

An Economic Analysis of Public Transit Service and Proposed Expansion in Butler County

July 9, 2026

Preliminary Report

Table of Contents

List of Tables	3
List of Figures	4
Executive Summary	5
Introduction	8
Background on BCRTA	8
Study Area	8
Methodology	9
Data Sources	9
Analytical Methods	9
Economic Impact Analysis	9
Fiscal Impact Analysis	10
Job Access Analysis	10
Peer County Comparison	10
Sales Tax Forecast.....	10
Resident and Outside Share Estimation	11
Resident Persona Construction	11
Reduced Automobile Travel Analysis	11
Community Access Analysis	12
Current Research: Benefits of Public Transit Expansion	13
Job Accessibility	13
Environmental Benefits and Traffic Congestion.....	13
Health Care Access.....	14
Food Deserts and Healthy Food Access	15
Education Access.....	15
Current and Proposed Transit Service	17
Current Transit System	17
Proposed Service Plan.....	19
Ridership, Travel Patterns, and Transit Demand	21
Transit Demand in Butler County.....	21
Population Trends and Growth Patterns	21
Employment and Business Trends.....	23
Commuting Trends	26
Ridership and Travel Patterns	27
Fixed-Route and CincyLink Ridership.....	27

Geographic Distribution of Fixed-Route and CincyLink Ridership	27
On-demand Trip Profile	29
Rider Experience and Consumer Sentiment.....	31
Comparison with Similar Counties	33
Job Access Analysis	35
Current Job Accessibility	35
Proposed Job Accessibility	36
Comparison of Current and Proposed Job Accessibility	39
Geographic Change in Job Accessibility	40
Industry Change in Job Accessibility	40
Job Accessibility by Service Span and Frequency	41
Economic Impacts of BCRTA	44
Current Expenditure Impacts	44
Operations Expenditures	44
Capital Expenditures	45
Revenue Structure.....	46
Total Combined Impacts.....	46
Proposed Service Plan Economic Impacts, 2027 to 2029	47
Operations Expenditures	47
Capital Expenditures	48
Revenue Structure and Funding Gap	50
Total Combined Impacts.....	51
Sales Tax Forecast and Burden Analysis	53
Sales Tax Forecast	53
Resident and Outside Shares of County Sales Tax Revenue	56
Resident Personas and Direct Tax Burden.....	57
0.25 Percentage-Point Scenario.....	57
0.30 Percentage-Point Scenario.....	58
0.50 Percentage-Point Scenario.....	59
Broader Economic and Community Value of Transit	61
Countywide Travel, Cost, and Environmental Benefits	61
Estimated Reduction in Vehicle Miles Traveled.....	61
Potential Congestion and Travel Time Effects	62
Potential Household Transportation Cost Savings.....	62
Potential Fuel Savings and Environmental Effects	62

Community Access Benefits	63
Food Access.....	63
Health Care Access	64
Education Access.....	65
Conclusion	67
References	68

List of Tables

Table 1: Current Revenue Miles and Revenue Hours by Service Category	18
Table 2: Employment by Industry Sector in Butler County, 2010 to 2024.....	24
Table 3: Projected Employment by Industry Sector in Butler County, 2024 to 2034.....	25
Table 4: Top Stops by Passenger Activity, 2025	29
Table 5: Service Quality Ratings, 2025	32
Table 6: Selected County Travel Indicators	33
Table 7: Selected Transit System Performance Indicators	34
Table 8: Current Jobs and Establishments Accessible by County, 2025	35
Table 9: Current Job Accessibility in Butler County, 2025	35
Table 10: Proposed Job Accessibility by County.....	37
Table 11: Proposed Job Accessibility in Butler County	37
Table 12: Current and Proposed Accessible Jobs Summary.....	39
Table 13: Current and Proposed Accessible Jobs by County	39
Table 14: Current and Proposed Accessible Establishments by BCRTA, by County	39
Table 15: Current and Proposed Accessible Jobs by Industry Sector in Butler County	41
Table 16: Jobs Accessible by Service Period in Butler County	42
Table 17: Jobs Accessible by Frequency Tier in Butler County	42
Table 18: Current and Proposed Accessible Jobs by Service Period in Butler County	42
Table 19: Operations Expenditures of BCRTA, FY2026 (2025\$)	44
Table 20: Economic Impact of Operations Expenditures in Butler County, FY2026 (2025\$).....	44
Table 21: Fiscal Impact of Operations Expenditures, 2026 (2025\$)	45
Table 22: Capital Expenditures of BCRTA, FY2026 (2025\$).....	45
Table 23: Economic Impact of Capital Expenditures in Butler County, FY2026 (2025\$)	45
Table 24: Fiscal Impact of Capital Expenditures, FY2026 (2025\$)	46
Table 25: Revenue Structure of BCRTA, 2026 (2025\$).....	46
Table 26: Current System Total Combined Economic Impact in Butler County, FY2026 (2025\$)	46
Table 27: Current System Total Combined Fiscal Impact, 2026 (2025\$)	47
Table 28: Operations Expenditures of BCRTA, 2027 to 2029 (2025\$)	47
Table 29: Economic Impact of Operations Expenditures in Butler County, 2027 to 2029 (2025\$)	48
Table 30: Fiscal Impact of Operations Expenditures, 2027 to 2029 (2025\$)	48
Table 31: Capital Expenditures of BCRTA, 2027 to 2029 (2025\$)	49
Table 32: Economic Impact of Capital Expenditures in Butler County, 2027 to 2029 (2025\$).....	49
Table 33: Fiscal Impact of Capital Expenditures, 2027 to 2029 (2025\$)	50
Table 34: Revenue Structure of BCRTA, 2027 to 2029 (2025\$).....	50
Table 35: Proposed Service Plan Funding Gap, 2027 to 2029 (2025\$)	51
Table 36: Total Combined Economic Impact in Butler County, 2027 to 2029 (2025\$)	51
Table 37: Proposed Service Plan Total Combined Fiscal Impact, 2027 to 2029 (2025\$).....	52

Table 38: Butler County Sales Tax Revenue, 2016 to 2025 (Nominal\$)	53
Table 39: Butler County Sales Tax Forecast, 2026-2035 (Nominal\$).....	54
Table 40: Butler County Tax Base and Naïve BCRTA Sales Tax Estimates, 2026-2035 (Nominal\$)	54
Table 41: Butler County Sales Tax Forecast, 0.25 Percentage-Point Scenario, 2026-2035 (Nominal\$).....	55
Table 42: Butler County Sales Tax Forecast, 0.30 Percentage-Point Scenario, 2026-2035 (Nominal\$).....	55
Table 43: Butler County Sales Tax Forecast, 0.50 Percentage-Point Scenario, 2026-2035 (Nominal\$).....	56
Table 44: Butler County Resident and Outside Share of County Sales Tax Revenue, 2024 (Nominal\$)	56
Table 45: Estimated Resident and Outside Share of Incremental County Sales Tax Revenue by Scenario (Nominal\$).....	57
Table 46: Direct Annual Sales Tax Burden by Persona, 0.25 Percentage-Point Scenario (Nominal\$).....	58
Table 47: Direct Annual Sales Tax Burden by Persona, 0.30 Percentage-Point Scenario (Nominal\$).....	59
Table 48: Direct Annual Sales Tax Burden by Persona, 0.50 Percentage-Point Scenario (Nominal\$).....	60
Table 49: Key Assumptions and Derived Measures for Reduced Automobile Travel Analysis.....	61
Table 50: Estimated Congestion Cost Savings from Transit Use (2024\$)	62
Table 51: Estimated Household Transportation Cost Savings from Reduced Vehicle Miles Traveled (2024\$)	62
Table 52: Estimated Fuel Savings, Fuel Cost Savings, and Carbon Dioxide Emissions Avoided (2024\$)	63

List of Figures

Figure 1: Study Area and Regional Context	8
Figure 2: Current Fixed-Route and Commuter Service Network.....	17
Figure 3: Kernel Density of Current BGo and BCare Activity, 2025	18
Figure 4: Proposed Fixed-Route and Commuter Service Network	19
Figure 5: Current and Proposed Revenue Miles and Revenue Hours by Service Category	20
Figure 6: Butler County Population Trend, 2010 to 2034	21
Figure 7: Population Concentration in Butler County, 2024.....	22
Figure 8: Population Change in Butler County, 2010 to 2024	22
Figure 9: Total Employment in Butler County, 2010 to 2034.....	23
Figure 10: Projected Job Change, Butler County, 2024 to 2034.....	23
Figure 11: Commuting Mode Share in Butler County, 2010 to 2024.....	26
Figure 12: Travel Time to Work in Butler County, 2024.....	26
Figure 13: Passenger Boardings and Alightings by Time of Day	27
Figure 14: Geographic Distribution of Passenger Activity by Stop	28
Figure 15: On-Demand Trips by Purpose, 2025.....	29
Figure 16: On-Demand Trips by Time of Day, 2025	30
Figure 17: On-Demand Trips by Day of Week, 2025	30
Figure 18: On-Demand Trip Destinations, 2025	31
Figure 19: Overall Satisfaction Distribution, 2025.....	32
Figure 20: Selected Service Ratings: BGo Riders vs. Other Riders, 2025	33
Figure 21: Jobs Accessible Within 0.25-Mile of the Current Transit System	36
Figure 22: Jobs Accessible Within 0.25-Mile of Proposed Service Plan	38
Figure 23: Accessible Job Change by Butler County Community, 2025	40
Figure 24: Food Access and Transit Coverage in Butler County	64
Figure 25: Health Care Access and Transit Coverage in Butler County	65
Figure 26: Education Access and Transit Coverage in Butler County	66

Executive Summary

Butler County Regional Transit Authority (BCRTA) engaged the Economics Center to conduct an economic analysis of its current transit system and proposed service plan. This report examines how the agency supports mobility in Butler County today and how an expanded system could affect transit service, ridership, job access and economic activity.

Current and Proposed Transit Service

BCRTA's existing system includes fixed-route service, CincyLink commuter express service, BGo curb-to-curb service, and BCare Americans with Disabilities Act (ADA) paratransit service. Under the existing system, BCRTA operates 1,507,190 annual revenue miles and 86,103 annual revenue hours. The expanded service plan is projected to reach 4,750,210 annual revenue miles and 276,831 annual revenue hours. This represents a 215.2 percent increase in annual revenue miles and a 221.5 percent increase in annual revenue hours. The expanded plan is expected to extend service span, strengthen weekend service, and increase service intensity across key corridors.

Ridership, Travel Patterns, and Transit Demand

Transit demand in Butler County is increasing. Population is projected to grow from 392,876 in 2024 to 427,216 in 2034, while employment is projected to grow from 221,331 to 240,441 over the same period. Although Butler County is a highly automobile-dependent suburban county, the fixed-route network in the current BCRTA system recorded more than 660,000 passenger boardings in 2025. BGo and BCare trip data also show broad demand for employment, personal, medical, and Safe Ride purposes, with more than 82,000 annual trips provided for local residents.

Job Access

Supporting work trips for local residents is one of BCRTA's primary service functions. The current network provides access to 51,581 Butler County jobs and 2,502 establishments, equal to 32.0 percent of all County jobs and 28.6 percent of all County establishments. It also connects local residents to job hubs in neighboring counties, including 4,747 jobs in Warren County and 54,813 jobs in Hamilton County.

Under the proposed service plan, fixed-route and CincyLink access in Butler County would reach 66,003 jobs and 2,978 establishments, equal to 40.9 percent of all County jobs and 34.0 percent of all County establishments. This represents an additional 14,422 accessible Butler County jobs, or a 28.0 percent increase. The largest increases would occur in West Chester Township, the City of Fairfield, the City of Hamilton, and Liberty Township. The proposed service plan would also produce its strongest relative improvements beyond daytime service, especially during early morning, late night, and weekend periods.

Economic and Fiscal Impact¹

BCRTA supports the Butler County economy through its operations and capital expenditures. Under the 2026 budget for the current system, BCRTA's operations and capital expenditures directly generated nearly \$7.0 million in economic output in Butler County, which led to an additional \$3.2 million in indirect output. In total, the current system generated \$10.1 million in economic output, supported 202 full-

¹ All dollar values in the economic and fiscal analysis are reported in 2025 dollars unless otherwise noted.

time equivalent (FTE) jobs, and produced \$13.4 million in wages in 2026. BCRTA's operations and capital expenditures generated \$777,549 in state and local tax revenue.

During the 2027 to 2029 expansion period, BCRTA's proposed operations and capital expenditures would generate \$19.7 million in economic output, support 973 job-years, and produce \$60.9 million in wages over the 2027 to 2029 period. Total state and local tax revenue would reach \$3.6 million over the same period.

However, the expanded plan would require additional funding. After accounting for projected revenues, the remaining funding gap is estimated at \$23.2 million in 2027, \$22.4 million in 2028, and \$23.2 million in 2029.

Sales Tax Forecast and Burden Analysis²

A county sales tax increase could help close the projected funding gap. The Economics Center forecasted potential county sales tax revenues and analyzed the resulting tax burden for local residents. The sales tax forecast shows that Butler County sales tax revenue is projected to increase from \$66.2 million in 2026 to \$93.6 million in 2035. Under the current planning scenario, a 0.30 percentage-point increase would raise the County rate to 1.05 percent and the total combined sales tax rate in Butler County to 6.80 percent. This scenario would support an estimated \$26.3 million in BCRTA sales tax revenue in 2026 and \$37.2 million in 2035.

Using 2024 Butler County sales tax collections, the resident share analysis estimates how the current planning scenario would be divided between Butler County residents and consumers from outside Butler County. Butler County households account for 36.9 percent of the County sales tax base, while 63.1 percent comes from spending by consumers from outside Butler County. Applying these shares to 2024 collections, a 0.30 percentage-point increase would generate an estimated \$23.8 million in incremental annual revenue. Approximately \$8.8 million would be paid by Butler County residents, while the remaining \$15.0 million would come from outside Butler County. A taxpayer persona analysis shows that the incremental burden is modest across all resident groups. Employed adults with at least a bachelor's degree face the highest annual burden, at \$34.09, while employed adults aged 18 to 25 are expected to experience the lowest, at \$18.41.

Broader Economic and Community Value

If the proposed service plan is implemented, BCRTA's expanded service would generate broader transportation and community benefits. Under the proposed plan, annual vehicle miles traveled would be reduced by approximately 3.3 million miles. Total annual benefits would include \$1.3 million in congestion cost savings, \$3.5 million in household transportation cost savings, 147,328 gallons in fuel savings, and 1,308 metric tons in avoided carbon dioxide emissions.

The community access analysis shows that the current fixed-route network reaches 18 of the 19 census tracts identified as low-income and low-access to grocery stores in Butler County, with the remaining tract covered by mapped on-demand food-related trip activity. There are 49 health care destinations outside the current fixed-route watershed, but all are reached when BGo and BCare health care-related trips are included. Education access is strong overall, with only one destination remaining outside both

² All dollar values in the sales tax forecast and burden analysis are reported in nominal dollars unless otherwise noted.

the fixed-route and on-demand education trips. Under the proposed service plan, these remaining service gaps could be addressed.

Together, these findings show that BCRTA supports Butler County not only through direct economic and fiscal effects, but also through expanded mobility, improved access to essential destinations, and reduced dependence on private vehicles.

Introduction

Butler County Regional Transit Authority (BCRTA) engaged the Economics Center to conduct an updated economic analysis of its current transit system and proposed service plan. This study builds on the 2023 Butler County Regional Transit Authority Economic Impact and Sales Tax Forecast report. The updated analysis evaluates the value that BCRTA provides today and estimates how a more connected system could affect Butler County's economy, job access, travel behavior, and community outcomes.

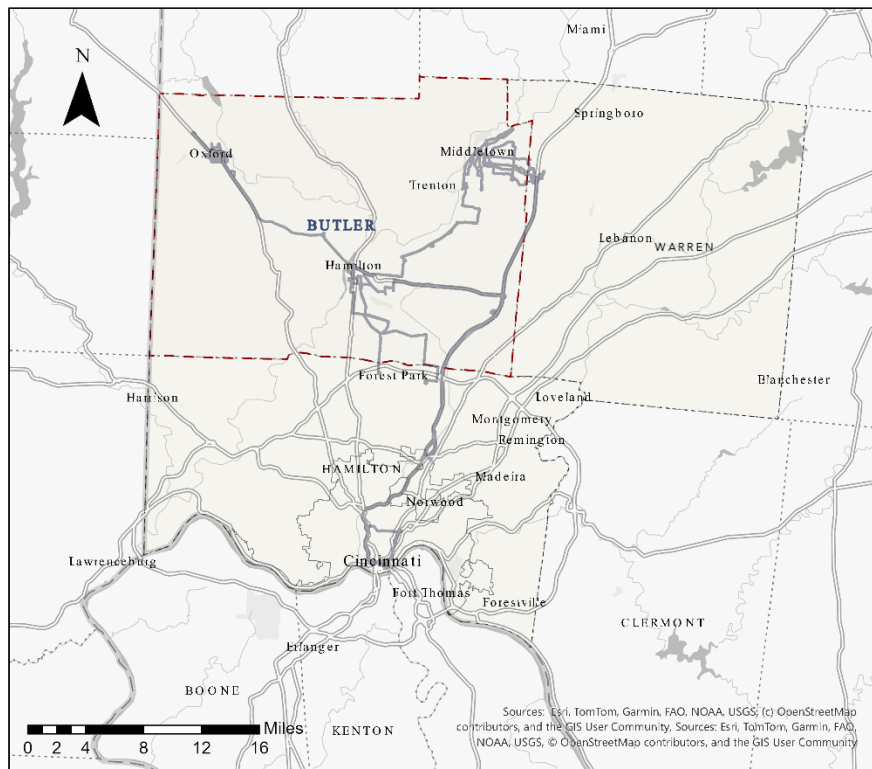
Background on BCRTA

BCRTA is the public transit provider for Butler County and operates as a regional transit authority. Its service structure includes fixed-route service, commuter service, and on-demand service. Fixed-route service provides local scheduled transit within Butler County. Commuter service, provided through CincyLink, connects Butler County with Uptown Cincinnati and Downtown Cincinnati. On-demand service includes BGo curb-to-curb service and BCare paratransit service for riders eligible under the Americans with Disabilities Act (ADA) and extends access for trips that are not well served by the fixed-route network.

Study Area

This study focuses primarily on Butler County, Ohio, as shown in Figure 1. Selected portions of the analysis extend beyond Butler County to reflect BCRTA's connections to the surrounding labor market, especially to Warren County and to Hamilton County through commuter service.

Figure 1: Study Area and Regional Context



Source: U.S. Census Bureau TIGER/Line Shapefiles (2024); Esri basemap; Economics Center analysis.

Methodology

This report uses multiple analytical methods to evaluate BCRTA's current transit system, estimate the effects of the proposed service plan, and assess the broader economic, fiscal, and community conditions that shape transit's role in Butler County. The following subsections summarize the data sources and methods used in the major parts of the analysis. Because the report relies on current data, proposed service plans, and modeled assumptions, the results should be interpreted as planning estimates rather than exact predictions.

Data Sources

BCRTA provided the core project data used throughout the analysis. These materials include operating and capital expenditure data, revenue data by source, ridership data, current and historical route and stop spatial files, proposed route and stop files, service characteristics such as frequency and service span, strategic planning materials, and rider survey results. Route and stop spatial files were provided in General Transit Feed Specification (GTFS) format for both the current and proposed networks. Together, these data provide the project-specific foundation for evaluating the current system and the proposed service plan.

External data were used to place the BCRTA system in its broader county and regional context. Population, labor market, and commuting conditions were drawn primarily from Lightcast, Ohio ES-202 (Quarterly Census of Employment and Wages), and the American Community Survey (ACS). Additional public data were used for selected topics, including the National Transit Database (NTD) for benchmarking; Ohio Department of Taxation data for sales tax collections; Ohio Department of Transportation data for vehicle travel; Regional Price Parities (RPPs) for cross-region cost comparison; the 2023–2024 Midwest Consumer Expenditure Survey for household spending patterns; USDA Food Access Research Atlas data for food access; U.S. Census Bureau TIGER/Line Shapefiles and Esri basemaps for mapping; and published sources for congestion, fuel use, emissions, automobile substitution, and vehicle operating costs.

Analytical Methods

This study relies on a combination of BCRTA-provided data, public data, and project-specific assumptions to evaluate the current system and the proposed service plan. The following subsections describe the major data sources and analytical approaches used throughout the report. Because the analysis uses current data, proposed service plans, and modeled assumptions, the results should be interpreted as planning estimates rather than exact predictions. All monetary values are presented in 2025 dollars unless otherwise noted.

The report combines descriptive statistics, mapping, trend analysis, benchmarking, economic impact modeling, forecasting, and scenario-based calculations to evaluate current conditions and proposed service changes. Different sections rely on different methods, but the overall framework is consistent: the analysis first describes current conditions and then estimates how the proposed service plan would change access, travel patterns, economic activity, and potential funding outcomes. More detailed methods for each topic area are described below.

Economic Impact Analysis

An economic impact analysis measures the effect of an organization'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 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.

The Economics Center used BCRTA expenditure data for fiscal year 2026 and for the proposed service plan period from 2027 to 2029. Operations and capital expenditures were evaluated separately and then combined into total system impacts. Economic leakage refers to the percentage of purchases for products and services that cannot be met immediately within the local economy, and thus must be imported from outside the local economy. Leakage estimates were obtained from Lightcast. Economic impacts were then estimated using a Butler County input-output framework with Lightcast multipliers to calculate direct and indirect output, jobs, and wages associated with BCRTA's expenditures. Jobs are reported as full-time equivalent (FTE) jobs for single-year results, while cumulative multi-year totals are reported as job-years.

Fiscal Impact Analysis

BCRTA expenditures also generate state and local tax revenue through the wages and taxable spending they support. The fiscal impact analysis estimates income tax revenue for the State of Ohio and the City of Hamilton and sales tax revenue for Butler County and the State of Ohio. These impacts are presented separately for operations and capital expenditures and then combined into total system figures for each study period.

Job Access Analysis

Job access is defined as employment located within one-quarter mile of a fixed-route stop. This quarter-mile walkshed is used throughout the report as the standard measure of walk access to transit. The analysis distinguishes between physical access and usable access. Physical access refers to jobs located within the walkshed. Usable access further considers whether service is available during the relevant time period and how frequently buses operate.

Employment and establishment data were drawn from Ohio ES-202, and current and proposed stop and route files were provided by BCRTA. The job access analysis measures current and proposed coverage by county, municipality, industry, service period, and frequency tier. More detailed service-period definitions and frequency categories are presented in the Job Access section so they can be interpreted directly alongside the results.

Peer County Comparison

The peer county comparison places Butler County and the BCRTA in a broader suburban transit context. The analysis compares Butler County with Pasco County, Florida; Somerset County, New Jersey; and San Luis Obispo County, California. These counties were selected because each is suburban, operates both fixed-route and on-demand public transportation services, and manages those services directly.

County travel and household indicators were drawn from the American Community Survey. Transit system measures were drawn from the Federal Transit Administration's 2024 National Transit Database Annual Database, which is the most recent year with complete data available for this comparison. To improve comparability across regions, operating cost measures were adjusted using Regional Price Parities and normalized to Ohio's price level.

Sales Tax Forecast

Butler County sales tax revenue has been volatile from year to year, so the forecast does not rely on a single trend line. Over the past ten years, the average annual growth rate has been 3.7 percent, while the average annual growth rate over the most recent five years was 3.4 percent. Growth in 2025 was

higher, at 5.9 percent. To reflect this pattern, the Economics Center forecasted county sales tax revenue using a five-model ensemble and averaged the model results to produce the baseline forecast. The general pattern in the forecast is for higher growth to occur in the first few years of the forecast horizon and then a gradual return toward the longer-run trend in the years further out.

To estimate potential BCRTA revenue under alternative county sales tax scenarios, the Economics Center first estimated the eligible base by dividing projected county sales tax revenue by the current 0.75 percent county sales tax rate. A naïve estimate then applies each higher tax rate to that base and assumes no change in the tax base itself. A second estimate adjusts the tax base using a sales tax elasticity of -2.609^3 , which allows the eligible base to decline when the tax rate increases. Because Butler County's sales tax rate remains lower than surrounding counties, the actual effect on the tax base may be smaller than the elasticity-adjusted estimate suggests.

Resident and Outside Share Estimation

The resident and outside share analysis estimates how much of Butler County's county sales tax base is generated by Butler County households and how much comes from taxable spending captured within the County from outside sources. The resident portion was estimated using 2024 ACS household counts by income group, combined with 2023-2024 Midwest Consumer Expenditure Survey spending patterns and a retained in-county spending adjustment derived from Lightcast.

The resulting estimate of household-generated county sales tax revenue was then compared with actual 2024 Butler County sales tax collections reported by the Ohio Department of Taxation. The comparison uses 2024 collections net of the December 2024 sales tax holiday reimbursement. This approach makes it possible to estimate resident and outside shares of the county sales tax base and then apply those shares to the alternative county tax scenarios evaluated later in the report.

Resident Persona Construction

Potential county sales tax increases would affect resident groups differently because income and taxable spending patterns vary across households. The persona analysis therefore uses five representative resident groups: employed adults with at least a bachelor's degree, individuals with family income below 175 percent of the poverty threshold, employed adults ages 18 to 25, retired adults ages 65 and older, and employed adults who are transit dependent. These groups were selected to represent different income levels, life stages, and likely relationships to transit use. Because some residents may fit more than one persona, the groups are not mutually exclusive.

Population counts were estimated using ACS data. Income and spending assumptions were based on Consumer Expenditure Survey patterns and estimates of taxable household spending. For each persona, the analysis estimates weighted average total income, annual taxable spending, county sales tax paid under the current 0.75 percent rate, and the incremental burden under each alternative county tax scenario.

Reduced Automobile Travel Analysis

The reduced automobile travel analysis estimates how the proposed service plan may affect vehicle miles traveled and related countywide outcomes. Under the proposed service plan, annual revenue hours would increase by 221 percent, and the analysis uses the medium ridership forecast scenario to estimate new annual unlinked transit trips associated with that increase in service.

³ Dat Huynh, Anna Sokolova, and Mehmet S. Tosun. 2022.

The next step estimates how many of those additional transit trips would replace automobile trips. The analysis applies assumptions about automobile substitution, trip length, and vehicle occupancy and then translates the results into vehicle miles traveled, commuter equivalents, household transportation cost savings, fuel savings, and avoided emissions.

Community Access Analysis

The community access analysis evaluates how BCRTA supports access to destinations that are important to daily life, especially grocery stores, health care providers, and education or training sites. Fixed-route access is measured using a one-quarter-mile walkshed around current BCRTA stops. This is the same walk-access standard used in the job access analysis, which allows the report to apply a consistent transit-access framework across sections.

A second service layer uses 2025 BGo and BCare trips with clearly labeled trip purposes related to food, health care, or education. These trips are used to illustrate where on-demand service is already supporting access beyond the fixed-route network. Because some 2025 on-demand trips could not be assigned clearly to one of these categories, the mapped BGo and BCare coverage shown in the report should be interpreted as a conservative estimate.

Current Research: Benefits of Public Transit Expansion

Recent U.S. research finds that expanding public transit service can support multiple community outcomes. This review focuses on bus-oriented expansion strategies that are feasible for mid-sized and suburban settings. The discussion below summarizes evidence on job accessibility, environmental benefits and traffic congestion, health care access, food access, and education access.

Job Accessibility

Transit access is associated with employment outcomes and with the number of jobs residents can reach within a practical commute. Stop proximity, network design, service frequency, and schedules shape that access for workers who rely on transit.

Job decentralization can make job access harder for residents when jobs shift farther from where people live. Sanchez finds that in Atlanta, Georgia, average weeks worked declined by about three weeks for every 0.5 kilometers farther a worker lived from the nearest bus stop.⁴ Kneebone and Holmes report that from 2000 to 2012, the number of jobs within a typical commute distance, defined as the median straight-line distance between home and work in each metropolitan area, fell by 7 percent for residents in major metropolitan areas. The decline was larger for Black residents, 14 percent, Hispanic residents, 17 percent, and poor residents, 17 percent. The authors describe this pattern as a growing distance between people and jobs over time, which reduces the set of jobs that are close enough to reach under common commuting constraints.⁵

Transit access also varies by the type of job. Tomer et al report that in 94 of the 100 largest metropolitan areas, transit provides better access to high-skill jobs than to low- or middle-skill jobs. This mismatch is relevant for lower-wage workers, who often face tighter time and cost constraints and are more likely to rely on transit for commuting.⁶

Qualitative work highlights that route coverage alone does not determine job access. In Columbus, Ohio, Boschmann reports that bus routing and schedules as barriers to reaching suburban jobs, including for workers seeking late shifts. The study also reports that residential choices were often tied to access to bus lines and commuting needs. These findings connect job accessibility to service design details, including timing, frequency, and schedule alignment with shift work.⁷

Case evidence shows that service changes can expand access and increase ridership. In Richmond, Virginia, the transit agency redesigned its bus network and launched the Pulse line as part of a broader effort to improve transit performance and access across the region. Ridership increased 17 percent from July 2018 to April 2019 compared with the same period a year earlier, while transit ridership nationally declined by nearly 2 percent. After the changes, nearly 40,000 households gained access to frequent transit, including 27,000 households in poverty. In the city of Richmond, nearly 50 percent of households in poverty gained access to frequent transit service.⁸

Environmental Benefits and Traffic Congestion

Public transit investment is often discussed as part of both climate and congestion strategies. The World Resources Institute reports that public transport can reduce greenhouse gas emissions by up to two-

⁴ Sanchez, Thomas W. 1998.

⁵ Kneebone, Elizabeth, and Natalie Holmes. 2015.

⁶ Tomer, Adie, Elizabeth Kneebone, Robert Puentes, and Alan Berube. 2011.

⁷ Boschmann, E. Eric. 2011.

⁸ Greater Washington Partnership. 2019.

thirds per passenger-kilometer compared with private vehicles. It also reports that transport produces about 15 percent of global greenhouse gas emissions and argues that restoring and expanding reliable public transport is needed to meet climate goals.⁹

The U.S. Department of Transportation describes three broad strategies for decarbonizing transportation. These include reducing the distance traveled for people and freight, expanding access to energy-efficient travel options such as public transit and passenger rail, and transitioning to zero-emission vehicles and fuels. The report states that decarbonizing transportation is needed to support the national goal of net-zero emissions by 2050.¹⁰

Congestion imposes large time and cost burdens on travelers. The Texas A&M Transportation Institute estimates that Americans lost an average of 63 hours to traffic delays in 2024 and that national congestion costs reached \$269 billion per year. The same report notes that delay patterns are spreading beyond traditional weekday peak periods.¹¹

Health Care Access

Transportation access shapes whether people can obtain timely health care. When households lack reliable transportation options, routine care becomes harder to schedule and harder to maintain. Public transportation can reduce these barriers by providing a consistent travel option for patients who do not have a car or cannot drive.¹²

Research shows that transportation disadvantage can limit health care access. Heaps, Abramsohn, and Skillen describe public transportation in the United States as a driver of health and equity, which places health care access within a broader public health context.¹³ A systematic review of 61 studies found that transportation barriers are associated with rescheduled or missed appointments, delayed care, and missed or delayed medication use. Across 25 studies in that review, 10 to 51 percent of patients reported transportation as a barrier to care, and the burden fell more heavily on people with lower incomes and on uninsured patients.¹⁴

The review also reports evidence that ride availability and driving privileges are associated with higher health care utilization. In one study, people who knew someone who regularly provided rides had an odds ratio of 1.58, meaning those individuals were 58 percent more likely to use health care services. People with a driver's license had an odds ratio of 2.3, meaning those with a license were more than twice as likely to use health care services as those without a license.¹⁵

Zhou uses National Health Interview Survey data to examine transportation deficiency and health care access. The study finds that transportation deficiency is more common among several groups, including women, non-Hispanic African Americans, American Indians or Alaska Natives, unemployed adults and adults not in the labor force, adults with activity limitations, and unmarried adults. The study also finds that transportation deficiency is associated with greater reliance on the emergency department as a usual source of care. In addition, access to a car and access to public transit are each associated with

⁹ World Resources Institute. 2023.

¹⁰ U.S. Department of Transportation. 2024.

¹¹ Texas A&M Transportation Institute. 2025.

¹² Syed, Samina T., Ben S. Gerber, and Lisa K. Sharp. 2013.

¹³ Heaps, Wendy, Erin Abramsohn, and Elizabeth Skillen. 2021.

¹⁴ Samina T. Syed, Ben S. Gerber, and Lisa K. Sharp, 2013

¹⁵ Thomas A. Arcury et al., study summarized in Syed, Gerber, and Sharp, 2013

lower odds that any family member experienced difficulty getting care, with no meaningful difference between car users and public transit users in this relationship.¹⁶

Food Deserts and Healthy Food Access

Food deserts, areas that the U.S. Department of Agriculture (USDA) identifies as low-income and low-access census tracts, limit residents' ability to reach full-service grocery stores, especially when households do not have reliable vehicle access. The U.S. Department of Agriculture identifies low-income and low-access tracts using income thresholds and distance to the nearest supermarket or large grocery store. One standard low-access measure uses a threshold of more than one mile in urban areas and more than 10 miles in rural areas.¹⁷

Transportation constraints shape where households shop and what they buy. Arnold examined how the removal of public transit options affected food shopping in urban food deserts across 138 U.S. metropolitan areas from 2008 to 2019. The study found that transit exit is associated with a 7 to 10 percent decrease in annual grocery store trips and a 13 to 31 percent increase in trips to drug and dollar stores. It also finds lower purchases of healthier foods and higher purchases of less healthy foods after transit service was removed, with stronger effects for poorer households.¹⁸

Network analysis provides a second view of food access. Sisk, Rappazzo, Luben, and Fefferman assessed how public transit networks connect food desert residents to grocery stores in five United States study sites. The study found wide variation in bus stop access near food deserts and in the number of grocery stores reachable within 30 minutes by transit. These findings show that stop proximity alone does not ensure practical access to full-service grocery stores.¹⁹

Transit agencies also use service and partnership strategies to improve access to food. Safe Routes Partnership identifies three categories of approaches: service planning, co-location of food services at transit sites, and real estate and development strategies. The fact sheet describes examples such as dedicated grocery routes, equity analyses that consider grocery access in service planning, partnerships that bring food retail or food pickup to transit hubs, and rural demand-response programs that include grocery stores as eligible destinations.²⁰

Food access is linked to broader health outcomes, including obesity. Trust for America's Health lists public transportation and food access among neighborhood conditions that shape daily choices and health outcomes. The report also notes that the COVID-19 period increased food insecurity and disrupted access to healthy food, including through challenges in safely using public transportation. It describes the hunger-obesity paradox and explains that food insecurity and obesity can occur together when the same social, economic, and environmental conditions affect both outcomes.²¹

Education Access

Public transportation can affect education access for students who rely on transit to reach campuses, training sites, and school programs. When transit is limited, students may face longer travel times,

¹⁶ Zhou, Ying. 2019.

¹⁷ U.S. Department of Agriculture Economic Research Service. n.d.

¹⁸ Arnold, Sierra. 2024.

¹⁹ Sisk, Anna, Kristen Rappazzo, Tom Luben, and Nina Fefferman. 2023.

²⁰ Safe Routes Partnership. 2017.

²¹ Trust for America's Health. 2021.

higher costs, and fewer school options. Those barriers can affect on-time arrival, attendance, and participation in school-day routines and activities.

A national analysis by the Seldin/Haring-Smith Foundation focused on community and technical colleges reports that 57 percent of primary community college campuses have a transit stop within walking distance, though 99 percent of community college students live off campus and commute to school. The analysis reports that 25 percent of campuses without transit access could be made accessible by extending existing bus lines. The authors argue that expanded routes, improved stop access, and coordinated shuttle connections can improve access for transit-dependent students.²²

An Urban Institute report reviews available research on student transportation and profiles transportation options in five choice-rich cities: Denver, Detroit, New Orleans, New York City, and Washington, DC. The report finds that each city provides transportation to neighborhood schools through yellow buses or public transit. It also finds that transportation to non-neighborhood and charter schools varies across cities in coverage and design, which can affect which schools families can reasonably choose. Transportation logistics can influence whether a student can arrive on time, maintain attendance, and participate in before- and after-school activities.²³

Valant and Lincove find that car access shapes families' school options in New Orleans' choice-based school system. Their study reports that school bus service can reduce commute times and improve access for families without cars. The authors find that families who can use a car and manage morning and afternoon commutes of about 20 to 25 minutes can reach almost any school in the city. They conclude that car access is one pathway through which income differences can translate into differences in educational access.²⁴

Transportation access is also relevant for students with disabilities. In school year 2022-23, 7.5 million students aged three to 21 received special education and related services under the Individuals with Disabilities Education Act. This equals 15 percent of all public-school students.²⁵ For a bus-based transit system, coordinating service with campus schedules and training site locations can reduce travel barriers for students who depend on transit to attend class.²⁶

²² Seldin, Abigail, Matthew Crespi, and Ellie Bruecker. 2021.

²³ Urban Institute Student Transportation Working Group. 2017.

²⁴ Valant, Jon, and Jane Arnold Lincove. 2023.

²⁵ National Center for Education Statistics. 2024.

²⁶ Seldin, Abigail, Matthew Crespi, and Ellie Bruecker. 2021.

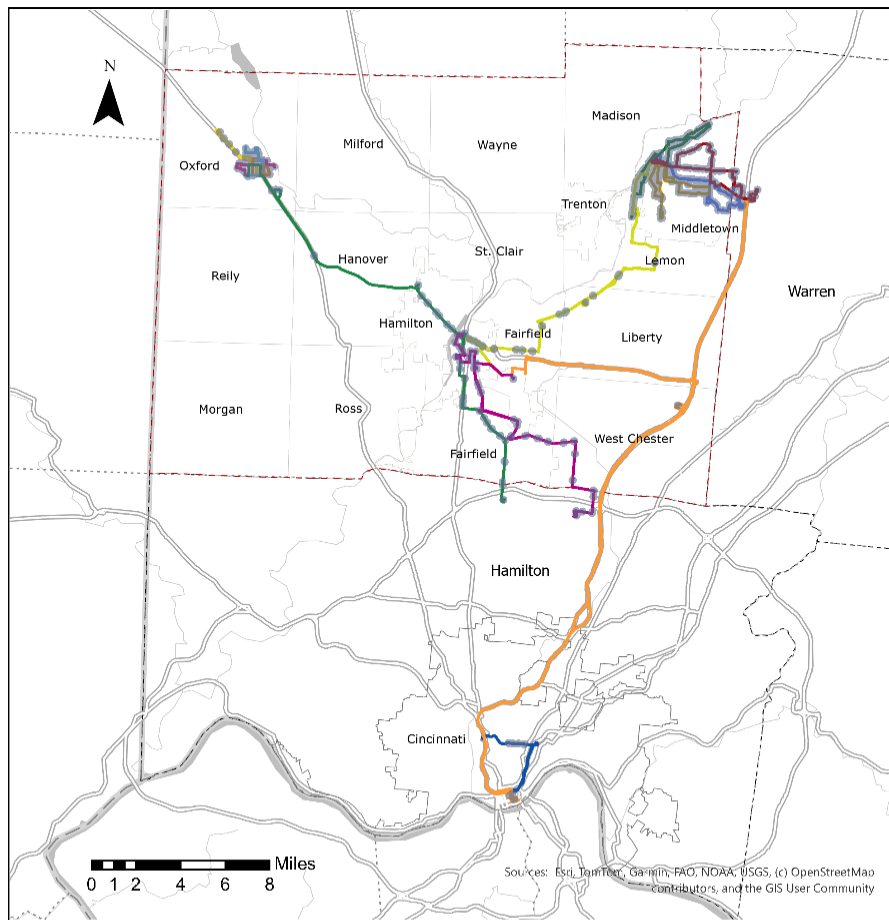
Current and Proposed Transit Service

BCRTA’s service structure is the baseline for the access, ridership, and broader impact analyses that follow. This section describes the current transit system and the proposed service plan, including differences in geography, service span, and overall service levels.

Current Transit System

BCRTA’s current transit system includes fixed-route service, commuter service, and on-demand service. Fixed-route service provides local scheduled transit within Butler County and is concentrated in Oxford, Hamilton, and Middletown. Commuter service, provided through CincyLink, connects Butler County with Uptown and Downtown Cincinnati. Figure 2 shows the current fixed-route and CincyLink service network.

Figure 2: Current Fixed-Route and Commuter Service Network



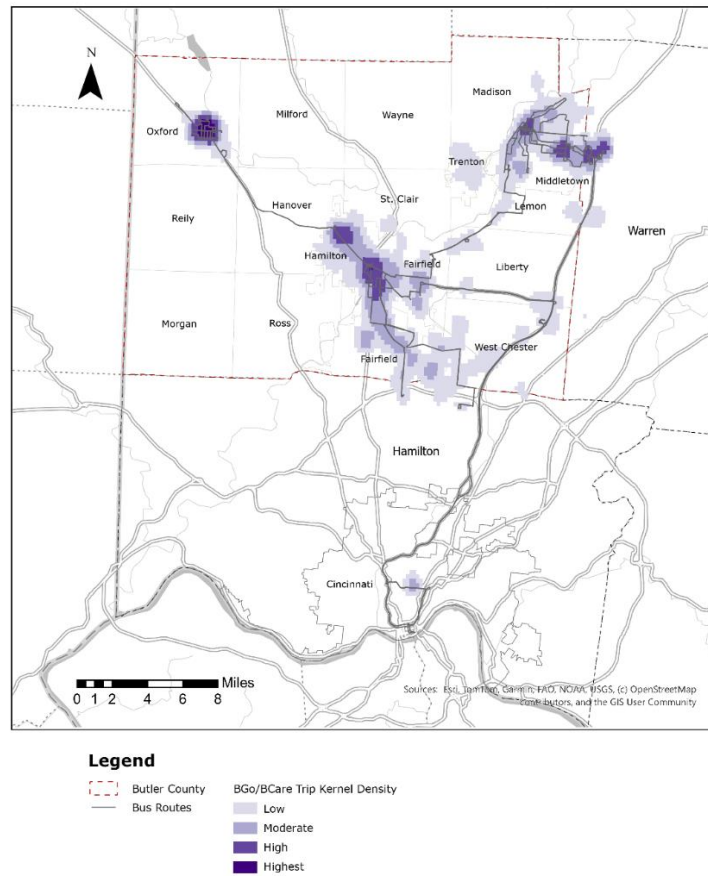
Legend

 Butler County	— Bus Routes	— Green Line	— R1 - Hamilton/Middletown Shuttle
● Bus Stops	— Blue Line	— O1	— R3 - Oxford-Forest Park Connector
	— CincyLink	— O2	— R6 - Job Connector
	— CincyLink Express	— O3	— Red Line
	— Gold Line	— O4	

Source: BCRTA 2026 GTFS data; Esri basemap; Economics Center analysis.

On-demand service includes BGo curb-to-curb service and BCare ADA paratransit service. Current BGo and BCare activity is strongest City of Oxford, the City of Hamilton, the City of Middletown, the City of Fairfield, and West Chester Township. Figure 3 shows this pattern through a kernel density surface of current on-demand activity in 2025.

Figure 3: Kernel Density of Current BGo and BCare Activity, 2025



Source: BCRTA on-demand trip data, 2025; Esri basemap; Economics Center analysis.

Together, the current system operates 1,507,190 annual revenue miles and 86,103 annual revenue hours, as shown in Table 1.

Table 1: Current Revenue Miles and Revenue Hours by Service Category

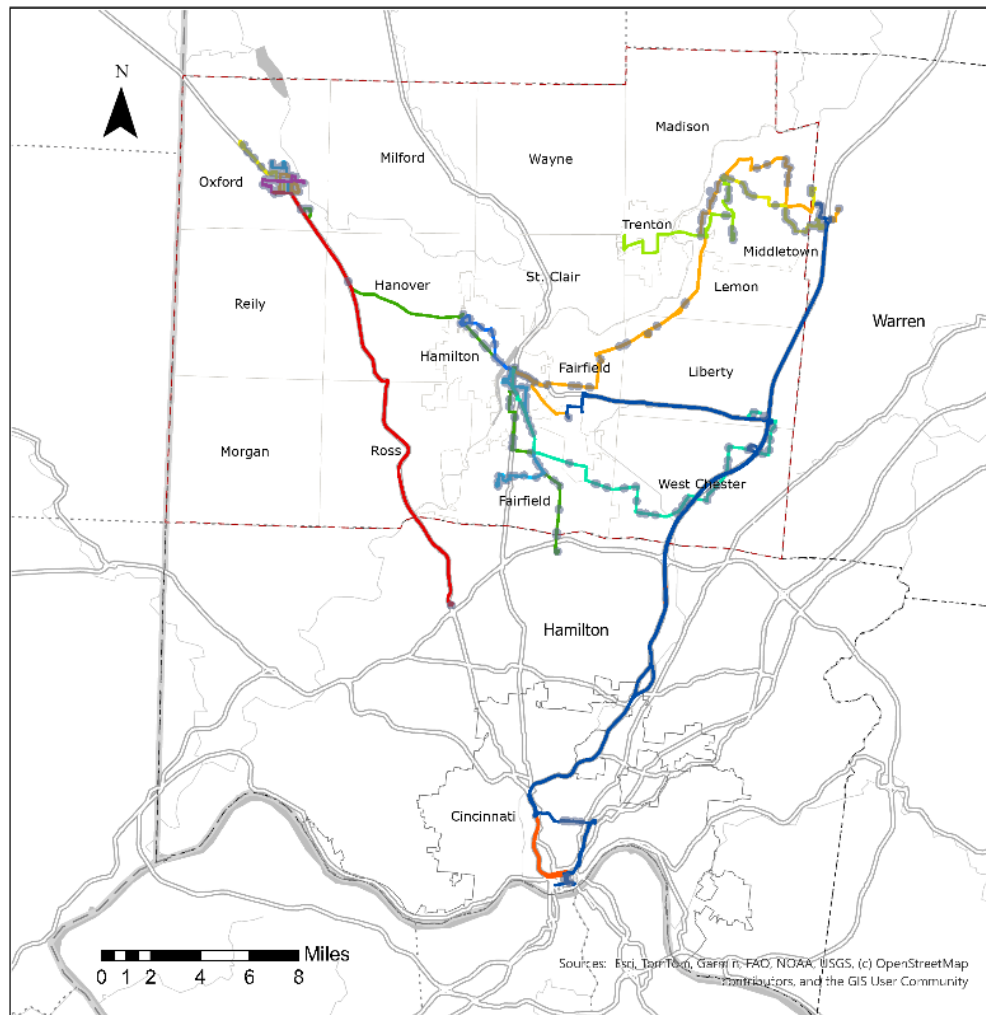
Service Category	Current Revenue Miles	Current Revenue Hours
Local Fixed-Route	562,309	40,562
CincyLink	231,286	7,754
BGo and BCare	713,595	37,787
System Total	1,507,190	86,103

Source: BCRTA 2025 ridership data; Economics Center analysis.

Proposed Service Plan

The proposed service plan retains the same service categories but expands them into a broader structure. Oxford service would continue through the O1, O2, O3, and O4 routes. Hamilton service would be strengthened through the new H1 and H3 routes. Middletown service would be reorganized through the M1 and M3 routes. Regional fixed-route connections would be strengthened through the R1, R3, and R9 corridors. Commuter service would continue through the Uptown and Downtown CincyLink services and would add the Colerain Connector. The proposed network is shown in Figure 4.

Figure 4: Proposed Fixed-Route and Commuter Service Network



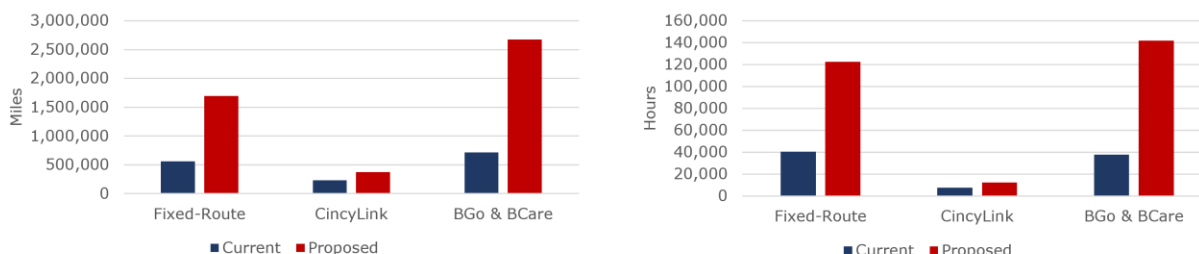
Legend

- | | | | |
|--|---|---|---|
| Butler County | Bus Routes | — M1 | — O4 |
| ● Bus Stops | — CincyLink | — M3 | — Oxford - Colerain Commuter (New) |
| | — CincyLink Express | — O1 | — R1 |
| | — R9 (New) | — O2 | — R3 |
| | — I11 (New) | — O3 | |
| | — H3 (New) | | |

Source: BCRTA proposed service plan; Esri basemap; Economics Center analysis.

Under the proposed plan, annual revenue miles would increase from 1,507,190 to 4,750,210, and annual revenue hours would increase from 86,103 to 276,831. This represents a 215.2 percent increase in annual revenue miles and a 221.5 percent increase in annual revenue hours. Figure 5 shows the current and proposed service totals by service category.

Figure 5: Current and Proposed Revenue Miles and Revenue Hours by Service Category



Source: BCRTA current service data and proposed service plan; Economics Center analysis.

The proposed plan would also make the system more usable by extending service span and strengthening weekend availability. Most Oxford, Hamilton, and regional fixed routes would operate from 5:00 a.m. to 11:00 p.m. on weekdays and from 9:00 a.m. to 11:00 p.m. on weekends. R3 would begin earlier and run later than the other proposed fixed routes, operating from 4:00 a.m. to midnight on weekdays. Middletown routes would operate from 6:00 a.m. to 11:00 p.m. on weekdays and from 8:00 a.m. to 6:00 p.m. on weekends. The Uptown and Downtown CincyLink services would begin at 3:00 a.m. on weekdays and provide 12 daily round trips, while the Colerain Connector would begin at 4:00 a.m. and provide six daily round trips. BGo and BCare would operate from 4:00 a.m. to 1:00 a.m. on both weekdays and weekends.

Ridership, Travel Patterns, and Transit Demand

Butler County’s travel patterns create both constraints and opportunities for public transit demand. This section examines the county conditions that shape demand for transit and the current ways riders use the BCRTA system, with attention to where demand is most likely to remain concentrated and where service improvements could have the greatest effect.

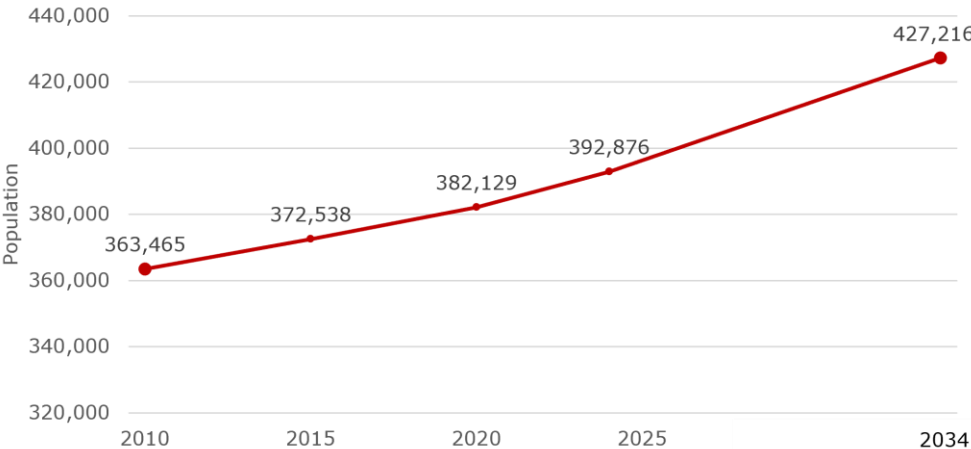
Transit Demand in Butler County

Transit demand in Butler County is shaped by where residents live, where jobs are growing, and how people travel to work.

Population Trends and Growth Patterns

Butler County’s population has grown steadily and is projected to continue growing over the next decade. According to Lightcast, the County’s population increased from 363,465 in 2010 to 392,876 in 2024, an increase of 29,411 residents, or 8.1 percent. Butler County’s population is projected to reach 427,216 by 2034, an increase of 34,340 residents, or 8.7 percent, from the 2024 level. Figure 6 illustrates these trends.

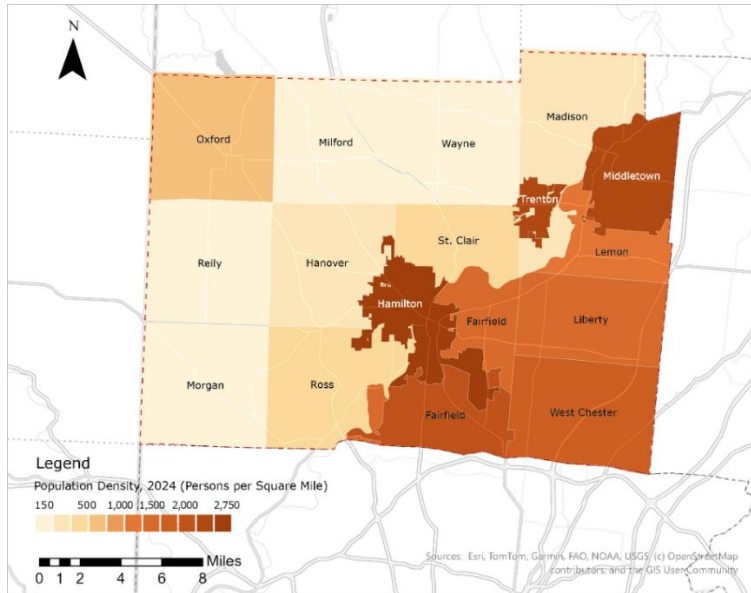
Figure 6: Butler County Population Trend, 2010 to 2034



Sources: Lightcast, 2025; Economics Center analysis.

Population is not distributed evenly across the County. Larger population concentrations are located in the City of Hamilton, the City of Middletown, the City of Fairfield, the City of Trenton, and West Chester Township. As shown in Figure 7, these areas account for a dominant share of the County’s current population and are likely to remain important sources of travel demand.

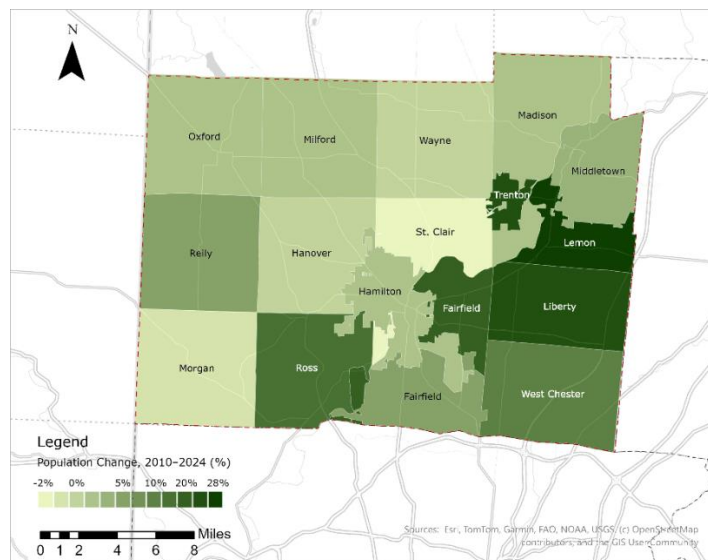
Figure 7: Population Concentration in Butler County, 2024



Sources: U.S. Census Bureau ACS 2020–2024 5-Year Estimates; Esri basemap; Economics Center analysis.

Growth has also been concentrated in a limited number of jurisdictions rather than spread evenly across the County. As shown in Figure 8, the strongest population gains from 2010 to 2024 occurred in Liberty Township, West Chester Township, Lemon Township, Fairfield Township. These patterns suggest that future transit demand is likely to remain strongest in the County’s larger and growing population centers.

Figure 8: Population Change in Butler County, 2010 to 2024

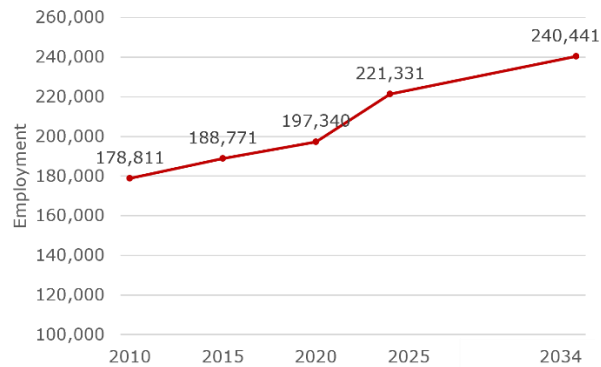


Sources: U.S. Census Bureau Decennial Census and ACS 2020–2024 5-Year Estimates; Esri basemap; Economics Center analysis.

Employment and Business Trends

Butler County’s job base has grown steadily and is projected to continue growing over the next decade. As shown in Figure 9, employment increased from 178,811 jobs in 2010 to 221,331 jobs in 2024, an increase of 42,520 jobs, or 23.8 percent. Employment is projected to reach 240,441 jobs by 2034, adding 19,110 jobs, or 8.6 percent, from the 2024 level.²⁷

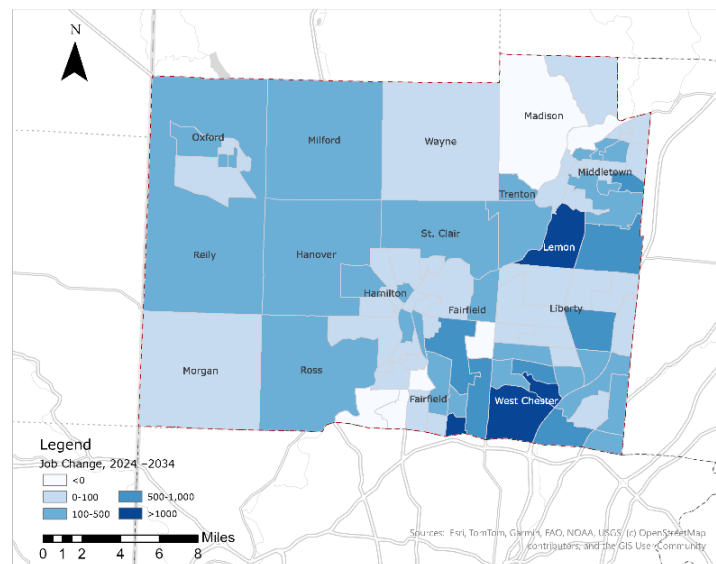
Figure 9: Total Employment in Butler County, 2010 to 2034



Source: Lightcast, 2025; Economics Center analysis.

Current employment is concentrated in the southern and southeastern portions of the County along the I-75 corridor, as well as in established employment centers around the City of Hamilton and the City of Middletown. As shown in Figure 10, projected job growth from 2024 to 2034 generally follows these existing patterns. This suggests that future work-trip demand is likely to remain concentrated within the County’s established employment corridors and centers.

Figure 10: Projected Job Change, Butler County, 2024 to 2034



Source: U.S. Census Bureau ACS 2020–2024 5-Year Estimates; Esri basemap; Lightcast, 2025; Economics Center analysis.

²⁷ Lightcast

Industry trends shown in Table 2, the largest job gains from 2010 to 2024 occurred in transportation and warehousing, manufacturing, accommodation and food services, and several major service sectors, including construction, real estate and rental and leasing, and finance and insurance.

Table 2: Employment by Industry Sector in Butler County, 2010 to 2024

Sector	2010	2024	Change	Change%
Agriculture, Forestry, Fishing and Hunting	923	1,393	470	50.8%
Mining, Quarrying, and Oil and Gas Extraction	200	122	-77	-38.8%
Utilities	286	446	160	55.9%
Construction	9,856	14,034	4,178	42.4%
Manufacturing	19,975	25,696	5,721	28.6%
Wholesale Trade	12,566	13,904	1,338	10.6%
Retail Trade	19,108	20,632	1,524	8.0%
Transportation and Warehousing	8,914	16,175	7,261	81.5%
Information	1,439	1,625	186	12.9%
Finance and Insurance	11,304	14,908	3,604	31.9%
Real Estate and Rental and Leasing	6,105	9,878	3,773	61.8%
Professional, Scientific, and Technical Services	6,653	9,336	2,683	40.3%
Management of Companies and Enterprises	599	1,732	1,133	189.2%
Administrative and Support and Waste Management and Remediation Services	10,664	11,555	891	8.4%
Educational Services	2,173	2,773	600	27.6%
Health Care and Social Assistance	20,268	22,451	2,183	10.8%
Arts, Entertainment, and Recreation	3,401	4,363	962	28.3%
Accommodation and Food Services	13,248	18,024	4,776	36.0%
Other Services (except Public Administration)	8,840	10,637	1,797	20.3%
Government	22,268	21,634	-634	-2.8%
Unclassified Industry	20	10	-10	-48.5%
Total	178,810	221,328	42,519	23.8%

Source: Lightcast, 2025; Economics Center analysis.

Table 3 shows that this pattern is expected to continue through 2034, with the strongest projected gains in transportation and warehousing, finance and insurance, real estate and rental and leasing, manufacturing, construction, and accommodation and food services.

Table 3: Projected Employment by Industry Sector in Butler County, 2024 to 2034

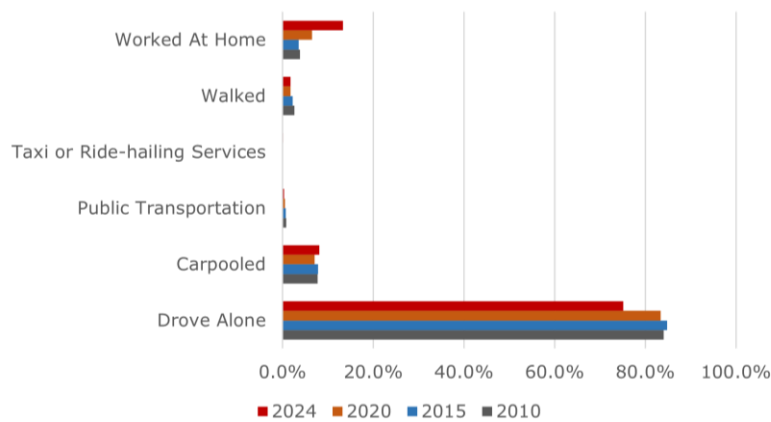
Sector	2024	2034	Change	Change%
Agriculture, Forestry, Fishing and Hunting	1,393	1,798	405	29.1%
Mining, Quarrying, and Oil and Gas Extraction	122	123	0	0.3%
Utilities	446	545	99	22.1%
Construction	14,034	15,708	1,674	11.9%
Manufacturing	25,696	27,577	1,881	7.3%
Wholesale Trade	13,904	14,210	306	2.2%
Retail Trade	20,632	20,059	-573	-2.8%
Transportation and Warehousing	16,175	20,346	4,171	25.8%
Information	1,625	1,818	193	11.9%
Finance and Insurance	14,908	18,410	3,501	23.5%
Real Estate and Rental and Leasing	9,878	11,989	2,111	21.4%
Professional, Scientific, and Technical Services	9,336	10,652	1,317	14.1%
Management of Companies and Enterprises	1,732	1,731	-2	-0.1%
Administrative and Support and Waste Management and Remediation Services	11,555	11,630	75	0.6%
Educational Services	2,773	3,210	437	15.8%
Health Care and Social Assistance	22,451	23,678	1,227	5.5%
Arts, Entertainment, and Recreation	4,363	4,650	287	6.6%
Accommodation and Food Services	18,024	19,369	1,345	7.5%
Other Services (except Public Administration)	10,637	11,510	874	8.2%
Government	21,634	21,426	-209	-1.0%
Unclassified Industry	10	2	-8	-78.8%
Total	221,328	240,441	19,111	8.6%

Source: Lightcast, 2025; Economics Center analysis.

Commuting Trends

Driving alone remained the largest commute mode in Butler County from 2010 through 2024. As shown in Figure 11, much of the decline in driving alone reflects the increase in working from home, which grew from 6,401 workers in 2010 to 24,818 workers in 2024. However, the broader commuting pattern still reflects strong dependence on private vehicles. Butler County recorded 1,323 public transportation commuters in 2010, 1,186 in 2015, 890 in 2020, and 560 in 2024. In percentage terms, public transportation accounted for 0.8 percent of commuters in 2010 and 0.3 percent in 2024.

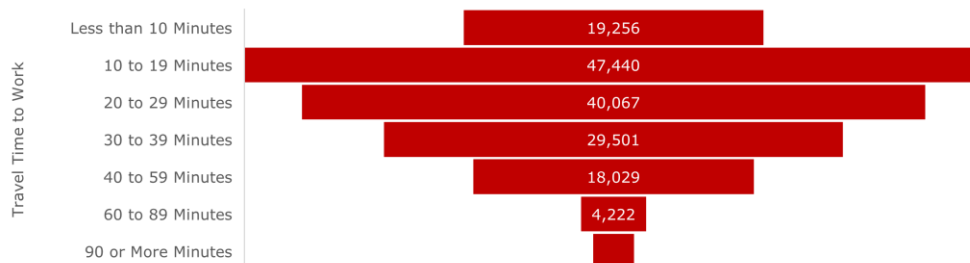
Figure 11: Commuting Mode Share in Butler County, 2010 to 2024



Source: U.S. Census Bureau ACS 2006–2024 5-Year Estimates; Economics Center analysis.

Travel time and vehicle availability provide additional context. As shown in Figure 12, the largest number of Butler County workers in 2024 had commute times of 10 to 19 minutes, followed by 20 to 29 minutes. A smaller but still meaningful number of workers faced commute times of 60 minutes or more.

Figure 12: Travel Time to Work in Butler County, 2024



Source: U.S. Census Bureau ACS 2020–2024 5-Year Estimates; Economics Center analysis.

According to the ACS 2024 5-year estimates, 11,902 Butler County households, or 6.2 percent of all households, had no vehicle available. By contrast, 59.3 percent of households had access to two or more vehicles. Butler County also recorded 301,803 passenger vehicles in 2024, equal to approximately 0.77 passenger vehicles per capita, and approximately 7.9 million daily vehicle miles traveled, or 20.1 daily vehicle miles traveled per resident.

Overall, these patterns show that Butler County remains highly automobile-dependent, even though a meaningful share of households continue to live without access to a vehicle.

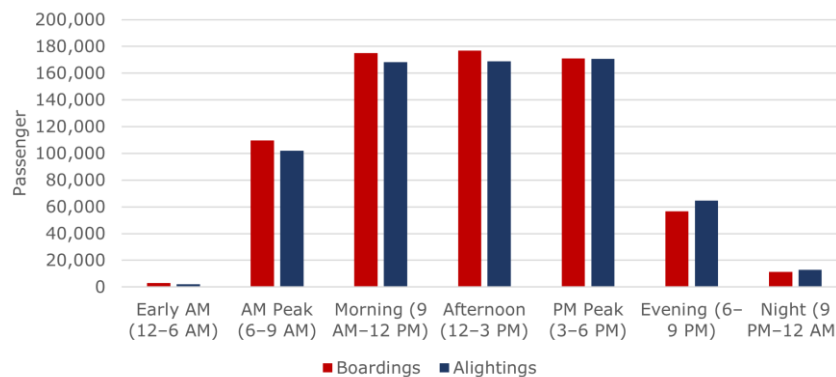
Ridership and Travel Patterns

Current BCRTA ridership is concentrated in a few major hubs, but demand remains active across the day and across several trip types. The following subsections show that the current system supports a broad mix of work, school, shopping, personal, and medical travel, while also revealing where demand is strongest and where riders report the greatest service challenges.

Fixed-Route and CincyLink Ridership

Current BCRTA ridership is not limited to narrow work-trip peaks. Based on BCRTA’s 2025 stop-level ridership data, fixed-route and CincyLink stops recorded 660,516 passenger boardings and 643,326 passenger alightings in 2025. Figure 13 shows that boardings and alightings followed a broadly balanced pattern throughout the day. Activity remained strong from 9:00 a.m. through 6:00 p.m., which suggests that the current service system supports a broad mix of trip purposes and rider groups rather than serving only a traditional peak-period commuter market.

Figure 13: Passenger Boardings and Alightings by Time of Day

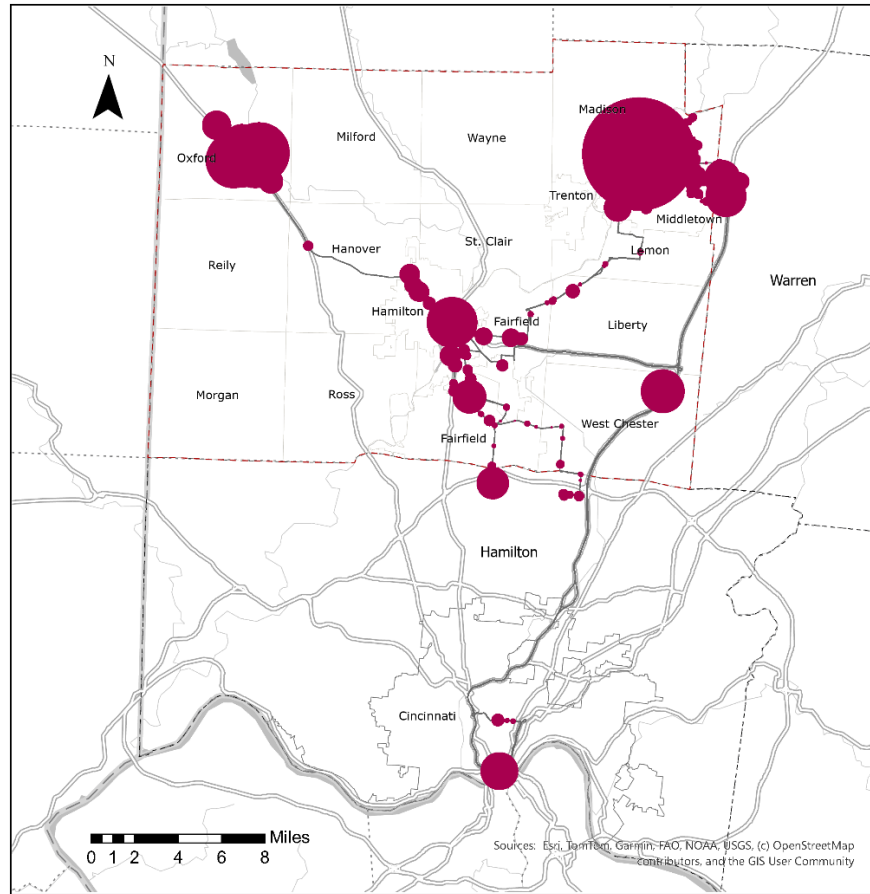


Sources: BCRTA ridership data, 2025; Economics Center analysis.

Geographic Distribution of Fixed-Route and CincyLink Ridership

Passenger activity is concentrated in several primary locations rather than spread evenly across the BCRTA system. As shown in Figure 14, the highest stop-level activity is centered in Middletown, Oxford, Hamilton, and select destinations in West Chester Township.

Figure 14: Geographic Distribution of Passenger Activity by Stop



Legend

- Butler County
- Bus Routes
- Annual Passenger Activity

Source: BCRTA stop-level ridership data, 2025; Esri basemap; Economics Center analysis.

Middletown Transit Station (MTS) is the system’s dominant stop. As shown in Table 4, it recorded 151,124 total passenger movements in 2025, equal to 11.6 percent of all stop activity in the BCRTA system. This total was far above every other stop and confirms that the City of Middletown functions as the BCRTA’s primary ridership hub. The City of Oxford forms the second major ridership cluster. Several of the highest-activity stops are located within or adjacent Miami University, which indicates that student and campus-related travel is a major driver of ridership in the City of Oxford. Market Street Station-Area B in the City of Hamilton also shows the role of transfer activity within the fixed-route network. Meijer in West Chester Township represents a different type of high-activity stop because riders can connect there to CincyLink service to Downtown Cincinnati, linking southern Butler County to regional employment destinations.

Table 4: Top Stops by Passenger Activity, 2025

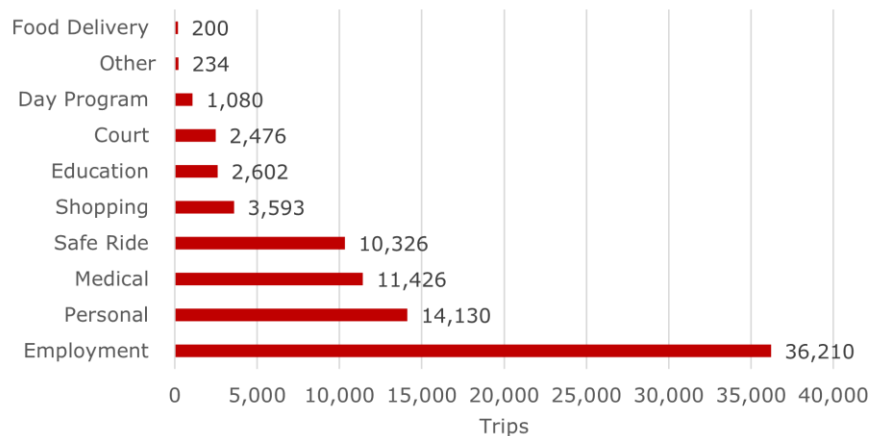
Stop	Area	Boardings	Alightings	Total Passenger Activity	Share of Total Activity
MTS Transit Station	Middletown	82,485	68,639	151,124	11.6%
Farmer School	Oxford	24,045	19,925	43,970	3.4%
Miami Station B	Oxford	10,577	33,172	43,749	3.4%
Wells Mill WB	Oxford	25,387	11,144	36,531	2.8%
Miami Station C	Oxford	20,683	11,412	32,095	2.5%
Laws Hall	Oxford	3,942	26,427	30,369	2.3%
Market Street Station-Area B	Hamilton	17,858	12,320	30,178	2.3%
Benton Hall	Oxford	18,453	8,067	26,520	2.0%
Meijer-West Chester Township	West Chester	11,802	10,700	22,502	1.7%
Walmart-Middletown	Middletown	10,530	9,277	19,807	1.5%

Source: BCRTA stop-level ridership data, 2025; Economics Center analysis.

On-demand Trip Profile

On-demand trips support a broad range of daily travel needs in Butler County. As shown in Figure 15, employment was the largest trip purpose in 2025, accounting for 36,210 trips, or 44.0 percent of all recorded on-demand trips. Personal trips ranked second with 14,130 trips, followed by medical trips with 11,426 trips and Safe Ride trips with 10,326 trips. Shopping, education, court, and day-program trips accounted for smaller shares, but they show that on-demand service supports recurring non-work travel needs.

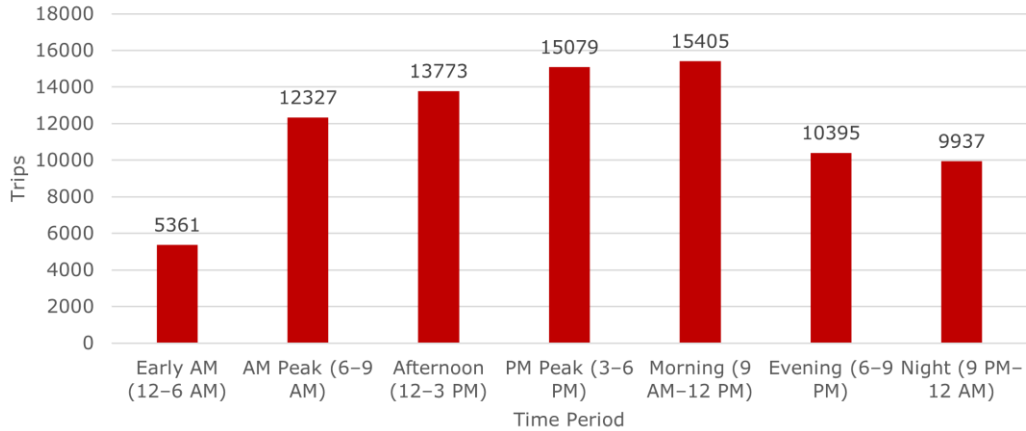
Figure 15: On-Demand Trips by Purpose, 2025



Source: BCRTA on-demand trip data, 2025; Economics Center calculations.

The time-of-day pattern is spread across the daytime rather than concentrated in only a few periods. As shown in Figure 16, trip volumes were highest during the morning peak, mid-day, and afternoon peak periods, with all three time blocks recording similar totals. This suggests that BGo and BCare ridership is tied to a broad range of daily activities.

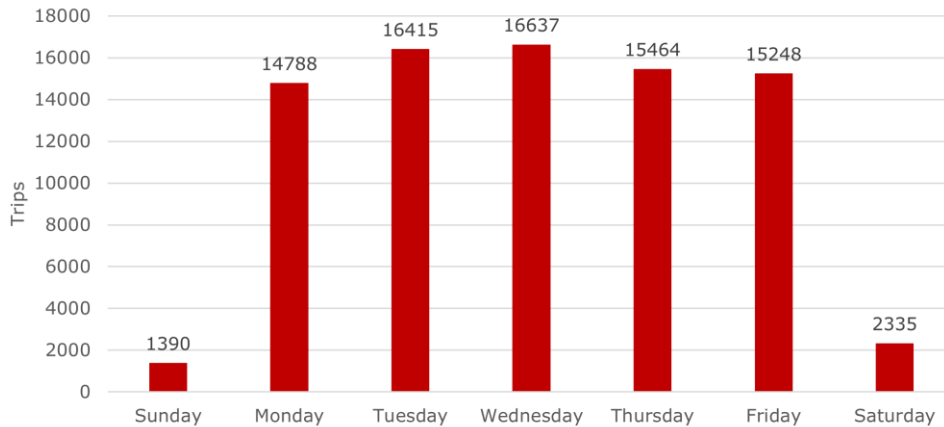
Figure 16: On-Demand Trips by Time of Day, 2025



Source: BCRTA on-demand trip data, 2025; Economics Center calculations.

The day-of-week pattern is strongly weekday oriented. As shown in Figure 17, on-demand trips were concentrated from Monday through Friday, with the highest totals occurring from Tuesday through Friday. Sunday and Saturday recorded much lower totals.

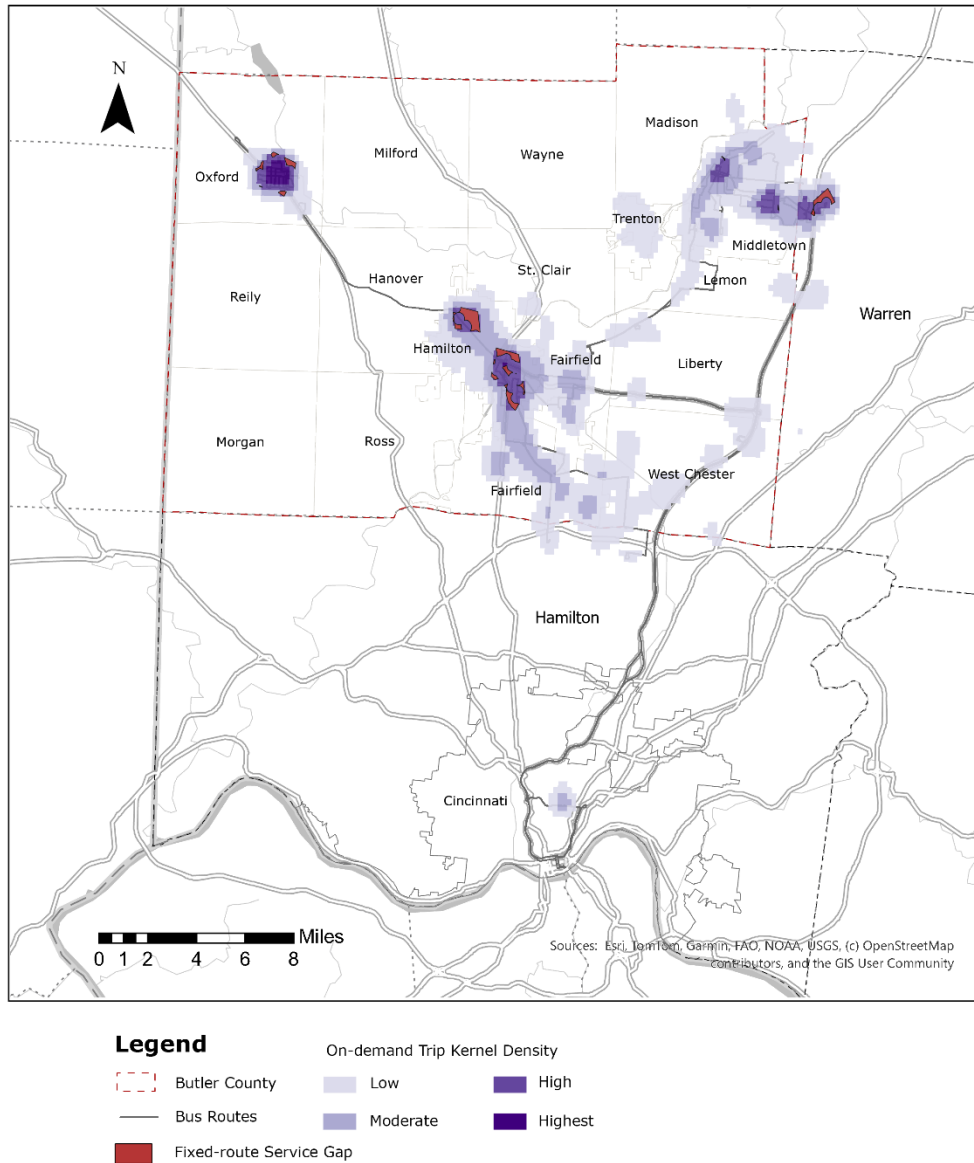
Figure 17: On-Demand Trips by Day of Week, 2025



Source: BCRTA on-demand trip data, 2025; Economics Center calculations.

The spatial distribution of BGo and BCare destinations shows recurring concentrations around Middletown, Hamilton, Oxford, and parts of the Fairfield and West Chester corridor. As illustrated in Figure 18, these areas correspond to major activity centers already visible in the fixed-route and CincyLink network, while some BGo and BCare activity extends beyond the fixed-route and commuter service footprint.

Figure 18: On-Demand Trip Destinations, 2025

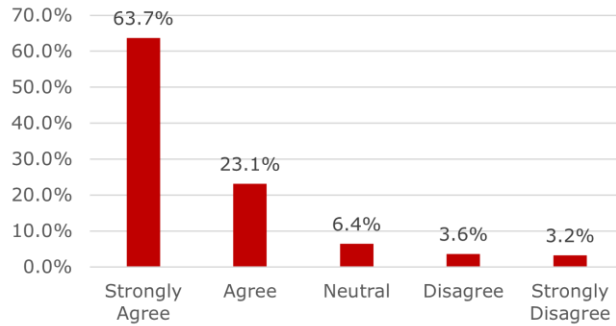


Source: BCRTA on-demand trip destination data, 2025; Economics Center analysis.

Rider Experience and Consumer Sentiment

A 2025 survey of BCRTA’s ridership indicates that overall satisfaction with service is high across multiple service types, including fixed-route service, CincyLink, BGo, BCare, and Safe Ride. As shown in Figure 19, 63.7 percent of respondents strongly agreed that they were happy with the service, and another 23.1 percent agreed.

Figure 19: Overall Satisfaction Distribution, 2025



Source: BCRTA rider survey, 2025; Economics Center analysis.

The strongest-rated aspects of service relate to the in-vehicle experience and interactions with staff. As shown in Table 5, vehicle cleanliness and driver safety received the highest average scores, both at 4.6 on a five-point scale. Driver friendliness also scored 4.6, followed by language access at 4.6 and overall happiness with service at 4.4. The weakest ratings are tied to scheduling and timing. Pickup on time received the lowest average score at 3.7, followed by ease of scheduling at 3.9. Bus on-time performance and arriving at the destination on time both scored 4.0. This pattern is consistent with a system that is positively viewed by riders but still faces service constraints that affect reliability and trip convenience.

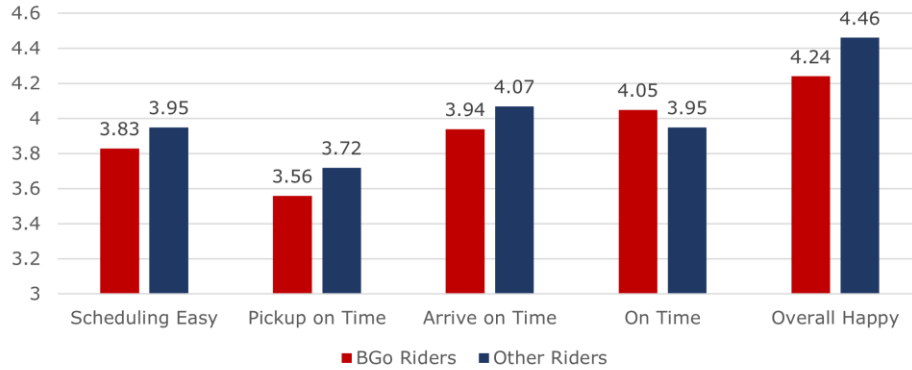
Table 5: Service Quality Ratings, 2025

Service Dimension	Avg Score (1-5)
Vehicles Clean	4.6
Drivers Safe	4.6
Drivers Friendly	4.6
No Language Barrier	4.6
Overall Happy	4.4
Call Takers Friendly	4.3
Arrive on Time	4.0
Bus on Time	4.0
Scheduling Easy	3.9
Pickup on Time	3.7

Source: BCRTA rider survey, 2025; Economics Center analysis.

The comparison between BGo riders and other riders follows a similar pattern, but with somewhat lower ratings among BGo riders on some scheduling-related measures. As shown in Figure 20, the largest gap appears in pickup timing, where BGo riders reported a lower average score than other respondents. One exception is on-time performance, which BGo riders rated slightly higher. These differences suggest that current riders generally view the system positively, but that timing and scheduling remain more challenging for some on-demand trips than for other service experiences.

Figure 20: Selected Service Ratings: BGo Riders vs. Other Riders, 2025



Source: BCRTA rider survey, 2025; Economics Center calculations.

Comparison with Similar Counties

A comparison with similar suburban counties helps place Butler County’s travel patterns and transit use in context. As shown in Table 6, Butler County had one of the lowest public transportation commute shares among its peers, at 0.3 percent in 2024, below San Luis Obispo County at 0.6 percent and Pasco County at 0.4 percent. Somerset County was higher at 3.4 percent, but that result reflects commuter rail access to the New York region rather than a local bus context directly comparable to Butler County. Butler County’s public transportation commute share also fell from 0.8 percent in 2010 to 0.3 percent in 2024, the steepest relative decline among the four counties in this comparison. At the same time, Butler County’s no-vehicle household share of 4.7 percent in 2024 is equal to Pasco County and above both San Luis Obispo County and Somerset County, suggesting that some residents lack private vehicle access despite limited transit availability.

Table 6: Selected County Travel Indicators

Indicator	Butler County, OH	San Luis Obispo County, CA	Pasco County, FL	Somerset County, NJ
Public transportation commute share				
2024	0.30%	0.58%	0.39%	3.39%
2010	0.78%	1.10%	0.40%	5.44%
Relative change, 2010–2024	–61.5%	–47.1%	–3.9%	–37.8%
No-vehicle households				
Share, 2024	4.7%	3.8%	4.7%	4.0%
Count, 2024	6,863	4,146	11,080	5,274

Sources: U.S. Census Bureau ACS 2006–2010 and 2020–2024 5-Year Estimates; Economics Center analysis.

BCRTA compares favorably with two of its three suburban peers on basic productivity measures. As shown in Table 7, BCRTA generated 1.48 unlinked passenger trips per service area resident in 2024 and 6.8 trips per revenue hour, below only San Luis Obispo County on both measures. Cost and funding patterns were more mixed. After regional price parity adjustments to Ohio’s price level, BCRTA’s operating cost per trip was approximately \$17.10, above San Luis Obispo County and Pasco County, but below Somerset County. BCRTA’s federal share of operating funds, at 50.3 percent in 2024, was the highest in the peer group and above the peer range of 3.7 percent to 46.9 percent.

Table 7: Selected Transit System Performance Indicators

Indicator	Butler County, OH	San Luis Obispo County, CA	Pasco County, FL	Somerset County, NJ
Service Area Population	394,803	282,013	584,067	324,194
Unlinked Passenger Trips per Service Area Resident	1.48	2.83	1.19	0.78
Trips per Revenue Hour	6.8	10.3	6.5	3.1
Operating Cost per Trip (RPP-Adjusted to Ohio Price Level)	\$17.10	\$14.91	\$14.39	\$26.64
State Share of Operating Funds	0.0%	0.0%	34.1%	2.4%
Federal Share of Operating Funds	50.3%	46.9%	15.6%	3.7%

Sources: Federal Transit Administration, National Transit Database 2024 Annual Database; Economics Center analysis.

Job Access Analysis

Supporting work trips for local residents is one of BCRTA’s primary service functions. Job access depends on both route location and service availability. This section estimates how the current and proposed fixed-route networks connect jobs and establishments to transit, with additional detail by geography, industry, and service period.

Current Job Accessibility²⁸

The current BCRTA network provides access to 111,141 jobs across Butler, Hamilton, and Warren Counties. These jobs are located within 4,011 establishments and represent approximately \$823.9 million in monthly wages. Butler County accounts for 51,581 of these jobs and 2,502 of these establishments, equal to 32.0 percent of all county jobs and 28.6 percent of all county establishments. Table 8 and Table 9 detail the current distribution of accessible jobs and establishments across the three-county study area and within Butler County.

Table 8: Current Jobs and Establishments Accessible by County, 2025

County	Jobs	Establishments	Total Monthly Wages (2025\$)
Butler	51,581	2,502	\$322,065,314
Hamilton	54,813	1,353	\$485,969,383
Warren	4,747	156	\$15,855,619
Total	111,141	4,011	\$823,890,316

Source: Ohio ES-202, 2025; BCRTA route and stop GTFS data; Economics Center analysis.

Table 9: Current Job Accessibility in Butler County, 2025

Category	Jobs	Share of Jobs	Establishments	Share of Establishments
Fixed-Route Accessible	51,581	32.0%	2,502	28.6%
Fixed-Route Not Accessible	109,639	68.0%	6,251	71.4%
Total Butler County	161,220	100.0%	8,753	100.0%

Source: Ohio ES-202, 2025; BCRTA current route and stop files; Economics Center analysis.

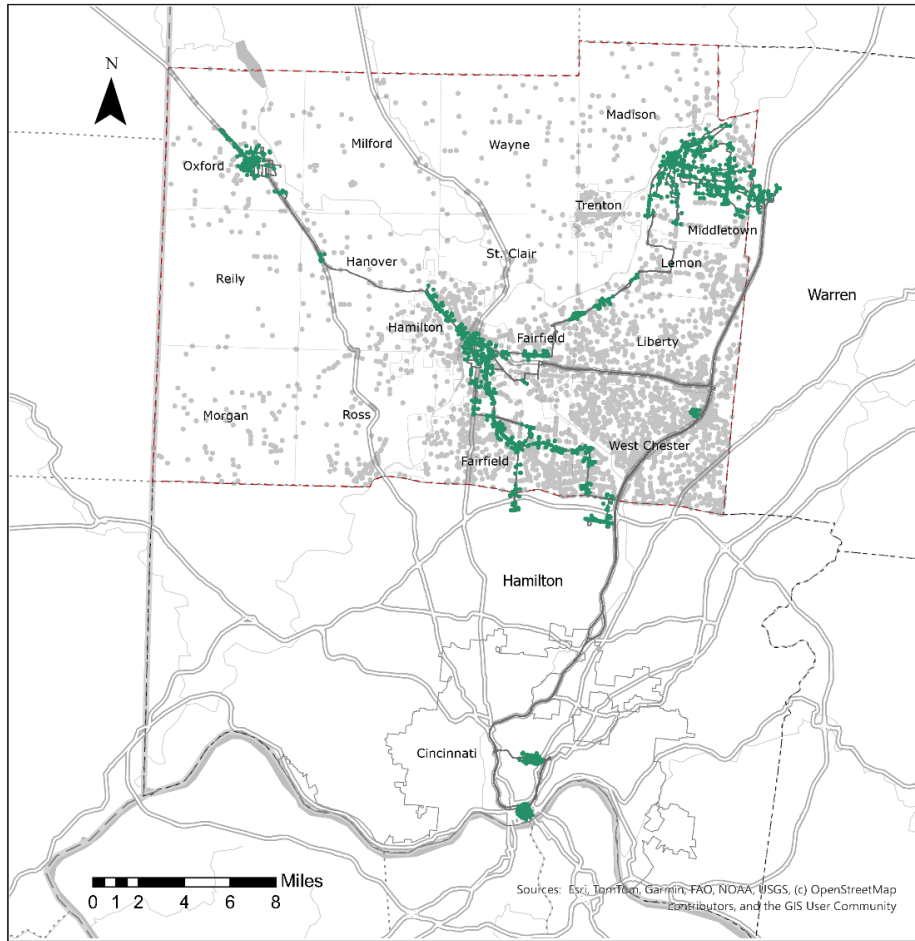
Current job access is concentrated in a set of established service areas. As shown in Figure 21, the largest concentrations of accessible jobs are in the City of Fairfield, the City of Hamilton, the City of Oxford, and the City of Middletown.

The current system also provides access to a broad mix of industries. The largest numbers of accessible jobs are currently found in retail trade, accommodation and food services, manufacturing, educational services, and finance and insurance.

The current system is stronger during standard weekday periods than during off-peak periods. Weekend service reaches only 15,017 Butler County jobs, or 29.1 percent of the County’s physical maximum. Early AM service reaches 30,746 jobs, or 59.6 percent of the County’s physical maximum.

²⁸ The job access analysis measures access based on BCRTA fixed-route service and CincyLink commuter service. On-demand services, including BGo and BCare, are not included in the job access calculations unless specifically stated.

Figure 21: Jobs Accessible Within 0.25-Mile of the Current Transit System



Source: Ohio ES-202, 2025; BCRTA GTFS data; Esri basemap; Economics Center analysis.

Proposed Job Accessibility

The proposed plan would expand job access in Butler County and shift more access toward the County’s major employment areas. Using the same 2025 Ohio ES-202 base as the current-system analysis, the proposed network would provide access to 122,793 jobs and 4,331 establishments across Butler, Hamilton, and Warren counties. Within Butler County, the proposed network would provide access to 66,003 jobs and 2,978 establishments, equal to 40.9 percent of all County jobs and 34.0 percent of all County establishments. Table 10 details the proposed distribution across the three-county study area, and Table 11 summarizes the Butler County shares.

Table 10: Proposed Job Accessibility by County

County	Jobs	Establishments
Butler	66,003	2,978
Hamilton	52,840	1,237
Warren	3,950	116
Total	122,793	4,331

Source: Ohio ES-202, 2025; BCRTA route and stop GTFS data; Economics Center analysis.

Table 11: Proposed Job Accessibility in Butler County

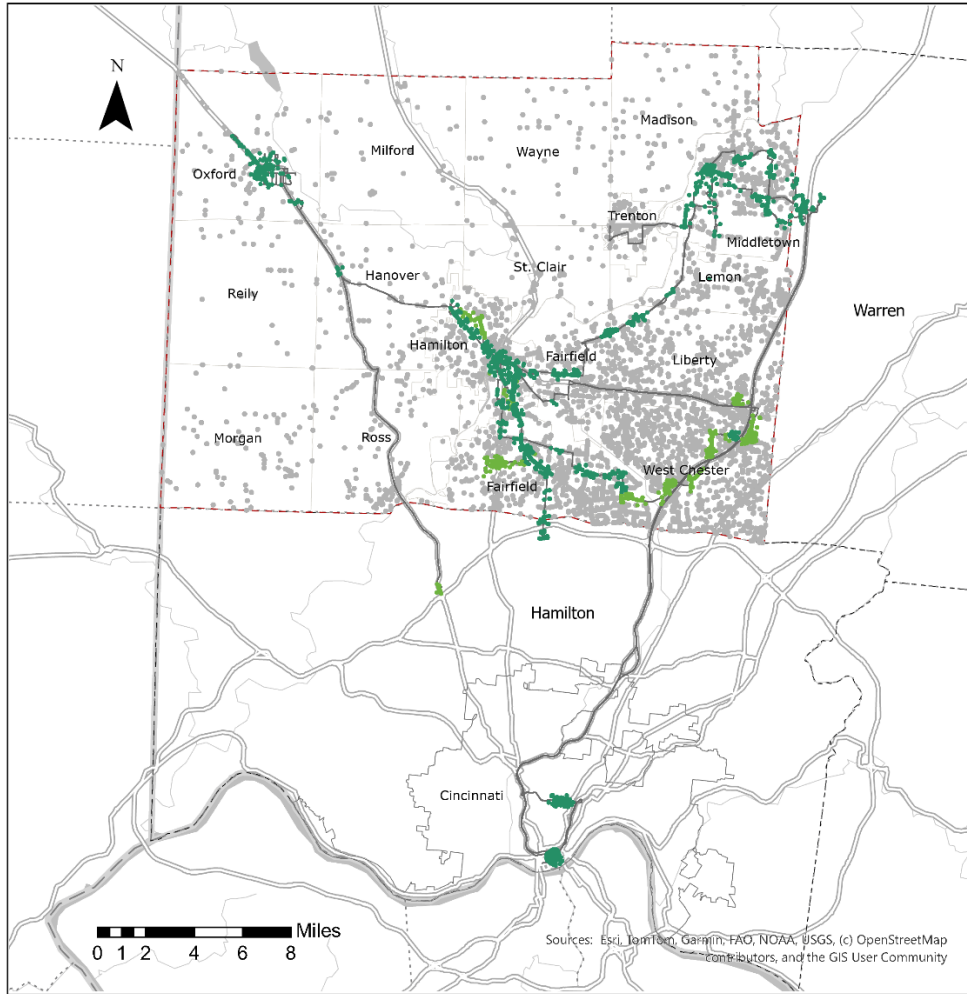
Category	Jobs	Share of Jobs	Establishments	Share of Establishments
Fixed-Route Accessible	66,003	40.9%	2,978	34.0%
Fixed-Route Not Accessible	95,217	59.1%	5,775	66.0%
Total Butler County	161,220	100.0%	8,753	100.0%

Source: Ohio ES-202, 2025; BCRTA route and stop data files; Economics Center analysis.

The proposed geography of access is more closely aligned with Butler County’s major job centers. West Chester Township is estimated to contain 17,047 accessible jobs under the proposed system, the City of Fairfield is estimated to contain 15,508, and the City of Hamilton is estimated to contain 13,367. The City of Oxford would remain highly covered with 8,034 accessible jobs. Figure 22 shows that the proposed network would extend job access more broadly across several of the County’s largest employment areas compared with the current system.

The proposed network would also broaden access across a wider mix of industries. A large number of accessible jobs would be found in health care and social assistance, accommodation and food services, retail trade, finance and insurance, and manufacturing. This indicates that the proposed plan would not only add more accessible jobs but would also expand access across sectors that account for a large share of Butler County employment.

Figure 22: Jobs Accessible Within 0.25-Mile of Proposed Service Plan



Legend

- Butler County
- Bus Routes
- Bus Accessible Jobs
- Newly Accessible Jobs
- Bus Unaccessible Jobs

Source: Ohio ES-202, 2025; BCRTA GTFS data; Esri basemap; Economics Center analysis.

Comparison of Current and Proposed Job Accessibility

Across the whole study area, accessible jobs would increase from 111,141 to 122,793, and accessible establishments would increase from 4,011 to 4,331. At the same time, accessible monthly wages would decline by approximately \$62.6 million, as shown in Table 12.

Table 12: Current and Proposed Accessible Jobs Summary

Metric	Current System	Proposed System	Net Change	Percent Change
Accessible Jobs	111,141	122,793	11,652	10.5%
Accessible Establishments	4,011	4,331	320	8.0%
Total Monthly Wages (\$)	\$823,890,316	\$761,333,775	(\$62,556,541)	-7.6%

Source: Lightcast, 2025; Ohio ES-202, 2025; BCRTA route and stop data files; Economics Center analysis.

These findings indicate that the proposed service plan would expand the number of jobs and establishments reachable by transit while shifting the wage composition of accessible employment. The decline in total accessible monthly wages suggests that the proposed network would reach a greater share of lower- and moderate-wage jobs than the current system. By connecting these workers to a larger set of employers, the proposed service plan could reduce transportation barriers, improve job matching, and support productivity gains by giving employers access to a broader pool of potential workers.

The proposed plan improves job access most clearly in Butler County. Accessible jobs in Butler County would increase from 51,581 to 66,003, a gain of 14,422 jobs, or 28.0 percent, as shown in Table 13.

Table 13: Current and Proposed Accessible Jobs by County

County	Current Jobs	Proposed Jobs	Net Change	Percent Change
Butler	51,581	66,003	14,422	28.0%
Hamilton	54,813	52,840	-1,973	-3.6%
Warren	4,747	3,950	-797	-16.8%
Total	111,141	122,793	11,652	10.5%

Source: Lightcast, 2025; Ohio ES-202, 2025; BCRTA route and stop GTFS data; Economics Center analysis.

The proposed plan also expands access to establishments, with the largest gain again in Butler County. As shown in Table 14, accessible establishments in Butler County would increase under the service expansion from 2,502 to 2,978, a gain of 476 establishments, or 19.0 percent.

Table 14: Current and Proposed Accessible Establishments by BCRTA, by County

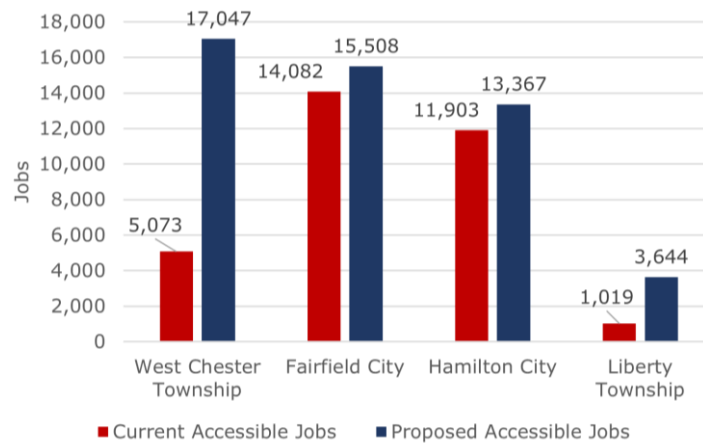
County	Current Establishments	Proposed Establishments	Net Change	Percent Change
Butler	2,502	2,978	476	19.0%
Hamilton	1,353	1,237	-116	-8.6%
Warren	156	116	-40	-25.6%
Total	4,011	4,331	320	8.0%

Source: Lightcast, 2025; Ohio ES-202, 2025; BCRTA route and stop data files; Economics Center analysis.

Geographic Change in Job Accessibility

The largest geographic improvements are concentrated in parts of Butler County where the current system leaves more of the job base outside fixed-route coverage. West Chester Township would gain 11,974 accessible jobs under the proposed network, the largest increase in the County. Liberty Township would gain 2,625 accessible jobs, while the cities of Fairfield and Hamilton would each add more than 1,400 accessible jobs. Figure 23 illustrates these four areas with the largest increases in job access.

Figure 23: Accessible Job Change by Butler County Community, 2025



Source: Lightcast, 2025; Ohio ES-202, 2025; BCRTA route and stop data files; Economics Center analysis.

Industry Change in Job Accessibility

The proposed plan would broaden access across a wider set of industry sectors. The largest increases would occur in health care and social assistance, accommodation and food services, finance and insurance, and retail trade. The health care and social assistance industry is estimated to gain 6,252 accessible jobs, accommodation and food services would gain 2,994, finance and insurance would gain 2,303, and retail trade would gain 1,880. These increases indicate that the proposed network would improve access in several of Butler County's largest service-oriented employment sectors. Table 15 shows the relative percentage changes by sector.

Table 15: Current and Proposed Accessible Jobs by Industry Sector in Butler County

NAICS Sector	Industry Sector Name	Current Accessible Jobs	Proposed Accessible Jobs	Net Change	Percent Change
11	Agriculture, Forestry, Fishing and Hunting	184	198	14	7.6%
22	Utilities	85	127	42	49.4%
23	Construction	1,969	1,692	-277	-14.1%
31-33	Manufacturing	7,011	6,266	-745	-10.6%
42	Wholesale Trade	3,183	3,056	-127	-4.0%
44-45	Retail Trade	7,324	9,204	1,880	25.7%
48-49	Transportation and Warehousing	1,640	1,644	4	0.2%
51	Information	309	351	42	13.6%
52	Finance and Insurance	4,748	7,051	2,303	48.5%
53	Real Estate and Rental and Leasing	710	811	101	14.2%
54	Professional, Scientific, and Technical Services	868	1,038	170	19.6%
55	Management of Companies and Enterprises	96	721	625	651.0%
56	Administrative and Support and Waste Management and Remediation Services	2,513	2,701	188	7.5%
61	Educational Services	5,462	5,467	5	0.1%
62	Health Care and Social Assistance	4,063	10,315	6,252	153.9%
71	Arts, Entertainment, and Recreation	626	948	322	51.4%
72	Accommodation and Food Services	7,143	10,137	2,994	41.9%
81	Other Services (except Public Administration)	1,495	1,786	291	19.5%
92	Public Administration	2,152	2,490	338	15.7%
Total		51,581	66,003	14,422	28.0%

Source: Lightcast, 2025; Ohio ES-202, 2025; BCRTA route and stop data files; Economics Center calculations.

Job Accessibility by Service Span and Frequency

Physical proximity does not fully describe practical job access. Usable access also depends on when service operates and how frequently buses arrive. Under the current system, access is strongest during weekday peak periods and weaker during Early AM, Late Night, and Weekend periods. Table 16 shows that weekend service currently reaches only 15,017 Butler County jobs, equal to 29.1 percent of the maximum number of jobs reachable under the current fixed-route network. Early AM service reaches 30,746 jobs, or 59.6 percent of that maximum. These gaps show that many jobs are near current fixed-route stops but are not served equally well across the full week.

Table 16: Jobs Accessible by Service Period in Butler County

Time Period	Jobs	Share of Maximum Fixed-Route Job Access
Early AM	30,746	59.6%
AM Peak	48,048	93.2%
Midday	50,429	97.8%
PM Peak	51,545	99.9%
Evening	49,461	95.9%
Late Night	39,224	76.0%
Weekend	15,017	29.1%

Source: BCRTA route and stop data files; Economics Center analysis.

Service frequency further limits usable job access, even for jobs that fall within the current service area. Table 17 shows that many currently accessible jobs are served by low-frequency or single-trip service rather than by higher-frequency routes, especially during Early AM, Evening, and Late Night service periods. In other words, some jobs are technically reachable under the current system, but the service remains difficult to use in practice because buses run infrequently or only once during the relevant period.

Table 17: Jobs Accessible by Frequency Tier in Butler County

Service Period	High	Moderate	Low	Very Low	Single-Trip	Total
Early AM	0	0	8,527	0	22,219	30,746
AM Peak	809	7,352	27,702	0	12,185	48,048
Midday	809	10,674	23,874	15,072	0	50,429
PM Peak	767	11,394	25,337	11,379	2,668	51,545
Evening	472	9,586	20,775	2,449	16,179	49,461
Late Night	6,668	245	3,272	70	28,969	39,224
Weekend	1,054	6,712	7,251	0	0	15,017

Source: BCRTA route and stop data files; Economics Center analysis.

The proposed network improves usable access across every service period, with the largest relative improvements in the periods where the current system is weakest. Access during the Early AM service period would increase from 30,746 jobs to 63,421, an increase of 106.3 percent. Late Night access would increase from 39,224 to 62,659, an increase of 59.7 percent. Weekend access would increase from 15,017 to 64,125, an increase of 327.0 percent. Access during the AM Peak, Midday, PM Peak, and Evening service periods would also improve. Table 18 provides detailed counts and percentage changes.

Table 18: Current and Proposed Accessible Jobs by Service Period in Butler County

Service Period	Current Jobs	Proposed Jobs	Net Change	Percent Change
Early AM	30,746	63,421	32,675	106.3%
AM Peak	48,048	64,887	16,839	35.0%
Midday	50,429	64,887	14,458	28.7%
PM Peak	51,545	66,003	14,458	28.0%
Evening	49,461	66,003	16,542	33.4%
Late Night	39,224	62,659	23,435	59.7%
Weekend	15,017	64,125	49,108	327.0%

Source: Lightcast, 2025; Ohio ES-202, 2025; BCRTA route and stop data files; Economics Center analysis.

These results show that the proposed network would improve not only how many jobs are near fixed-route service, but also how usable that service would be across the full day and week. The largest practical improvements would occur in Early AM, Late Night, and Weekend service periods, when the current network is most limited.

Economic Impacts of BCRTA

BCRTA supports Butler County not only through rider mobility, but also through its own spending. This section estimates the Butler County economic and fiscal effects of BCRTA’s operations and capital expenditures under the current system in 2026 and under the proposed service plan from 2027 to 2029. All dollar values in this section are reported in 2025 dollars.

Current Expenditure Impacts

The current system in 2026 provides the baseline for this analysis. It reflects BCRTA’s adopted operations and capital budget under the current service structure and revenue model. The following subsections present the operations expenditures, capital expenditures, revenue structure, and total combined impacts associated with that current system.

Operations Expenditures

Operations expenditures represent the day-to-day expenses incurred by BCRTA. In fiscal year 2026, BCRTA budgeted \$15.0 million in total operations expenditures. Of that total, \$7.0 million was budgeted for wages, \$4.3 million for fringe benefits, and \$3.6 million for non-wage operating expenditures, as shown in Table 19.

Table 19: Operations Expenditures of BCRTA, FY2026 (2025\$)

Expense	Amount
Wages	\$7,029,819
Fringe Benefits	\$4,330,643
Non-Wage Operating Expenditures	\$3,648,759
Total	\$15,009,221

Source: Economics Center analysis of data provided by BCRTA.

After accounting for economic leakage, approximately \$1.4 million in economic output was directly generated in Butler County by BCRTA’s FY2026 operations expenditures. This resulted in approximately \$627,000 in indirect output for businesses in Butler County supported by BCRTA’s direct expenditures. BCRTA directly supported 141 FTE jobs with \$7.0 million in wages. Indirectly, another 26 FTE jobs with \$3.3 million in wages were supported during FY26. BCRTA’s FY2026 operations expenditures generated \$2.0 million in total economic output, supported 167 full-time equivalent (FTE) jobs, and produced \$10.3 million in total wages in Butler County. Table 20 summarizes these impacts.

Table 20: Economic Impact of Operations Expenditures in Butler County, FY2026 (2025\$)

Impact Type	Output	Jobs (FTE)	Wages
Direct	\$1,408,419	141	\$7,029,819
Indirect	\$627,199	26	\$3,317,053
Total	\$2,035,618	167	\$10,346,872

Source: Economics Center analysis of data provided by BCRTA.

BCRTA’s FY2026 operations expenditures also generated \$606,158 in state and local tax revenue. The wages, directly and indirectly, supported by these expenditures generated income tax revenue, and the spending of those wages generated sales tax revenue. In FY2026, operations expenditures generated \$206,937 in income tax revenue for the City of Hamilton, \$216,456 in income tax revenue for the State

of Ohio, \$21,089 in Butler County sales tax revenue, and \$161,676 in State of Ohio sales tax revenue. Table 21 details these fiscal impacts.

Table 21: Fiscal Impact of Operations Expenditures, 2026 (2025\$)

Impact Type	City of Hamilton Income Tax	Ohio State Income Tax	Butler County Sales Tax	State of Ohio Sales Tax	Total Tax Revenue
Direct	\$140,596	\$134,435	\$16,047	\$123,023	\$414,101
Indirect	\$66,341	\$82,021	\$5,042	\$38,653	\$192,057
Total	\$206,937	\$216,456	\$21,089	\$161,676	\$606,158

Source: Economics Center analysis of data provided by BCRTA.

Capital Expenditures

Capital expenditures refer to expenses for vehicles, facilities, equipment, technology, and other system investments. These expenditures are associated with specific projects and are generally one-time expenditures rather than ongoing expenditures. In fiscal year 2026, BCRTA budgeted approximately \$12.7 million in capital expenditures. These expenditures were grouped into revenue vehicles and related items, transit centers and facility improvements, and equipment, technology, amenities, and other capital needs, as shown in Table 22.

Table 22: Capital Expenditures of BCRTA, FY2026 (2025\$)

Expense	Amount
Revenue Vehicles and Related Items	\$1,297,600
Transit Centers and Facility Improvements	\$7,022,986
Equipment, Technology, Amenities, and Other	\$4,370,614
Total	\$12,691,200

Source: Economics Center analysis of data provided by BCRTA.

After accounting for economic leakage, approximately \$5.6 million in economic output was directly generated in Butler County by BCRTA's FY2026 capital expenditures. This resulted in an additional \$2.5 million in indirect output. BCRTA directly supported 21 FTE jobs with \$2.2 million in wages, while the indirect effects supported another 14 FTE jobs with approximately \$840,100 in wages, during FY2026. BCRTA's FY2026 capital expenditures generated \$8.1 million in total economic output, supported 35 FTE jobs, and produced more than \$3.0 million in total wages in Butler County. Table 23 summarizes these impacts.

Table 23: Economic Impact of Capital Expenditures in Butler County, FY2026 (2025\$)

Impact Type	Output	Jobs (FTE)	Wages
Direct	\$5,569,316	21	\$2,189,394
Indirect	\$2,525,622	14	\$840,094
Total	\$8,094,938	35	\$3,029,488

Source: Economics Center analysis using data provided by BCRTA.

BCRTA's FY2026 capital expenditures also generated \$171,391 in state and local tax revenue. During FY2026, capital expenditures generated \$60,592 in income tax revenue for the City of Hamilton, \$67,134

in income tax revenue for the State of Ohio, \$5,038 in sales tax revenue for Butler County, and \$38,627 in sales tax revenue for the State of Ohio. Table 24 details these fiscal effects.

Table 24: Fiscal Impact of Capital Expenditures, FY2026 (2025\$)

Impact Type	City of Hamilton Income Tax	Ohio State Income Tax	Butler County Sales Tax	State of Ohio Sales Tax	Total Tax Revenue
Direct	\$43,789	\$50,201	\$3,342	\$25,627	\$122,959
Indirect	\$16,803	\$16,933	\$1,696	\$13,000	\$48,432
Total	\$60,592	\$67,134	\$5,038	\$38,627	\$171,391

Source: Economics Center analysis using data provided by BCRTA.

Revenue Structure

Federal funding and the Miami University partnership account for most of BCRTA's current revenue. In FY2026, BCRTA operated on an adopted budget of \$11.7 million in total revenue. Federal funding was the largest source at approximately \$5.1 million, or 43.1 percent of total revenue. The Miami University partnership provided another \$3.9 million, or 33.2 percent. State funding contributed \$1.7 million, or 14.8 percent. Passenger and contract fares totaled approximately \$740,400, or 6.3 percent of total revenue. Interest and other income, along with agency funding, accounted for the remaining 2.6 percent. BCRTA does not have a dedicated local transit sales tax under the current system. Table 25 summarizes the current revenue structure.

Table 25: Revenue Structure of BCRTA, 2026 (2025\$)

Revenue Source	Amount	Share of Total
Passenger and Contract Fares	\$740,350	6.3%
Transit Development (Miami University)	\$3,888,989	33.2%
State Funding	\$1,731,675	14.8%
Federal Funding	\$5,050,589	43.1%
Interest and Other	\$288,600	2.5%
Agency Funding	\$7,000	0.1%
Total Revenue	\$11,707,203	100.0%

Source: Economics Center analysis of data provided by BCRTA.

Total Combined Impacts

Overall, BCRTA's current operations and capital expenditures generated \$10.1 million in economic output, supported 202 FTE jobs, and produced \$13.4 million in wages in Butler County in 2026. Direct effects accounted for \$7.0 million in output, 162 FTE jobs, and \$9.2 million in wages. Indirect effects accounted for another \$3.2 million, 40 FTE jobs, and \$4.2 million in wages. Table 26 summarizes the combined economic impact of the current system.

Table 26: Current System Total Combined Economic Impact in Butler County, FY2026 (2025\$)

Impact Type	Output	Jobs (FTE)	Wages
Direct	\$6,977,735	162	\$9,219,213
Indirect	\$3,152,821	40	\$4,157,147
Total	\$10,130,556	202	\$13,376,360

Source: Economics Center analysis using data provided by BCRTA.

The current system also generated \$777,549 in total state and local tax revenue in 2026. This total included \$267,529 in City of Hamilton income tax revenue, \$283,590 in Ohio state income tax revenue, \$26,127 in Butler County sales tax revenue, and \$200,303 in State of Ohio sales tax revenue. Table 27 details these combined fiscal effects.

Table 27: Current System Total Combined Fiscal Impact, 2026 (2025\$)

Tax Type	Revenue
Ohio State Income Tax	\$283,590
City of Hamilton Income Tax	\$267,529
Butler County Sales Tax	\$26,127
State of Ohio Sales Tax	\$200,303
Total Tax Revenue	\$777,549

Source: Economics Center analysis using data provided by BCRTA.

Proposed Service Plan Economic Impacts, 2027 to 2029

The proposed service plan would substantially increase BCRTA's spending between 2027 and 2029. The following subsections estimate the associated operations impacts, capital impacts, projected revenue structure, funding gap, and total combined economic and fiscal effects over that three-year period.

Operations Expenditures

Operations expenditures under the proposed service plan are projected to generate \$12.0 million in economic output, support 939 job-years, and produce \$58.3 million in wages from 2027 to 2029. Over the three-year period, BCRTA budgeted \$85.1 million in total operations expenditures. Of that total, \$39.6 million was budgeted for wages, \$23.4 million for fringe benefits, \$21.5 million for non-wage operating expenditures, and approximately \$581,400 for interest expense and contingency, as shown in Table 28.

Table 28: Operations Expenditures of BCRTA, 2027 to 2029 (2025\$)

Expense	2027 Amount	2028 Amount	2029 Amount	Total
Wages	\$12,743,251	\$13,189,265	\$13,650,889	\$39,583,405
Fringe Benefits	\$7,537,995	\$7,801,824	\$8,074,888	\$23,414,707
Non-Wage Operating Expenditures	\$6,926,606	\$7,169,037	\$7,419,954	\$21,515,597
Interest Expense and Contingency	\$187,166	\$193,716	\$200,497	\$581,379
Total	\$27,395,018	\$28,353,842	\$29,346,228	\$85,095,088

Source: Economics Center analysis of data provided by BCRTA.

After accounting for economic leakage, operations expenditures are projected to generate approximately \$2.7 million in direct output in 2027, \$2.8 million in 2028, and \$2.9 million in 2029. Indirect output is projected at \$1.2 million in 2027, \$1.2 million in 2028, and \$1.3 million in 2029. Across the full three-year period, operations expenditures are projected to generate \$12.0 million in total output, with 795 direct job-years and 144 indirect job-years. Table 29 presents the annual and cumulative results.

Table 29: Economic Impact of Operations Expenditures in Butler County, 2027 to 2029 (2025\$)

Year	Impact Type	Output	Jobs (FTE)	Wages
2027	Direct	\$2,688,974	256	\$12,743,251
	Indirect	\$1,188,611	46	\$6,012,962
	Total	\$3,877,585	302	\$18,756,213
2028	Direct	\$2,783,088	265	\$13,189,265
	Indirect	\$1,230,213	48	\$6,223,415
	Total	\$4,013,301	313	\$19,412,680
2029	Direct	\$2,880,496	274	\$13,650,889
	Indirect	\$1,273,270	50	\$6,441,235
	Total	\$4,153,766	324	\$20,092,124
2027 to 2029	Total	\$12,044,652	939	\$58,261,017

Source: Economics Center analysis using data provided by BCRTA.

Note: Annual rows are reported as Jobs (FTE). The 2027 to 2029 total row is reported as job-years.

Operations expenditures under the proposed service plan are also projected to generate \$3.4 million in state and local tax revenue from 2027 to 2029. Over this period, these expenditures are projected to generate \$1.2 million in City of Hamilton income tax revenue, \$1.2 million in Ohio state income tax revenue, \$118,739 in Butler County sales tax revenue, and \$910,334 in State of Ohio sales tax revenue. Table 30 details these fiscal effects.

Table 30: Fiscal Impact of Operations Expenditures, 2027 to 2029 (2025\$)

Year	Impact Type	City of Hamilton Income Tax	Ohio State Income Tax	Butler County Sales Tax	State of Ohio Sales Tax	Total Tax Revenue
2027	Direct	\$254,865	\$243,559	\$29,086	\$222,993	\$750,503
	Indirect	\$120,259	\$149,857	\$9,139	\$70,069	\$349,324
	Total	\$375,124	\$393,416	\$38,225	\$293,062	\$1,099,827
2028	Direct	\$263,785	\$252,073	\$30,105	\$230,802	\$776,765
	Indirect	\$124,468	\$154,696	\$9,459	\$72,519	\$361,142
	Total	\$388,253	\$406,769	\$39,564	\$303,321	\$1,137,907
2029	Direct	\$273,018	\$260,988	\$31,160	\$238,893	\$804,059
	Indirect	\$128,825	\$159,779	\$9,790	\$75,058	\$373,452
	Total	\$401,843	\$420,767	\$40,950	\$313,951	\$1,177,511
2027 to 2029	Total	\$1,165,220	\$1,220,952	\$118,739	\$910,334	\$3,415,245

Source: Economics Center analysis using data provided by BCRTA.

Capital Expenditures

Capital expenditures under the proposed service plan are projected to generate \$7.7 million in economic output, support 34 job-years, and produce \$2.6 million in wages from 2027 to 2029. Over the three-year period, BCRTA budgeted \$20.3 million in total capital expenditures, as shown in Table 31.

Table 31: Capital Expenditures of BCRTA, 2027 to 2029 (2025\$)

Year	Expense	Amount
2027	Vehicles	\$3,826,578
	Infrastructure	\$1,660,200
	Facilities	\$1,666,667
	Total	\$7,153,445
2028	Vehicles	\$4,644,045
	Infrastructure	\$166,020
	Facilities	\$1,666,667
	Total	\$6,476,732
2029	Vehicles	\$4,806,587
	Infrastructure	\$171,831
	Facilities	\$1,666,667
	Total	\$6,645,085
2027 to 2029	Total	\$20,275,262

Source: Economics Center analysis of data provided by BCRTA.

After accounting for economic leakage, capital expenditures are projected to generate approximately \$2.3 million in direct output in 2027, \$1.5 million in 2028, and \$1.5 million in 2029. Indirect output is projected at \$998,461 in 2027, \$697,417 in 2028, and \$710,056 in 2029. Across the full three-year period, capital expenditures are projected to generate \$7.7 million in output, with 21 direct job-years and 13 indirect job-years. Table 32 presents the annual and cumulative results.

Table 32: Economic Impact of Capital Expenditures in Butler County, 2027 to 2029 (2025\$)

Year	Impact Type	Output	Jobs (FTE)	Wages
2027	Direct	\$2,260,179	9	\$872,778
	Indirect	\$998,461	5	\$320,049
	Total	\$3,258,640	14	\$1,192,827
2028	Direct	\$1,494,751	6	\$475,039
	Indirect	\$697,417	4	\$220,245
	Total	\$2,192,168	10	\$695,284
2029	Direct	\$1,518,562	6	\$480,410
	Indirect	\$710,056	4	\$224,335
	Total	\$2,228,618	10	\$704,745
2027 to 2029	Total	\$7,679,426	34	\$2,592,856

Source: Economics Center analysis using data provided by BCRTA. Note: Annual rows are reported as Jobs (FTE). The 2027 to 2029 total row is reported as job-years.

Capital expenditures under the proposed service plan are also projected to generate \$148,722 in state and local tax revenue from 2027 to 2029. Over that period, these expenditures are projected to generate \$51,859 in City of Hamilton income tax revenue, \$56,130 in Ohio state income tax revenue, \$4,701 in Butler County sales tax revenue, and \$36,032 in State of Ohio sales tax revenue. Table 33 details these fiscal effects.

Table 33: Fiscal Impact of Capital Expenditures, 2027 to 2029 (2025\$)

Year	Impact Type	City of Hamilton Income Tax	Ohio State Income Tax	Butler County Sales Tax	State of Ohio Sales Tax	Total Tax Revenue
2027	Direct	\$17,456	\$19,560	\$1,446	\$11,083	\$49,545
	Indirect	\$6,402	\$6,519	\$647	\$4,953	\$18,521
	Total	\$23,858	\$26,079	\$2,093	\$16,036	\$68,066
2028	Direct	\$9,501	\$10,431	\$850	\$6,520	\$27,302
	Indirect	\$4,405	\$4,497	\$444	\$3,408	\$12,754
	Total	\$13,906	\$14,928	\$1,294	\$9,928	\$40,056
2029	Direct	\$9,608	\$10,543	\$861	\$6,597	\$27,609
	Indirect	\$4,487	\$4,580	\$453	\$3,471	\$12,991
	Total	\$14,095	\$15,123	\$1,314	\$10,068	\$40,600
2027 to 2029	Total	\$51,859	\$56,130	\$4,701	\$36,032	\$148,722

Source: Economics Center analysis using data provided by BCRTA.

Revenue Structure and Funding Gap

Projected revenues remain below projected expenditures under the proposed service plan. Projected revenues total \$11.4 million in 2027, \$12.5 million in 2028, and \$12.8 million in 2029, as shown in Table 34. Federal assistance remains the largest projected revenue source, ranging from \$4.5 million to \$4.8 million annually. The Transit Development Fund contributes another \$3.3 million to \$3.5 million each year. State assistance, fare revenue, contract revenue, and discretionary capital assistance provide the remaining projected revenue.

Table 34: Revenue Structure of BCRTA, 2027 to 2029 (2025\$)

Revenue Source	2027	2028	2029
Federal Assistance	\$4,532,000	\$4,667,960	\$4,807,999
Discretionary Capital Assistance	\$1,487,431	\$1,801,728	\$1,864,788
State Assistance	\$800,000	\$824,000	\$848,720
Fare Revenue	\$932,983	\$1,435,525	\$1,478,590
Contract Revenue	\$336,093	\$346,176	\$356,561
Transit Development Fund	\$3,276,976	\$3,375,285	\$3,476,544
Total Revenue	\$11,365,483	\$12,450,674	\$12,833,202

Source: Economics Center analysis of data provided by BCRTA.

The projected funding gap remains substantial in each year of the proposed plan. Total projected expenditures reach \$34.5 million in 2027, \$34.8 million in 2028, and \$36.0 million in 2029. After accounting for projected revenues, the remaining funding gap is \$23.2 million in 2027, \$22.4 million in 2028, and \$23.2 million in 2029. Table 35 details these annual gaps. The potential role of a county sales tax increase in closing this gap is evaluated later in the Sales Tax Forecast and Burden Analysis section.

Table 35: Proposed Service Plan Funding Gap, 2027 to 2029 (2025\$)

Category	2027	2028	2029
Operating Expenditures	\$27,395,018	\$28,353,843	\$29,346,228
Capital Expenditures	\$7,153,444	\$6,476,732	\$6,645,084
Total Expenditures	\$34,548,462	\$34,830,575	\$35,991,312
Total Revenues	\$11,365,483	\$12,450,674	\$12,833,203
Funding Gap	(\$23,182,979)	(\$22,379,901)	(\$23,158,109)

Source: Economics Center analysis of data provided by BCRTA.

Total Combined Impacts

Overall, the proposed service plan's operations and capital expenditures are projected to generate \$19.7 million in economic output, support 973 job-years, and produce \$60.9 million in wages from 2027 to 2029. Annual output is projected at \$7.1 million in 2027, \$6.2 million in 2028, and \$6.4 million in 2029. Across the full three-year period, direct effects account for 816 job-years and indirect effects account for 157 job-years. Table 36 summarizes the combined economic effects of the proposed plan.

Table 36: Total Combined Economic Impact in Butler County, 2027 to 2029 (2025\$)

Year	Impact Type	Output	Jobs (FTE)	Wages
2027	Direct	\$4,949,153	265	\$13,616,029
	Indirect	\$2,187,072	51	\$6,333,011
	Total	\$7,136,225	316	\$19,949,040
2028	Direct	\$4,277,839	271	\$13,664,304
	Indirect	\$1,927,630	52	\$6,443,660
	Total	\$6,205,469	323	\$20,107,964
2029	Direct	\$4,399,058	280	\$14,131,299
	Indirect	\$1,983,326	54	\$6,665,570
	Total	\$6,382,384	334	\$20,796,869
2027 to 2029	Total	\$19,724,078	973	\$60,853,873

Source: Economics Center analysis using data provided by BCRTA. Note: Annual rows are reported as Jobs (FTE). The 2027 to 2029 total row is reported as job-years.

The proposed service plan is also projected to generate \$3.6 million in state and local tax revenue from 2027 to 2029. This total includes \$1.2 million in City of Hamilton income tax revenue, \$1.3 million in Ohio state income tax revenue, \$123,440 in Butler County sales tax revenue, and \$946,366 in State of Ohio sales tax revenue. Table 37 details these combined fiscal effects.

Table 37: Proposed Service Plan Total Combined Fiscal Impact, 2027 to 2029 (2025\$)

Year	City of Hamilton Income Tax	Ohio State Income Tax	Butler County Sales Tax	State of Ohio Sales Tax	Total Tax Revenue
2027	\$398,982	\$419,495	\$40,318	\$309,098	\$1,167,893
2028	\$402,159	\$421,697	\$40,858	\$313,249	\$1,177,963
2029	\$415,938	\$435,890	\$42,264	\$324,019	\$1,218,111
Total	\$1,217,079	\$1,277,082	\$123,440	\$946,366	\$3,563,967

Source: Economics Center analysis using data provided by BCRTA.

Sales Tax Forecast and Burden Analysis

A county sales tax increase is one of the primary local options available to help close the projected funding gap under the proposed service plan. Because a countywide sales tax applies to taxable spending within Butler County rather than only to Butler County households, it can broaden the funding base beyond local residents alone. This section presents the Butler County sales tax forecast, estimates the revenue associated with three county tax-rate scenarios, and examines how the added burden and added revenue base would be distributed between Butler County residents and taxable spending from outside the County.

Sales Tax Forecast

Butler County sales tax collections have grown over time, but year-to-year change has been uneven. Over the 2016 to 2025 period, the County experienced negative revenue growth in three years. At the other extreme, revenue increased by 18.9 percent in 2021 as taxable spending rebounded after the COVID-19 pandemic. Across the full 2016 to 2025 period, the average annual growth rate was 3.7 percent, while the average annual growth rate over the most recent five years was 3.4 percent. Growth in 2025 was higher, at 5.9 percent. Table 38 presents the historical pattern.

Table 38: Butler County Sales Tax Revenue, 2016 to 2025 (Nominal\$)

Year	Sales Tax Revenue	Growth
2016	\$44,065,247	6.5%
2017	\$43,646,412	-1.0%
2018	\$43,192,457	-1.0%
2019	\$45,168,340	4.6%
2020	\$45,012,792	-0.3%
2021	\$53,530,346	18.9%
2022	\$57,010,564	6.5%
2023	\$58,580,873	2.8%
2024	\$59,634,200	1.8%
2025	\$63,152,364	5.9%

Source: Ohio Department of Taxation; Economics Center analysis.

The Butler County sales tax forecast projects higher growth in the first few years of the forecast horizon and then a gradual return toward the longer-run trend.²⁹ Under this forecast, Butler County sales tax revenue is projected to increase from \$66.2 million in 2026 to \$93.6 million in 2035. These values should be treated as planning estimates rather than exact predictions. Table 39 presents the forecast.

²⁹ Details on the forecasting models are provided in the Methodology section, Sales Tax Forecast subsection.

Table 39: Butler County Sales Tax Forecast, 2026-2035 (Nominal\$)

Year	Average Point Forecast	Growth
2026	\$66,174,579	4.8%
2027	\$69,898,287	5.6%
2028	\$73,577,550	5.3%
2029	\$76,952,294	4.6%
2030	\$80,146,222	4.2%
2031	\$83,135,479	3.7%
2032	\$85,959,477	3.4%
2033	\$88,634,469	3.1%
2034	\$91,186,223	2.9%
2035	\$93,636,089	2.7%

Source: Economics Center analysis.

To estimate the revenue effect of a county sales tax increase for BCRTA, this analysis first estimates the eligible base by dividing projected county sales tax revenue by the current 0.75 percent county sales tax rate. Table 40 presents that eligible base and the corresponding naive estimates for a 0.25 percentage-point increase, a 0.30 percentage-point increase, and a 0.50 percentage-point increase. The naive estimates assume that a higher county tax rate would not affect the tax base itself.

Table 40: Butler County Tax Base and Naïve BCRTA Sales Tax Estimates, 2026-2035 (Nominal\$)

Year	Tax Base Forecast	.25% Sales Tax	.30% Sales Tax	.50% Sales Tax
2026	\$8,823,277,186	\$22,058,193	\$26,469,832	\$44,116,386
2027	\$9,319,771,627	\$23,299,429	\$27,959,315	\$46,598,858
2028	\$9,810,340,049	\$24,525,850	\$29,431,020	\$49,051,700
2029	\$10,260,305,924	\$25,650,765	\$30,780,918	\$51,301,530
2030	\$10,686,162,912	\$26,715,407	\$32,058,489	\$53,430,815
2031	\$11,084,730,568	\$27,711,826	\$33,254,192	\$55,423,653
2032	\$11,461,263,554	\$28,653,159	\$34,383,791	\$57,306,318
2033	\$11,817,929,249	\$29,544,823	\$35,453,788	\$59,089,646
2034	\$12,158,163,070	\$30,395,408	\$36,474,489	\$60,790,815
2035	\$12,484,811,922	\$31,212,030	\$37,454,436	\$62,424,060

Source: Economics Center analysis.

A second set of estimates adjusts the tax base using a sales tax elasticity of -2.609.³⁰ Because Butler County's sales tax rate remains lower than surrounding counties, the actual effect on the tax base may be smaller than the elasticity-adjusted estimate suggests.

The 0.25 percentage-point increase represents the lowest sales tax scenario evaluated in this forecast. Table 41 shows that the adjusted tax base would support an estimated \$21.9 million in BCRTA sales tax revenue in 2026 and \$31.0 million in 2035.

³⁰ Dat Huynh, Anna Sokolova, and Mehmet S. Tosun (2022).

**Table 41: Butler County Sales Tax Forecast, 0.25 Percentage-Point Scenario, 2026-2035
(Nominal\$)**

Year	Elasticity Adjusted Tax Base	Butler County Sales Tax	BCRTA Sales Tax
2026	\$8,769,239,792	\$65,769,298	\$21,923,099
2027	\$9,262,693,495	\$69,470,201	\$23,156,734
2028	\$9,750,257,473	\$73,126,931	\$24,375,644
2029	\$10,197,467,572	\$76,481,007	\$25,493,669
2030	\$10,620,716,435	\$79,655,373	\$26,551,791
2031	\$11,016,843,099	\$82,626,323	\$27,542,108
2032	\$11,391,070,041	\$85,433,025	\$28,477,675
2033	\$11,745,551,367	\$88,091,635	\$29,363,878
2034	\$12,083,701,456	\$90,627,761	\$30,209,254
2035	\$12,408,349,776	\$93,062,623	\$31,020,874

Source: Economics Center analysis.

The 0.30 percentage-point increase represents the scenario most closely aligned with the funding needed to support BCRTA’s proposed service plan, and it is the primary scenario evaluated in the resident and exogenous revenue analysis that follows. Table 42 shows that the adjusted tax base would support an estimated \$26.3 million in BCRTA sales tax revenue in 2026 and \$37.2 million in 2035.

**Table 42: Butler County Sales Tax Forecast, 0.30 Percentage-Point Scenario, 2026-2035
(Nominal\$)**

Year	Elasticity Adjusted Tax Base	Butler County Sales Tax	BCRTA Sales Tax
2026	\$8,758,432,313	\$65,688,242	\$26,275,297
2027	\$9,251,277,869	\$69,384,584	\$27,753,834
2028	\$9,738,240,958	\$73,036,807	\$29,214,723
2029	\$10,184,899,901	\$76,386,749	\$30,554,700
2030	\$10,607,627,140	\$79,557,204	\$31,822,881
2031	\$11,003,265,605	\$82,524,492	\$33,009,797
2032	\$11,377,031,338	\$85,327,735	\$34,131,094
2033	\$11,731,075,791	\$87,983,068	\$35,193,227
2034	\$12,068,809,133	\$90,516,068	\$36,206,427
2035	\$12,393,057,347	\$92,947,930	\$37,179,172

Source: Economics Center analysis.

A 0.50 percentage-point increase represents a higher-revenue alternative that would provide a larger funding cushion for capital needs and service contingencies. Table 43 shows that the adjusted tax base would support an estimated \$43.6 million in BCRTA sales tax revenue in 2026 and \$61.7 million in 2035.

Table 43: Butler County Sales Tax Forecast, 0.50 Percentage-Point Scenario, 2026-2035 (Nominal\$)

Year	Elasticity Adjusted Tax Base	Butler County Sales Tax	BCRTA Sales Tax
2026	\$8,715,202,397	\$65,364,018	\$43,576,012
2027	\$9,205,615,364	\$69,042,115	\$46,028,077
2028	\$9,690,174,898	\$72,676,312	\$48,450,874
2029	\$10,134,629,219	\$76,009,719	\$50,673,146
2030	\$10,555,269,958	\$79,164,525	\$52,776,350
2031	\$10,948,955,629	\$82,117,167	\$54,744,778
2032	\$11,320,876,528	\$84,906,574	\$56,604,383
2033	\$11,673,173,486	\$87,548,801	\$58,365,867
2034	\$12,009,239,842	\$90,069,299	\$60,046,199
2035	\$12,331,887,630	\$92,489,157	\$61,659,438

Source: Economics Center analysis.

Among the three scenarios, the 0.30 percentage-point increase best aligns with the proposed service plan. Butler County’s current local sales tax rate is 0.75 percent. A proposed 0.30 percentage-point increase would raise the County rate to 1.05 percent and the total combined sales tax rate in Butler County to 6.80 percent. The 0.30 percentage-point scenario remains the current planning case used elsewhere in this report.

Resident and Outside Shares of County Sales Tax Revenue

One benefit of using a county sales tax to help finance the proposed service plan is that much of the revenue would come from spending by consumers from outside Butler County. This analysis estimates the resident share by comparing taxable household spending by Butler County residents with actual county sales tax collections. Using actual 2024 Butler County sales tax collections, this analysis estimates that Butler County households generated approximately \$22.0 million of the County’s \$59.6 million in sales tax revenue in 2024. This implies a resident share of 36.9 percent and an outside share of 63.1 percent, shown in Table 44.

Table 44: Butler County Resident and Outside Share of County Sales Tax Revenue, 2024 (Nominal\$)

Measure	Amount
Estimated Butler County household-generated county sales tax revenue	\$21,985,344
2024 Butler County sales tax collections	\$59,634,200
Resident share of county sales tax revenue	36.9%
Outside share of county sales tax revenue	63.1%

Source: Economics Center analysis using ACS, 2023–2024 Midwest Consumer Expenditure Survey, and Ohio Department of Taxation county sales tax distribution data.

Under the current planning 0.30 percentage-point scenario used in the resident-share analysis, the estimated added annual revenue is approximately \$23.8 million. Of that amount, approximately \$8.8 million would be generated from Butler County residents and approximately \$15.0 million would come from those that reside outside of Butler County. Applying the same shares to the other scenarios suggests that the outside portion would be approximately \$12.5 million under the 0.25 percentage-point increase and approximately \$25.0 million under the 0.50 percentage-point increase. Table 45 details these estimates.

Table 45: Estimated Resident and Outside Share of Incremental County Sales Tax Revenue by Scenario (Nominal\$)

Scenario	Incremental Revenue	Resident Portion	Outside Portion
0.25 percentage-point scenario	\$19,800,000	\$7,299,668	\$12,500,332
0.30 percentage-point scenario	\$23,760,000	\$8,759,601	\$15,000,399
0.50 percentage-point scenario	\$39,600,000	\$14,599,335	\$25,000,665

Source: Economics Center calculations using the updated 2024 Butler County resident share estimate.

Resident Personas and Direct Tax Burden

A county sales tax increase would raise the direct tax burden on Butler County residents, but the size of that burden would vary across households because taxable spending varies across groups. This analysis uses five representative personas that together account for 59.8 percent of Butler County residents age 18 and older: employed adults with at least a bachelor’s degree, 87,780 adults (29.1%); individuals with family income below 175.0 percent of the poverty threshold, 55,606 adults (18.5%); employed adults ages 18 to 25, 31,787 adults (10.6%); retired adults ages 65 and older, 32,947 adults (10.9%); and employed adults who are transit dependent, 4,468 adults (1.5%). Because some residents may fit more than one persona, these groups are not mutually exclusive.

0.25 Percentage-Point Scenario

Under the 0.25 percentage-point scenario, the estimated incremental annual burden ranges from \$15.34 for employed adults ages 18 to 25 to \$28.41 for employed adults with at least a bachelor’s degree. The corresponding estimated burdens are \$20.96 for individuals with family income below 175 percent of the poverty threshold, \$22.37 for retired adults ages 65 and older, and \$18.95 for employed adults who are transit dependent. Table 46 summarizes the estimated annual burden for each persona under this scenario.

Table 46: Direct Annual Sales Tax Burden by Persona, 0.25 Percentage-Point Scenario (Nominal\$)

Persona	Population 18+	Weighted Average Total Income	Taxable Spending	Current Rate (0.75%)	Increased Rate (1.00%)	Incremental Annual Tax Burden
Employed individual with at least a bachelor's degree	87,780	\$85,183	\$11,364	\$85.23	\$113.64	\$28.41
Individual with family income less than 175% of poverty threshold	55,606	\$12,373	\$8,384	\$62.88	\$83.84	\$20.96
Employed individual aged 18 to 25 years	31,787	\$25,417	\$6,135	\$46.01	\$61.35	\$15.34
Retired individual aged 65 years and older	32,947	\$62,149	\$8,946	\$67.10	\$89.46	\$22.37
Employed individual who is transit dependent	4,468	\$35,868	\$7,579	\$56.84	\$75.79	\$18.95

Source: Economics Center calculations using data from the U.S. Census Bureau American Community Survey and the 2023-2024 Midwest Consumer Expenditure Survey.

0.30 Percentage-Point Scenario

Under the 0.30 percentage-point scenario, the estimated incremental annual burden ranges from \$18.41 for employed adults ages 18 to 25 to \$34.09 for employed adults with at least a bachelor’s degree. The corresponding estimated burdens are \$25.15 for individuals with family income below 175 percent of the poverty threshold, \$26.84 for retired adults ages 65 and older, and \$22.74 for employed adults who are transit dependent. Table 47 summarizes the estimated annual burden for each persona under this scenario.

Table 47: Direct Annual Sales Tax Burden by Persona, 0.30 Percentage-Point Scenario (Nominal\$)

Persona	Population 18+	Weighted Average Total Income	Taxable Spending	Current Rate (0.75%)	Increased Rate (1.05%)	Incremental Annual Tax Burden
Employed individual with at least a bachelor's degree	87,780	\$85,183	\$11,364	\$85.23	\$119.32	\$34.09
Individual with family income less than 175% of poverty threshold	55,606	\$12,373	\$8,384	\$62.88	\$88.04	\$25.15
Employed individual aged 18 to 25 years	31,787	\$25,417	\$6,135	\$46.01	\$64.42	\$18.41
Retired individual aged 65 years and older	32,947	\$62,149	\$8,946	\$67.10	\$93.94	\$26.84
Employed individual who is transit dependent	4,468	\$35,868	\$7,579	\$56.84	\$79.58	\$22.74

Source: Economics Center calculations using data from the U.S. Census Bureau American Community Survey and the 2023-2024 Midwest Consumer Expenditure Survey.

0.50 Percentage-Point Scenario

Under the 0.50 percentage-point scenario, the estimated incremental annual burden ranges from \$30.68 for employed adults ages 18 to 25 to \$56.82 for employed adults with at least a bachelor’s degree. The corresponding estimated burdens are \$41.92 for individuals with family income below 175 percent of the poverty threshold, \$44.73 for retired adults ages 65 and older, and \$37.89 for employed adults who are transit dependent. Table 48 summarizes the estimated annual burden for each persona under this scenario.

Table 48: Direct Annual Sales Tax Burden by Persona, 0.50 Percentage-Point Scenario (Nominal\$)

Persona	Population 18+	Weighted Average Total Income	Taxable Spending	Current Rate (0.75%)	Increased Rate (1.25%)	Incremental Tax Burden
Employed individual with at least a bachelor's degree	87,780	\$85,183	\$11,364	\$85.23	\$142.05	\$56.82
Individual with family income less than 175% of poverty threshold	55,606	\$12,373	\$8,384	\$62.88	\$104.80	\$41.92
Employed individual aged 18 to 25 years	31,787	\$25,417	\$6,135	\$46.01	\$76.69	\$30.68
Retired individual aged 65 years and older	32,947	\$62,149	\$8,946	\$67.10	\$111.83	\$44.73
Employed individual who is transit dependent	4,468	\$35,868	\$7,579	\$56.84	\$94.73	\$37.89

Source: Economics Center calculations.

Across all three scenarios, employed adults with at least a bachelor’s degree face the highest increased burden, with an estimated annual increase ranging from \$28.41 to \$56.82. Employed adults ages 18 to 25 face the lowest burden, with an estimated annual increase ranging from \$15.34 to \$30.68.

Broader Economic and Community Value of Transit

Transit affects Butler County through more than direct economic and fiscal impacts. If the proposed service plan is implemented, BCRTA’s expanded service would generate broader transportation and community benefits. This section estimates how the proposed service plan could reduce automobile travel and expand access to essential destinations, with a focus on countywide travel effects and access to food, health care, and education or training sites.

Countywide Travel, Cost, and Environmental Benefits

The proposed service plan is estimated to add measurable countywide travel and cost benefits beyond those already generated by the current system. These estimates focus on changes in vehicle miles traveled, congestion costs, household transportation costs, fuel use, and emissions. Because these values are based on modeled assumptions rather than direct observation, they should be interpreted as planning estimates rather than measured outcomes.

The countywide benefit estimates in this subsection are driven by a small set of ridership, automobile substitution, and trip-length assumptions. Table 49 summarizes the key inputs and derived measures used in the reduced automobile travel analysis.

Table 49: Key Assumptions and Derived Measures for Reduced Automobile Travel Analysis

Metric	Value
Current Annual Revenue Hours	86,103
Proposed Annual Revenue Hours	276,831
Increase in Revenue Hours	221.5%
Forecasted New Annual Unlinked Transit Trips	753,752
Elasticity Assumption	0.7
Automobile Substitution Rate	40%
Weighted Average Trip Length	6.2 miles
Vehicle Occupancy	1.06 persons per vehicle
Annual Automobile Trips Replaced	301,501
Work-Related Share of Replaced Trips	35%
Work-Related Automobile Trips Replaced	105,525
Commuter Trips per Commuter per Year	500
Additional Commuter Equivalent	211

Sources: Economics Center analysis using BCRTA proposed service data, 2024 National Transit Database, ACS 2024 5-Year Estimates, and Victoria Transport Policy Institute guidance.

Estimated Reduction in Vehicle Miles Traveled

Public transit reduces vehicle miles traveled (VMT) in Butler County. This estimate is based on projected transit trips, the share of trips expected to replace automobile travel, average vehicle occupancy, and average trip length. This approach converts transit ridership into estimated avoided VMT. The current BCRTA system is estimated to reduce annual VMT by approximately 1.5 million miles. Under the proposed service plan, the expanded system is estimated to reduce annual VMT by approximately 3.3 million miles. These values form the basis for the congestion, household transportation cost, fuel savings, and environmental calculations that follow. Because this estimate is derived from modeled assumptions rather than direct observation, it should be interpreted as a planning estimate rather than a measured outcome.

Potential Congestion and Travel Time Effects

Traffic congestion imposes measurable costs on commuters in the Cincinnati Metropolitan Statistical Area. According to the Texas A&M Transportation Institute, the annual congestion cost per auto commuter in the Cincinnati MSA was \$1,316 in 2024 dollars. Applying that value to the current system's 754 transit commuters produces \$992,264 in annual congestion cost savings. The proposed service plan would add 211 commuter equivalents and \$277,743 in annual congestion cost savings. Under the proposed service plan, total congestion cost savings are estimated at \$1,270,007 per year, as shown in Table 50.

Table 50: Estimated Congestion Cost Savings from Transit Use (2024\$)

Metric	Current System	Change	Proposed Service Plan
Transit Commuters / Commuter Equivalents	754	211	965
Congestion Cost per Commuter	\$1,316	\$1,316	-
Congestion Cost Savings (\$/Year)	\$992,264	\$277,743	\$1,270,007

Sources: Economics Center calculations based on Butler County commuter counts and Texas A&M Transportation Institute, 2025 Urban Mobility Report.

Potential Household Transportation Cost Savings

Private vehicle dependence carries a direct household cost burden. Based on American Automobile Association (AAA) estimates, this analysis applies an estimated vehicle cost of \$1.06 per mile. Using that rate, the current system is associated with approximately \$1.6 million in annual household transportation cost savings. The proposed service plan would add \$1,869,305 in annual household transportation cost savings. Under the proposed service plan, total household transportation cost savings are estimated at \$3,466,926 per year, as shown in Table 51.

Table 51: Estimated Household Transportation Cost Savings from Reduced Vehicle Miles Traveled (2024\$)

Metric	Current System	Change	Proposed Service Plan
VMT Reduced (Miles per Year)	1,507,190	1,763,495	3,270,685
Cost per Mile	\$1.06	\$1.06	-
Household Cost Savings (\$/Year)	\$1,597,621	\$1,869,305	\$3,466,926

Sources: Economics Center calculations based on Ohio Department of Transportation adjusted county daily vehicle miles traveled data, and AAA, Your Driving Costs 2024.

Potential Fuel Savings and Environmental Effects

Reduced driving can lower fuel use, fuel costs, and vehicle emissions. Using U.S. Environmental Protection Agency assumptions for a typical passenger vehicle, the current system is estimated to save 67,891 gallons of fuel and avoid 603 metric tons of carbon dioxide per year. The proposed service plan would add 79,437 gallons in annual fuel savings and 705 metric tons in avoided carbon dioxide emissions. Under the proposed service plan, total annual fuel savings are estimated at 147,328 gallons, and avoided carbon dioxide emissions are estimated at 1,308 metric tons.

Applying average 2024 fuel costs to reduced driving suggests that the current system is associated with \$224,571 in annual fuel cost savings. The proposed service plan would add \$262,761 in annual fuel cost savings. Under the proposed service plan, total annual fuel cost savings are estimated at \$487,332, as shown in Table 52.

Table 52: Estimated Fuel Savings, Fuel Cost Savings, and Carbon Dioxide Emissions Avoided (2024\$)

Metric	Current System	Change	Proposed Service Plan
Fuel Saved (Gallons per Year)	67,891	79,437	147,328
Fuel Cost Savings (\$/Year)	\$224,571	\$262,761	\$487,332
CO2 Avoided (Metric Tons per Year)	603	705	1,308

Sources: Economics Center analysis based on reduced vehicle miles traveled, U.S. Environmental Protection Agency assumptions for a typical passenger vehicle, and American Automobile Association, *Your Driving Costs 2024*.

Community Access Benefits

Community access benefits refer to the way transit supports access to destinations that are important to daily life, especially grocery stores, health care providers, and education or training sites. These destinations shape whether residents can meet basic household needs, reach appointments, and participate in school or workforce preparation without relying only on a private vehicle.

This analysis evaluates community access using the current system because the existing stop network provides the clearest base for measuring present-day spatial coverage. Fixed-route access is measured using a one-quarter-mile walkshed around current BCRTA stops. A second service layer uses 2025 BGo and BCare trips with clearly labeled trip purposes related to food, health care, or education to show where on-demand service is already extending access beyond the fixed-route network. Because some 2025 on-demand trips could not be assigned clearly to one of these categories, the mapped BGo and BCare coverage shown below should be interpreted as a conservative estimate. The proposed service plan would expand fixed-route coverage beyond the current system, so actual future access would be expected to improve from the current baseline shown here.

Food Access

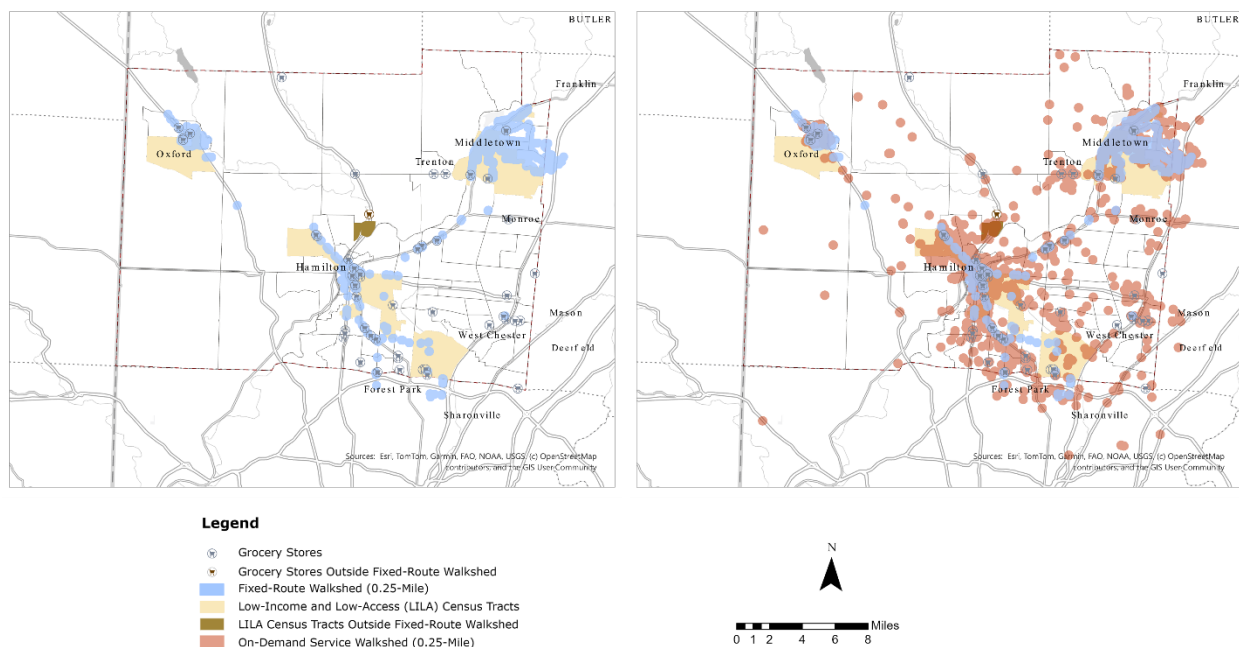
Access to grocery stores through public transportation is most important for households that do not have a reliable private vehicle and for households located in low-income and low-access areas. In Butler County, government food-access data from the U.S. Department of Agriculture Economic Research Service identify 19 census tracts as low-income and low-access (LILA) areas.³¹ These tracts represent places where reaching a full-service grocery store may be more difficult, especially for households with limited transportation options.

Analysis of the spatial distribution of these LILA tracts and the current BCRTA fixed-route network shows that one of the 19 tracts remains outside the current fixed-route walkshed. This uncovered tract contains 854 households, including 20 households without a vehicle. The analysis then adds on-demand food-related trip destinations to show where BGo and BCare are already extending access beyond the fixed-

³¹ The newest available USDA Food Access Research Atlas tract-level food access data used in this analysis are from 2019.

route system. As shown in Figure 24, the remaining uncovered tract is reached by observed on-demand food-related trip activity.

Figure 24: Food Access and Transit Coverage in Butler County



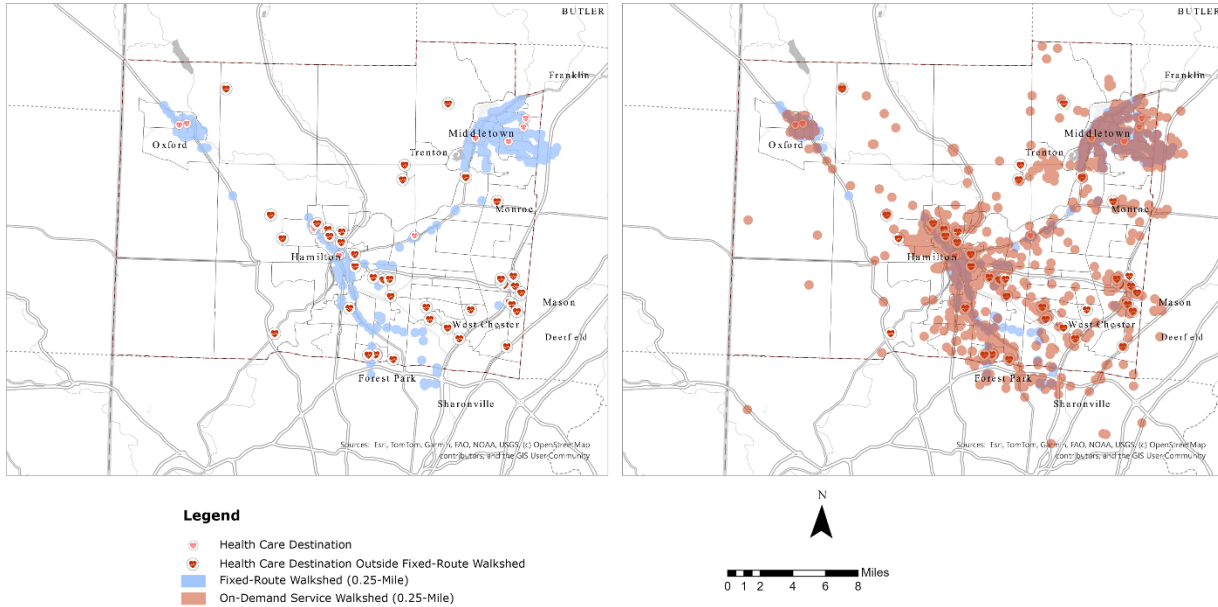
Sources: U.S. Department of Agriculture Food Access Research Atlas, 2019 tract-level food access data; ACS 2020-2024 5-Year Estimates; Ohio ES-202, 2025 establishment data; BCRTA fixed-route data files; 2025 BGo and BCare trip data; and Economics Center analysis.

Health Care Access

Access to health care through public transportation is important because missed or delayed appointments can limit preventive care, interrupt treatment, and make routine medical needs harder to manage, which can increase long-term health care costs for residents. These barriers are often more difficult for residents without reliable vehicle access, older adults, individuals with disabilities, and patients who need recurring medical visits.

Spatial analysis of health care destinations in Butler County identifies 49 health care destinations outside the current fixed-route walkshed. These uncovered destinations include facilities in the City of Hamilton, the City of Fairfield, and West Chester Township, among other parts of the County. The analysis then adds mapped health care-related BGo and BCare trip destinations. This on-demand layer shows that BGo and BCare extend health care-related access into lower-density parts of the County where fixed-route service is less available. Under this combined view, all identified health care destinations are covered. As shown in Figure 25, the mapped pattern indicates that on-demand service plays an important role in extending access to medical destinations beyond the fixed-route network.

Figure 25: Health Care Access and Transit Coverage in Butler County



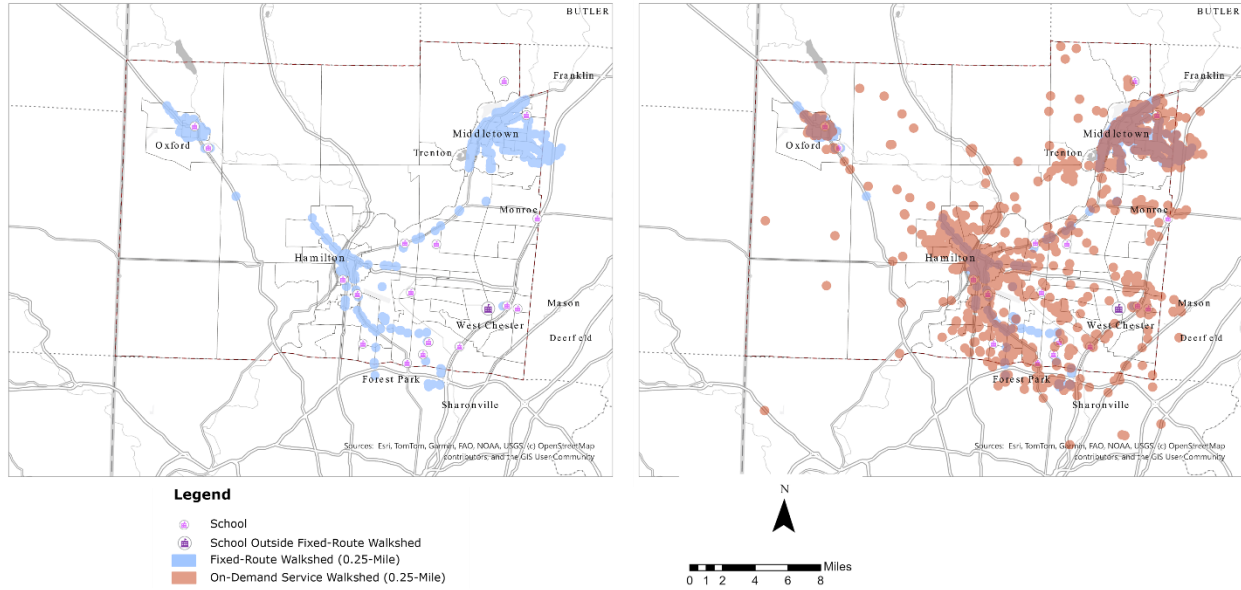
Sources: Ohio ES-202, 2025 establishment data; BCRTA fixed-route data files; 2025 BGo and BCare trip data; and Economics Center analysis.

Education Access

Access to education and training through public transportation is important because it shapes whether students and trainees can reliably reach classes, workforce programs, and skill-building opportunities. These access needs are especially relevant for younger adults, students without a car, and residents pursuing training in parts of the County where destinations are more dispersed.

Education and training access is strong overall, but some lower-density areas remain outside the current fixed-route walkshed. The spatial analysis identifies 12 uncovered education-related destinations, as shown in Figure 26. The analysis then adds mapped education-related on-demand trips. Under this combined view, one destination remains outside both mapped service layers. Because this analysis includes only clearly labeled 2025 education-related trips, the practical reach of on-demand service may be somewhat broader than the mapped result suggests.

Figure 26: Education Access and Transit Coverage in Butler County



Sources: Ohio ES-202, 2025 establishment data; BCRTA fixed-route data files; 2025 BGo and BCare trip data; and Economics Center analysis.

Conclusion

BCRTA is Butler County's public transit provider and one of the County's core mobility services. Through fixed-route service, CincyLink commuter express service, BGo curb-to-curb service, and BCare Americans with Disabilities Act (ADA) paratransit service, it connects residents to jobs, education, health care, shopping, and other daily destinations. The proposed service plan would expand that role by increasing annual revenue miles and revenue hours. Under the proposed plan, fixed-route access in Butler County would reach 66,003 jobs and 2,978 establishments, a gain of 14,422 accessible jobs. The largest gains would occur in West Chester Township, Fairfield, Hamilton, and Liberty Township, with the strongest relative improvements beyond daytime service, especially during early morning, late night, and weekend periods.

In addition, BCRTA supports the Butler County economy through its operations and capital expenditures. Under the current system in 2026, BCRTA's expenditures directly generated \$7.0 million in output, supported 162 FTE jobs, and produced \$9.2 million in wages. These expenditures led to a further \$3.2 million in indirect output, 40 additional FTE jobs, and \$4.2 million in wages. In total, the current system generated \$10.1 million in output, supported 202 FTE jobs, and produced \$13.4 million in wages in Butler County in 2026. BCRTA's operations and capital expenditures also generated \$777,549 in state and local tax revenue. Under the proposed service plan, BCRTA's operations and capital expenditures would generate \$19.7 million in economic output, support 973 job-years, and produce \$60.9 million in wages over the 2027 to 2029 period, with total state and local tax revenue reaching \$3.6 million over the same period.

However, the proposed service plan cannot be supported by projected revenues alone. After accounting for current and projected funding sources, BCRTA would face remaining funding gaps of \$23.2 million in 2027, \$22.4 million in 2028, and \$23.2 million in 2029. A county sales tax increase is one local funding option that could help close this gap. A sales tax forecast shows that Butler County sales tax revenue is projected to increase from \$66.2 million in 2026 to \$93.6 million in 2035. Under the current planning scenario, a 0.30 percentage-point increase would support an estimated \$26.3 million in BCRTA sales tax revenue in 2026 and \$37.2 million in 2035. The resident share analysis found that 63.1 percent of the County sales tax revenue comes from spending by consumers that do not reside within Butler County, meaning a majority of any new sales tax revenue would be supported by non-resident spending made within the County.

If the proposed service plan is funded and implemented, the expanded system would provide broader community benefits. Under the proposed plan, annual vehicle miles traveled would be reduced by approximately 3.3 million miles. Total annual benefits would include \$1.3 million in congestion cost savings, \$3.5 million in household transportation cost savings, 147,328 gallons in fuel savings, and 1,308 metric tons in avoided carbon dioxide emissions. The community access analysis also shows that the current fixed-route network reaches 18 of the 19 census tracts identified as low-income and low-access to grocery stores in Butler County, with the remaining tract covered by mapped on-demand food-related trip activity. There are 49 health care destinations outside the current fixed-route walkshed, but all are reached when BGo and BCare health care-related trips are included. Education access is strong overall, with one destination remaining outside both the fixed-route and mapped on-demand education layers.

Overall, these findings show that BCRTA is not only a transportation provider, but also a public investment that supports economic activity, expands opportunity, and broadens mobility options across Butler County.

References

American Automobile Association. 2024. *Your Driving Costs 2024*. Heathrow, FL: American Automobile Association.

Arnold, Sierra. 2024. "Public Transportation Access and Food Insecurity." Working paper, University of Pittsburgh and Federal Reserve Board of Governors.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4994694.

Boschmann, E. Eric. 2011. "Job Access, Location Decision, and the Working Poor: A Qualitative Study in the Columbus, Ohio Metropolitan Area." *Geoforum* 42 (6): 671–682.

Greater Washington Partnership. 2019. *Richmond's Transit Revolution: GRTC Ridership and Accessibility Analysis*. Washington, DC: Greater Washington Partnership.

Heaps, Wendy, Erin Abramsohn, and Elizabeth Skillen. 2021. "Public Transportation in the US: A Driver of Health and Equity." *Health Affairs Health Policy Brief*, July 29, 2021.
<https://doi.org/10.1377/hpb20210630.810356>.

Huynh, Dat, Anna Sokolova, and Mehmet S. Tosun. 2022. *Tax Elasticity of Border Sales: A Meta-Analysis*. IZA Discussion Paper No. 15525. Bonn: Institute of Labor Economics (IZA).

Kneebone, Elizabeth, and Natalie Holmes. 2015. *The Growing Distance Between People and Jobs in Metropolitan America*. Washington, DC: Brookings Institution.

National Center for Education Statistics. 2024. "Students With Disabilities." In *The Condition of Education 2024*. Washington, DC: U.S. Department of Education, Institute of Education Sciences.

Safe Routes Partnership. 2017. *The Wheels on the Bus Go to the Grocery Store*. Oakland, CA: Safe Routes Partnership.

Sanchez, Thomas W. 1998. "The Connection Between Public Transit and Employment." Discussion Paper DP98-7. Portland, OR: Center for Urban Studies, Portland State University.

Seldin, Abigail, Matthew Crespi, and Ellie Bruecker. 2021. "Waiting for the Bus: Transit Infrastructure at America's Community & Technical Colleges." Washington, DC: Seldin/Haring-Smith Foundation.

Sisk, Anna, Kristen Rappazzo, Tom Luben, and Nina Fefferman. 2023. "Connecting People to Food: A Network Approach to Alleviating Food Deserts." *Journal of Transport & Health* 31: 101627.
<https://doi.org/10.1016/j.jth.2023.101627>.

Syed, Samina T., Ben S. Gerber, and Lisa K. Sharp. 2013. "Traveling Toward Disease: Transportation Barriers to Health Care Access." *Journal of Community Health* 38 (5): 976–993.
<https://doi.org/10.1007/s10900-013-9681-1>.

Texas A&M Transportation Institute. 2025. *2025 Urban Mobility Report*. College Station, TX: Texas A&M Transportation Institute.

Tomer, Adie, Elizabeth Kneebone, Robert Puentes, and Alan Berube. 2011. *Missed Opportunity: Transit and Jobs in Metropolitan America*. Washington, DC: Brookings Institution.

Trust for America's Health. 2021. *The State of Obesity 2021: Better Policies for a Healthier America*. Washington, DC: Trust for America's Health.

Urban Institute Student Transportation Working Group. 2017. *Student Transportation and Educational Access: How Students Get to School in Denver, Detroit, New Orleans, New York City, and Washington, DC*. Washington, DC: Urban Institute.

U.S. Department of Agriculture Economic Research Service. 2016. "Grocery Store Access: Share of Households Using Their Own Car, by Income Group." Washington, DC: USDA ERS.

U.S. Department of Agriculture Economic Research Service. n.d. "Food Access Research Atlas: Documentation." Washington, DC: USDA ERS.

U.S. Department of Transportation. 2024. *DOT Report to Congress: Decarbonizing U.S. Transportation*. Washington, DC: U.S. Department of Transportation.

U.S. Environmental Protection Agency. 2024. *Greenhouse Gas Emissions from a Typical Passenger Vehicle*. Washington, DC: U.S. Environmental Protection Agency.

Valant, Jon, and Jane Arnold Lincove. 2023. "Transportation Inequities and School Choice: How Car, Public Transit, and School Bus Access Affect Families' Options." Technical report. New Orleans: Education Research Alliance for New Orleans, Tulane University.

Victoria Transport Policy Institute. 2025. *Evaluating Transportation Economic Development Impacts*. Victoria, BC: Victoria Transport Policy Institute.

World Resources Institute. 2023. "The Current State of Public Transport as a Climate Solution." WRI Insights, December 14, 2023.

Zhou, Ying. 2019. "The Impact of Transportation Disadvantage on Healthcare Access." PhD diss., Clemson University.