive at 3.05 rides per hour, followed by the East Concept at 2.85 rides per hour. The South Concept is projected to be the least productive at 1.83 rides per hour. Because operating cost is driven primarily by revenue hours, cost per trip generally moves inversely with productivity. The Northwest and East Concepts have the lowest cost per trip at \$36.83 and \$39.47, respectively, while the South Concept has the highest at \$61.20. Annual operating costs range from approximately \$1.27 million for the South Concept to \$2.71 million for the West Concept, reflecting the West Concept's larger vehicle requirement rather than a higher per-vehicle cost.

Overall, the Northwest and East Concepts are the strongest performers in terms of productivity and cost efficiency, while the South Concept performs weakest on both measures. West Concept has the highest total cost, but its cost per trip remains in the mid-range because its additional vehicles are matched by proportionally higher ridership.

TABLE 5: MICROTRANSIT OPERATIONAL SUMMARY

Zone	SqMi	VOMS	Annual Hours	Weekly Ridership	Annual Ridership	Rides /Hour	Cost*/Year	Cost/Trip
Northeast Concept	12.4	2	12,792	500	26,000	2.03	\$ 1,436,541.60	\$ 55.25
East Concept	13.4	2	12,792	700	36,400	2.85	\$ 1,436,541.60	\$ 39.47
South Concept	10.7	2	11,336	400	20,800	1.83	\$ 1,273,032.80	\$ 61.20
West Concept	12.1	4	24,128	1,160	60,320	2.50	\$ 2,709,574.40	\$ 44.92
Northwest Concept	13.4	2	12,792	750	39,000	3.05	\$ 1,436,541.60	\$ 36.83

*An hourly cost of \$112.30 was utilized for costing purposes based on 2025 NTD data confirmed by KAT staff

6.2.1 Microtransit Booking and Scheduling Considerations

The operational analysis presented in this study assumes an on-demand service model with a target response time of approximately 30 minutes. This assumption was intentionally used to evaluate the proposed service areas under a more operationally demanding scenario. KAT may elect to implement a prebooking-first operating model in which riders are encouraged or required to reserve trips in advance, with same-day trip requests accommodated when available vehicle capacity permits. A prebooking approach would provide additional scheduling flexibility for the new service and opportunities to group compatible trips and would therefore not be expected to increase the fleet requirements identified through this analysis. Final booking policies should be established during implementation based on KAT's desired service model, available capacity, and observed pilot demand.

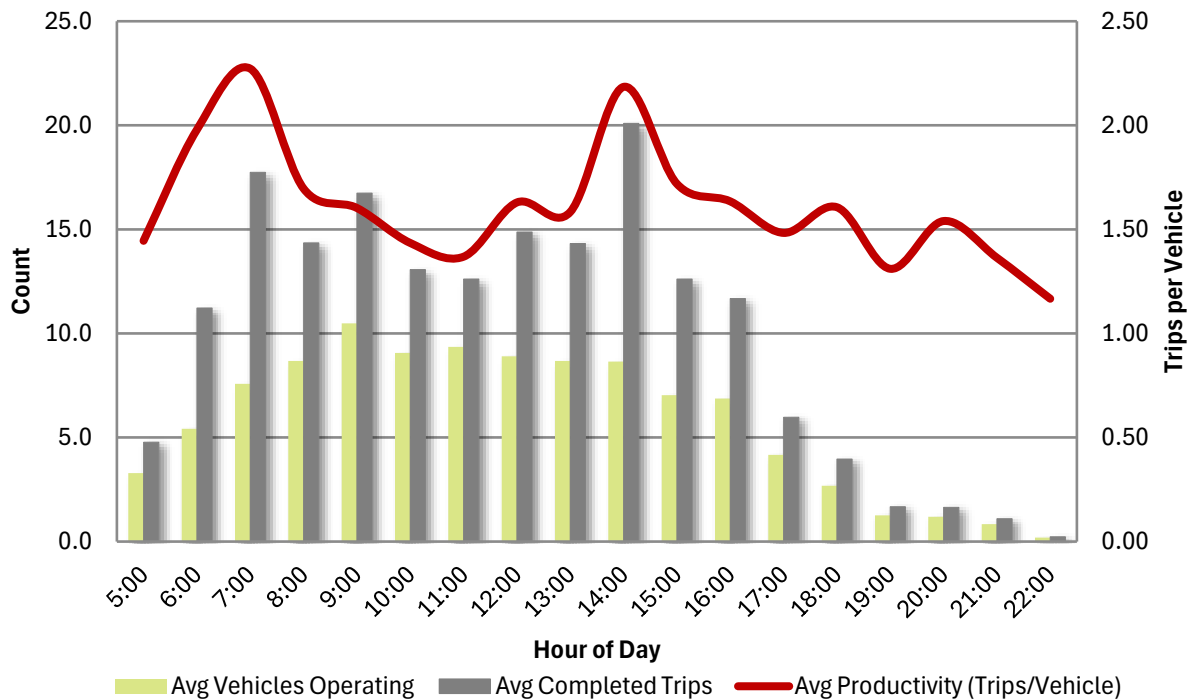
7 COMINGLED OPERATING ANALYSIS AND CONCEPT OVERVIEW

This section evaluates the operational performance and vehicle utilization of KAT's existing LIFT paratransit service to identify opportunities to improve scheduling efficiency, optimize fleet deployment, and support the potential integration of microtransit services. Using October 2025 trip-level data, the analysis examines vehicle requirements, completed trips, service productivity, idle and gap time, same-day demand, and periods of peak vehicle utilization. The findings provide a data-driven understanding of how existing fleet capacity is currently used, where operational efficiencies may be achieved, and whether available capacity could support a future comingled service model without adversely affecting ADA paratransit reliability, on-time performance, or the customer experience.

7.1 Existing LIFT Service Operational Analysis

KAT's LIFT paratransit service currently operates a fleet of 25 total vehicles, with an average of roughly 11 vehicles operating during peak service hours, based on analysis of the October 2025 LIFT trip-level data provided by the project team. The data shows the service running at an overall productivity of 1.71 trips per vehicle-hour, with peak concurrent vehicle need reaching 16 in any single hourly bucket. Figure 20 below highlights system-wide averages by service hour for number of vehicles operated, completed trips, and productivity, and lays the foundation for the analysis throughout this section of the report.

FIGURE 20: AVG VEHICLES OPERATING VS. AVG COMPLETED TRIPS BY HOUR



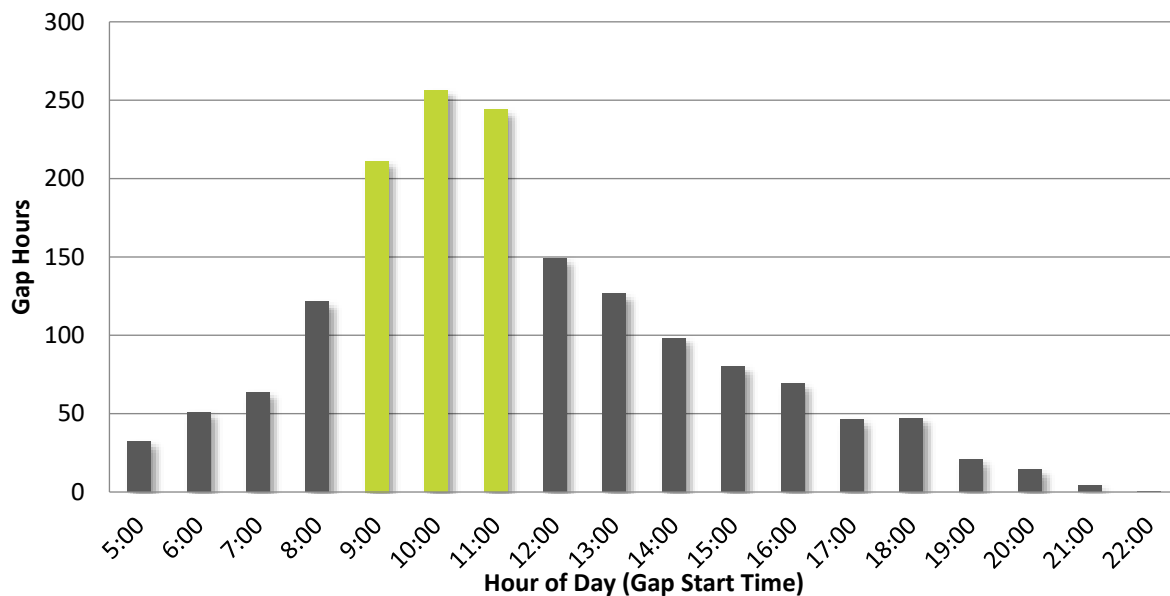
Additional analysis of LIFT vehicle requirements, completed trips, and productivity was conducted to identify idle time and fleet management opportunities. This included reviewing gaps between active trips to better understand LIFT service provision. The project team completed an analysis of idle and/or gap time for the month of October.

The idle time analysis compared how much of each LIFT vehicle’s active service time in October was spent carrying passengers versus waiting between trips. A simple gap calculation between one trip ending and the next beginning is not appropriate for paratransit because vehicles can carry multiple passengers simultaneously, causing trip records to overlap even during one continuous run. Initial testing of this approach produced unreliable results, including negative idle time for some vehicles. To address this, overlapping trips for each vehicle were merged into single activity blocks, and idle time was counted only as the gap between one completed block and the next. Time before a vehicle’s first trip or after its last trip was excluded because it reflects off-shift time rather than idle time during active service. Using this refined method, vehicles were in service for approximately 1,839 hours and idle for approximately 1,636 hours in October, meaning the fleet was idle for roughly 47 percent of active service time.

A key limitation of this analysis is that calculated idle time includes both stationary wait time and travel between assignments, because the available data does not distinguish deadhead travel from true wait time. As a result, actual available capacity is likely lower than the 47 percent estimate. Even with this limitation, the analysis helps identify demand patterns and potential opportunities to reallocate slack

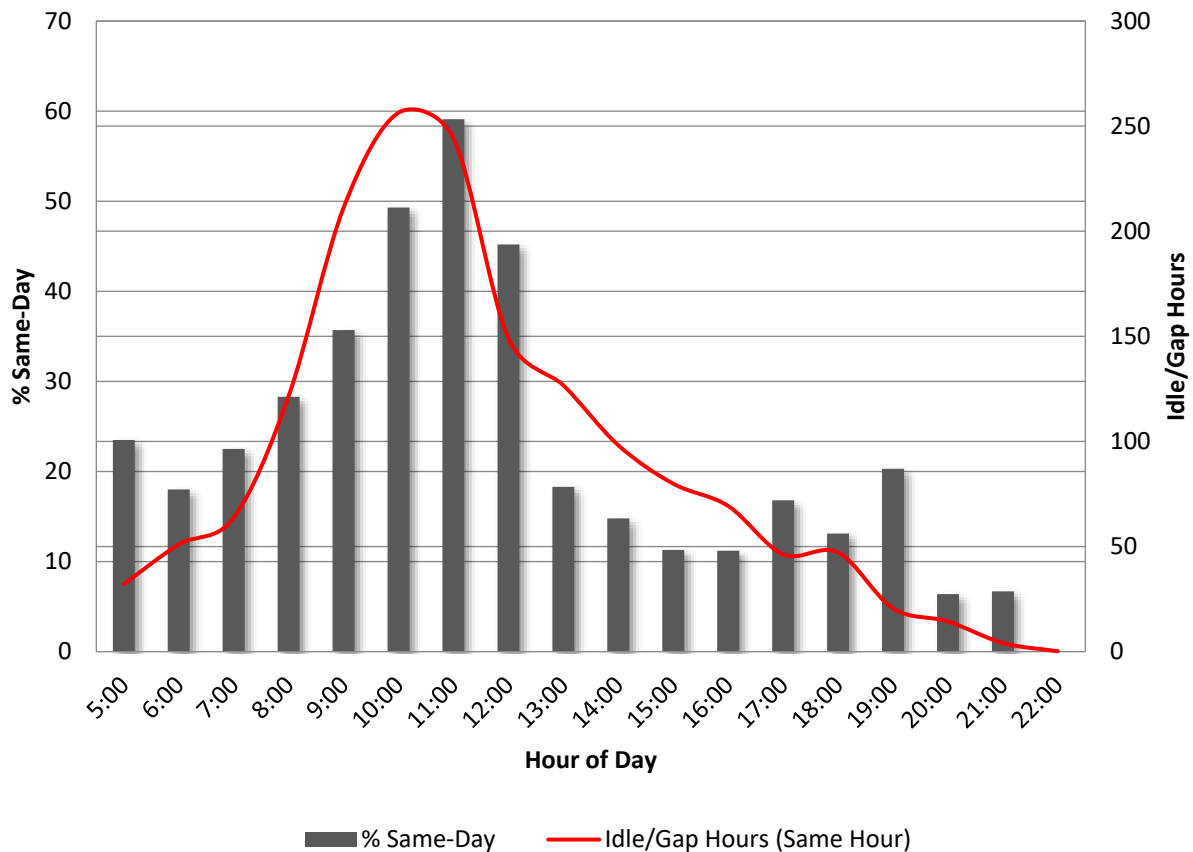
capacity to support microtransit. The refined approach better reflects how paratransit operates and provides a reliable basis for the fleet sizing and comingled service recommendations that follow. Figure 21 below highlights the idle/gap time for October 2025 by service hour. As shown, total idle/gap hours increase drastically during the mid-morning hours from 9:00 AM to 11:00 AM before slowly tapering off throughout the remaining service window.

FIGURE 21: TOTAL IDLE/GAP TIME BY HOUR (ALL VEHICLES)



Building on the idle/gap time analysis, the project team compared same-day trips, defined as requests made with 24 hours or less notice, with vehicle idle/gap time by hour. As shown in Figure 22, the share of same-day trips increases sharply through the morning, peaking at 59 percent at 11:00 AM. Idle hours follow a similar pattern, also peaking during the late morning before declining later in the day. This overlap suggests that a meaningful portion of late-morning idle time may function as operating slack used to absorb unplanned same-day requests, rather than unused capacity. In contrast, idle time during the early morning and evening occurs when same-day demand is lower, indicating that those periods may represent more available excess capacity. This distinction is important for fleet right-sizing because reducing vehicle availability from 10:00 AM to 12:00 PM window could affect same-day service reliability, while adjustments outside that period may carry less operational risk. Overall, this begins to showcase the concept of a comingled service might not be as impactful on existing operations as once envisioned. The following section provides an overview of additional key takeaways from this analysis.

FIGURE 22: PERCENTAGE OF SAME-DAY TRIPS VS. IDLE/GAP HOURS BY HOUR BY DAY



Existing LIFT Operational Analysis Key Findings

KAT's current platform configuration may be contributing to inefficient LIFT scheduling. Based on the analysis, trip pairing in Ecolane appears limited to requests with narrow pickup windows and overlapping routes, rather than optimizing shared rides across broader time and geographic ranges. Demand-based service also appears to be scheduled reactively, with vehicles assigned as scheduled and same-day requests are received. This limits the system's ability to proactively group trips or use idle capacity for non-paratransit demand. Key findings from the October 2025 LIFT service data include:

- **Low system-wide productivity.** At 1.71 trips per vehicle-hour, productivity sits below typical national paratransit benchmarks (often 2.0+), which points toward inefficiencies within the trip-pairing and grouping logic in Ecolane not being fully leveraged rather than simply low demand.
- **Hourly peak might overstate true need.** The gap between the hourly peak (16 vehicles) and the true continuous concurrent peak (13 vehicles) suggests Ecolane's scheduling has been built

around discrete hourly buckets rather than continuous trip overlap, may be overestimating vehicle need at the dispatch level for scheduling and fleet management purposes.

- **Idle time is not evenly "wasted."** Nearly half of active service windows (47.1%) have vehicles sitting idle waiting for activity, but the concentration of same-day demand in the late morning (peaking at 59.1% at 11:00 AM) shows that idle time isn't uniform in value. Some of it is potentially functioning as informal "slack" that Ecolane can't formally schedule around, since it has no forward-looking way to anticipate same-day demand and hold capacity for it deliberately. The potential for comingled services could better fill demand and fill idle time with localized trips when vehicles in service are idle.
- **Same-day demand is currently absorbed by accident, not by design.** Because of a potentially lacking dedicated same-day capacity-reservation mechanism, the system is relying on residual idle time to catch same-day requests rather than planning for them, which is a symptom of the same underlying gap that is driving the concept that comingling would work within the current operating environment.

7.2 Recommendations for Refining Existing Operations

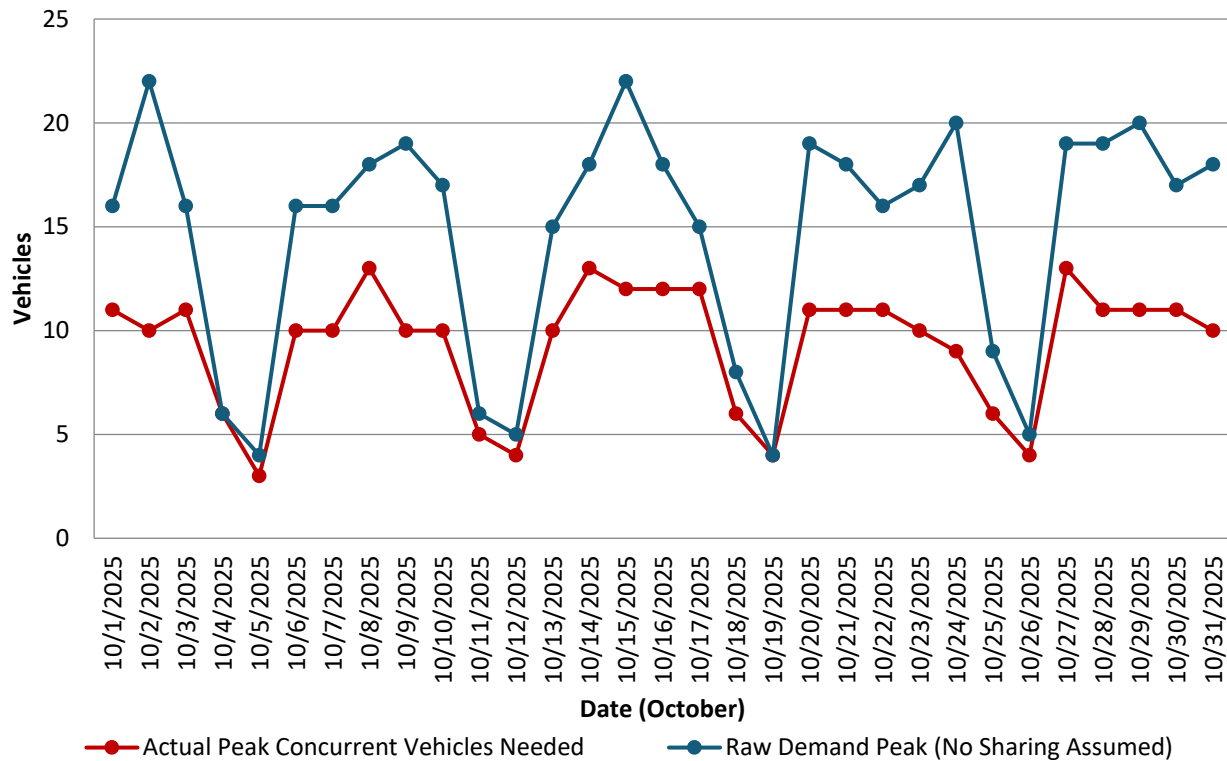
The October trip-level data supports a preliminary concept of targeted reeducation in vehicle capacity within the current operating configuration. The following section aims to provide an overview of additional analysis regarding the rightsizing of the current fleet for streamlined operations and potential inclusion of microtransit services.

KAT's LIFT fleet totals 25 vehicles according to KAT staff, with an average of roughly 11 vehicles operating during the 9:00 AM peak hour. Trip-level data from October shows 21 of those vehicles are active over the course of the month, with a peak of 16 vehicles operating in any single hourly bucket.

Figure 23 below refines previous trip-based analysis further by comparing two day-by-day measures of vehicle need: raw demand peak and actual peak concurrent vehicles needed. Raw demand peak is the count of vehicles that would be required if every trip ran in its own dedicated vehicle with no sharing at all, an upper bound that overstates true need since LIFT vehicles can carry more than one passenger on overlapping trips. Actual peak concurrent need corrects for this by merging overlapping trip records for each vehicle into single continuous blocks of activity, then identifying the highest number of vehicles active at any one point in time on each day.

Across October, raw demand peak fluctuates widely, reaching as high as 22 vehicles on individual days and tracking closely with the fleet's total size, while actual concurrent need holds in a much tighter band, generally between 10 and 13 vehicles, regardless of how high raw demand climbs on a given day. The 13-vehicle true peak cited throughout this section is the single highest value the theoretical concurrent need service reaches across the entire month, meaning it already reflects the busiest day of refined ride-sharing operations. Set against a total fleet of 25 vehicles, this represents a consistent gap between fleet size and true operational need, even after existing ride-sharing efficiency is fully accounted for.

FIGURE 23: DAILY PEAK VEHICLE ANALYSIS



The afternoon to early evening hours, roughly 3:00 PM to 6:00 PM, present the clearest opportunity for reduction in service provision for paratransit. This window combines substantial idle time (46 to 80 idle vehicle-hours across the block) with low same-day trip dependency (11 to 17 percent of trips). This can mean idle vehicle hours during this period do not appear to be being drawn on to absorb unplanned demand the way idle time earlier in the day is. Reducing scheduled capacity here carries the lowest risk to service quality.

The late-morning window should be held at current capacity but potential refinements to the operating standards could be made to better serve an integrated transit network. Same-day trip share peaks at 59.1 percent of trips at 11:00 AM, and idle time in this window (256.4 hours at 10:00 AM, 244.2 hours at 11:00 AM) tracks closely with that demand. This indicates the late-morning slack is functioning as informal reserve capacity for unplanned requests, and the idle time within this window could potentially handle some of the on-demand trip requests associated with a more refined microtransit comingled service model.

7.2.1 Summary of Findings

Based on these findings and data presented in this section of the report, the data presents potential for baseline configuration changes within Ecolane's existing scheduling and dispatch logic, not a new platform to begin with:

- **Enhanced trip-pairing and grouping parameters.** Review Ecolane's trip-pairing logic to identify opportunities to group compatible trips across broader geographic areas and reasonable pickup windows while maintaining ADA requirements related to on-time performance and passenger travel time. Improved trip grouping may increase productivity and reduce unnecessary vehicle deployment.
- **Time-of-day vehicle deployment.** Align scheduled vehicle availability more closely with observed demand patterns. Late-morning capacity should generally be maintained because available capacity appears to help accommodate elevated same-day demand, while afternoon service levels may provide opportunities for targeted adjustments due to higher idle time and lower reliance on same-day capacity.
- **Dispatch rules and vehicle assignments.** Refine the rules governing how same-day requests are inserted into existing vehicle schedules so available capacity is used more deliberately while maintaining KAT's existing ADA service policies and requirements. Many same-day requests represent will-call return trips from medical appointments and other time-sensitive ADA trips and should continue to be accommodated accordingly. Dispatch refinements should therefore focus on improving vehicle assignment and trip grouping where operational flexibility exists, without delaying, deprioritizing, or otherwise affecting scheduled or will-call ADA trips. ADA service obligations and service quality should remain the priority when assigning available capacity.
- **Fleet right-sizing and reserve capacity.** Evaluate vehicle requirements using continuous concurrent demand rather than hourly vehicle counts alone. While the analysis indicates that operational demand is generally lower than the total available fleet, any fleet adjustments should preserve sufficient capacity for peak demand, same-day requests, wheelchair-accessible trips, vehicle maintenance, and operational contingencies.
- **On-time performance threshold refinement.** Review scheduling and dispatch thresholds to support more efficient trip grouping and revised vehicle blocks without reducing ADA-required service quality, passenger safeguards, or established on-time performance standards.
- **Pilot testing and ongoing performance monitoring.** Implement operational changes incrementally and monitor their effects on productivity, vehicle utilization, idle time, same-day trip accommodation, on-time performance, passenger travel time, and trip denials. This will allow KAT to confirm whether anticipated efficiencies are achieved before broader operational changes are implemented.
- **Preparation for potential comingled service.** Use the operational refinements to establish a reliable baseline for determining when and where excess vehicle capacity may be available to support microtransit trips. Any future comingled service model should prioritize scheduled LIFT

trips and only assign general-public microtransit trips when ADA pickup windows, passenger travel-time requirements, vehicle accessibility needs, and service reliability can be maintained.

Together, these adjustments let KAT capture efficiency gains from the current data and current software before any new platform or comingled service model is introduced. Additional nuances associated with the Ecolane suite should be reviewed and adjusted accordingly to lay the foundation for a potential comingled service model within the existing Ecolane system.

7.3 Comingled Service Operational Overview/Recommendations

The data used for the October 2025 analysis indicates that portions of the existing LIFT fleet have available capacity throughout the day, as evidenced by the significant amount of vehicle idle time and the fleet capacity analysis conducted. Capitalizing on this available capacity depends on the ability to identify periods of excess fleet availability and determine when those resources can support microtransit service without impacting ADA paratransit operations, which is a function the current scheduling environment is not equipped to perform. A modern software scheduling platform provides the foundation for a functional comingled service, giving KAT the tools to identify available capacity and refine how it is assigned in a way that existing backend operational adjustments alone cannot achieve.

Booking window adjustments, dispatch rule refinements, and performance threshold updates can potentially improve LIFT operations within Ecolane's current configuration but would require additional coordination and real-world testing of solutions and improvements to monitor changes over a certain period of time to establish a true impact of baseline operational refinements. These changes alone might not allow KAT to schedule and operate ADA paratransit and general public microtransit trips on the same vehicles within the same service window, since Ecolane's scheduling and dispatch logic is structured entirely around paratransit requests and does not currently include a mechanism for pooling microtransit demand in real time. That gap exists despite the fleet already having the operational capacity to support it, as shown in the October data.

Operationally speaking, right-sizing, LIFT scheduling refinements, and platform and other capital investments should be treated as sequential steps rather than competing options, with the procurement and implementation of a modern comingled scheduling platform representing the first step and an immediate need for KAT. **Comingled service cannot be effectively delivered within the current platform. The platform is what recognizes paratransit and microtransit as distinct trip types, protects scheduled paratransit commitments, and pools microtransit demand into remaining capacity in real time, none of which the current scheduling environment can perform.** It determines how much of the available capacity can be assigned to microtransit services in specific areas and gauges demand and service provision without reducing paratransit reliability, on-time performance, or rider safeguards. Implemented on this new foundation, microtransit service utilizing shared capacity in a comingled service would likely have minimal impact on existing paratransit operations while improving cost per trip, productivity, and idle time across existing service windows.

A Software-as-a-Service (SaaS) platform capable of supporting comingled service would need to provide several core capabilities, an expanded overview of additional SaaS functionality can be found in the following section of the report:

- Recognize ADA paratransit and general public microtransit trips as distinct trip types with different service rules
- Treat scheduled paratransit trips as fixed service commitments within each vehicle's route
- Evaluate available vehicle capacity in real time and insert eligible microtransit trips only when ADA pick-up windows, ride time limits, and on-time performance standards can be maintained
- Pool microtransit trips into remaining capacity without displacing or degrading paratransit service
- Provide reporting tools to monitor shared-ride performance, idle time, vehicle utilization, and the effect of comingled operations on paratransit reliability

A more detailed overview of the SaaS platform procurement process and expectations are listed below in Section 7.3.1.

The following summary presents the projected coordinated operation of the five proposed microtransit zones under the recommended 20 percent trip-mitigation scenario. To model the projected shift from LIFT to microtransit, approximately 12,372 annual trips were distributed across the five proposed zones and added to the Remix ridership projections, while total annual LIFT trips were intentionally held constant at 61,862 throughout the service planning analysis. This conservative approach intentionally double counts the shifted trips to demonstrate that the proposed microtransit network can accommodate the additional demand without assuming any reduction in LIFT ridership or service demand. Based on the October 2025 LIFT operational analysis, including findings related to fleet utilization, vehicle sizing, and idle time, the coordinated operating scenario also assumes a 10 percent reduction in peak vehicles in maximum service (VOMS), reflecting opportunities to improve fleet utilization while maintaining existing ADA paratransit service levels.

The modeled reduction is supported by the analysis presented earlier in this section and illustrates how demand could be redistributed across modes while maintaining service levels above the level indicated by KAT's observed requirements. Table 6 below highlights a potential comingled service operating model.

TABLE 6: COMINGLED SERVICE MODEL OPERATIONAL CONSIDERATIONS BY ZONE

20% Limited Mitigation	Northeast	East	South	West	Northwest
Microtransit VOMS	2	2	2	4	2
Microtransit Projected Ridership	26,000	36,400	20,800	60,320	39,000
Microtransit Projected Hours	12,792	12,792	11,336	24,128	12,792
Lift VOMS*	18	18	18	18	18
Lift Projected Ridership*	61,862	61,862	61,862	61,862	61,862
Lift Projected Hours*	30,078	30,078	30,078	30,078	30,078
Total VOMS	20	20	20	22	20
Total Hours	42,870	42,870	41,414	54,206	42,870
Total Ridership	87,862	98,262	82,662	122,182	100,862
Cost/Year	\$4,814,346	\$4,814,346	\$4,650,837	\$6,087,379	\$4,814,346
Cost/Trip	\$54.79	\$48.99	\$56.26	\$49.82	\$47.73
Rides/Rev Hour	2.05	2.29	2.00	2.25	2.35

* The LIFT VOMS, ridership, and hours outlined are systemwide figures and are not tied to the specific microtransit concept. They are presented within each proposed microtransit zone as standalone values to pair the operational considerations of each zone with paratransit requirements at the system level, illustrating what operating the two services in a comingled manner would entail.

7.3.1 SaaS Platform Procurement

As KAT considers the implementation of a more robust microtransit service, the agency will have greater flexibility to provide more responsive and convenient mobility in lower-density areas while focusing fixed route resources on the corridors best suited to frequent, higher-capacity transit service. However, for this model to be successful, microtransit should function as a complement to the fixed route and current LIFT service rather than compete with it. Without appropriate trip-pairing and eligibility rules in place, there is a risk that riders who are already well served by fixed route transit could shift to microtransit, reducing fixed route ridership while simultaneously increasing microtransit demand, vehicle requirements, wait times, and operating costs.

To support a sustainable and integrated service model, KAT should establish trip-pairing rules within its Software-as-a-Service (SaaS) platform that considers a rider's proximity to fixed route service and whether the requested trip can reasonably be completed using the fixed route network. For riders whose origin and/or destination is within approximately a ¼-mile walkshed of an existing bus stop, the platform should evaluate available fixed route options before offering a direct microtransit trip. When fixed route service provides a reasonable travel option based on route availability, travel time, frequency, and the requested trip time, the platform could direct the rider to the fixed route or offer a first/last-mile microtransit connection rather than providing a fully duplicative microtransit trip.

These rules will be particularly important as KAT expands microtransit coverage across much of the service area. Without defined parameters, riders may naturally choose microtransit over walking to a nearby bus stop, even when frequent fixed route service is readily available. Over time, this could cannibalize fixed route ridership and place unnecessary demand on the microtransit service, reducing

vehicle availability for riders in areas where fixed route service is not a viable option. Establishing clear trip-pairing rules would help preserve fixed route transit as the backbone of the network while reserving microtransit capacity for lower-density areas, first/last-mile connections, and trips that cannot reasonably be completed by fixed route.

KAT should also consider integrating mobility hubs into the redesigned network, creating designated locations where riders can conveniently transfer between microtransit and fixed route services. The SaaS platform could direct appropriate microtransit trips to these hubs and support reduced fares or free transfers between services. This approach would allow microtransit to expand the reach of the fixed route network without requiring every trip to be completed curb-to-curb, helping improve overall vehicle productivity and creating a more seamless, connected transit system.

In addition, KAT may wish to explore a fare policy for riders located within a ¼-mile walkshed of fixed route service who choose a direct microtransit trip when a reasonable fixed route option is available. These trips could be subject to a modestly higher fare, while trips connecting riders to fixed routes or mobility hubs could receive a reduced fare or free transfer. This pricing structure would preserve rider choice while creating a financial incentive to use the most efficient mode for each trip.

Ultimately, the goal should be to create an integrated network in which each service is used where it performs best. Fixed routes should carry higher-volume trips along the strongest residential, employment, and commercial corridors, while microtransit provides flexible coverage in lower-density and harder-to-serve areas and connects riders to the broader transit network. By establishing appropriate trip-pairing, proximity, eligibility, and fare rules within the SaaS platform from the outset, KAT can help protect fixed route ridership, manage microtransit demand, improve productivity across both services, and create a more financially sustainable network over the long term.

8 NEXT STEPS

The following section identifies additional considerations that were beyond the scope of this study but should be evaluated further to support the successful implementation of the proposed service recommendations presented in this report.

8.1 Select Microtransit Pilot Zone

The analysis in this study identifies the proposed microtransit zones that are best positioned for implementation based on projected productivity, cost efficiency, and community need. The recommended next step, following the SaaS platform, is for KAT to prioritize a single zone as a pilot. Then when a SaaS platform has been procured to support the proposed comingled service model, KAT should launch the selected zone. This is a more prudent approach than attempting to launch multiple zones simultaneously or utilizing the current platform for a service model of this nature. A pilot service allows KAT to validate the operational assumptions used throughout this study, refine service parameters based on real-world demand, establish booking policies, and build institutional experience with microtransit before committing to a broader rollout. Selecting the pilot zone should be guided by the weighted screening results alongside KAT's current operational and fiscal capacity. The zone chosen

should balance strong projected performance with manageable startup requirements, so that early results provide a meaningful and fair test of the service model.

Once a pilot zone is selected, KAT should define the service parameters, including booking policies, hours and days of operation, fleet size, technology platform, and any associated fixed route modifications. Establishing clear performance metrics at the outset is essential. Productivity, ridership, cost per trip, and rider feedback should be tracked from launch and evaluated against the projections developed in this study, with a defined evaluation period to allow demand to mature before conclusions are drawn.

The pilot should also be supported by a coordinated public outreach and marketing effort. Education is a key aspect of a new service as the proposed microtransit service model differs from traditional fixed route service in how riders request and access trips, clear communication about how the service works will be central to building early ridership and ensuring an accurate test of demand.

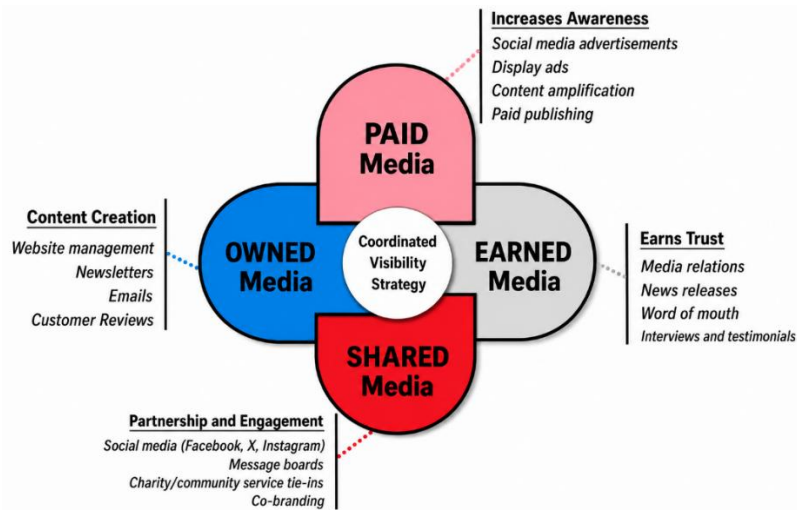
At the conclusion of the pilot period, KAT can use the results to determine whether to continue, adjust, or expand the service, and to inform decisions about implementing additional zones. The lessons learned from a single well-executed pilot will strengthen the planning and delivery of any future microtransit investment across the KAT network.

8.2 Education Campaign

As KAT prepares to roll out changes associated with the new service or modifications to the network, it is imperative to the success of the microtransit service that residents are well-informed and engaged throughout the process. A structured educational campaign offers a systematic approach to informing the public and stakeholders in an organized manner.

A versatile communication methodology for disseminating information is the PESO model, which establishes an integrated multimedia framework. This approach strategically employs diverse tactics to amplify key ideas, engage target audiences, enhance message saturation, and boost overall engagement. By applying the PESO model, communication strategies effectively amplify both public-facing and targeted messages across the model's four pillars.

- **Paid Media** - Leveraging paid media opportunities to effectively amplify messages across traditional media platforms and various social media channels. This can be achieved through strategic “sponsorship” placements, targeted email marketing, and optimization of content for broader reach.
- **Earned Media** - Securing media coverage, press mentions, reviews, social media shares, and mentions through non-paid efforts.
- **Shared Media** - Utilizing social media platforms such as Facebook, X, Instagram, and LinkedIn to allow individuals and organizations to share thoughts and ideas across digital platforms.
- **Owned Media** - Creating communications opportunities and content that are self-managed, controlled, and shared with key users on organization-owned platforms.



Effective communication facilitates the delivery, understanding, and interpretation of messages by the intended audience. Thus, messaging plays an essential role in conveying clear and concise information. Recognizing that diverse audiences respond differently to messages, creating an array of messaging strategies is an important step in grounding public-facing campaigns in tailored content to appeal to various stakeholder groups.

The new KAT microtransit service represents a significant leap forward in connectivity, recognizing the magnitude of these comprehensive service modifications, a robust communications plan is recommended to not only educate but also raise awareness about the impending changes.

To support a smooth transition and promote awareness, all newly implemented fixed routes modifications and microtransit zones should be clearly communicated to the public through individual route and zone brochures, consistent with how existing routes are currently presented. Each brochure should include a map, schedule, and key destination information to ensure clarity for both new and existing riders.

In addition, the reverse side of each brochure should feature a corridor headway summary for routes departing major transfer locations. This will help passengers understand the frequency and range of travel options available along key corridors throughout a typical weekday, Saturday, or Sunday.

Public outreach plays a critical role in the success of any service change. Engaging riders through meetings, surveys, social media, and onboard promotions can build awareness, address concerns, and help riders adapt to the new network. Proactive communication also reinforces trust and ensures the service redesign reflects community needs while minimizing disruptions to the rider experience.

8.3 Other Technology Improvements

Technology is an important priority to improve customer experience and enhance operational efficiency. Implementing technology, particularly in the microtransit service with a user-friendly mobile application, enhances the service by providing passengers with seamless booking experiences and real-time updates on vehicle availability and arrival times.

Technology can also focus internally on the operational needs of a transit agency, such as the adoption of APC data to track passenger activity, or it can be more outward facing to provide additional utility and benefit to patrons, such as enhanced real-time passenger information boards at transfer stations, or modernize fare collection on all vehicles to better support the comingled microtransit and paratransit service model. Regardless of purpose, there are many available advanced technology systems and applications that agencies may consider, with an equally wide range of costs and potential benefits associated with them.

8.4 Exploration of Additional Funding

It is recommended that KAT explore additional funding possibilities to further advance transit in not only current service area but in the region. Accomplishing this has various avenues such as private and public partnerships, federal, state, and local funding programs available to support transit operations, capital investments, and planning, including key FTA programs such as Sections 5303, 5307, 5310, 5311, and 5339. Each program offers targeted support based on service area, population, and transit needs, with varying match requirements, and eligible recipients. In addition to formula-based programs, competitive federal grants present opportunities to advance innovation, improve mobility, and address transportation challenges in underserved communities. Local funding sources such as property taxes, general fund allocations, and non-DOT federal programs play a critical role in leveraging federal dollars and sustaining long-term service.

8.5 Service Performance Evaluation

Once the proposed network and microtransit service are implemented, ongoing performance monitoring will be essential to ensure the system continues to meet ridership needs, operational goals, and established service standards. Key performance indicators (KPIs), including ridership by route and zone, on-time performance, passenger trips per revenue hour, average trip length, and cost per trip, should be tracked for both the fixed route network and microtransit service to provide a comprehensive understanding of overall system performance. For microtransit specifically, additional KPIs should include average and maximum wait times, trip completion and cancellation rates, no-driver-available occurrences, shared-ride rates, vehicle utilization, deadhead time and mileage, wheelchair-accessible vehicle availability, and the percentage of trips beginning or ending within proximity to fixed route service.

Because the proposed service strategy is intended to complement KAT LIFT rather than replace it, KAT should also monitor the relationship between the two demand-responsive services. Key measures should include changes in LIFT ridership and trip purposes, eligibility and certification trends, denials and capacity constraints, vehicle utilization, trips transferred between services, and the number of riders who voluntarily choose microtransit over LIFT when both services are available. Monitoring these metrics will help KAT determine whether microtransit is successfully attracting trips that can be accommodated by a less specialized service while preserving LIFT capacity and resources for riders whose disabilities require ADA complementary paratransit. As operating experience is gained, KAT should periodically reevaluate scheduling practices, fleet allocation, and operating policies to ensure

both services remain coordinated and resources are deployed as efficiently as possible without affecting ADA compliance or service quality.

This monitoring will allow KAT to identify emerging travel patterns, evaluate zone-level demand, assess whether microtransit is complementing rather than competing with the fixed route network, and determine where future zone expansions, service modifications, or operating-rule adjustments may be warranted. Particular attention should be given to trips originating and ending within one-quarter mile of frequent fixed route service, as these trips may represent opportunities to encourage fixed route use when a comparable and reasonable transit option is available. The microtransit software platform should support configurable rules that help prioritize fixed route connections, manage trip eligibility, and protect productive fixed route ridership while preserving microtransit access for trips and areas that are less efficiently served by traditional transit.

KAT should also periodically evaluate whether the operational assumptions developed during this study, particularly those related to LIFT fleet utilization, vehicle availability, and opportunities for shared resources between LIFT and microtransit, continue to reflect actual operating conditions. As demand evolves, these findings can be used to refine service policies, fleet requirements, and scheduling strategies while maintaining compliance with ADA complementary paratransit requirements and ensuring both services continue to work together as an integrated mobility system.