

# Durham Transit Plan Funded Microtransit Pilot Evaluation

GoTriangle – May 24, 2023

## Executive Summary

- The Durham Transit Plan funded microtransit initial pilot period will end June 30, 2023. GoTriangle operated two zones during the pilot period: one in east Durham and one in north Durham. The cost to operate the north Durham zone quickly exceeded the budget and additional funding was required to complete the full duration of the pilot period without changes to the program design. GoTriangle staff has performed an evaluation to identify changes to the program design necessary to operate the program within budget in FY24.
- The evaluation found that both the East Zone and North Zone were successful, providing a flexible mobility service with usage meeting or exceeding expectations. However, service in the North Zone is being consumed at a rate which is not financially sustainable under the program's budget (growing from about \$1,000 per month to over \$117,000 per month between December 2022 and April 2023 with an FY23 total program budget of \$164,250), and was found to be duplicating fixed route service, in contrast to the program's goal of providing mobility to transit deserts. The chart below shows the rapid growth of costs and rides in the North Zone.

	Dec	Jan	Feb	March	April
East Durham Cost	\$ 2,127.36	\$ 10,113.31	\$ 14,467.19	\$ 18,620.55	\$ 21,678.02
East Durham Rides Completed	204	1,004	1,306	1,733	1,988
North Durham Cost	\$ 1,010.29	\$ 31,301.92	\$ 73,533.72	\$ 115,157.20	\$ 117,309.16
North Durham Rides Completed	81	2,455	5,302	8,417	9,151

- More than 60% of trips in the North Zone began and ended within ¼ mile of a fixed route bus stop. These trips are considered duplicative of fixed route service, which is outside of the scope of the original intent of this program. Additionally, 85% of trips began or ended outside the originally studied service area.
- To operate the program within the budget allocated in the recommended FY24 Durham Transit Work Program, the following program design changes are recommended to allow for continued provision of a reliable mobility option in transit deserts while also accommodating new riders and program growth:
  - Revising the service zone to the original service zone identified in 2017 GoDurham Short Range Transit Plan and studied in the 2020 Microtransit Study, with the addition of the Treyburn region in the Northeast to provide access to the job centers there
  - Reducing the number of subsidized trips allowed for each passenger from 120 per month to 60 per month
- The next phase of implementation will be considered a continuing pilot, as continued evaluation of use may result in recommendations for additional program rule changes that were discussed during this evaluation but ultimately not recommended at this time. Examples include a possible requirement that at least one end of each trip originate far from a fixed route bus stop or a requirement that passengers pay a small fare for each trip (copay).

## Introduction

This report analyzes the current Durham Transit Plan funded microtransit pilot program that began with the earliest implementation of East Durham Zone in March 2022 followed by the North Durham Zone in November 2022. The pilot is funded through the Durham County Transit Plan and operated by Lyft. GoTriangle manages the program including administration, planning and contracting. The pilot program rules were developed in collaboration with the City of Durham and Durham County. This report introduces the findings, describes the program's inception and goals, service parameters and existing conditions, documents analysis of the data and rider use, behavior, and trends, and concludes with recommended mitigations to provide for a financially sustainable program upon completion of the initial pilot phase on June 30, 2023.

The current rate of utilization of the North Zone service is financially unsustainable within the program's budget allocated in the Recommended FY24 Durham Transit Work Program. The FY23 program budget of \$164,250 was exceeded during the fourth month of the North Durham zone implementation, and additional funding was required to complete the full duration of the pilot period without changes to the program rules. The analysis in this report determined that generally the higher costs are due to deviations in the pilot program design from the original program purpose. More than 60% of trips taken within the North Zone both originated and ended within a quarter-mile radius of a fixed-route bus stop; in other words, more than 60% of trips were duplicative of fixed-route service and therefore beyond the program's original purpose to provide a mobility option in areas of Durham that are not served by fixed-route buses.

To operate the program within the budget allocated in the recommended FY24 Durham Transit Work Program, the following program design changes are identified to allow for continued provision of a reliable mobility option in transit deserts while also accommodating new riders and program growth:

- Revising the service zone to the original service zone identified in 2017 GoDurham Short Range Transit Plan and studied in the 2020 Microtransit Study, with the addition of the Treyburn region in the Northeast to provide access to the job centers there
- Reducing the number of subsidized trips allowed for each passenger from 120 per month to 60 per month

It is also suggested that the City and County explore ways to operationalize some of the other benefits observed in the pilot that were determined to be outside of the microtransit program scope but are nonetheless beneficial to mobility, such as enhancing the GoDurham ACCESS program to provide more responsive and less expensive service as well as implementing the northern Durham fixed route expansion as recommended in the Durham County Transit Plan as soon as possible. These measures would provide similar mobility benefits achieved in the microtransit pilot through more financially sustainable transit services.

As an emerging mode of transportation that is inherently flexible, the microtransit program will continue to evolve. GoTriangle will continue to closely evaluate the program and recommend needed changes to ensure that the program is financially sustainable and that usage is aligned with the program's goals and community needs. Future program adjustments may be recommended based on factors including

expansion of fixed routes, improvements to the GoDurham ACCESS demand response service, and better pedestrian infrastructure integration at the edges of the fixed-route service area. Through regular and recurring monitoring, data analysis, and responsive adjustments, GoTriangle aims to optimize the microtransit service for those that need it most, while also considering reliability, accessibility, and customer satisfaction.

## Program Inception and Goals

These microtransit zones were first identified in the GoDurham Short Range Transit Plan (SRTP), approved by the Durham City Council in 2019, which recommends short range transit plans and programs to address unmet transit needs and streamline service. The zones were further studied in a Microtransit Study conducted in winter and spring of 2020 by Nelson Nygaard.

The GoDurham SRTP identified six areas in Durham with potentially unmet needs, including north Durham and east Durham. While the north and east areas have some fixed route transit routes near high-density areas, there are also low-density outskirts that are considered far from these fixed route options. The planning consultants from Nelson Nygaard, who led the development of the Durham SRTP, recommended microtransit in these areas.

The Durham Transit Plan funded microtransit pilot program provides valuable service for people who may not have access to a car or have limited access to public transportation. GoTriangle contracts with Lyft to operate the microtransit service, which enhances connections to the GoDurham fixed-route network. Lyft provides a zone-based, curb-to-curb service, and the program subsidizes the cost of rides up to \$25 per trip. This on-demand last-minute transportation service offers first-mile and last-mile connections to and from the GoDurham fixed-route service. Currently trips can start and end anywhere in the existing zone.

The goal of the program is to increase access to employment, schools, and groceries, while also increasing ridership and mobility in the areas of Durham County that are not well served by fixed-route buses (transit deserts). The current pilot service is specifically targeted towards areas with a high transit propensity and limited or no bus service, within the identified service zones in eastern and northern Durham. Preliminary on-demand service zones identified in the 2020 study were developed based on market review findings, with identified potential service types including a zone-based model and a hybrid zone/hub-based model.

The goals of the microtransit pilot program defined in the 2020 study, prepared by Nelson Nygaard, are shown below.

- **Goal 1: Make Service More Convenient**
  - Preserve and enhance mobility for current customers
  - Expand coverage to areas not served by fixed route
  - Improve the customer experience, including more access, decrease wait and trip times, and ease of use
  - Integrate experience with other modes, including fixed route

- **Goal 2: Connect People to Life’s Activities**
  - Improve access to jobs
  - Connect people to healthcare and other social services
  - Design service that will benefit the largest number of people
  - Improve connections to fixed route network
- **Goal 3: Design an Equitable Service that Improves Access to Opportunity**
  - Create shared economic prosperity for disadvantaged populations
  - Address safety concerns around microtransit
  - Build partnerships within each zone to encourage use and improve service
  - Ensure fares are accessible and affordable
  - Design service to meet the needs of those with the fewest mobility options
- **Goal 4: Create a Model That Will Be Sustainable**
  - Understand the financial and technical feasibility of on-demand mobility options
  - Develop services that achieve a high level of public support
  - Learn and test new strategies for leveraging technology to improve the customer experience
  - Generate additional data to understand transit demand and travel flows
  - Gain experience collaborating and contracting with private-sector mobility companies

These goals guide the evaluation of the pilot program in this report, as well as the recommendation for program rule and zone changes as the program moves out of the initial pilot phase.

### Service Parameters, Service Areas, and Existing Conditions

The pilot program runs from Monday through Saturday, between 7am and 8pm, and on Sundays between 8am and 7pm. The program currently has two zones. Trips in the East Zone must begin and end within the East Zone, and trips in the North Zone must begin and end within the North Zone; trips from one zone to the other trips originating or ending outside the zone boundaries are not eligible for the program. Additionally, riders who are 17 years old or younger must be accompanied by an adult. Riders with smartphone access can book a subsidized Lyft trip by downloading and opening the app and entering their requested drop-off and pickup locations. Trips may also be arranged by calling the Regional Information Center concierge service to book a trip. The service does not accept cash as a payment option, but unbanked riders can use pre-paid debit cards. Trips can be scheduled in advance or requested on-demand via the Lyft app, with a maximum wait time of 15 minutes and most waits under 10 minutes.

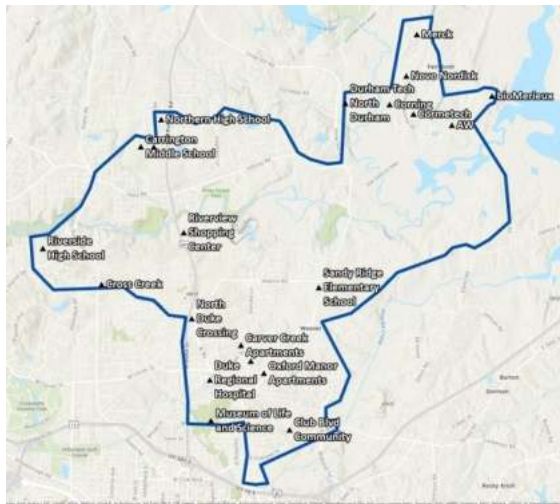
At present, four active GoDurham fixed routes serve North Durham at an average headway of 30 minutes, while one active GoDurham fixed route serves East Durham with a 60-minute headway. Both of the microtransit zones overlap somewhat with areas served by these GoDurham fixed route buses and GoDurham ACCESS ADA paratransit. Additionally, county-funded programs provide limited demand response service throughout the area to eligible passengers (Durham County residents who are disabled, 60 years of age or older, transportation disadvantaged, or live in rural areas of Durham County are eligible for service). The Senior Shuttle also provides scheduled service to shopping from destinations within the north zone.

Detailed information regarding fixed route service, ADA paratransit, and microtransit service is available in the table below.

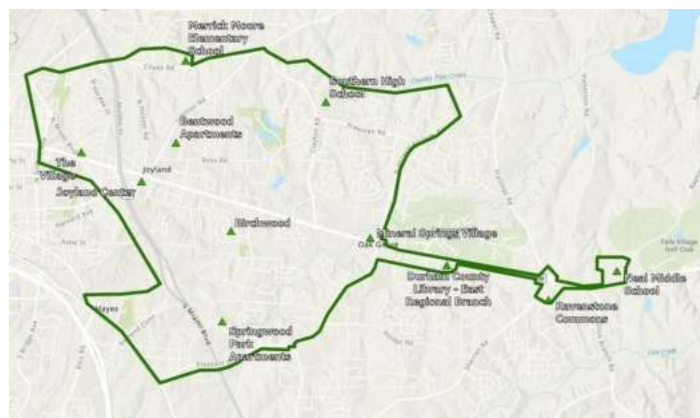
Table 1: Mobility Service in East and North Durham

	Service Hours	Frequency	Booking Options	Service Boundaries
<b>Route 1</b>	6:00am - 12:00am (Mon - Sun)	30 minutes	No Booking Required	North Durham
<b>Route 4</b>	7:00am - 9:30pm (Mon - Sun)	1 hour	No Booking Required	North Durham
<b>Route 9</b>	7:00pm - 12:30am (Mon - Sat Evening)	1 hour	No Booking Required	North Durham
	7:00am - 9:30pm (Sunday)	1 hour	No Booking Required	North Durham
<b>Route 9A</b>	6:00am - 12:30am (Mon - Sat)	30 minutes	No Booking Required	North Durham
<b>Route 9B</b>	6:00am - 12:30am (Mon - Sat)	30 minutes	No Booking Required	North Durham
<b>Route 3B</b>	5:00am - 12:00am (Mon - Sun)	1 hour	No Booking Required	East Durham
<b>GoDurham ACCESS ADA Paratransit</b>	5:30am - 12:30am (Mon - Sun)	ADA/DAR 24-hour reservation required	Mobile Booking, Concierge Call and Advanced Reservation	GoDurham Service Area
<b>GoDurham County ACCESS</b>	5:30am - 12:30am (Mon - Sun)	ADA/DAR 24-hour reservation required	Mobile Booking, Concierge Call and Advanced Reservation	Durham County
<b>USURV</b>	5:30am - 12:30am (Mon - Sun)	ADA/DAR 24-hour reservation required	Mobile Booking, Concierge Call and Advanced Reservation	GoDurham Service Area
<b>GoDurham Senior Shuttle</b>	10:am - 2:30pm (Mon - Sun)	Weekly grocery access service	No Booking Required	Serves 10 Senior Communities
<b>Microtransit Pilot</b>	7:00am - 8:00pm (Mon - Sun)	MOD Late-minute On Demand	Mobile Booking and Concierge Call	North and East Durham

The East and North Durham service zones as implemented for the pilot program are shown below.



Map 1: North Durham Expanded Service Zone

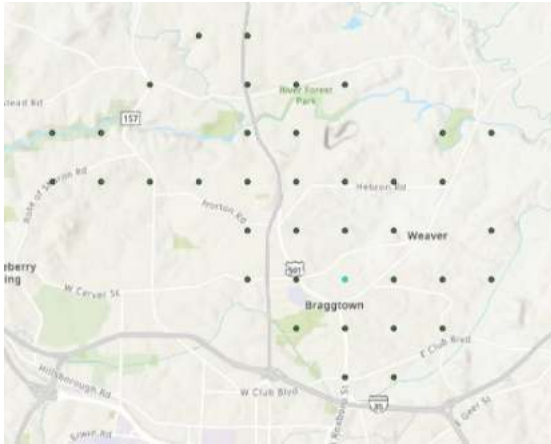


Map 2: East Durham Expanded Service Zone

## Methodology

Data used in this analysis includes anonymized rider IDs, daily rides, cost per ride, ride distance, time of day, origins, and destinations. The analysis focuses on March 2023, the most recent full month's data available at the time of the analysis.

Lyft provides ridership data via approximate coordinates rather than precise origins and destination addresses to protect passenger privacy. The approximate origin and destination locations are represented on a grid on a map. Each location covers an approximately 0.5x0.5 square mile area. These locations are referred to as quadrants in the analysis, and there are 45 unique quadrants in the North Zone study area. An example of how these quadrants appear on a map is shown below.



Map 3: North Durham Service Zone Unique Quadrants (Pilot)

The GoTriangle team examined the proximity of microtransit origins and destinations to the current fixed route network and identified three types of trips.

- Near Fixed Route: Trip starts and ends within a ¼ mile radius of a fixed route bus stop and could be served by the existing fixed route network.
- Far From Fixed Route: Trip begins and ends further than ¼ mile radius from a fixed route bus stop.
- Mixed: "Mixed" trips start or end within a ¼ mile radius of a fixed route bus stop and end far away.

### North and East Zone Analysis

The North Zone Analysis evaluates the microtransit service in North Durham. It assesses the current service's effectiveness with the goal of optimizing the Microtransit system in the North Zone to create a sustainable program.

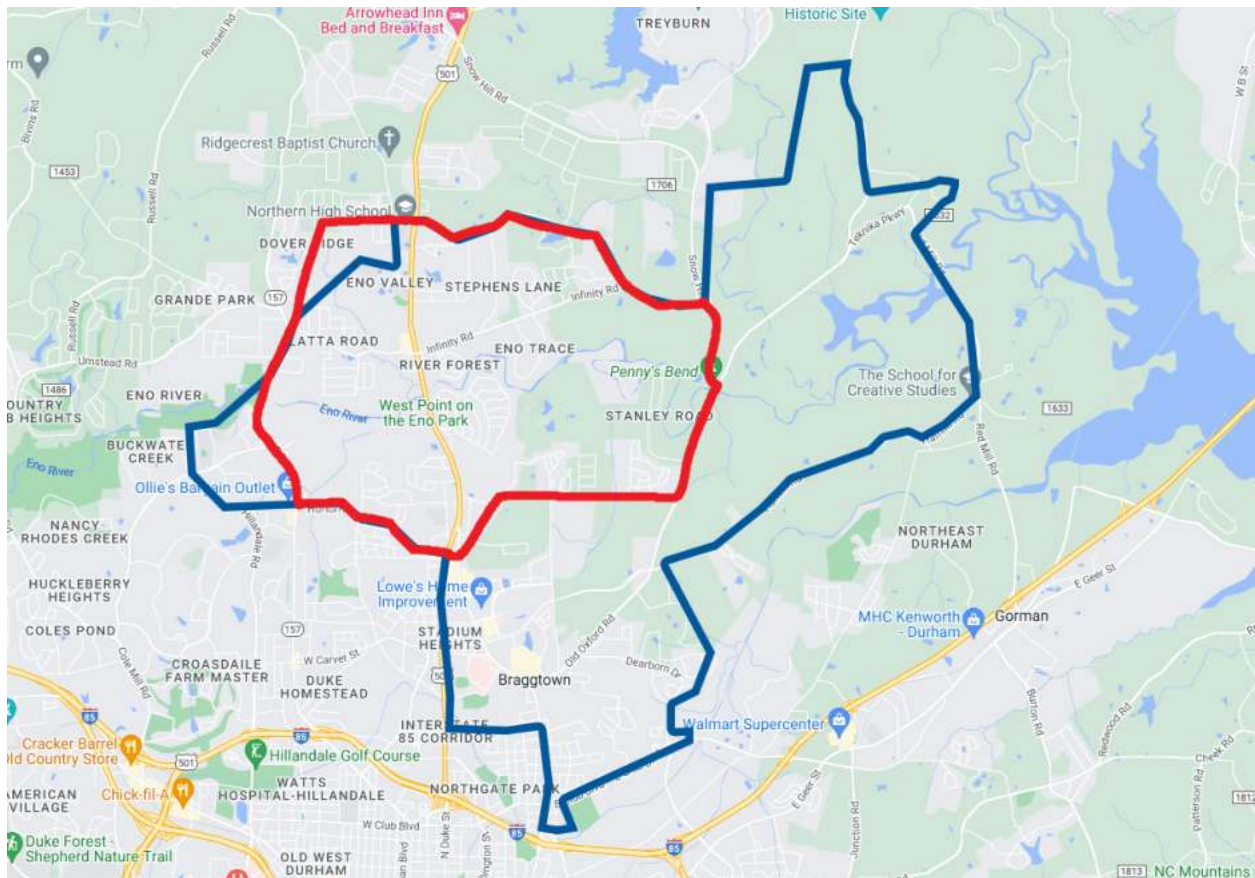
#### North Zone Original and Current Service Zone Analysis

In 2017 the GoDurham STRTP recommended six potential Durham microtransit zones. The 2020 Microtransit Study evaluated three implementation zones. The "original" zone recommended in the SRTP appears in red in the map below. This zone includes an area with limited fixed route transit service and lower densities where fixed route service is not a viable option. Ridership data and budgets were developed for the smaller red zone. During the pilot implementation phase, the north zone was extended to the blue zone boundary illustrated in the map below, beyond the original boundaries recommended by Nelson Nygaard. A map of the original and expanded (current) service zone is shown below.

**In RED:** Original service zone in 2017 GoDurham SRTP and 2020 Microtransit Study

**In BLUE:** Expanded (current) service zone that was implemented as pilot zone.





Map 4: Original and Current Service Zones Overlay

## Geographic Concentrations

The service zone's expansion significantly contributed to ridership and cost in this zone. In March 2023, 7,270 or 85.83% of rides began and/or ended outside the original zone. This accounted for a cost increase of \$98,554.67 in the month of March alone. Seven of the nine major trip generating locations were outside of the originally studied service zone. Major trip generating locations were defined as quadrants associated with 500 trips or more from December 1, 2022, and March 31, 2023. Nine (out of the total forty-five) quadrants were identified as major trip generators. All seven of the major trip generators that are outside of the original service zone are within 0.25 miles of a fixed-route stop.



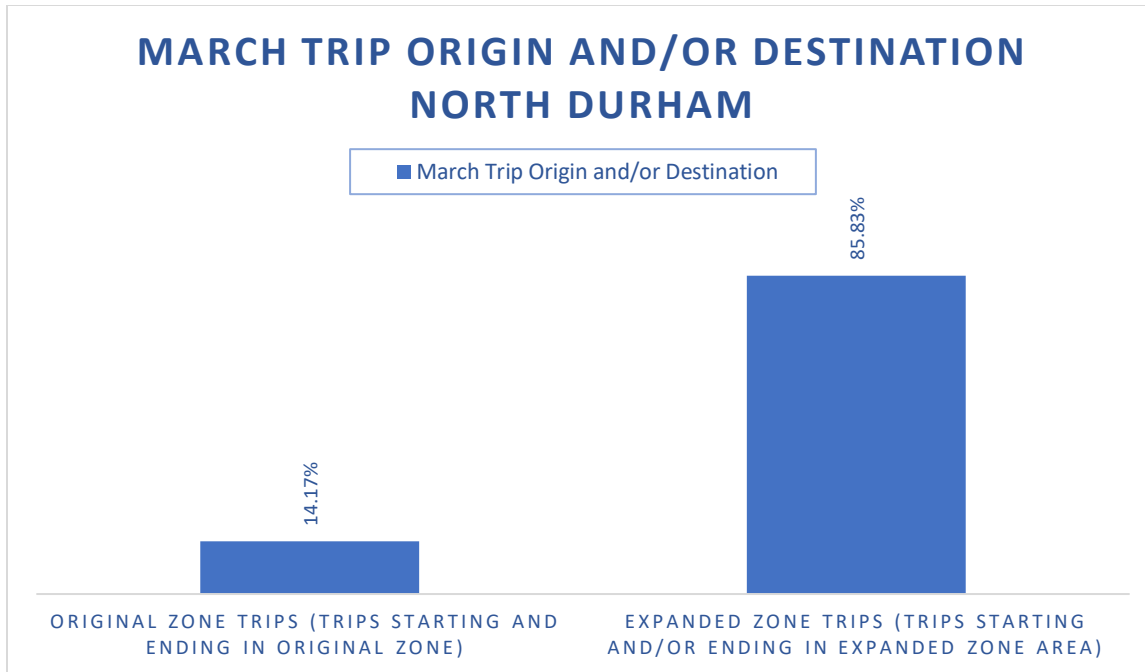


Figure 2: North Durham March Trip Origin and/or Destination

Table 2: North Durham Top Ridership Quadrants

Quadrant Area	Total Trips	Original or Expanded	Proximity to FR Stop
Oxford Commons Commercial Area	3696	Expanded Zone	NEAR FR (1/4 mile)
Mix Low Cost Apartment Residential Housing	1738	Original Zone	FAR FR (over 1/4 mile)
North Duke Mall; Mid Cost Commercial	1363	Expanded Zone	NEAR FR (1/4 mile)
Northern Highschool; Low Cost Family Residential	1272	Original Zone	NEAR FR (1/4 mile)
Red Maple Park Residential Area	1132	Expanded Zone	NEAR FR (1/4 mile)
Duke Regional Hospital; Mixed Low Commercial	978	Expanded Zone	NEAR FR (1/4 mile)
Lakeview Park Residential Area	843	Expanded Zone	NEAR FR (1/4 mile)
Mix Low-Mid Cost Commercial	666	Expanded Zone	NEAR FR (1/4 mile)
Mix Low Cost Commercial	571	Expanded Zone	NEAR FR (1/4 mile)

**North Zone Fixed Route Bus Stop Overlap Analysis:** From December 1, 2022, through March 31, 2023, 61.54% of all trips started within 0.25 miles of a fixed route bus stop and ended within 0.25 miles of a fixed route bus stop. Because these trips both began and ended near a fixed route bus stop, these trips could have been completed using a bus or paratransit vehicle rather than the microtransit program. These trips added \$133,051.06 to the total cost of the program (60.59% of total cost) during the four-month period studied.

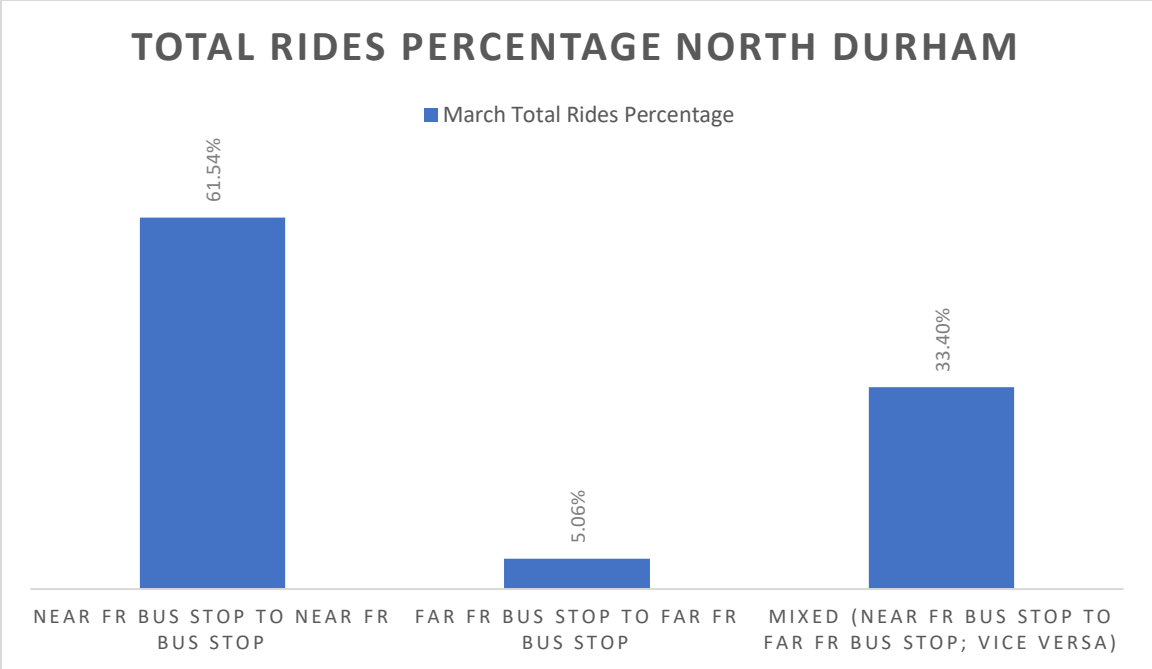
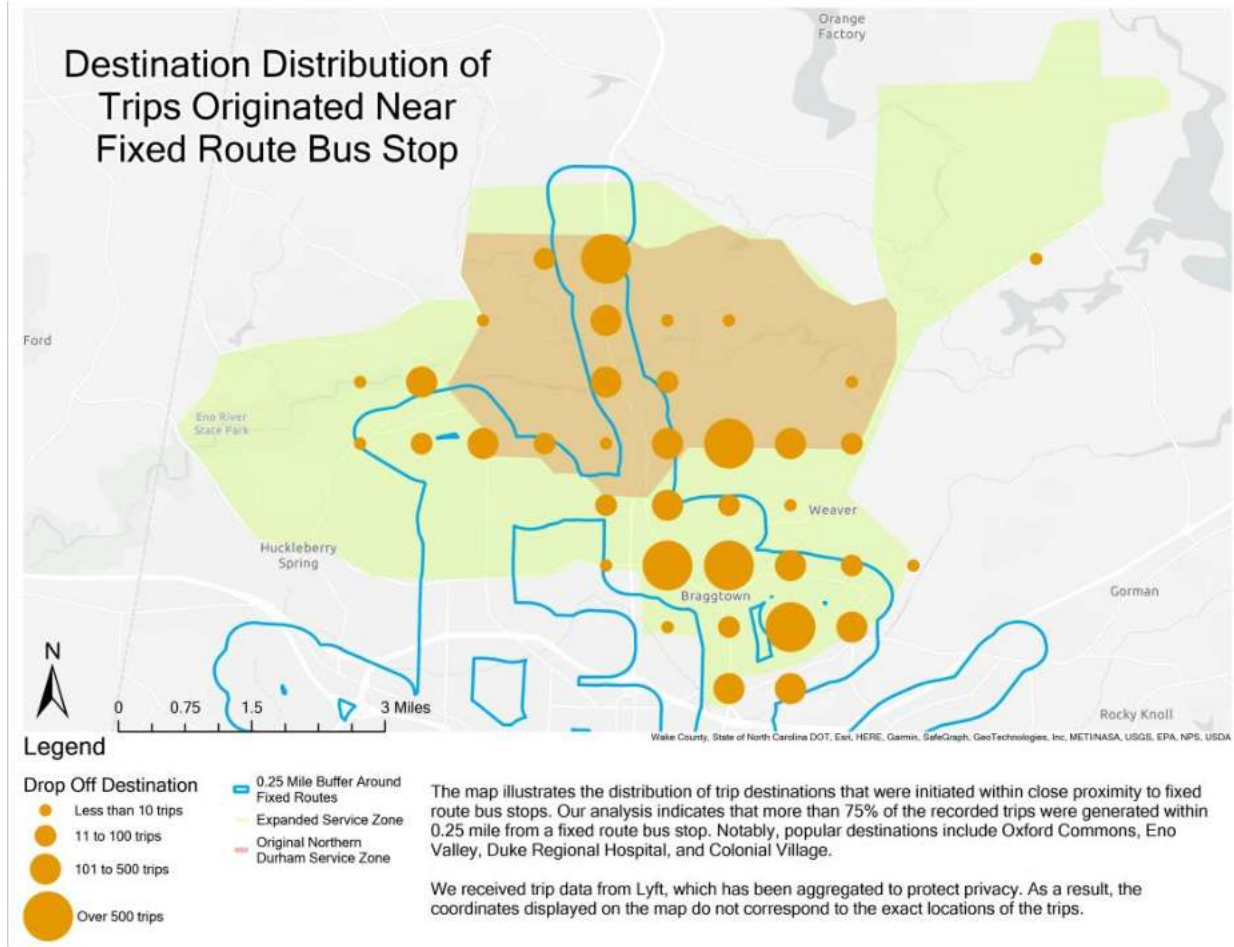


Figure 3: North Durham Total Rides Percentage

Table 3: North Durham Unique Rides Near or Far from a fixed route bus stop (December to March Origins/Destinations)

UNIQUE RIDES NEAR OR FAR FROM A FIXED ROUTE BUS STOP (December to March O/D)			
			% against Total
<b>Near FR to Near FR (1/4 mile to a Bus Stop)</b>	Unique Quadrant Combinations (O/D)	238	35.42%
	Rides	9944	61.54%
	Cost	\$133,051.06	60.59%
<b>Far FR to Far FR (1/4 mile far from a Bus Stop)</b>	Unique Quadrant Combinations (O/D)	91	13.54%
	Rides	818	5.06%
	Cost	\$11,717.67	5.32%
<b>Mixed (Pick up Near FR; Drop off Far FR; Vice Versa)</b>	Unique Quadrant Combinations (O/D)	343	51.04%
	Rides	5396	33.40%
	Cost	\$74,810.63	34.07%
	<b>TOTAL UNIQUE QUADRANT COMBINATIONS</b>		<b>672</b>
	<b>TOTAL RIDES</b>		<b>16158</b>
	<b>TOTAL COST</b>		<b>\$219,579.36</b>

Figure 4: North Durham Destination Distribution of Trips Originated Near Fixed Route Bus Stop



## East Zone Trips Analysis

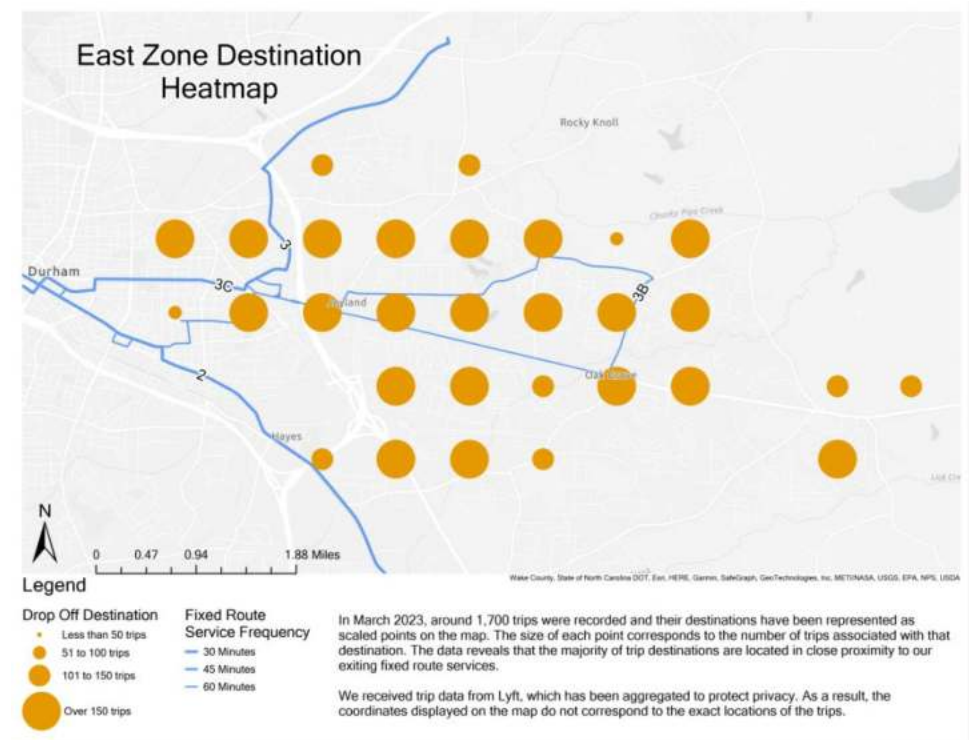
Table 4: East Durham Unique Rides Near or Far from a Fixed Route Bus Stop

EAST DURHAM MARCH UNIQUE RIDES NEAR OR FAR FROM A FIXED ROUTE BUS STOP			
			% against Total
<b>Near FR to Near FR (1/4 mile to a Bus Stop)</b>	Total Unique Quadrant Combinations	1	0.48%
	Total Rides	18	1.04%
	Total Cost	\$167.39	0.90%
<b>Far FR to Far FR (1/4 mile far from a Bus Stop)</b>	Total Unique Quadrant Combinations	182	86.67%
	Total Rides	1530	88.29%
	Total Cost	\$16,493.11	88.57%
<b>Mixed (Pick up Near FR; Drop off Far FR; Vice Versa)</b>	Total Unique Quadrant Combinations	27	12.86%
	Total Rides	183	10.56%
	Total Cost	\$1,940.09	10.42%
<b>TOTAL UNIQUE QUADRANT COMBINATIONS</b>		<b>210</b>	
<b>TOTAL RIDES</b>		<b>1733</b>	
<b>TOTAL COST</b>		<b>\$18,620.55</b>	

**East Durham March Unique Rides Near or Far from a Fixed Route Bus Stop:** Based on Lyft Data gathered on March 2023, 1530 Unique Rides or 88.29% of Total Rides for March started and ended Far from a Fixed Route Bus Stop while 18 Unique Rides or 1.04% of Total Rides for March started and ended Near from a Fixed Route Bus Stop and 183 or 10.56% of Total Rides for March on East Zone started or ended Near and Far from a Fixed Route Bus Stop.

Therefore, based on the analysis conducted on the East Durham March Data, it can be concluded that only 1% of the total rides started and ended near a Fixed Route Bus Stop. This indicates that the service provided is not replicating Fixed Route Service and provides adequate service to transit deserts and delivers the goals of the program.

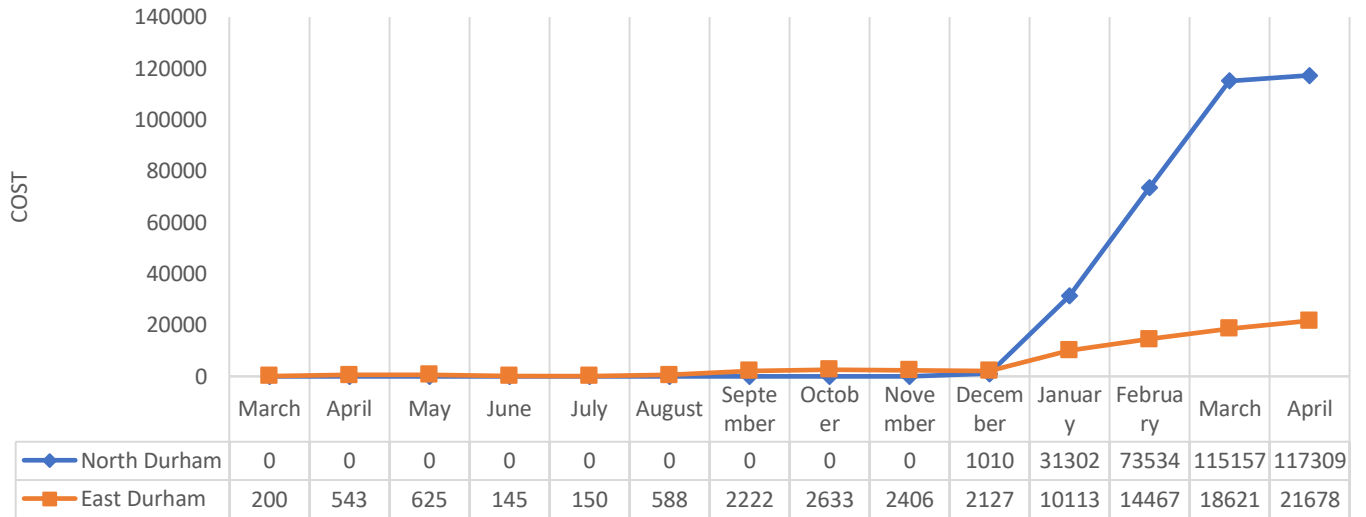
Figure 5: East Durham Zone Destination Heatmap



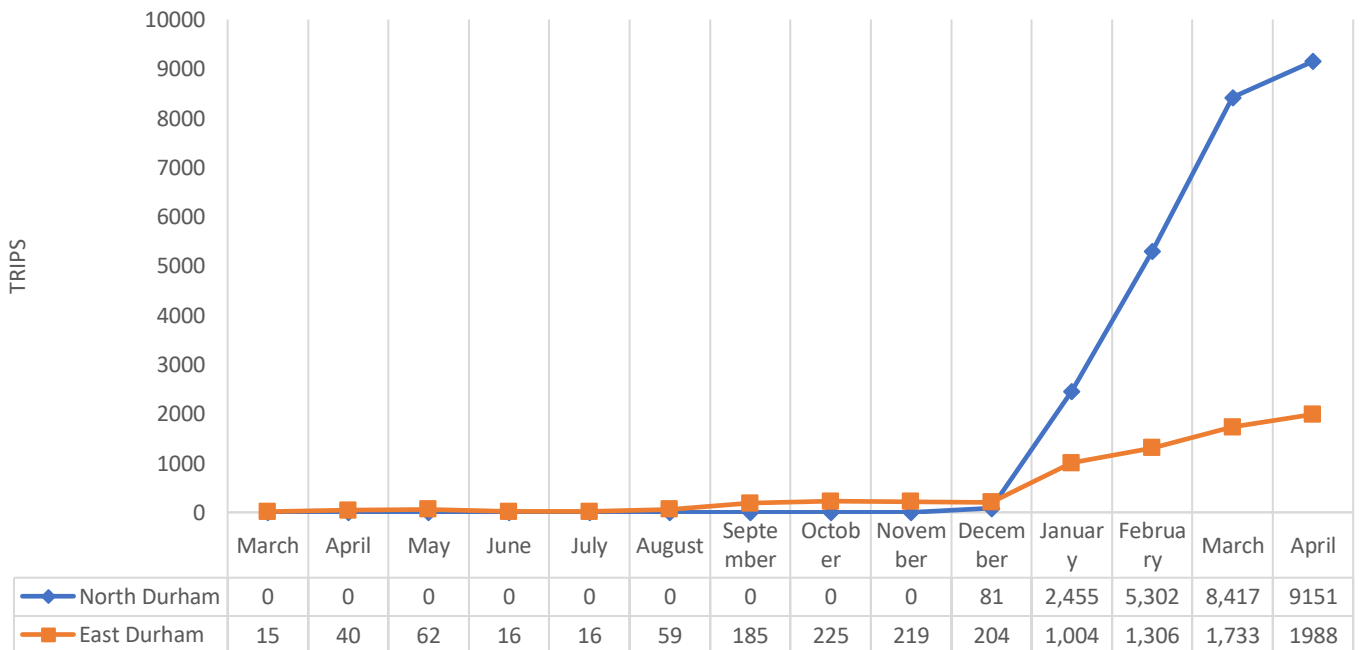
### Trends over time

As seen on the chart below, ridership is growing in both the East Durham zone and the North Durham zone. However, ridership and costs in the North Durham zone will quickly outpace the program’s FY24 \$679,355 budget for both zones.

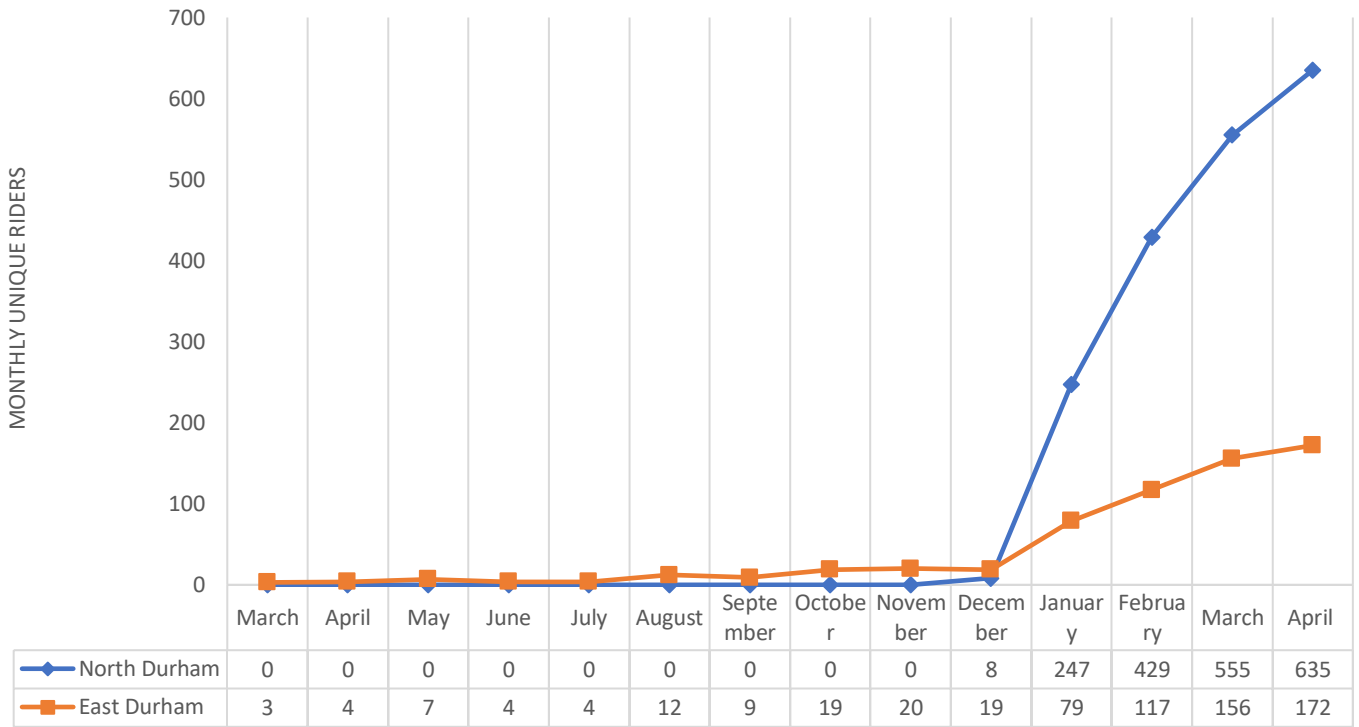
## PROGRAM COST TREND OVER TIME NORTH AND EAST DURHAM



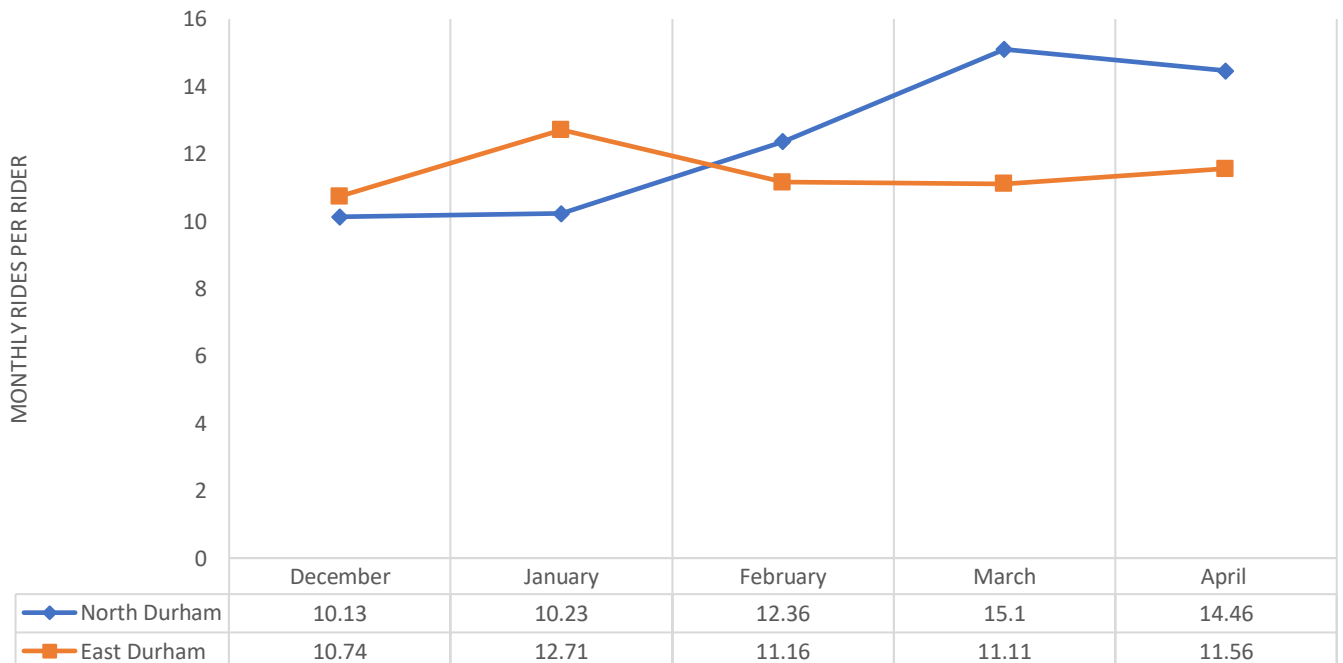
## PROGRAM TRIPS TREND OVER TIME NORTH AND EAST DURHAM



## UNIQUE RIDERS: TREND OVER TIME NORTH AND EAST DURHAM

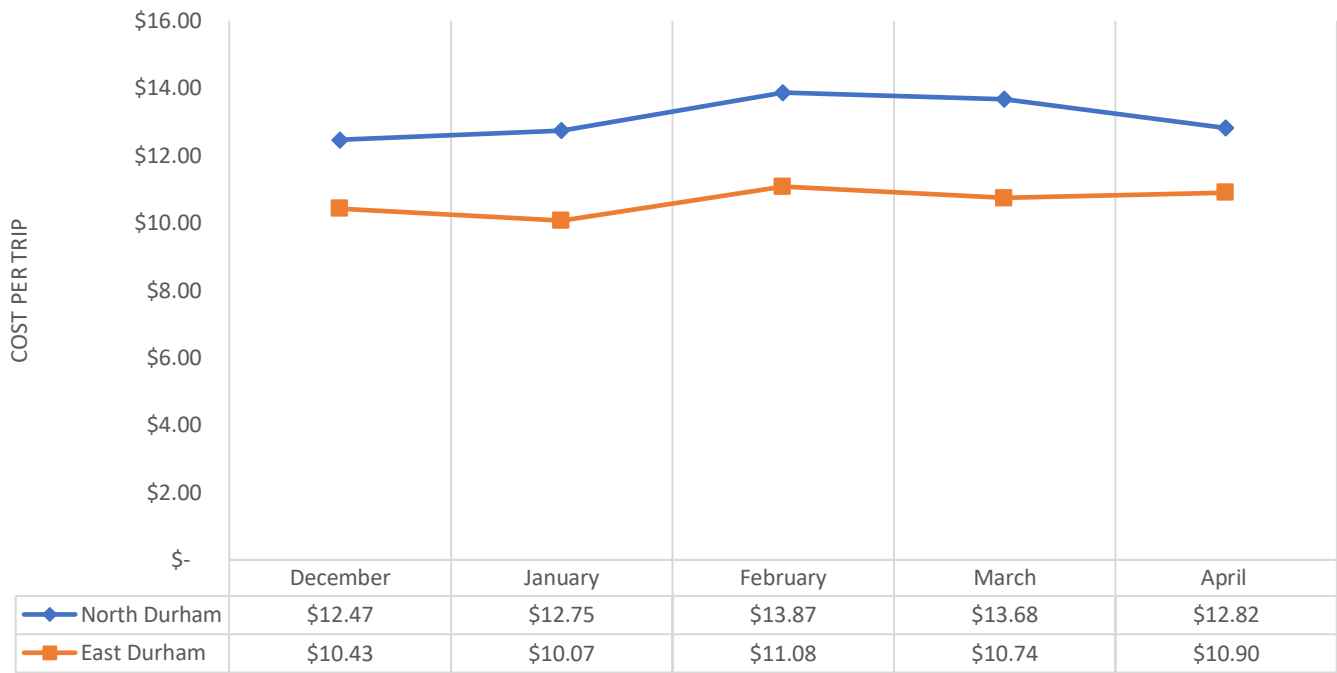


## RIDES PER MONTH PER RIDER: TREND OVER TIME NORTH AND EAST DURHAM





## AVERAGE COST PER TRIP OVER TIME NORTH AND EAST DURHAM



### Superusers and individual rider usage

The pilot program limits riders to 120 rides per month. Most riders consume a small number of trips while a small number of riders are “superusers”. Individual rider behavior was evaluated, including superusers who disproportionately contribute to the monthly number of rides and monthly program cost compared to other riders. From December 1, 2022, through March 31, 2023, of 1,142 unique passengers the following number of trips were consumed:

Figure 9: North Durham Total Unique Rider Trips (December to March)

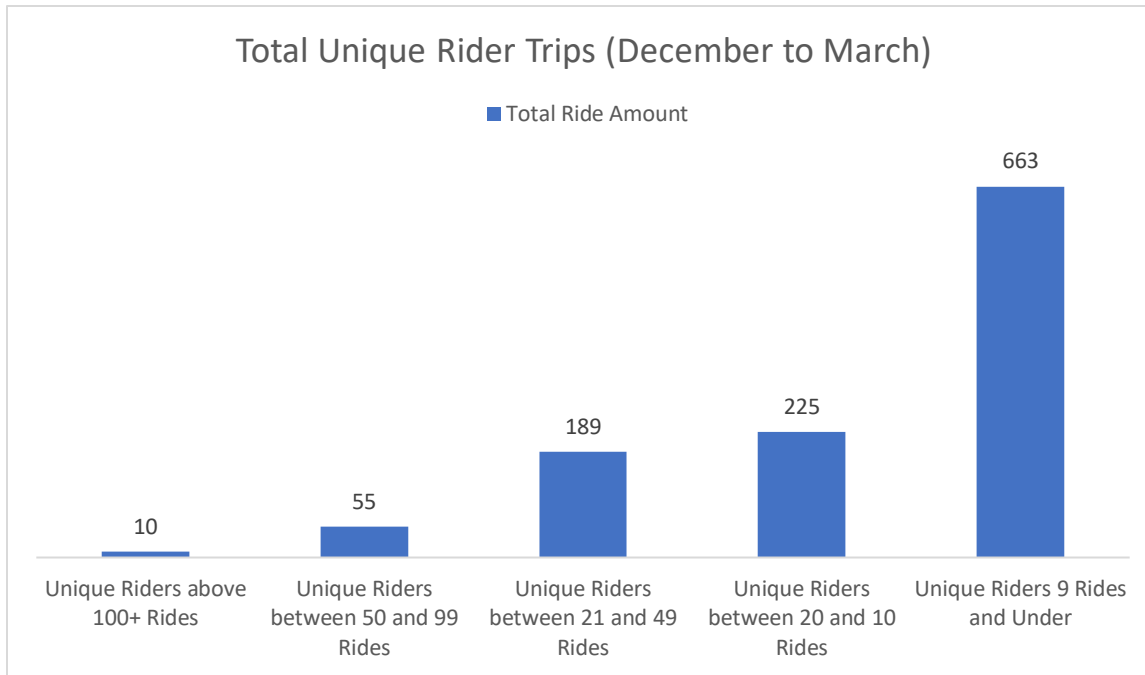


Figure 11: North Durham Microtransit Super Users (December to March)

North Durham Microtransit Super Users All Months			
	Unique Riders	Total Ride Cost	Percentage
Amount of Users Above 100+ Rides	10	\$14,279.52	22.70%
Amount of Users between 50 and 99 Rides	55	\$47,510.81	29.06%
Amount of Users between 21 and 49 Rides	189	\$80,789.86	17.15%
Amount of Users between 20 and 10 Rides	225	\$45,038.53	21.35%
Amount of Users 9 Rides and Under	663	\$32,817.50	9.74%
<b>Total</b>	<b>788</b>	<b>\$220,859.97</b>	<b>100.00%</b>

- 225 riders took 20 rides or fewer each at a total cost of \$77,856.03 (\$87.68/ride)
- 189 riders took between 21 and 49 rides each at a total cost of \$80,789.86 (\$427.46/ride)
- 55 riders took between 50 and 99 rides each at a total cost of \$47,510.81 (\$863.83/ride)
- 10 riders took more than 100 rides each at a total cost of \$14,279.52 (\$1,427.95/ride)

One rider took 228 trips totaling \$3,189.05 in the months of February and March alone.

### Recommended Mitigations

The recommendations below are based on the findings of this evaluation and the previously stated goals of the microtransit pilot program. These goals include: making service more convenient and expanding coverage to areas not service by fixed round; connecting people to life’s activities by improving connections to the fixed route network; designing an equitable service that improves access to

opportunity; and creating a model that will be sustainable, including understanding the financial and technical feasibility of on-demand mobility options.

**Mitigation 1: Change Zone Boundary to Original Zone with Treyburn Addition**

- Reducing the size of the zone to align with the originally-studied area with the Treyburn addition would result in significant cost savings. Using March 2023 data as an example, \$82k of the total \$98k costs were attributable to trips starting and/or ending outside of the originally-studied area.
- This change aligns the service zone with the goal of providing mobility in transit deserts. The Treyburn addition adds employment centers to the service without significantly increasing costs.
- Extending the border of the service zone further south beyond the recommended zone increases the likelihood that the program will replicate existing fixed route service, and significantly increase costs.

Map: Recommended Zone: Originally Proposed Service Zone (Purple) with Proposed Treyburn extension (Blue)

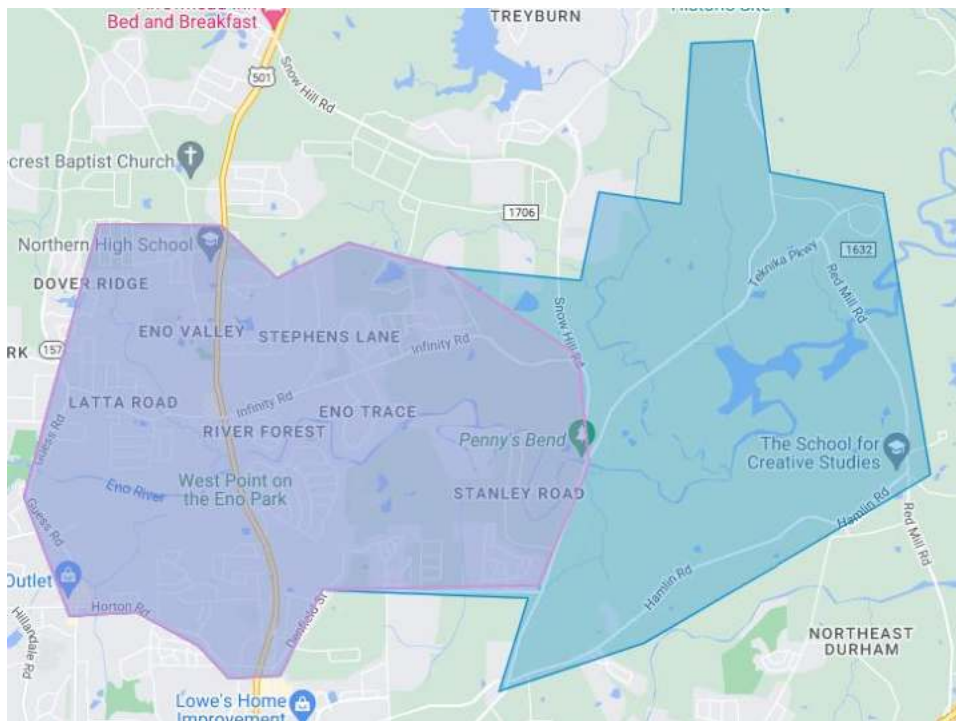


Figure 12: Original vs Current Expanded Service Zone

		Current Expanded Zone vs Original Service Zone Total Cost & Difference				
		December	January	February	March	TOTAL
Expanded	Current Expanded Service Zone Total Ride Cost	\$1,010.29	\$31,255.72	\$73,362.37	\$98,554.67	\$204,183.05
Expanded	Current Expanded Service Zone Total Ridership	81	2453	5292	7270	15096
Original	Original Service Zone Total Ride Cost	\$669.93	\$12,116.20	\$26,409.11	\$16,165.17	\$55,360.41
Original	Original Service Zone Total Ridership	51	899	1732	1111	3793
	Cost Difference	\$340.36	\$19,139.52	\$46,953.26	\$82,389.50	\$148,822.64
	Cost Percentage Difference	33.69%	61.24%	64.00%	83.60%	60.63%
	Ridership Difference	30	1554	3560	6159	11303
	Ridership Percentage Difference	37.04%	63.35%	67.27%	84.72%	63.09%

## **Mitigation 2: Change Monthly Ride Cap from 120 to 60**

- A second recommended mitigation is adjusting the cap on total rides taken by an individual user in both the GoDurham North Zone and GoDurham East Zone from 120 to 60 per month. While ridership and cost has not grown as drastically in the East Zone as in the North Zone, revising these program rules will ensure that both zones can accommodate new ridership. These rules will also create consistency across zones.
- Currently the maximum monthly trips per rider is set at 120. Under the current 120 rides per month cap, riders have little incentive to take the bus with the TNC convenience available. With a lower cap, some riders may use the service more judiciously: taking advantage of other transportation options, such as using fixed-route buses and sharing rides where possible, and saving microtransit rides for situations where there is not a convenient alternative.
- A cap of 60 rides per month would allow more users to access the program within the available budget, incentivize riders to take other available forms of transit, and still ensure that riders to get to and from work every day.
- Lower monthly ride cap options (50 rides per month, 40 rides per month) were considered, but it was determined that the incremental cost savings from these lower caps were not worth the impacts to rider mobility. A cap of 2 rides per day was also considered, but this would be overly-limiting to riders with acute mobility needs over a short period of time.
- Lowering the trip subsidy amount (currently \$25 per trip) was also considered, but it was determined that a lower subsidy cap would not yield significant cost-savings and would introduce the potential for unexpected costs for riders.

## **Estimated Financial Impacts of Mitigations 1 & 2**

Figure 12: Estimated Financial Impacts of Mitigations

North Service Zone	North Zone April Cost Before Mitigation	North Zone April Cost Difference		North Zone April Cost After Mitigation
60 Monthly Trip Cap	\$ 117,309.16	\$ (8,194.63)	-6.99%	\$ 16,101.75
Zone Adjustment	\$ 117,309.16	\$ (98,554.67)	-84.01%	
Conciege Service	\$ 660.75	\$ (570.56)	-86.35%	
<b>Total After Mitigations</b>		\$ (101,868.16)	-86.84%	\$ 16,101.75 13.65%
East Service Zone	East Zone April Cost Before Mitigation	East Zone April Cost Difference		East Zone April Cost After Mitigation
60 Monthly Trip Cap	\$ 21,678.02	\$ (5,634.09)	-25.99%	\$ 17,135.49
Conciege Service	\$ 1,474.88	\$ (383.32)	-25.99%	
<b>Total After Mitigations</b>		\$ (6,017.41)	-25.99%	\$ 17,135.49 74.01%
North and East Zone April Cost After Mitigaton	\$			<b>33,237.24</b>
North and East Zone April Cost After Mitigaton x12	\$			<b>398,846.85</b>
FY24 Budget for East and North Zone	\$			<b>679,355.00</b>

**GoDurham North Zone:** Adjusting the zone size as described above and capping rides at 60 trips per month would have had an impact of \$101,868.16 or 86.35% of program costs for the month of April in the North Zone.

**GoDurham East Zone:** Capping rides at 60 trips per month would have had an impact of \$6,017.41 or 25.99% of program costs for the month of April in the East Zone.

**Our projections, based on April data, suggest that our recommended mitigations would reduce the annual program costs to \$398,846.85 which is within the annual budget of \$679,355.00 and creates appropriate capacity for the program to support growth in ridership within the zones.**

**Mitigation 3: Identify New Service Design to Discourage Duplication of Fixed Route Service**

- In addition to the above recommended mitigations, there may be ways to discourage microtransit riders from booking trips which could otherwise be taken using fixed route or GoDurham ACCESS service. In the creation and configuration of microtransit zones, it may be possible to prohibit trips between specific areas if such a trip could instead use a fixed route service or GoDurham ACCESS. The flexibility of service configurations varies based on the microtransit technology provider, but it is worthwhile to explore what options exist. This option would require a longer-term investigation of technical capabilities and could be implemented in the future.