

MAY 2023



BCRTA TRANSIT PLAN

EXECUTIVE SUMMARY



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Executive Summary

The Butler County Regional Transit Authority (BCRta) Transit Plan is BCRta's first ever transit plan. This plan outlines recommendations to grow and improve BCRta's system based on the changing demographics and transportation needs within Butler County. This plan makes immediate and near-term recommendations for the following aspects of BCRta's service:



New or improved bus routes



Identification of needed bus stop enhancements



Transit funding and financing strategies



Support for existing and future BCRta operations at transit facilities

BCRta started this plan in January 2022 and began this process by analyzing data and transit performance to establish a baseline of BCRta's existing conditions. BCRta engaged the public stakeholder throughout the development of this plan, with two main phases of public engagement. In the first phase of engagement, BCRta listened to the public and stakeholders to learn what is and is not working well with BCRta's service. The outcomes of this engagement, along with findings from the existing conditions analysis, were the basis of a preliminary set of recommendations. In the second phase of engagement, BCRta shared these draft recommendations with the public to gather feedback. Based on the outcomes of the second phase of engagement, BCRta revised the recommendations outlined in the final BCRta Transit Plan.

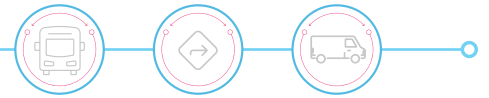


Existing Conditions Analysis

The project team conducted an existing conditions analysis to serve as the baseline for the recommendations made throughout the BCRta Transit Plan. The existing conditions analysis included a market analysis, a service analysis, and a facilities analysis.

MARKET ANALYSIS

The market analysis identified the strongest transit corridors in Butler County and highlighted areas with relatively high transit need. This analysis consisted of two components: Transit Potential, which analyzes population and employment density, and Transit Need, which evaluates socio-economic characteristics. The analysis of Transit Potential and Transit Need was complemented by an analysis of regional travel patterns. The Transit Potential component of the market analysis found that the areas of highest transit potential in Butler County are concentrated in the City of Oxford. There are areas of moderate concentrations in Hamilton, Middletown, and north of Springdale. The Transit Need analysis combined demographic characteristics that measure transit propensity, or the likelihood that someone will take a trip on transit over a different mode, into a Transit Need Index. The Transit Need Index reveals that the populations most likely to need transit services are most prevalent in Oxford, Trenton, Middletown, Hamilton, and Fairfield. The project team conducted an analysis of travel patterns in Butler County using the 2019 regional travel demand model maintained by the Ohio-Kentucky-Indiana Regional Council of Governments (OKI). This model was used to simulate the travel patterns of all individual travelers in the region between traffic analysis zones (TAZ). Key results from this analysis were that high concentrations of trips occur between two locations in the same city, there are high concentrations of trips between Oxford and Hamilton, and the most significant travel flow between Butler County and Cincinnati is between West Chester and Uptown Cincinnati.



SERVICE ANALYSIS

The project team conducted a service analysis to identify the strengths and weaknesses of each BCRTA route and to highlight possible opportunities to improve services in the context of the market analysis and feedback from public and stakeholder engagement. As part of this analysis, the project team created a high-level route profile that describes each route's alignment and service patterns, major markets served, service and operational characteristics, productivity and performance characteristics, along with the route's strengths, weaknesses, and potential opportunities. Strengths of the system include the destinations served, intuitive service schedules, transfer potential, high frequency and ridership in Oxford, and the facilitation of regional travel. Weaknesses of the system include a lack of bidirectional service, poor on-time performance, low ridership/productivity, infrequent service, and unintuitive routing. Opportunities identified included targeted microtransit service, on-time performance improvements, consolidating routes, bidirectional service, and year-round service for key destinations.

FACILITIES ASSESSMENT

In addition to assessing the existing conditions of BCRTA service, the project team completed an assessment of BCRTA facilities. This assessment included the Operations and Maintenance Facility at Moser Court, as well as passenger facilities in Hamilton, Oxford, and West Chester. Some of the key observations at the operations and maintenance facility is that several elements of the facility do not have the capacity to support existing operations, the vehicle storage building at the BCRTA facility was constructed with a short-term vision, which has led to challenges with lighting, drainage, traffic flow, and circulation, and the facility currently lacks some infrastructure, such as a loading dock, laydown space, and bus fueling, which impact BCRTA operations. Key findings related to the passenger facilities are that there are very few of them, those that exist are not currently placed based on a distribution policy and have varying levels of amenities provided, and riders desire more benches, shelters, and real-time transit information. BCRTA's Market Street Station is a passenger facility with some specific challenges due to the location of the facility, such as having the appearance and feel of a dimly lit tunnel and having little ongoing activity in the area and a lack of public restrooms, which has led to some undesirable behavior, such as public urination.

Public and Stakeholder Engagement

Two rounds of engagement were conducted as part of the BCRTA Transit Plan process. The goal of public engagement for the BCRTA Transit Plan was to build and strengthen relationships in the community while gathering stakeholder and public input, responding to comments and concerns, and keeping decision-makers and other stakeholders informed throughout the process.

ROUND 1 ENGAGEMENT

The first round of engagement was done in the spring of 2022 and was intended to be an opportunity for BCRTA to listen to the public and stakeholders regarding what is and is not working well with BCRTA's current service. In this round of engagement, BCRTA conducted surveys and held meetings that were tailored to each stakeholder group and collected comments through an interactive map on the project website. Table 1 summarizes the number of people engaged in Round 1 through each method.

Table 1: Round 1 Engagement Participation by Method

Method	Number of people engaged
Public Survey	308
Operator Survey	20
Decision Maker Survey	13
Business/Employer Survey	12
Interactive Map	10
Focus Groups	21

Round 1 Engagement Takeaways

Several common themes were identified through this round of engagement:

- » BCRTA's strengths
 - » Fare-free system
 - » Generally reliable and on-time service
 - » Bus operators' friendliness and knowledge of routes and riders
- » Areas for improvement for BCRTA service
 - » Focus on serving residents (not just students)
 - » Expanding service to neighborhoods and having the same level of service available during the school year available year-round
 - » More service to cities across the county and to Cincinnati vs. within cities
 - » More service outside of typical commute hours – early mornings, nights, midday, and on weekends
 - » Bi-directional routes so customers do not have to ride the full loop
 - » Increased capacity on certain routes/during certain times of day
 - » Finding more drivers to limit service cuts
 - » Matching schedules, rider app, and operator tablet programming
- » Areas of improvement for BCRTA facilities
 - » Real-time transit information
 - » More shelters
 - » More benches, particularly around apartment complexes and shopping centers
- » Areas of improvement for customer information and customer experience
 - » More accessible/easy-to-understand transit information (e.g., more accuracy on bus tracking app, better information at shelters and online)
 - » Robust advertising around driver positions, routes, and services that BCRTA offers (e.g., BGo, paratransit)
 - » Robust education around how to ride transit (e.g., "learn how to ride days", info panels inside buses, presentations at Miami Freshmen orientation)

ROUND 2 ENGAGEMENT

During the second round of engagement the study team gathered feedback from the public and stakeholders on initial service improvement ideas for BCRTA fixed-route service. This phase of engagement took place during the fall of 2022. Feedback during the second phase of engagement was gathered through surveys, meetings, and comment forms. Table 2 provides a count of participants by method for Phase 2.

Table 2: Phase 2 Public Engagement Participation by Method

Method	Number of people engaged
Public Survey	760
Interactive Map	110
Focus Groups	9
Miami University Discussions	56
Comment Cards	10
Focus Groups	21

Round 2 Engagement Takeaways

Several common themes were identified through this round of engagement.

- » Preference for bi-directional, more direct routing
- » Desire for service directly to Farmer School of Business (from student housing, High Street, the recreation center)
- » Concern about removal of regional service between Oxford and Hamilton and Middletown and Hamilton (service between cities is essential)
- » Support for express service from Middletown to Cincinnati, with some trips direct to downtown and some stopping in Uptown first
- » Would like a direct route from other cities to Cincinnati (71 people expressed this desire, with the most interest expressed from Oxford and Hamilton)
- » Desire for more frequent service and expanded service hours (e.g., early mornings, weekends)



Service Recommendations

The project team developed service recommendations for BCRTA based on the public and stakeholder feedback received during the second round of engagement. These recommendations were also based on travel time information from test driving the route ideas and how the routes could be shortened, lengthened, combined, or modified to make most efficient use of BCRTA resources.

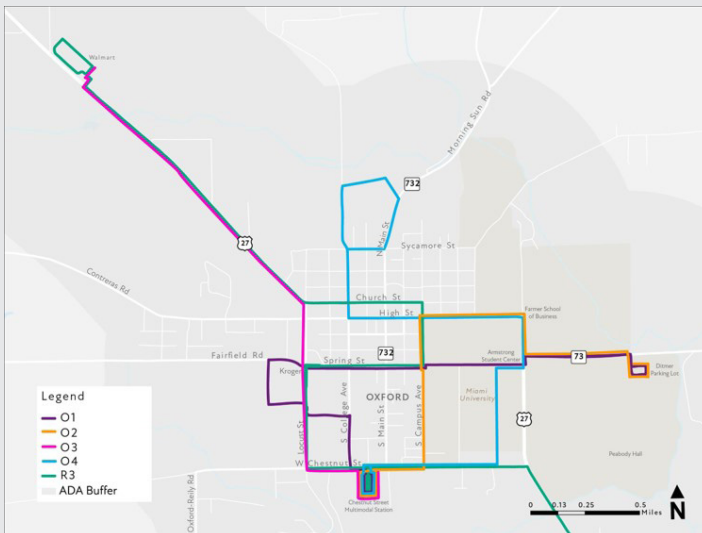
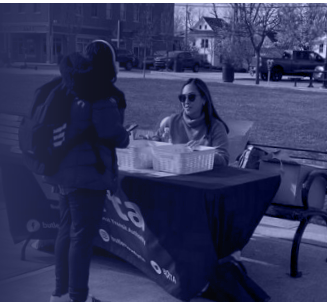


Figure 1: Oxford Proposed Service Recommendations

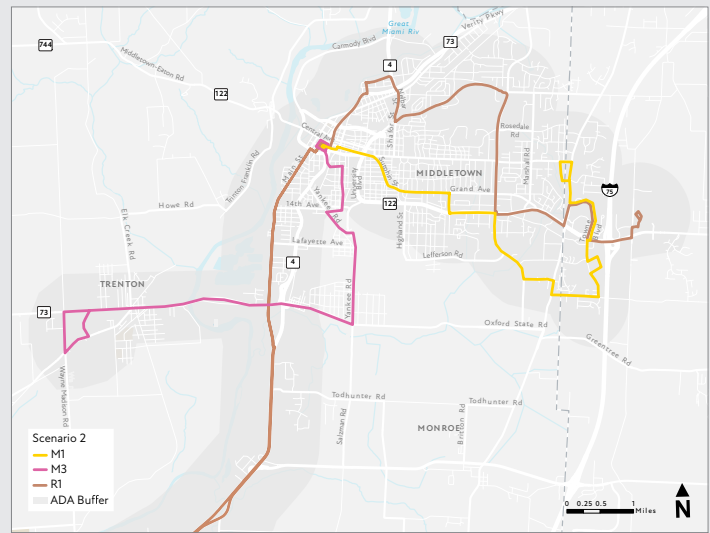


Figure 3: Middletown Proposed Service Recommendations

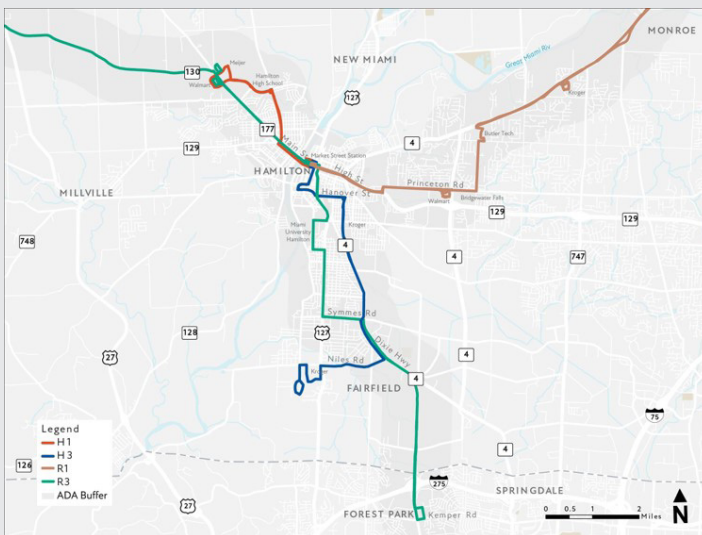


Figure 2: Hamilton/Fairfield Proposed Service Recommendations

Table 3: Proposed Service Recommendation Route Descriptions

Route	Description
O1	Would operate between the Ditmer and Chestnut Fields parking lots in Oxford, via Spring Street and the Miami University campus
O2	Would operate between the Ditmer and Chestnut Fields parking lots in Oxford, via the Farmer School of Business, High Street, and S. Campus Avenue, including fraternity houses and other off-campus housing
O3	Would operate between the Chestnut Fields Parking Lot/Future Chestnut Street Multimodal Station and Walmart on College Corner Pike (US 27)
O4	Would operate between the Chestnut Fields parking lot and Kelly Drive in north Oxford via Maple Street, Patterson Avenue, and High Street
R3	Would provide regional bi-directional service between Oxford and Forest Park, via Miami University, Hamilton, and Fairfield
H1	Would provide bi-directional service between Market Street Station in downtown Hamilton and Walmart on Main Street, via Kettering Health Hamilton, Hamilton High School, and Meijer
H3	Would provide bi-directional service between Market Street Station in downtown Hamilton and Southgate Boulevard in Fairfield, via the Erie Boulevard/Dixie Highway corridor
R1	Would provide regional bi-directional service between Hamilton and Middletown, via several Butler Tech Campuses located along the Hamilton Middletown Road (Route 4) corridor
M1	Would provide bi-directional service between Middletown Transit Station and Central Avenue in Middletown, via Walmart and Meijer on Towne Boulevard
M3	Would provide bi-directional service between Middletown Transit Station and Wayne Madison Road in Trenton, via the Baltimore Street, Yankee Road, and Oxford State Road (Route 73) corridors
42X/42XU	The proposed modifications to this route include extending the route further north to Meijer in Middletown and adding a second variant called 42XU that would operate between Butler County and downtown Cincinnati via Martin Luther King Drive in order to provide more direct service to the University of Cincinnati and hospitals near the university

MICROTRANSIT RIDESHARE PARTNERSHIP POTENTIAL

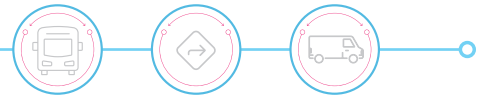
BCRTA's BGo service provides curb-to-curb microtransit service throughout Butler County. This service can be expensive to provide and is constrained by the number of BCRTA drivers available, so project team explored the potential for BCRTA to partner with rideshare companies to provide this service and the financial impacts of these potential partnerships.

Microtransit Rideshare Partnership Examples

The project team looked at other transit agencies that currently have partnerships with rideshare companies to gather insight on the operations and finances of these partnerships. These include Pinellas Suncoast Transit Authority, Greater Dayton Regional Transit Authority, and Dallas Area Rapid Transit. Each of these agencies operates their partnership differently and has a different fare structure.

Benefits and Drawbacks of Microtransit Rideshare Partnerships

There are both benefits and drawbacks of partnering with rideshare organization to provide microtransit service. Some of the benefits include providing more capacity for microtransit service, potentially being more cost-effective, and being relatively easy to implement. Some of the drawbacks include that the supply of drivers is not guaranteed and may be limited, there may be some loss of control with pricing, data or communications, and it may be confusing or less comfortable to some riders.



Potential Rideshare Partnership and Payment Options

There are various ways that transit agencies can partner with rideshare companies to provide microtransit service. Some example of partnership options include:

- » Have all microtransit service operated by BCRTA
- » Have microtransit service operated by BCRTA and supplemented by rideshare companies
- » Have microtransit service operated by BCRTA and supplemented by rideshare companies during existing hours of service and operated by rideshare companies outside of currently operated hours
- » Have microtransit service operated by BCRTA during existing hours of service and operated by rideshare companies outside of currently operated hours
- » Have all microtransit service operated by rideshare companies

Similarly, there are various payment options that transit agencies implement with their microtransit rideshare partnerships. Example of these include:

- » A promo code is provided for a discounted rideshare trip
- » The rider pays the transit fare, and the transit agency pays for any additional cost of rideshare trip
- » A promo code is provided for the full cost of the rideshare trip

It will be advantageous as BCRTA coordinates with the other transit agencies involved with NEORide to discuss rideshare partnerships and payment options that the agencies can explore and implement together.

Facilities Recommendations

The project team developed recommendations for BCRTA's operations and maintenance facility and passenger facilities to address the challenges identified in the existing conditions analysis.

OPERATIONS AND MAINTENANCE FACILITY RECOMMENDATIONS

The project team explored four potential concepts to address the existing operations and maintenance facility challenges.

These options included:

- » **Option 1:** Construct separate materials storage building
- » **Option 2:** Add 2nd floor to administration building
- » **Option 3:** Construct new maintenance facility and expand the administration area
- » **Option 4:** Expand administration to existing maintenance area and construct separate maintenance and materials storage buildings

Based on the benefits and drawbacks of these options, the project team recommends BCRTA explore Option 3 further. While this option likely more expensive than Option 1 and Option 2, it is better aligned with current expansion work underway at the location and would lead to a more effective and functional use of the site.

PASSENGER FACILITY RECOMMENDATIONS

The project team developed passenger facility recommendations for BCRTA at a high-level as well as recommendations specific to the Market Street Station.

Passenger Facility Distribution

The Federal Transit Administration requires that transit agencies develop a policy regarding the distribution and siting of transit amenities, including seating (benches), shelters, provision of information (signs, maps, schedules, real-time signage), and waste receptacles. Based on natural breaks in BCRTA ridership by stop as well as the distribution policies of similar sized systems, the following thresholds are recommended for distribution of transit amenities within the BCRTA system:

- » Benches at stops with 15 or more boardings per day
- » Shelters with waste receptacles at stops with 25 or more boardings per day
- » Real-time signage and bicycle parking at stops with 100 or more boardings per day

Given that these would require much more infrastructure than BCRTA currently provides, it may be beneficial to set the thresholds higher and work towards these levels as resources are available.

Market Street Station Recommendations

The project team identified several opportunities for improving the environment at Market Street Station. They included additional signage, lighting and light colored materials, activating the space, adding restrooms, and placemaking at the station.

Economic and Fiscal Impact

ECONOMIC IMPACT

The University of Cincinnati Economics Center completed an economic impact analysis to measure the effect of an BCRTA's expenditures on its surrounding community. The total economic impact is the sum of the direct and indirect impacts. The direct impact is the amount spent directly by the organization that is retained within the local economy. The indirect impact is the additional economic impact resulting from the increased demand, income, and jobs within other industries, or the inter-industry linkages. The direct impact has ripple effects due to increased household income and spending, which are referred to as induced impacts. Induced impacts are reported within indirect impacts for the entirety of this report.

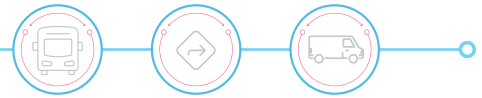
Between 2023 and 2033, BCRTA will directly generate \$67.2 million in economic output in Butler County, which will lead to further indirect economic output of \$30.0 million. The capital and operations expenditures of BCRTA will directly support 1,158 jobs with earnings of \$39.7 million. On average, 105 jobs with earnings of \$3.6 million will be directly supported by BCRTA each year. Indirectly, the capital and operations expenditures of BCRTA will support an additional 217 jobs with \$11.7 million in earnings in Butler County. Over this 11-year period, the capital and operations expenditures of BCRTA will generate \$97.2 million in economic output and support 1,375 jobs with earnings of \$51.4 million. This equates to an average annual impact in Butler County of more than \$8.8 million in economic output, 125 jobs, and \$4.7 million in earnings.

FISCAL IMPACT

The fiscal impact analysis estimates the subsequent impacts on state and local tax revenue of the capital and operations expenditures of BCRTA. State and local earnings tax revenue were calculated for the earnings, directly and indirectly, supported, as well as the state and local sales tax revenue resulting from the spending of those earnings. It was assumed that the current tax rates would remain unchanged in the future.

The planned capital and operations expenditures of BCRTA will generate a total of \$2.6 million in state and local tax revenue between 2023 and 2033. The capital and operations expenditures of BCRTA will directly generate more than \$692,000 in state earnings tax revenue, nearly \$784,500 in local earnings tax revenue, approximately \$457,000 in sales tax revenue for the State of Ohio, and an estimate \$59,600 in sales tax revenue for Butler County. The operations and capital expenditures of BCRTA will indirectly lead to an additional \$253,800 in state earnings tax revenue, \$214,600 million in local earnings tax revenue, \$97,000 in state sales tax revenue, and 12,700 in sales tax revenue for Butler County. On average, the capital and operations expenditures of BCRTA will have an annual fiscal impact of approximately \$233,800 between 2023 and 2033.





Financial Plan

FUNDING ANALYSIS

A variety of different funding sources are available to BCRTA at the federal, state, and local levels. The project team completed a funding analysis that documented the funding sources that BCRTA currently leverages and other potential funding sources that BCRTA could seek in the future as it looks to expand its system.

Current BCRTA Funding

Federal and state funding make up the majority of BCRTA's current operating revenue. BCRTA relies on federal funding for approximately 50 percent of its operating revenues and state funding for approximately four percent of its operating revenue. BCRTA secures additional funding through local sources, with the top two sources being the Transit Development Program (Miami University) and Partnership Transit Revenue (City of Middletown), which comprise 32 percent of the total operating revenue.

Future Funding and Financing Options

The project team inventoried potential federal, state, local, and direct revenue options that BCRTA could pursue in the future. The project team applied two evaluation criteria to these sources to define the general applicability of each funding and financing option to BCRTA:

- » **Revenue** – A measure of the magnitude of funding possible under each option
- » **Stability** – The likelihood that revenues under each option stay consistent year-to-year

Identifying potential local transit funding sources was of particular importance for the project team because additional local funding is required to leverage any additional federal funding. This is because federal funding requires a local match, and BCRTA is already leveraging all of its existing local funding as local match. Permissive sales and use tax was found to be the optimal potential local funding source based on the magnitude of funding it can provide and its stability. Another benefit of funding transit with permissive sales and use tax is that the burden of the tax does not solely fall on residents, since those visiting the county for shopping or sporting events also pay sales tax. Eleven transit agencies in Ohio already leverage the benefits of sales tax for transit revenue.

BUTLER COUNTY SALES TAX

Currently, BCRTA is not able to obtain additional federal funding to support existing or increased service until the agency secures additional local funding. Without additional local funding, BCRTA will not be able to maintain its existing service as the costs of service are outpacing the growth in funding. One of the mechanisms available to BCRTA to generate increased local funding that can be leveraged for additional federal funding is an increase to the local sales tax rate. An increase to the local sales tax rate would enable BCRTA to collect revenue from all spending subject to sales tax, including from non-County residents.

The University of Cincinnati Economics Center conducted a sales tax forecast of Butler County's monthly and annual sales tax revenues including estimated impacts on collections based on two scenarios. The baseline county rate is 0.75 percent, or three-quarters of one percent, and represents the baseline scenario. The alternative scenario models a marginal increase of 0.25 percentage points, resulting in a total local rate of 1.00 percent. An increase to the Butler County sales tax rate of 0.25 percentage points will result in additional sales tax revenues ranging from \$19.16 million in 2023 to \$20.45 million in 2032. In total, increasing the local sales tax rate from 0.75 percent to 1.00 percent will generate approximately \$198.40 million in additional revenue.

FINANCING RECOMMENDATIONS

Partnership between BCRTA staff, the BCRTA board, and local policymakers will be critical in discussions regarding the availability of BCRTA service and the local funding required to pay for it. If these partners further explore the potential of a sales tax to support transit in Butler County, it would be beneficial to engage the public and stakeholders regarding if this funding option is supported, what percentage sales tax is most supported, and if the sales tax should benefit roads in addition to transit.



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