Calhoun County Transit Study

FINAL RECOMMENDATIONS

March 2020

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EXECUTIVE SUMMARY

Calhoun County, located in southern Michigan, is approximately 100 miles west of Detroit. The County has nearly 135,000 residents. The three most populated cities in the county are Battle Creek, Albion, and Marshall, respectively; the majority of the areas outside these three cities are rural.

The Calhoun County Countywide Transit Study (CTS) is an initiative to identify how public transportation can best serve residents throughout Calhoun County. The study established goals for countywide public transportation, as well as a transit service plan, financial plan, and roadmap for implementation. Countywide transit service in Calhoun County would significantly expand accessibility to life's opportunities for residents.

The intent of this study was to identify how to:

- Meet County residents' transportation needs
- Enhance job access and economic competitiveness throughout the County
- Create transit opportunities across the County
- Develop a service and governance implementation plan

ES.1. Current Conditions and Needs Analysis

The Current Conditions and Needs Analysis identifies areas for transit opportunities and areas where services could be optimized to better serve the population. The following are some key take-aways from this analysis.

- **There are many transit providers** filling in gaps for vulnerable populations across the County. There are over 17 providers for a population of just 135,000, including at least six that serve higher need populations (low-income, seniors, and people with disabilities). The amount of transportation support is a great feature of the community. There may be untapped opportunities yet to achieve efficiencies by working together to ensure clear roles in meeting County residents' public transportation needs.
- **Interjurisdictional trips are low but important** for the County. The County has most of its services and opportunities clustered in the three urban areas of Battle Creek, Marshall, and Albion, and many residents of these three communities both live and work there. However, residents living outside of these three areas often need to travel farther distances to have their needs met. There are potential opportunities to offer scheduled services (for example, potential runs operating once or a few times per week) for residents in smaller towns to access shopping or other destinations in Battle Creek, Marshall, and/or Albion.
- **Calhoun County has high volumes of vulnerable populations** including low-income, seniors, people with disabilities, and people living in zero- and one-car households.[1] These populations require more service and, in some cases, door-to-door service. Concentrations of these populations can be seen in the **Economy** section.
- **There are some areas of moderate and high transit potential outside of Battle Creek**, suggesting more scheduled transit services could thrive in places like Albion and Marshall. There are also areas around Battle Creek with high daily travel that do not have any bus routes.
- **There are coverage and level of service gaps across the County.** Outside of the Battle Creek Tele-Tranist service area, residents do not have access to transportation in the evenings, and have only limited access on Saturdays. Those who are not seniors or people with disabilities do not have regular access to public transportation outside of Marshall and Battle Creek service areas.

[1] There are around six percent more senior citizens in Calhoun County than the national average, and two percent more people with disabilities. Sixty-nine percent of the population is under 150 percent of the poverty line in Calhoun County, while the national average is only 25 percent. Calhoun County has two percent fewer households with more than one car than the national average.

ES.2. Vision, Goals, and Objectives

The vision, goals, and objectives for public transportation in Calhoun County were developed through a robust stakeholder outreach process. The vision statement for future public transportation services in Calhoun County is:

> ***The Calhoun County Transit Study and its public and private partners envision cost-effective, user-friendly, sustainable, and equitable transit options for all county residents that offer connections to all aspects of community life.***

The guiding principles listed below will be considered as future public transit services for Calhoun County are developed and implemented.

Guiding Principles for Public Transit Service in Calhoun County

- The goal of transit services will be to provide equitable access to all County residents. Within the constraints of available funding and support, services will be designed to:
  - Connect communities.
  - Offer options in rural communities and other outlying areas.
  - Provide mobility for vulnerable populations such as older adults, people with disabilities, and residents with lower incomes.
  - Attract choice riders.
- Transit services will be designed with the customer in mind so that they are easy to understand and use, affordable, safe, comfortable, and convenient.
- When possible and appropriate, transit technologies will be used to improve efficiency and customer convenience.
- Transit services will be coordinated with neighboring counties, cities, and transit authorities to facilitate regional travel.
- A broad, inclusive set of partners will be involved in planning, designing, operating, and funding transit services. Coordination and collaboration across sectors (government, human services, education, transportation, health care) and jurisdictions (federal, state, county, municipal) will be pursued.
- Sources of transit service funding that are stable, sustainable, and equitable across communities will be sought.
- Transit services will be planned and designed with other Calhoun County public policy goals in mind, such as contributing to workforce and economic development, increasing environmental sustainability, and improving health and wellness of individuals and communities. Transit services will help to advance such goals by connecting people and jobs; making Calhoun County an attractive location for new employers; using energy-efficient vehicles and practices; and providing access to health care, nutritious food, exercise, and wellness programs.

ES.3. Transit Evaluation Criteria

The purpose of the transit investment evaluation framework is to provide policy guidance to Calhoun County transit decision makers as they distribute capital and operating funds for transit services in the future.

Specific measures for ranking potential programs, services, and projects are detailed in **Section 3**, for each evaluation criterion below:

- Community Support
- Transportation Benefits
- Cost and Funding
- Implementation
- Estimated Performance
- Support for Other County Goals

ES.4. Governance Alternatives

Michigan Act 196 of 1986 provides for the establishment of a public authority by a political subdivision or a group of two or more subdivisions. The CTS presents two governance alternatives for overseeing and administering public transit services in Calhoun County. Both are based on the formation of a public transportation authority under Act 196.

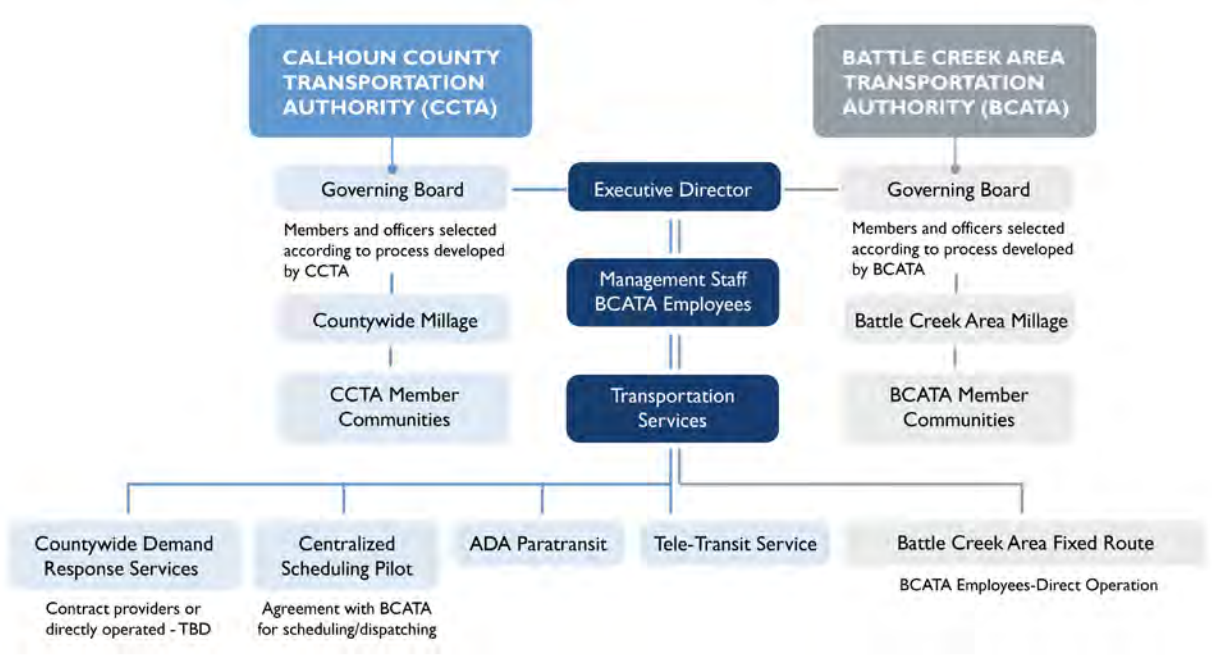
Governance Alternative 1: Creation of Separate Public Authorities for the Urban and Non-Urbanized Sections of Calhoun County

Under this alternative, one authority would be created to administer the countywide demand response services described in the service plan. A second authority would be established to administer fixed-route services, complementary paratransit as required by the Americans with Disabilities Act (ADA), and other Tele-Transit service in the Battle Creek urbanized area. Act 196 has specific requirements for establishment of two authorities within the same county; for this reason, County officials will need to consult with legal counsel and legislative partners to determine the best course of implementation of this Governance Alternative. [2]

The countywide authority, Calhoun County Transportation Authority (CCTA), would be responsible for securing funding and overseeing the delivery of demand response services throughout the County. The CCTA would be directed by a governing board composed of members selected by a process determined by the authority. The CCTA would create a millage district and levy a millage to support public transportation services in the County. If the millage is not passed, alternative funding sources would need to be identified.

The urbanized area authority, Battle Creek Area Transportation Authority (BCATA), would be created following the same process as the CCTA and would possess the same powers and be responsible for the provision of fixed-route public transportation service. BCATA would also have the ability to create a millage district and levy a millage to support fixed-route service in participating communities within the Battle Creek urbanized area. The structure of this governance alternative is outlined in **Figure ES-1**.

Figure ES-1: Governance Structure under Alternative 1



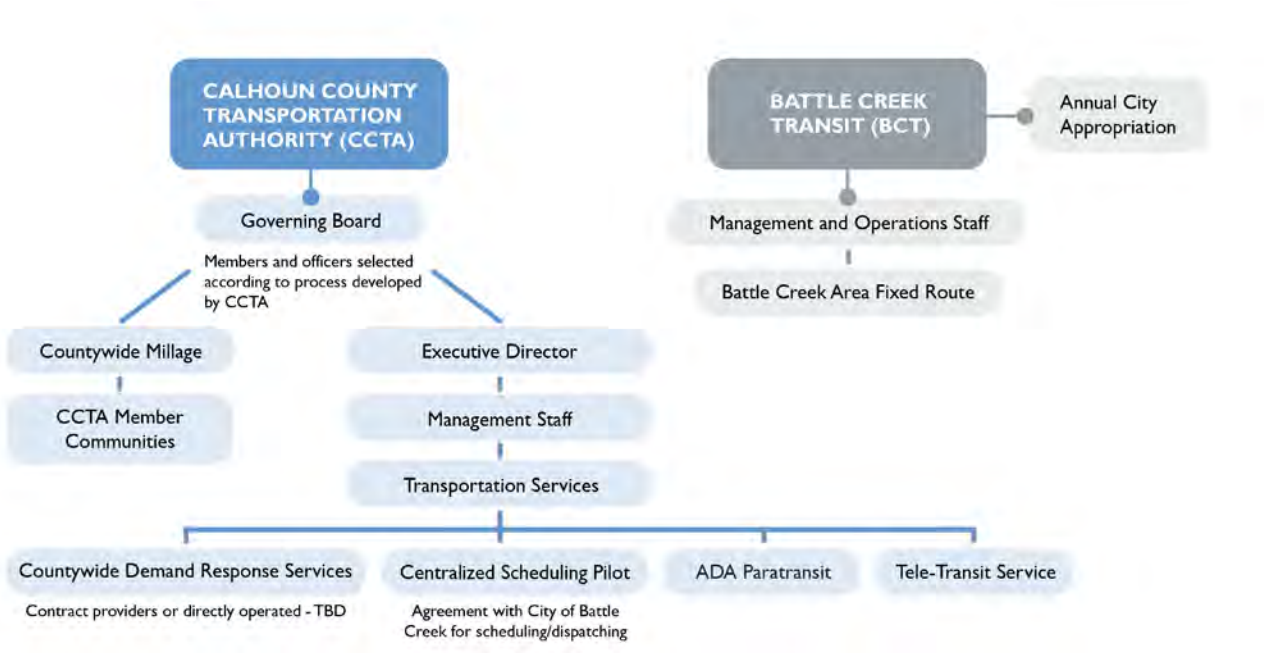
[2] For more information, see: https://law.justia.com/codes/michigan/2014/chapter-124/statute-act-196-of-1986/section-124.454/.

Governance Alternative 2: Creation of a Public Authority for Countywide Demand Response Services and Continued Operation of Fixed-Route Service by the City of Battle Creek

Under Governance Alternative 2, a new authority (the CCTA) would be created to provide all demand response services in the County, as described in Alternative 1. Demand response services in the County would be operated by one or more of the current transportation providers, or a new private contractor. Local funding would be raised by means of a countywide millage to support demand response service throughout the County.

Management, operation, and local funding of fixed-route service would remain the responsibility of Battle Creek Transit, as a department of the City of Battle Creek, and its funding partners. The CCTA would be responsible for meeting BCT's complementary ADA paratransit service obligations. The City of Battle Creek would remain responsible for providing local funding, in addition to fare revenues, to BCT. The governance structure for this alternative is outlined in **Figure ES-2**.

Figure ES-2: Governance Structure under Alternative 2



The CTS presents information about the potential cost savings and qualitative benefits of Governance Alternative 1.

ES.5. Service Plan

Demand response public transit service would be available for the populations that receive service today, plus the general public.[3] For service provision and fare purposes, Calhoun County would be geographically divided into five zones and the fare structure for this service would be zone-based, with discounts for seniors and persons with disabilities. This service plan allows riders the flexibility to travel on any day of the week, while providing reduced fares for people with disabilities and seniors and those who schedule shopping trips to Battle Creek on designated days, shown in **Figure ES-3**. A summary of the service characteristics is provided in **Table ES-1**.

[3] Assuming senior millage revenues are used to fund the provision of service, seniors and people with disabilities throughout the County would receive a level of service comparable to the service Community Action provides today. Seniors and people with disabilities may be asked to provide proof of eligibility for reduced fares.

Community Action (CA), City of Marshall Dial-a-Ride Transit, the Albion-Marshall Connector, and Battle Creek Transit Tele-Transit services would be integrated under the new authority, with an option for other private transportation providers to participate in service provision. Approximately 17 vehicles would be used to operate the service in maximum service; given the long span of service, a full fleet of about 23 vehicles is recommended to ensure an adequate spare ratio.[4]

Today in Calhoun County, between the available services (Community Action, Marshall DART, and the AMC), approximately 70,000 trips are provided to residents, while the estimated demand is approximately 92,000 trips, while within the Battle Creek area, Tele-Transit currently provides 23,250 trips annually and the estimated demand is approximately 26,250 (**Section 5** contains detailed estimates).

The recommended service plan for the entire County developed as part of the CTS includes nearly 48,000 revenue service hours, and is estimated to provide nearly 136,400 trips annually, exceeding the total estimated demand for service in the County of approximately 118,000 annual trips and the current annual number of trips provided in the County today of all providers, which is approximately 94,000.

Public entities that provide demand response service for the general public are required to provide an equivalent level of service to people with disabilities, including those who use wheelchairs. Equivalency is determined with respect to the following characteristics of the service: service days and hours, service area, response time, fare, trip purpose priorities or restrictions, capacity constraints, and the availability of information and reservations capability. The CTS outlines all requirements to which the CCTA would be held per the ADA.

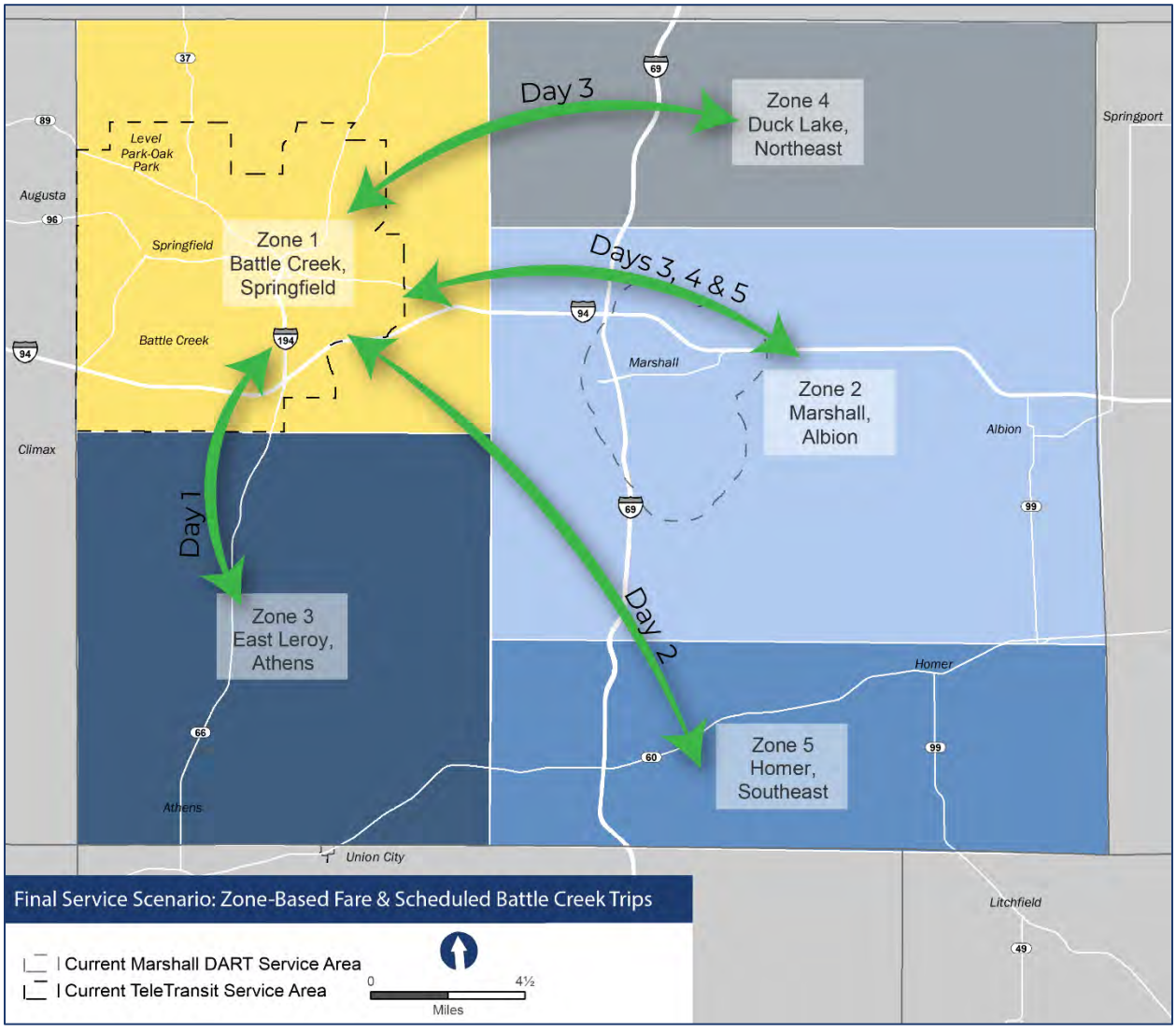
Table ES-1: Proposed Service Plan Characteristics Summary

Element	Description
Governance	Demand response service operates under the new CCTA. CCTA provides demand response services in all parts of the county (including the BCT fixed-route service area).
Service	Area-dedicated vehicles will be designated to serve shorter trips within the Cities of Marshall and Albion. Current special/program-specific transportation services provided by Community Action will continue to be provided (for example, service to support the Foster Grandparents program). Trips will be made daily between Albion and Marshall when demand exists. This will maintain the current service of the Albion Marshall Connector. Service in the county will be available on weekdays from 6:00 a.m. until 9:00 p.m., and on Saturdays from 9:00 a.m. until 6:00 p.m. (with more vehicles in service during busier times of day). Service hours may be rolled out gradually and services hours by time of day will be adjusted over time to best match demand. Service in the Battle Creek and Springfield area will be available from 5:00 a.m. until 3:00 a.m. on weekdays and 9:00 a.m. until 6:00 p.m. on Saturdays. Additional service in the Battle Creek area to meet known and estimated demand, including additional late night service for second- and third-shift worker.
Fare	The county will be divided into five zones, with a zone-based fare structure. Discounted fares offered to seniors and persons with disabilities.

[4] A spare ratio of 20 percent (the industry standard) would indicate that the CCTA would need a total fleet of approximately 21 vehicles. However, a fleet of 21 vehicles would leave the CCTA with a much higher number of revenue hours per vehicle (over 2,000) than many peer agencies (just under 1,200 on average), indicating a much higher rate of wear and tear of its vehicles. An extra two vehicles is recommended to be maintained in the CCTA's fleet to bring the amount of service per vehicle closer to peer agency averages.

Element	Description
	Discounted scheduled trips to Battle Creek (from outside Zone 1) will be available to all customers at least once per week.
Reservations	Riders can schedule trips via phone initially; web and mobile booking options would be made available as feasible. Riders must call to reserve a ride 24 hours in advance for some curb-to-curb services (initially). Same-day ride requests will be accepted in higher demand areas (i.e., Cities of Albion, Marshall, and Battle Creek) as resources and technology allow.

Figure ES-3: Proposed Service Map

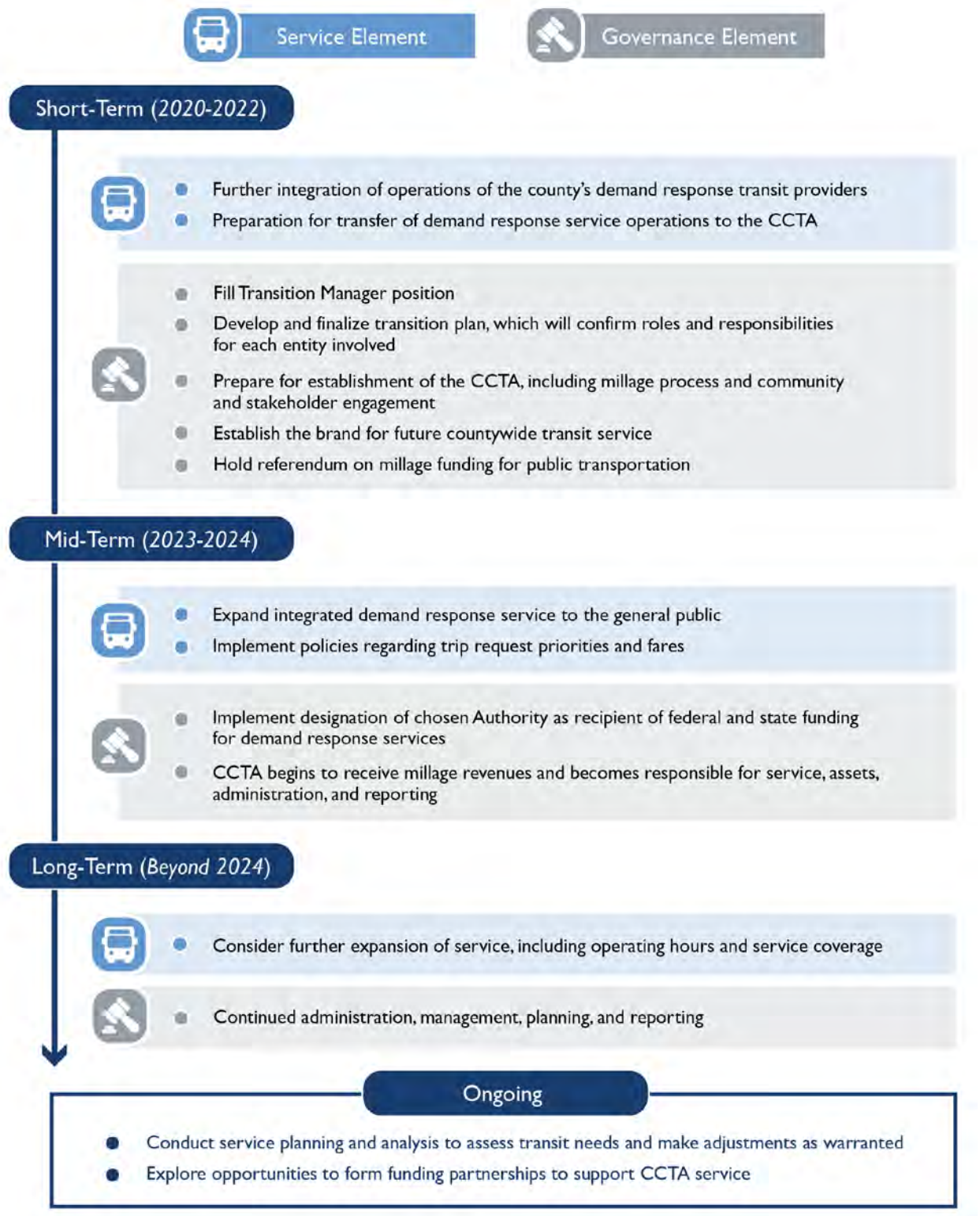


ES.6. Implementation Plan

The study proposes a three-phased implementation plan for the countywide demand response service. In the short-term, coordination between existing transit providers will continue, and the process for establishing a countywide authority will begin. In the mid-term, the countywide authority will be established, and a millage will be established to fund demand response services for the general public countywide. Finally, in the long-term, based

upon available funding, expanded services will be considered. **Figure ES-4** provides a general overview of the implementation plan presented in **Section 6**.

Figure ES-4: Implementation Plan Timeline



ES.7. Financial Plan

The CTS financial plan, presented in **Section 7**, assumes the continuation of operating and capital revenue sources that are available today. It also assumes increases in some revenue sources, as well as increases in costs associated with the service plan. The financial plan provides an estimate of the following, by year, for 2021 through 2026:

- Capital and operating budgets (expected expenses)
- Current and potential future funding sources
- Estimated local funding gap and millage requirement to implement the full service plan

Table ES-2 details the costs that CCTA would likely incur to continue operating the services that are currently operated in Calhoun County, as well as additional services per the service plan. This conceptual operating budget also includes expenses to hire a Transition Manager to lead coordination and establishment of the CCTA.

To address the gap between likely available funding from federal, state, and other sources and the funding needed to implement the service plan, it is recommended that a millage be implemented to raise the required local funds.

Table ES-2: Conceptual Operating Budget for CCTA (FY2021 – FY2026)

		FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Hiring of ~0.6 FTE Transition Manager		$65,000	$65,000	$0*	$0	$0	$0
Office space lease and other transition expenses		$10,300	$10,300	$0*	$0	$0	$0
Marshall DART service		$456,100	$476,900	-	-	-	-
Community Action service		$492,300	$514,800	-	-	-	-
AMC service		$93,600	$97,900	-	-	-	-
Proposed CCTA Service	Local services within Albion and Marshall	-		$770,700	$782,300	$794,000	$805,900
	Service between Albion and Marshall	-		$292,500	$296,900	$301,400	$305,900
	Pre-scheduled and discounted trips to Battle Creek	-		$167,200	$169,700	$172,200	$174,800
	Expanded general public countywide demand response service – five days per week and Saturdays	-		$2,228,100	$2,261,500	$2,295,400	$2,329,900
	Expanded Tele-Transit in Battle Creek, including late night service (until 3:00 a.m.)	-		$1,886,300	$1,914,600	$1,943,300	$1,972,400
Estimated CCTA savings from sharing staff under Governance Alternative 1		-	-	($262,200)	($266,200)	($270,200)	($274,200)
Total Estimated Annual Operating Expenses (for countywide service)		**$1.12 M**	**$1.16 M**	**$5.08 M**	**$5.16 M**	**$5.24 M**	**$5.31 M**

**Staffing, office space, and other expenses are assumed to be incorporated into the service cost estimates after the agency is established and becomes a direct funding recipient; therefore, they are no longer listed as separate line items after the transition to the CCTA is complete.*

65 identifies likely and potential funding sources to implement the service plan, as well as a conceptual capital budget for the CCTA, and estimated savings that could be achieved under Governance Alternative 1, in which the two authorities would integrate their operations and share staff functions.

The recommendations in this plan including establishment of the CCTA and implementation of the service plan represent an exciting opportunity to offer Calhoun County residents new connections to all aspects of community life.

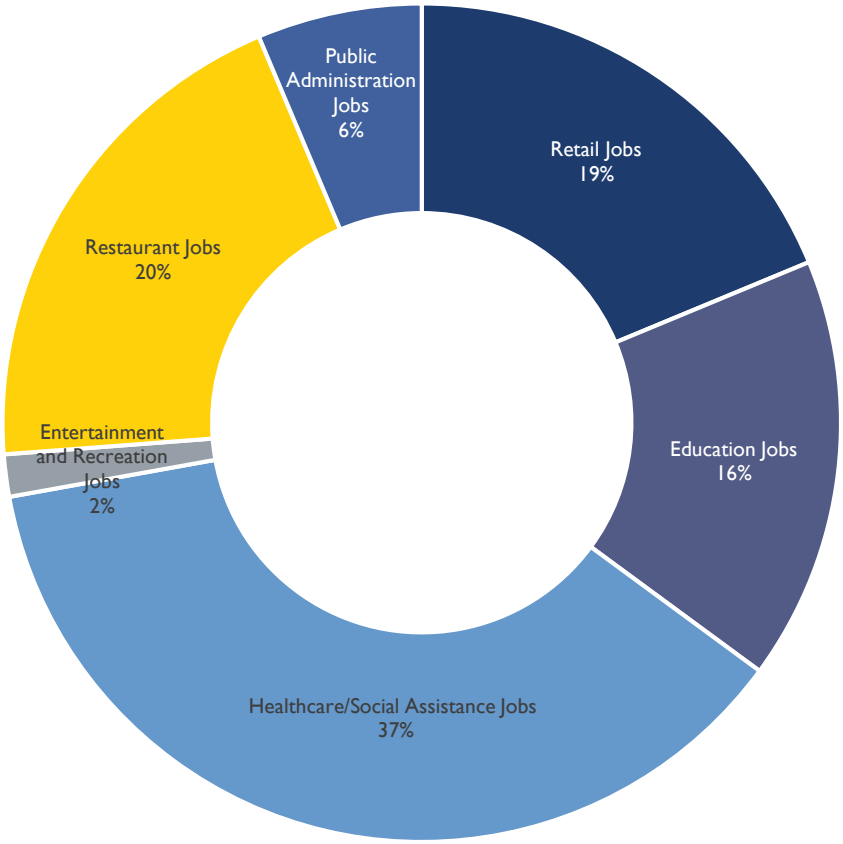
1. CURRENT CONDITIONS AND NEEDS ANALYSIS

1.1. Economy and Demographics

Calhoun County, located in southern Michigan, is approximately 100 miles west of Detroit. The County has nearly 135,000 residents. The three most populated cities in the county are Battle Creek, Albion, and Marshall, respectively; the majority of the areas outside these three areas are rural.

There are over 55,000 jobs in Calhoun County. The largest job sector is health care and social services (**Figure 1**). Major employers include Battle Creek Public Schools, Bronson Healthcare, the City of Battle Creek, Duncan Aviation, Denso Manufacturing, Il Stanley, Kellogg Company, Kellogg Community College, Meijer, Oaklawn, Post Cereals, Spartan Stores, US Department of Defense, Albion College, and other hospital systems.

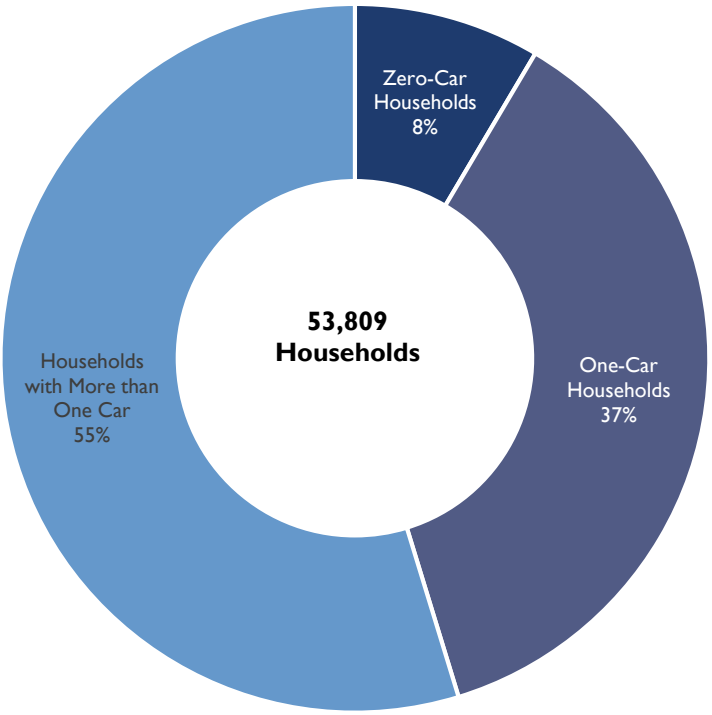
Figure 1: Calhoun County Jobs by Sector



Demographics

As shown in **Figure 2**, 45 percent of the households in Calhoun County have zero or one car. The population is 79 percent Non-Hispanic White, and over two-thirds (69 percent) of households in Calhoun County have an annual household income of less than 150 percent of the national poverty line.[5] The highest concentrations of low-income populations by percentage of the population are in Battle Creek and Albion (**Figure 3**). Minorities (people of all races other than non-Hispanic White) account for 21 percent of the County's population.[6] Senior citizens and residents with disabilities account for 16 and 14 percent[7] of the County population, respectively. The portion of the population over the age of 65 or with a disability is shown by block group in **Figure 4** and **Figure 5**.

Figure 2: Car Ownership among Households in Calhoun County [8]



[5] The ACS 2016 national average for persons under 150 percent of the poverty line is around 25 percent.
[6] The ACS 2016 national average of minorities is around 40 percent.
[7] The ACS 2016 national average of persons over 65 is 10 percent and the national average of persons with disabilities is 12 percent.
[8] The ACS 2016 national average for households with access to zero cars is 9 percent and access to one car is 34 percent.

Figure 3: Percentage of Low-Income Residents in Calhoun County by Census Block Group

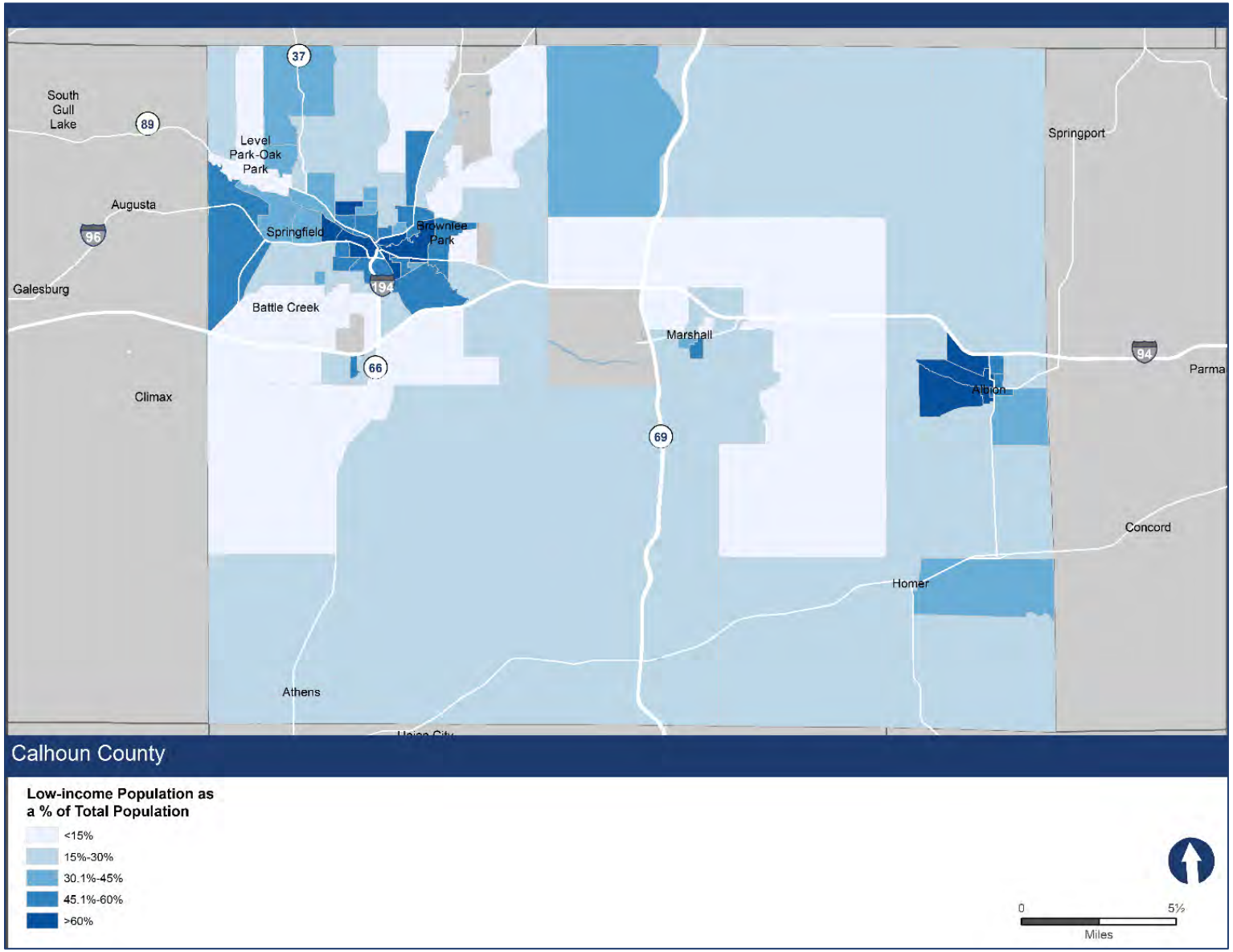


Figure 4: Percentage of Population Over Age 65 by Census Block Group

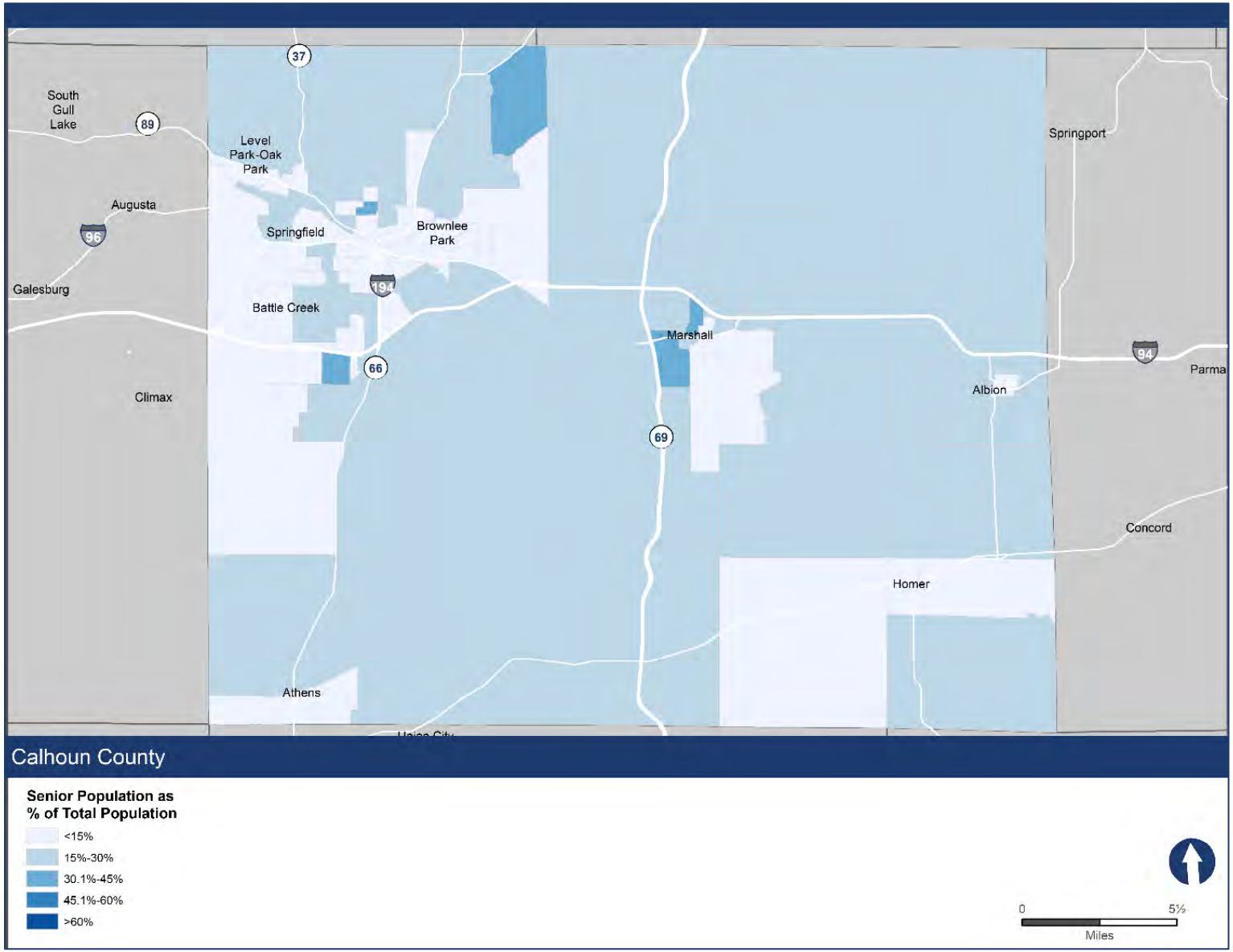
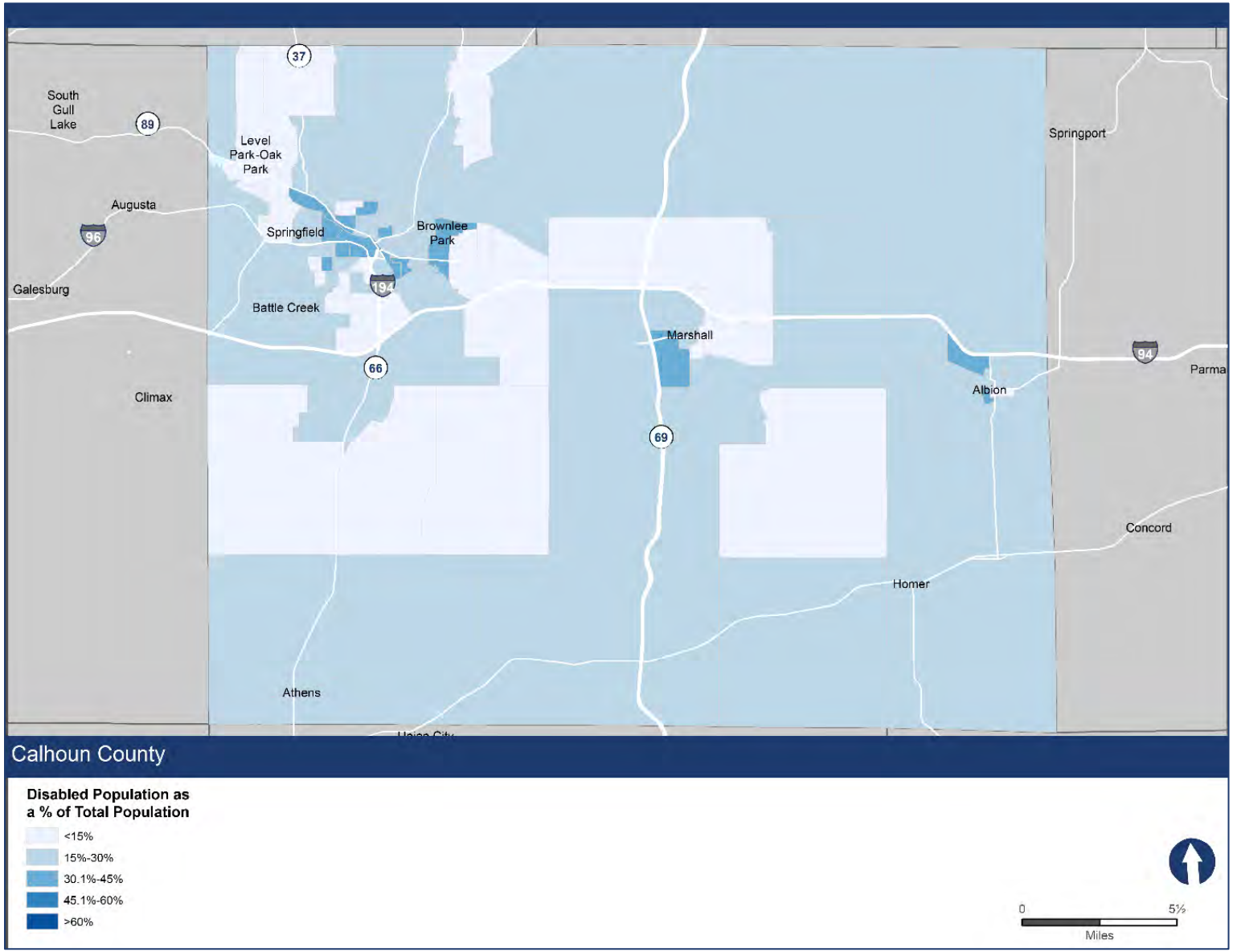


Figure 5: Percentage of Population with Disabilities by Census Block Group



Aging Population Trends

The senior population in Calhoun County is increasing quickly, ahead of similar national trends toward an older population. The number of older adults in Calhoun County will outnumber the population that is 18 years old or younger in the coming decade by 2027[9]; this is about eight years before the same change will occur among the US population overall (around 2035[10]). As of 2016, 68 percent of seniors in Calhoun County reported that they drove themselves where they needed to go, while five percent and four percent reported that they used senior transportation services and public transportation, respectively. When asked about daily travel barriers, 25 percent of seniors responded that public transportation did not meet their needs, they could not afford transportation, there was a general lack of ridesharing or senior transportation options, that they had no one to drive them, or that they just did not know of available services.[11] Furthermore, from six focus groups held in 2016, each group identified transportation access as a major challenge to quality of life for senior citizens. As the report states, these challenges exist for both rural and urban populations, however, "barriers that the large rural senior population experience lead to continued fear and isolation. 'Too difficult to find a ride, so I just stay home' – leading to more isolation." Safety, reliability, and after-hours services stood out in this report as a reoccurring issue for senior transportation.[12]

1.2. Regional Transportation

Air and Rail Services

The Kalamazoo/Battle Creek International Airport serves the area, and is located south of Kalamazoo, less than a 30-minute drive from the central business district of Battle Creek. There are also two city-owned public airports in Battle Creek (W.K. Kellogg Airport) and Marshall (Brooks Field Airport).[13]

Greyhound and Indian Trails both provide regional bus service in Calhoun County. Greyhound stops in both Battle Creek and Albion, and Indian Trails stops in Battle Creek only. Two Class I freight railroads cross Calhoun County: Canadian National Railway and Norfolk Southern Railway.[14] The Amtrak Blue Water and Wolverine lines both serve Calhoun County. The Blue Water line, which provides connections to Port Huron, Lansing, and Chicago, only serves Battle Creek. The Wolverine line, which provides connections to Detroit and Chicago, serves both Battle Creek and Albion.

1.3. Public Transportation Services

1.3.1. Fixed-Route Transit Services

Battle Creek Transit

Battle Creek Transit (BCT) operates eight fixed-routes within the City of Battle Creek, as well as limited stops in the City of Springfield, and the townships of Bedford, Emmett, and Pennfield, on weekdays from 5:15 a.m. to 6:45 p.m. and on Saturdays from 9:15 a.m. to 5:15 p.m. BCT served over 432,000 passenger trips in FY18 and provided nearly 28,000 hours of service. BCT's fixed-route fares are shown in **Table 1**.

Table 1: BCT Fixed-Route Fares

Ticket type	Fare price
Adults/Children taller than fare box	$1.25

[9] Independence for Older Adults. The Coordinating Council of Calhoun County, May 2017
[10] An Aging Nation: Projected Number of Children and Older Adults, https://www.census.gov/library/visualizations/2018/comm/historic-first.html.
[11] Senior: Community Health Needs Assessment, Calhoun and Barry County. CareWell Services, 2016
[12] Senior: Community Health Needs Assessment, Calhoun and Barry County. CareWell Services, 2016
[13] Michigan Department of Transportation (MDOT) Aeronautics, General Aviation Airports. https://www.michigan.gov/aero/0,4533,7-352-79155_79156_79390---,00.html
[14] MDOT Office of Rail. https://www.michigan.gov/mdot/0,4616,7-151-22444---,00.html

Ticket type	Fare price
People with disabilities and senior citizens (60+)	$0.60
Children shorter than fare box	Free
Accepted Transfers[15]	Free

BCT's ridership by route was estimated in October 2017 through a ride check survey; these results are presented in **Table 2** and **Figure 6**. The top three routes by share of annual ridership are 3W, 4S, and 5W.

Table 2: BCT Fixed-Route Characteristics

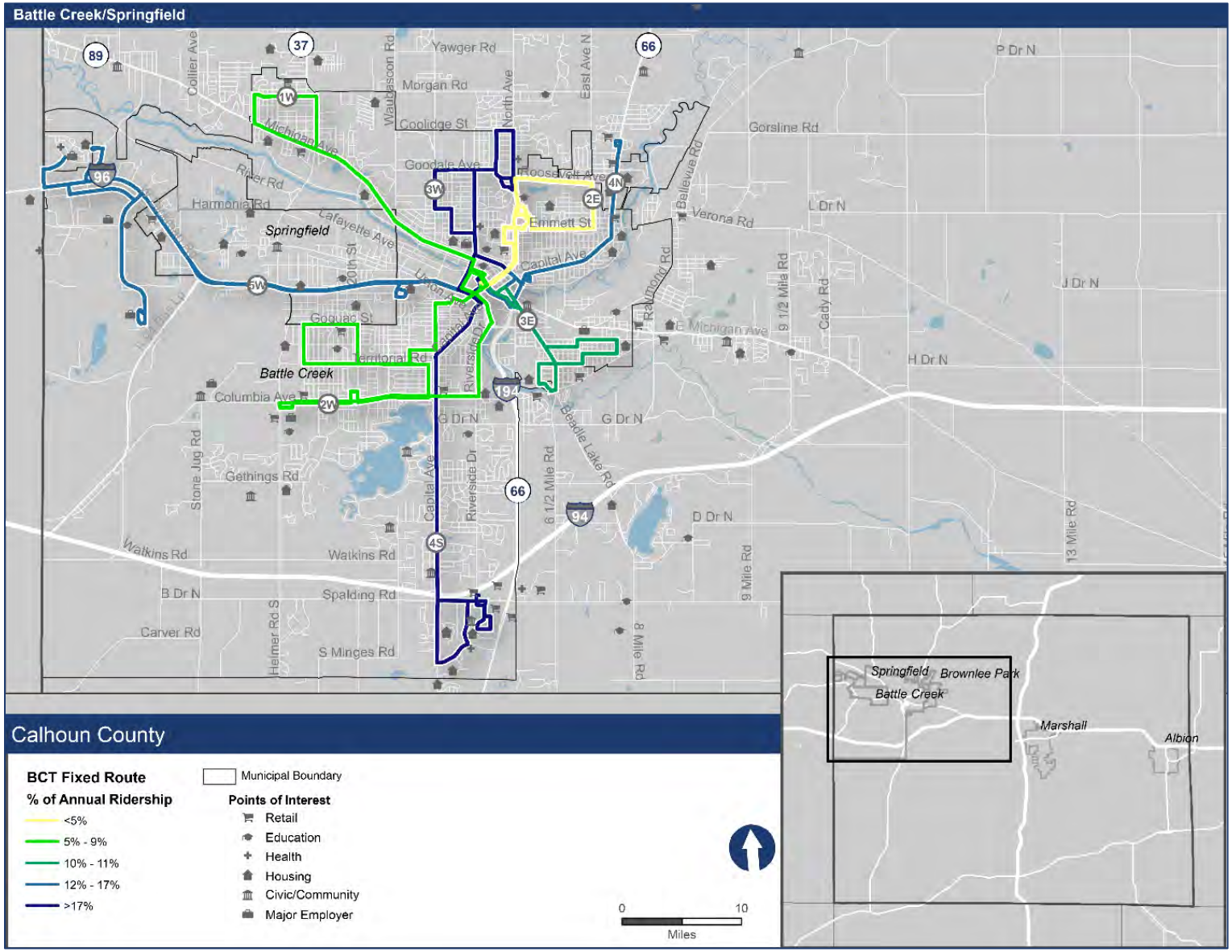
Route	Start – End Points	Span	Frequency	Average Daily Ridership[16]	Share of 2017 Ridership
1W	BC Transportation Center – Taylor Ave & Mason	Weekday: 5:15 a.m.-6:43 p.m.; Saturday: 9:15 a.m.-5:10 p.m.	Weekday Peak: 60 Weekday Off-Peak: 60 Saturday: 60	Weekday: 107 Saturday: 50	7%
2E	BC Transportation Center – Roosevelt Ave & East	Weekday: 5:15 a.m.-6:13 p.m.; Saturday: 9:15 a.m.-5:30 p.m.	Weekday Peak: 60 Weekday Off-Peak: 60 Saturday: 30	Weekday: 67 Saturday: 20	4%
2W	BC Transportation Center – Meijer West Columbia	Weekday: 5:15 a.m.-6:10 p.m.; Saturday: 9:15 a.m.-5:10 p.m.	Weekday Peak: 60 Weekday Off-Peak: 60 Saturday: 60	Weekday: 159 Saturday: 53	9%
3E	BC Transportation Center – Post Foods	Weekday 5:15 a.m.-6:43 p.m.; Saturday: 9:15 a.m.-5:13 p.m.	Weekday Peak: 30 Weekday Off-Peak: 30 Saturday: 30	Weekday: 184 Saturday: 62	11%
3W	BC Transportation Center – Springview Tower	Weekday: 5:15 a.m.-6:43 p.m.; Saturday: 9:15a-5:13p	Weekday Peak: 30 Weekday Off-Peak: 30 Saturday: 30	Weekday: 326 Saturday: 106	19%
4N	BC Transportation Center – Family Fare Supermarket	Weekday 5:15 a.m.-6:43 p.m.; Saturday: 9:15a-5:13p	Weekday Peak: 30 Weekday Off-Peak: 30 Saturday: 30	Weekday: 292 Saturday: 95	16%
4S	BC Transportation Center – Lakeview Mall	Weekday: 5:15 a.m.-6:10 p.m.; Saturday: 9:15 a.m.-5:10 p.m.	Weekday Peak: 60 Weekday Off-Peak: 60 Saturday: 60	Weekday: 265 Saturday: 112	18%
5W	BC Transportation Center – VA Hospital	Weekday: 5:15 a.m.-6:10 p.m.; Saturday: 9:15 a.m.-5:10 p.m.	Weekday Peak: 30 Weekday Off-Peak: 30 Saturday: 60	Weekday: 344 Saturday: 55	17%

[15] Accepted transfers are within the downtown boundaries and at select transfer points and stations. https://www.battlecreekmi.gov/330/Bus-Fares-Transfers.
[16] October 2017

In a 2017 customer survey, over 50 percent of Battle Creek fixed-route bus riders reported they held a job outside of their homes and most riders reported they were between the ages 35 and 64.[17] Over 65 percent of riders reported an annual household income of less than $20,000, which closely aligns to the demographics of Calhoun County. A majority of riders (50 percent) reported their race as Caucasian or White, and around 45 percent reported their race as African American. Seventy percent of riders reported that they had no special needs or disabilities that require accommodations.

[17] Battle Creek Customer Service Report, Assessing Customer Satisfaction and Trip Purpose for the Battle Creek Transit, Demand Response, 2017. Research conducted by Michigan State University, with funding from Michigan Department of Transportation.

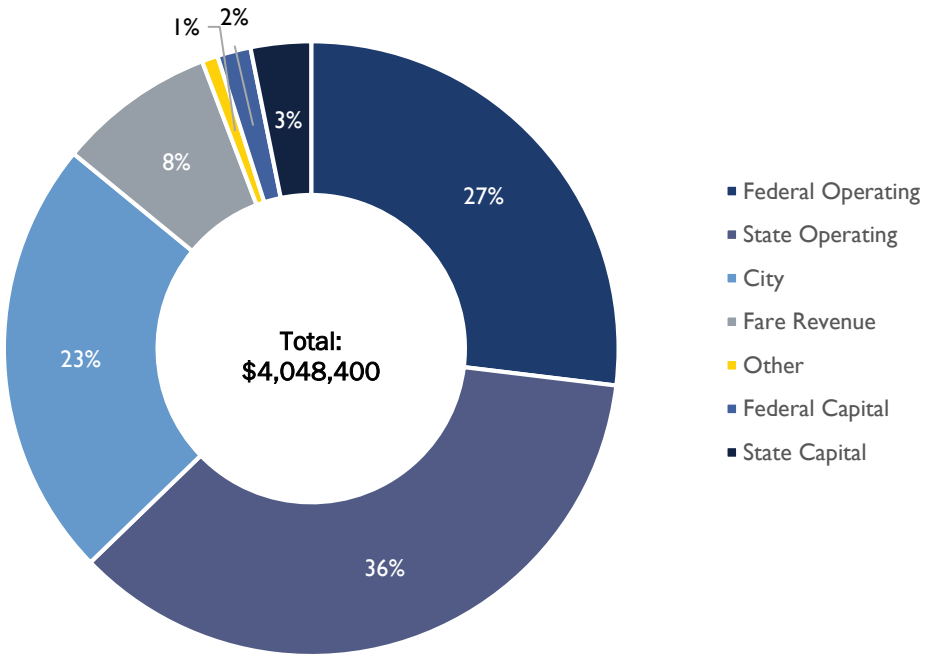
Figure 6: BCT Fixed-Routes by Share of 2017 Annual Ridership



Revenues and Expenses

Battle Creek Transit combines funding information for both its fixed-route and Tele-Transit (demand response) services. Approximately, 92 percent of the budget is allocated to fixed-route service and the remaining eight percent of the budget is allocated to Tele-Transit service. The total operating budget for fixed-route service in FY2018 was $3,108,500 and the Tele-Transit demand response service operating budget was $1,396,600. Battle Creek Transit's FY2018 budget is broken down in **Figure 7**. Only eight percent of the agency's annual revenue comes from fares, while 63 percent of its budgeted annual revenue comes from federal and state operating funds.

Figure 7: BCT FY2018 Revenue by Source[18]



1.3.2. Demand Response Services

Tele-Transit

Tele-Transit is a door-to-door demand response service available to the general public in the BCT service area. However, rides are prioritized for ADA-certified passengers. Trips are only provided to the general public if and when space is available. This service operates on weekdays from 5:15 a.m. to 12:00 a.m. and Saturdays from 9:15 a.m. to 5:00 p.m. The service area includes the City of Battle Creek, City of Springfield, and limited portions of Bedford, Emmett, and Pennfield Townships. Fares are discounted for qualified riders (as shown in **Table 3**) and 10- and 20-ride passes are available for all customers.

[18] In recent years, Battle Creek Transit's actual operating expenses have exceeded its revenues. When this has occurred, the City of Battle Creek has provided additional funding to address this deficit. As such, the city's share of funding has often actually been higher than 23 percent.

Table 3: BCT Tele-Transit Fares

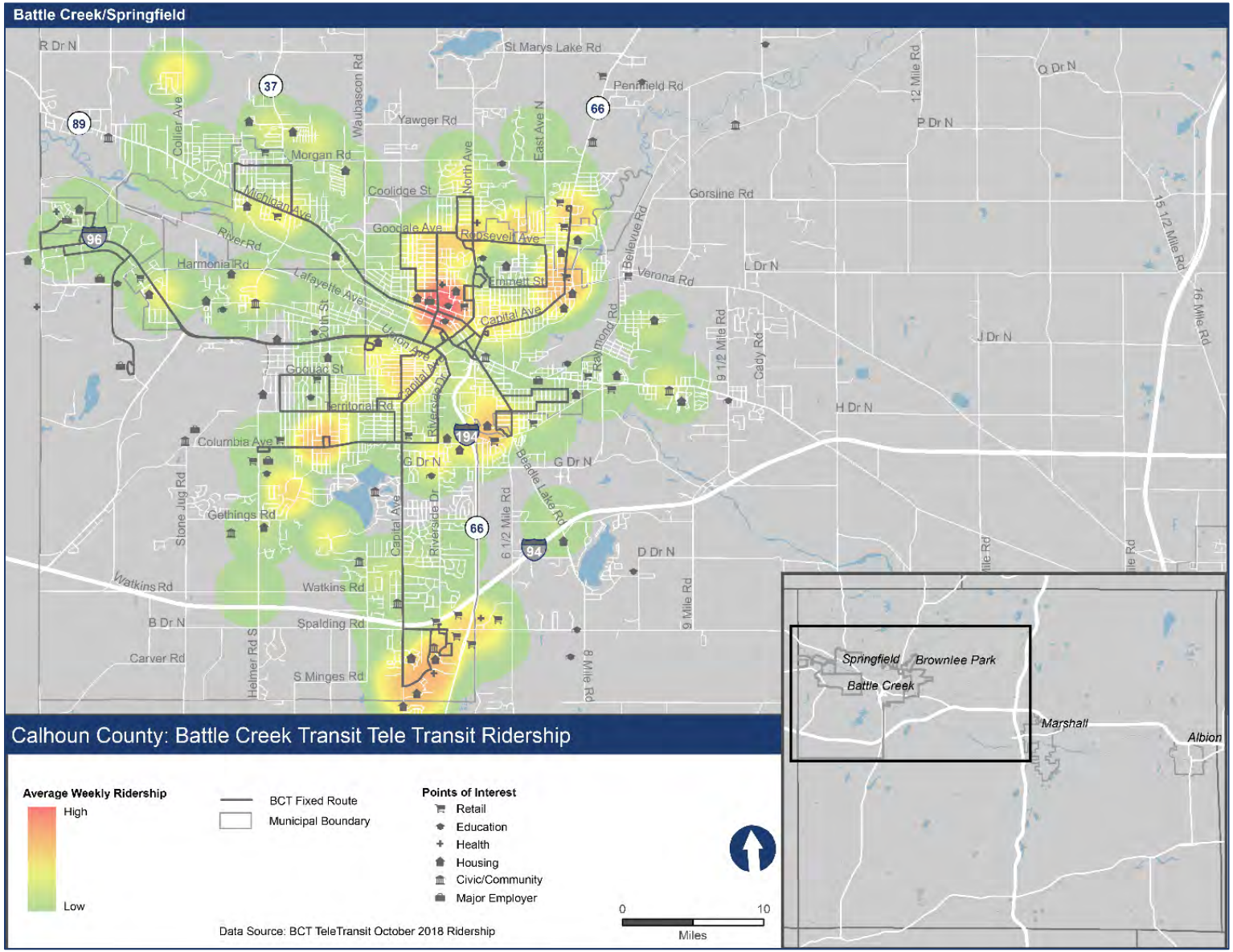
Ticket type	Tele-Transit one-way fare	Tele-Transit one-way fare after 6:45 pm	Tele-Transit Passes
ADA-certified, Seniors (60+), other qualified reduced fare, and companions. (Note: Personal Care Assistants (PCAs) ride free)	$2.00	$2.00	10 rides- $20.00 20 rides- $40.00
All other customers	$7.00	$5.00	10 rides- $50.00 20 rides- $100.00

The Tele-Transit service has a fleet of seven 10-16 passenger vans. In FY2018, Tele-Transit served over 30,500 trips and ran for more than 11,000 hours. **Figure 8** shows the concentration of pick-up locations across Battle Creek in October 2018. Most trips start downtown, other concentrations of high ridership are in the area south of I-94, around Spalding Road, and near Riverside Drive.

In a 2017 survey, nearly 60 percent of Tele-Transit riders reported being retired, and over 70 percent reported that they were over the age of 55. Over 70 percent of riders reported an annual household income of less than $20,000, with a majority of households making less than $10,000 annually. Just over 20 percent of riders reported that they did not have any special needs or disability that requires special accommodations. [19]

[19] Battle Creek Customer Service Report, Assessing Customer Satisfaction and Trip Purpose for the Battle Creek Transit, Demand Response, 2017. Research conducted by Michigan State University, with funding from Michigan Department of Transportation.

Figure 8: Average Monthly BCT Tele-Transit Ridership (October 2018)



Albion-Marshall Connector

The Albion-Marshall Connector (AMC) runs Monday through Friday from 7:30 a.m. to 5:30 p.m. and connects the Albion and Marshall communities in Calhoun County. Reservations for this curb-to-curb service must be made 24 hours in advance. There are scheduled pickup locations in Marshall and in Albion for six scheduled pickup times. Riders are given a 20-minute window in which the bus will arrive at the pick-up location. In CY2018, AMC provided 2,080 hours of service, covering 38,718 miles, and over 5,000 trips. The service uses one bus, with a 16-passenger capacity, and employs two drivers (one driver in the morning and one driver in the evening). Fares for the AMC service are shown below (**Table 4**).

Table 4: Albion-Marshall Connector Fares

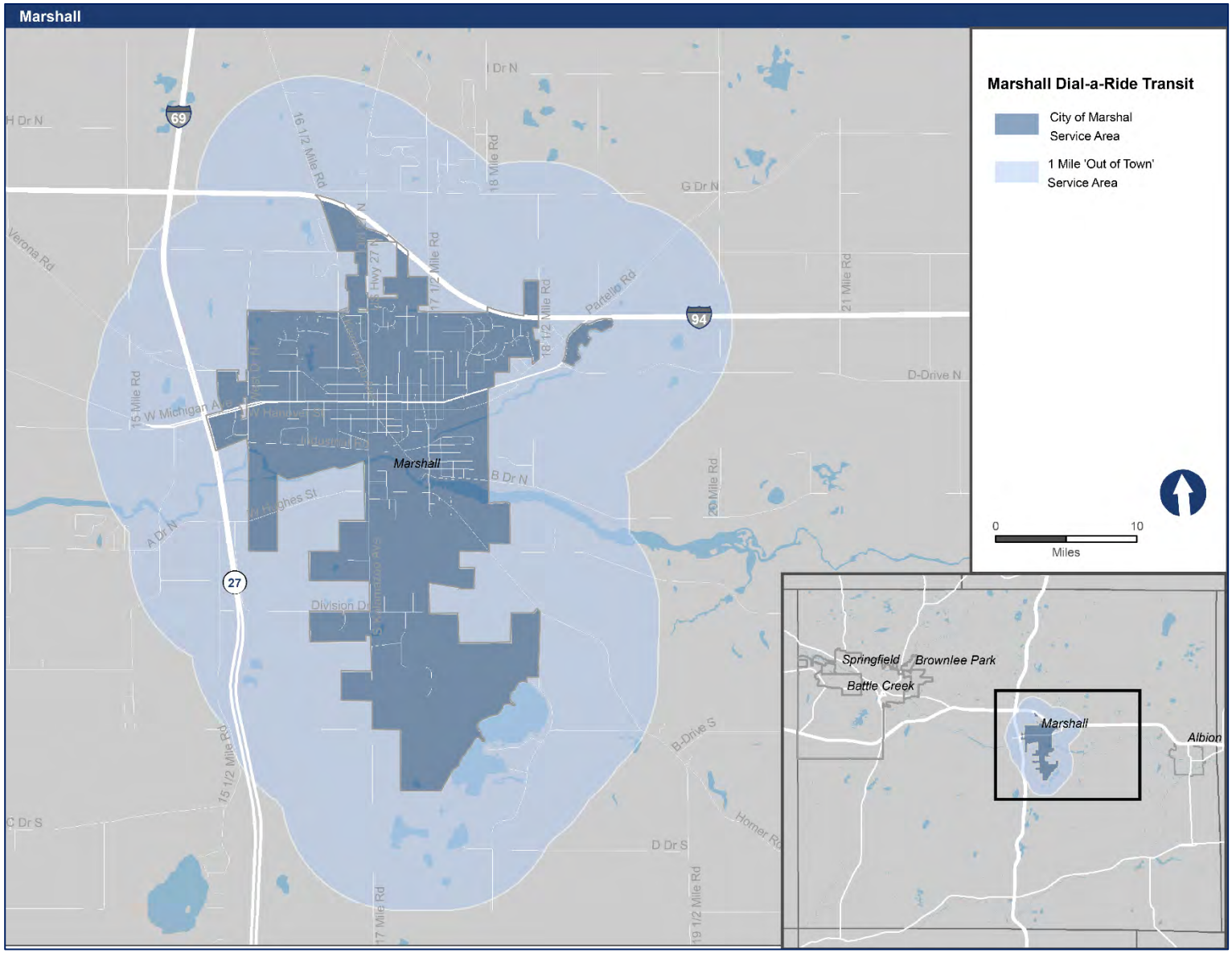
Ticket type	Fare
Adults/Children over 13	$2.00
People with disabilities/Seniors (over 60)/Children ages 5-12	$1.00
Children under 5 (with a paid rider)/Caretakers	Free

Marshall Dial-a-Ride Transit

The Marshall Dial-a-Ride Transit (DART) demand response service operates within the entire city of Marshall and within one mile outside the city (**Figure 9**). In CY2018, DART provided 5,680 hours of service, covering 62,972 miles, and over 26,000 trips. The DART fleet consists of five 16-passenger vans. DART is funded from Marshall general funds. In the adopted FY2018 budget, DART was estimated to receive $188,641 from a 0.9393 millage, $205,958 in federal and state funding, and $47,716 from fare revenue ($590,960 total in revenue). The FY2018 expenses were estimated to be $612,174. This included a $140,000 expense for a new bus, which will be paid for by a capital grant from MDOT.[20]

[20] City of Marshall Adopted FY2018 Budget, http://www.cityofmarshall.com/uploads/File/ADOPTED%20BUDGET-FY2018.pdf

Figure 9: Marshall DART Service Area



Community Action Transportation Services

Community Action's demand response service is available to any adult in Calhoun County who is a senior (60+) or is certified as having a disability (18+). Service areas are roughly divided into West Calhoun County, or Battle Creek area, and East Calhoun County, or Albion Area. Community Action has a fleet of twelve vans outlined in **Table 5**. In CY2018, Community Action provided over 39,000 passenger trips. Community Action operates with the support of the Michigan Departments of Transportation and Human Services, Calhoun County government (Department of Human Services and Senior Services), the Area Agency on Aging (Region 3B), and private donations. Services for seniors are funded in part through a Senior Millage Property Tax. Community Action also provides transportation services for Head Start and a variety of other community and social assistance programs.[21]

Table 5: Community Action Fleet

Vehicle Size	Number of Vehicles
With Lift, 5-7 passengers	5
5 passengers	3
7 passengers	1
9 passengers	2
15 Passengers	1

Other Providers

A variety of organizations throughout Calhoun County provide transportation services. These organizations and the types of services they provide are summarized in **Table 6**. Some additional senior care facilities provide on-request services for their residents.

Table 6: Transportation Service Providers Active in Calhoun County[22]

Organization	Description
Aequitas Mobility Services (AMS)	Non-profit organization advocating for increased mobility for individuals and families working toward economic self-sufficiency. Aequitas launched on-demand transportation operation with three passenger vans providing service between various residential areas and workplaces in and around Battle Creek in early 2019. As of early 2020, AMS service was suspended as the organization sought additional funding sources to continue its operations.
Albion College	BritBus is a fixed-route shuttle service between various locations on the Albion College campus and downtown Albion. https://www.albion.edu/student-life/campus-safety/transportation-services
B&W Charters Inc.	For-hire charter services in 16- to 56-passenger vehicles (vans, motorcoaches, and trolleys), handles special events, shuttles, and extended trips. https://www.bwcharters.com/

[21] For more information, see: www.caascm.org.
[22] Where no information source is specified in the table, the information comes from Battle Creek Transit. See: http://www.battlecreekmi.gov/DocumentCenter/View/2735/Transit-Application?bidId=.

Organization	Description
CentraCare/ LifeCare Ambulance	CentraCare provides medical services to older adults in Calhoun County free of charge to Medicare and Medicaid beneficiaries. The CentraCare program, also known as PACE (Program of All-Inclusive Care for the Elderly), is a nationally recognized model to support seniors remaining safely in their place of residence. High quality transportation is provided by LifeCare Ambulance Service for participants to come to and from the day center. https://lifecareems.org/community/centracare/
Community Inclusive Recreation	Community Inclusive Recreations provides a variety of recreational and social opportunities for people with disabilities and receives specialized services funding to provide transportation to clients to and from activities. Rides are booked in advance with a minimum three-hour notice. http://www.cirfun.com/
Concorde Transportation	Concorde Transportation provides transportation to work and home for Battle Creek residents and airport runs to Detroit, Lansing, Grand Rapids, and Kalamazoo. Fares are: Work to home – roundtrip is $15 per day; Airport start at $75 route trip; and specialized starting at $35 per hour (will go where needed). Service is 24 hours per day, and clients pay directly for services. Concorde serves approximately 50 to 75 people each day.
Courtesy Limousine	Luxury charter transportation services in a variety of light-duty vehicle types. http://courtesy247.com/home/2630585
Dean Trailways of Michigan	Provides charters, tours, line runs, and sports packages for individuals, companies, universities, event organizers, professional sports teams, and corporate events. http://www.deantrailways.com/about/our-company
Greyhound Bus	Bus stations in Battle Creek and Albion, Greyhound is an intercity bus common carrier serving over 3,800 destinations across North America.
Indian Trails Inc.	Indian Trails operates fixed intercity routes throughout Michigan and other Great Lakes states. Daily runs provide connections to Amtrak and Greyhound networks. https://www.indiantrails.com/maps-and-schedules
Marian Birch Adult Daycare	An adult day care center that transports individuals to and from the center throughout Calhoun County. The service operates a morning route at 7:30 a.m., & 9:30 a.m., and an afternoon route at 3:00 p.m., and 5:30 p.m. Funding comes from various funding agencies, Area Agency on Aging, Region 3B & waiver, Veteran's Administration, private pay, and senior millage.
Salvation Army	Provides in-town Triptiks or 12-ride bus passes as available at no charge to recipient for those with a new job who live on the bus route and has not received first paycheck. TripTiks are used to aid patrons to get home during inclement weather. The service is available while local buses are running and only within the Battle Creek public transit service area. State funding may have been reduced recently.

1.4. Market Analysis

The effectiveness and efficiency of public transportation is often determined by density. Where there are higher concentrations of people and/or jobs, transit tends to be supported by higher ridership. At the same time, most transit agencies have a mandate and mission to provide comprehensive service in their communities, and to provide mobility for vulnerable residents with no other means of transportation. The purpose of this market analysis is to both highlight areas with relatively high transit need and identify areas throughout the county that could support a certain level of transit service. This market analysis consists of three key components: Transit-Oriented Population, Commuter Origin, and Transit Potential.

Transit-Oriented Population

The Transit-Oriented Population Origin Index identifies areas with higher numbers and concentrations of customers more likely to need or use transit. The index is constructed from demographic statistics in six categories: population (including race and ethnicity), age (youth or senior), number of households, income (low), vehicle ownership (zero- and one-car households), and disability status. After each sub-area is scored in these categories, the scores are weighted and combined to create an overall Transit-Oriented Population Origin Index. The index is show in the following section from low to high propensity.

Transit-Oriented Population Propensity is shown for the Battle Creek area in **Figure 10**. In this part of the County, the areas with the higest concentration of transit-oriented populations are located in tightly packed residential neighborhoods. The high transit-oriented population area south of I-94 is home to the Minges Brook Mall, and multiple apartment and condo complexes near Capital Avenue. Other areas of high concentration are located near central Battle Creek and at the border of Springfield and Battle Creek, just south of Upton Avenue. These areas are all served by bus routes that operate every 30-60 minutes and that have a high share of annual system ridership.

In the Marshall area (**Figure 11**), the highest propensity is south of Michigan Avenue to just south of the North Branch Kalamazoo River. This neighborhood is home to the middle school and Marshall House apartments.

As shown in **Figure 12**, most of the Albion area has moderate to high tranit-oriented population propensity. The area of highest propensity in Albion is located south of the North Branch Kalamazoo River between Albion Street and Superior Street.

Figure 10: Transit-Oriented Population Origin Index, Battle Creek/Springfield

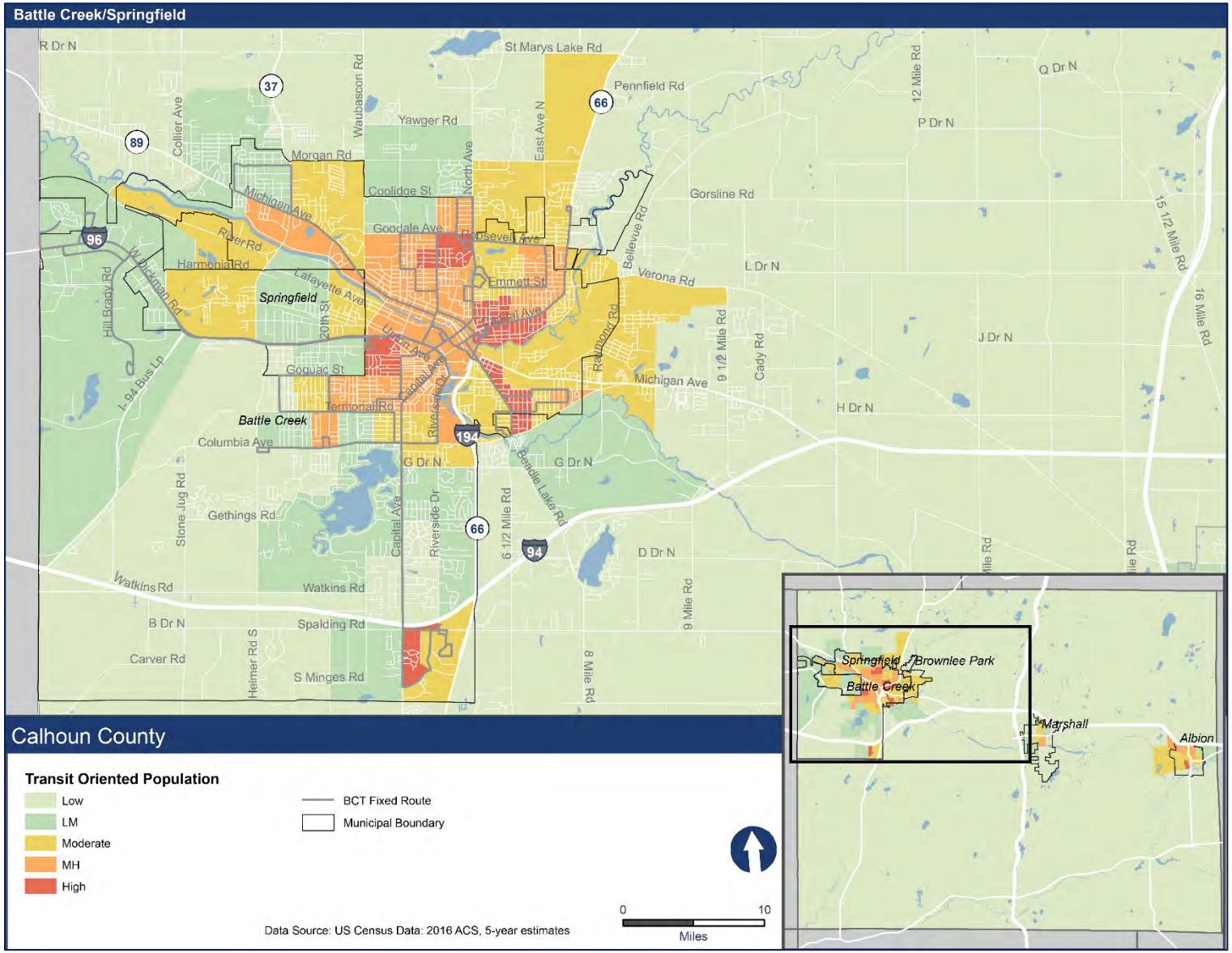


Figure 11: Transit-Oriented Population Origin Index, Marshall

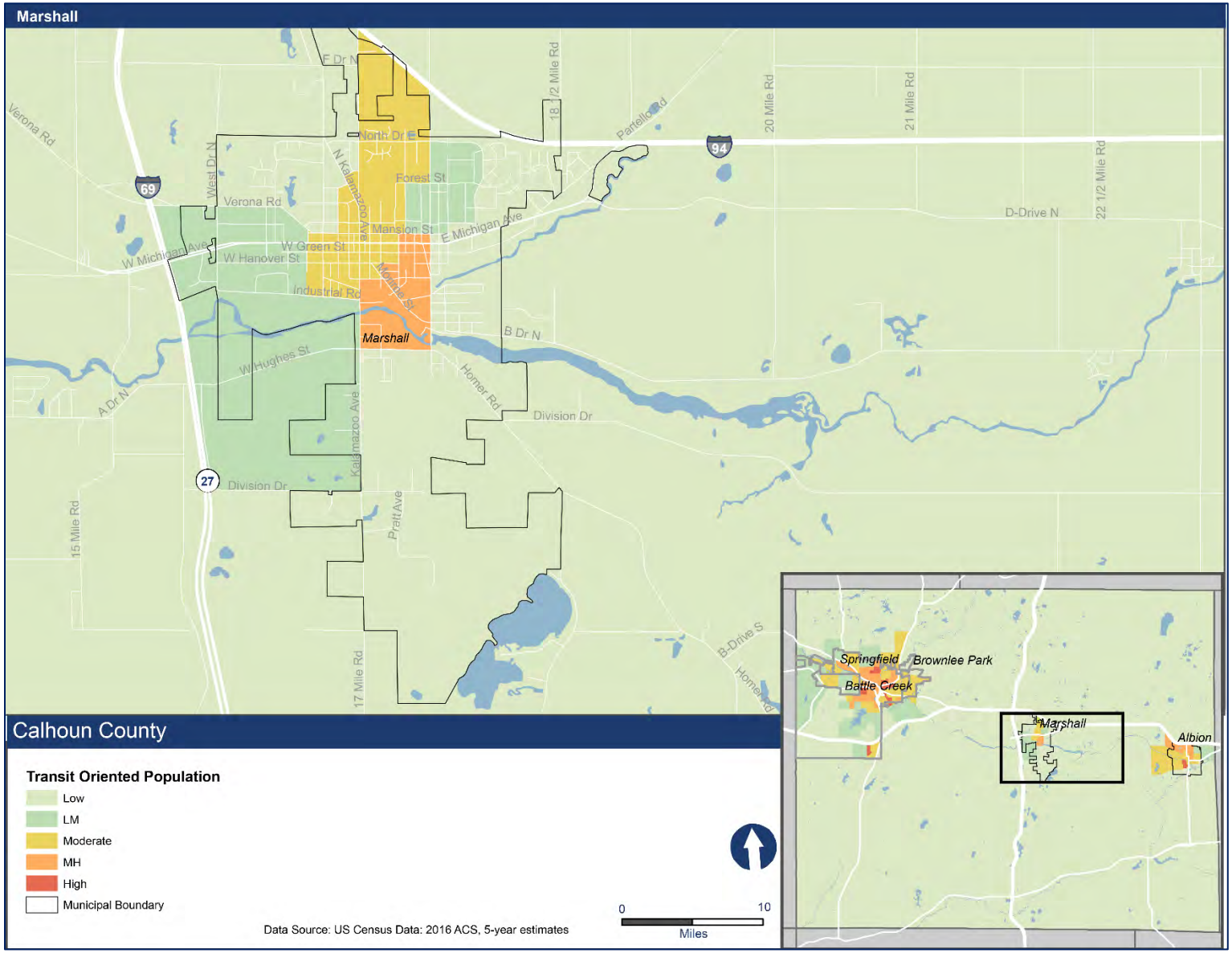
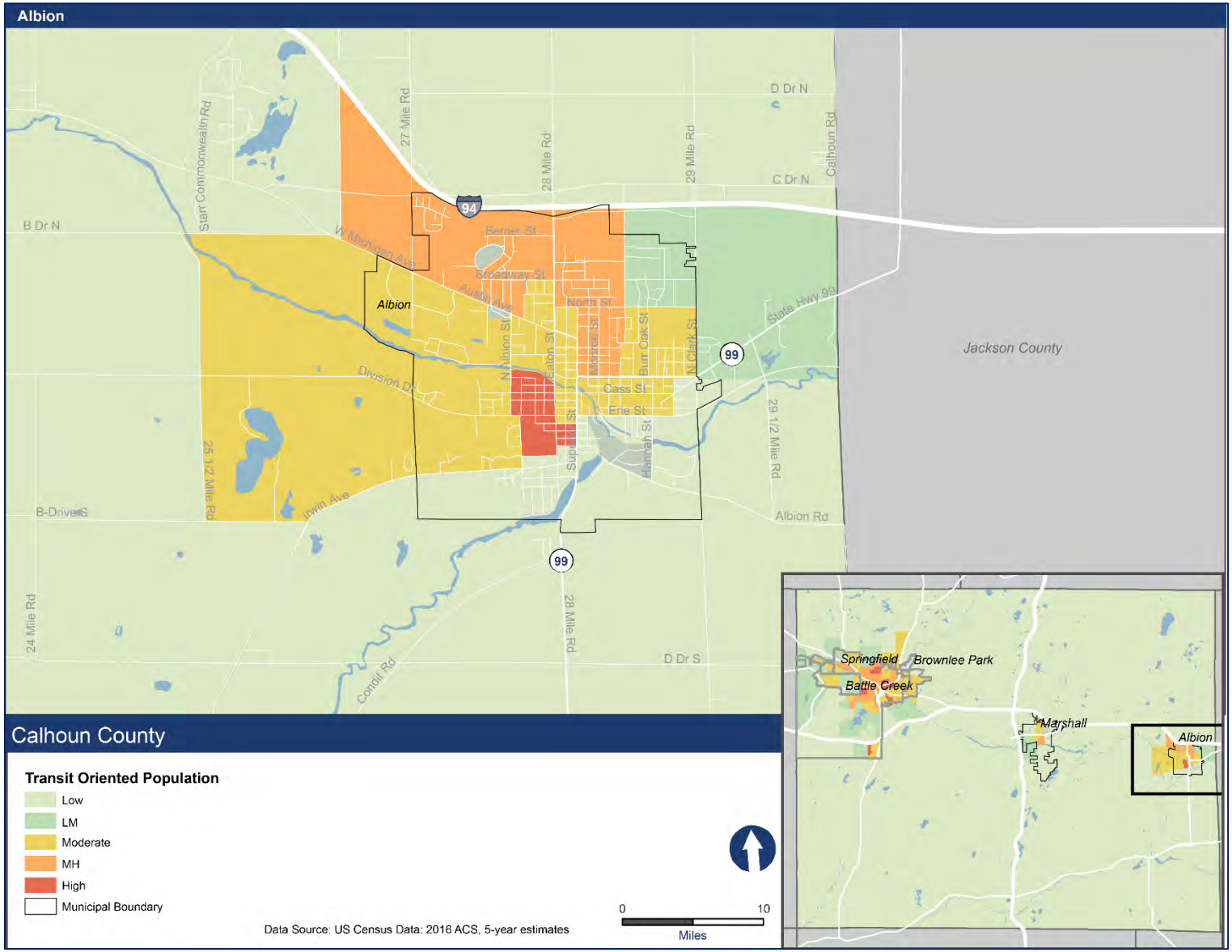


Figure 12: Transit-Oriented Population Origin Index, Albion



Commuter Origin Propensity

The Commuter Origin Index identifies areas with higher numbers and concentrations of customers more likely to need or use transit to commute. The index is constructed from demographic statistics in two categories: commuters in general (population over 16, workers over the age of 16, workers over the age of 16 who commute), and non-single occupancy vehicle (SOV) commuters. After each sub-area is scored in these categories, the scores are weighted and combined to create an overall Commuter Origin Index. The index is shown in the following section from low to high propensity.

The areas of highest commuter origin propensity are located in the three urban areas, Battle Creek, Marshall, and Albion. As shown in **Figure 13**,the areas that align with current Battle Creek Transit bus routes have the highest propensity.

In Marshall, the highest propensity is seen in the urban center, anchored around Mansion Street (**Figure 14**). These are also areas of more dense residential neighborhoods.

The propensity in Albion is highest in the area where Albion College is located (**Figure 15**). The areas north and west of state route 99 also have higher commuter origin propensity.

Figure 13: Commuter Origin Index, Battle Creek/Springfield

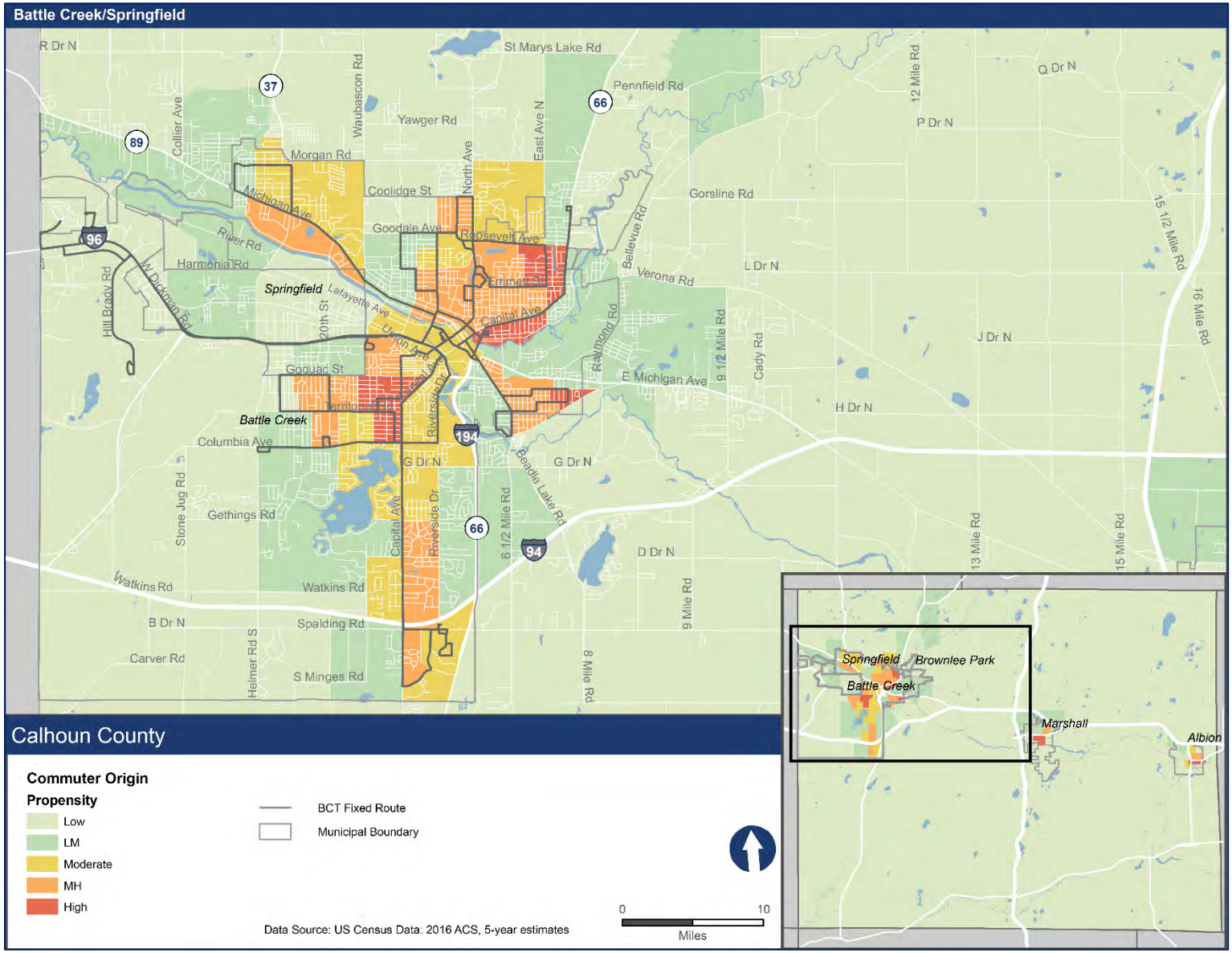


Figure 14: Commuter Origin Index, Marshall

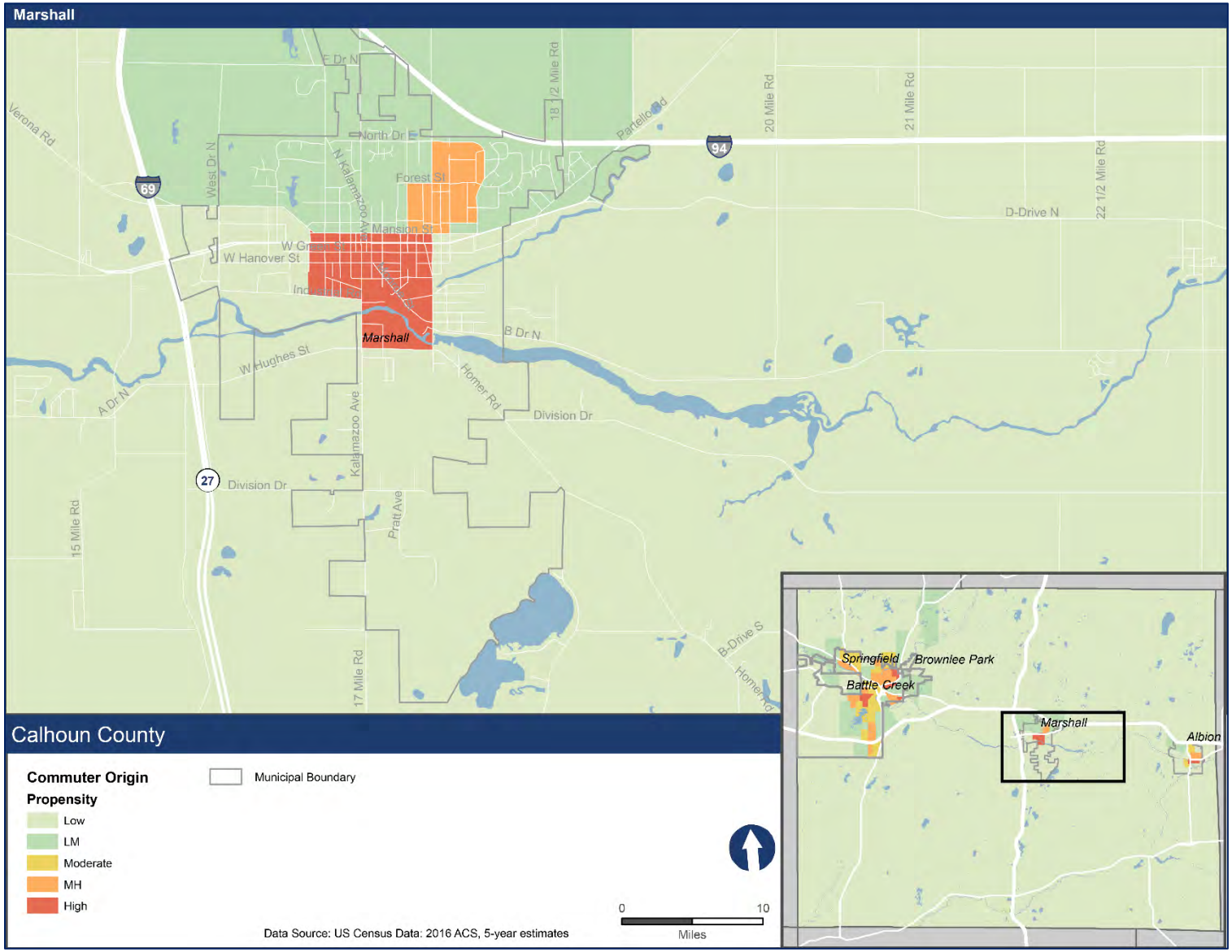
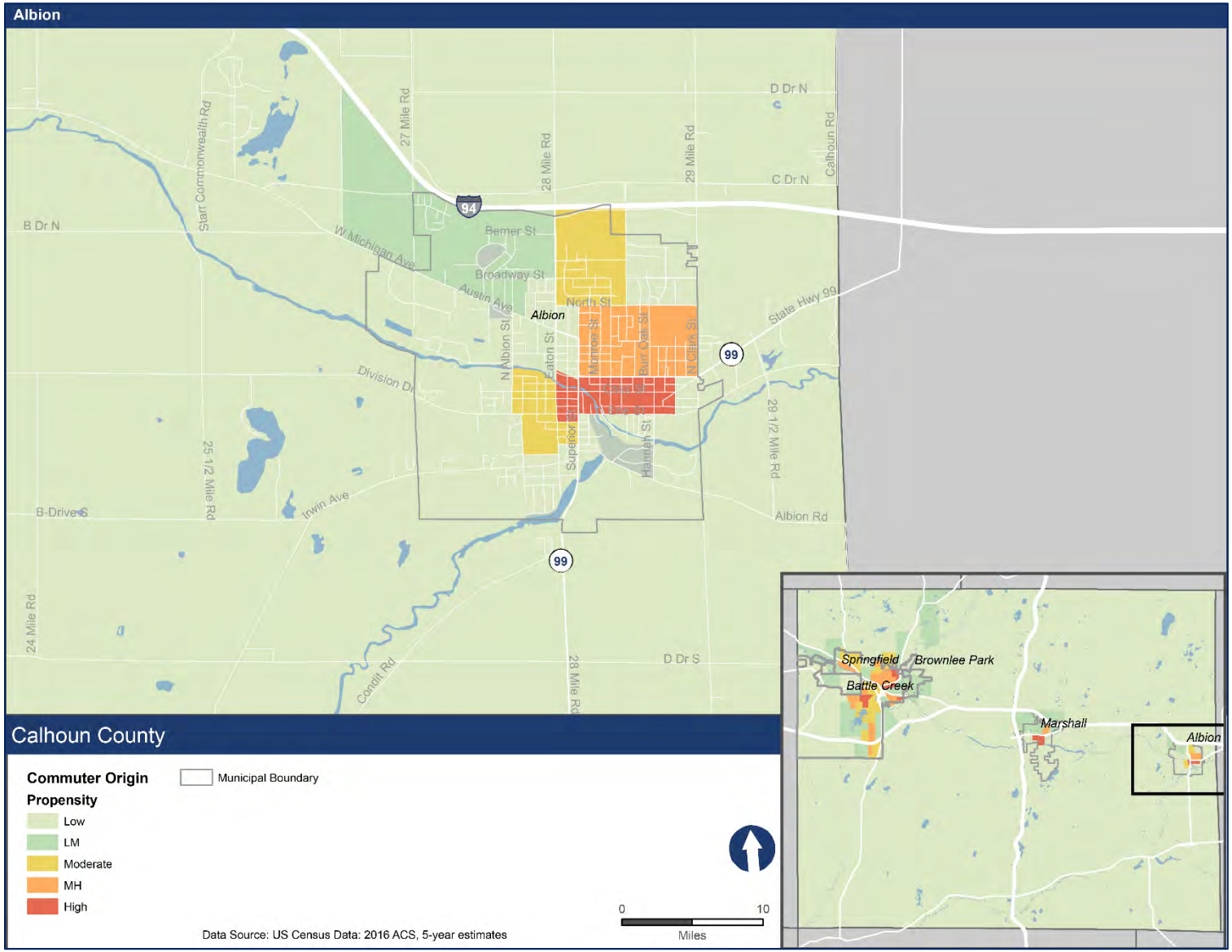


Figure 15: Commuter Origin Index, Albion



Transit Potential

Transit potential is an analysis of population and employment density. As transit service is generally most effective in areas with higher concentrations of activity, combining both population and employment densities show the locations with the highest potential to support transit service. The existing transit potential is based on current population and job data from the 2016 American Community Survey (ACS) five-year estimates, and 2016 Longitudinal Employer House Dynamic (LEHD) data. These indicators are shown per acre by Census Block in the following section. Local bus service is supported when there are at least 5 jobs and/or people per acre. Areas with less than five jobs and/or people per acre may benefit from a more flexible or demand response service.

As seen in **Figure 16**, the highest density (more than 60 jobs and people per acre) areas in Battle Creek are located where there are major employers: Bronson Battle Creek Hospital, Kellogg Community College, and Post Cereals. A large portion of the urbanized area of Battle Creek and Springfield has between 6 and 15 jobs and people per acre.

The transit potential in Marshall is generally moderate, with less than five jobs and people per acre across about half of the city (**Figure 17**). The higher potential areas are centered around the city center along Michigan Avenue. This area includes a major employer, Oaklawn Hospital. Other areas of high transit potential are along Industrial Road where Tenneco and Michigan Kitchen Distributors are located. South of the river, Marshall averages less than one person or job per acre.

Similar to Marshall, Albion also has a moderate transit potential with fewer than five jobs or people per acre in many locations (**Figure 18**). The highest concentration of activity is east of Eaton Street and north of Erie Street, where Albion College is located. Albion College is a liberal arts college that enrolls around 1,300 students annually.

Figure 16: Transit Potential, Battle Creek/Springfield

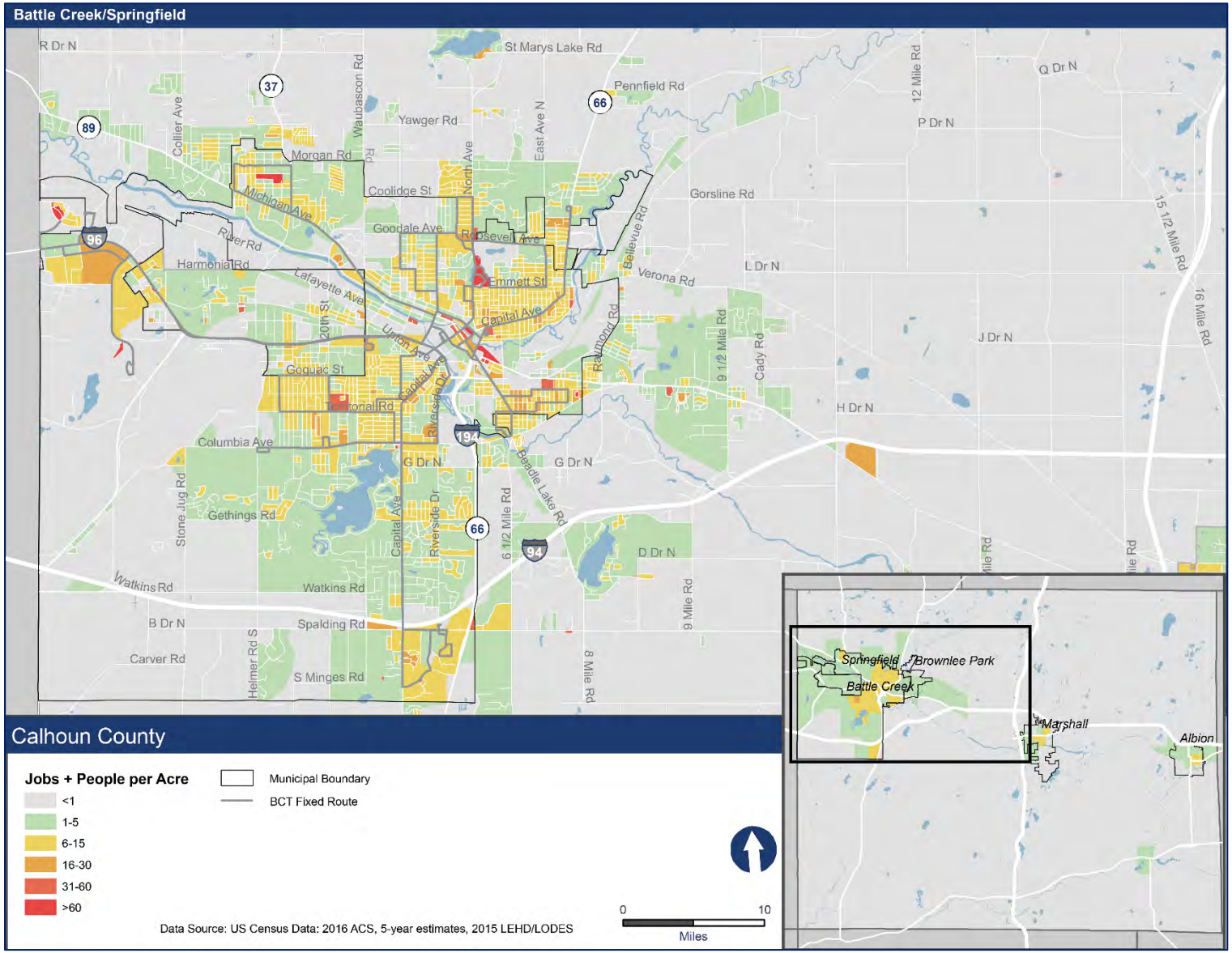


Figure 17: Transit Potential, Marshall

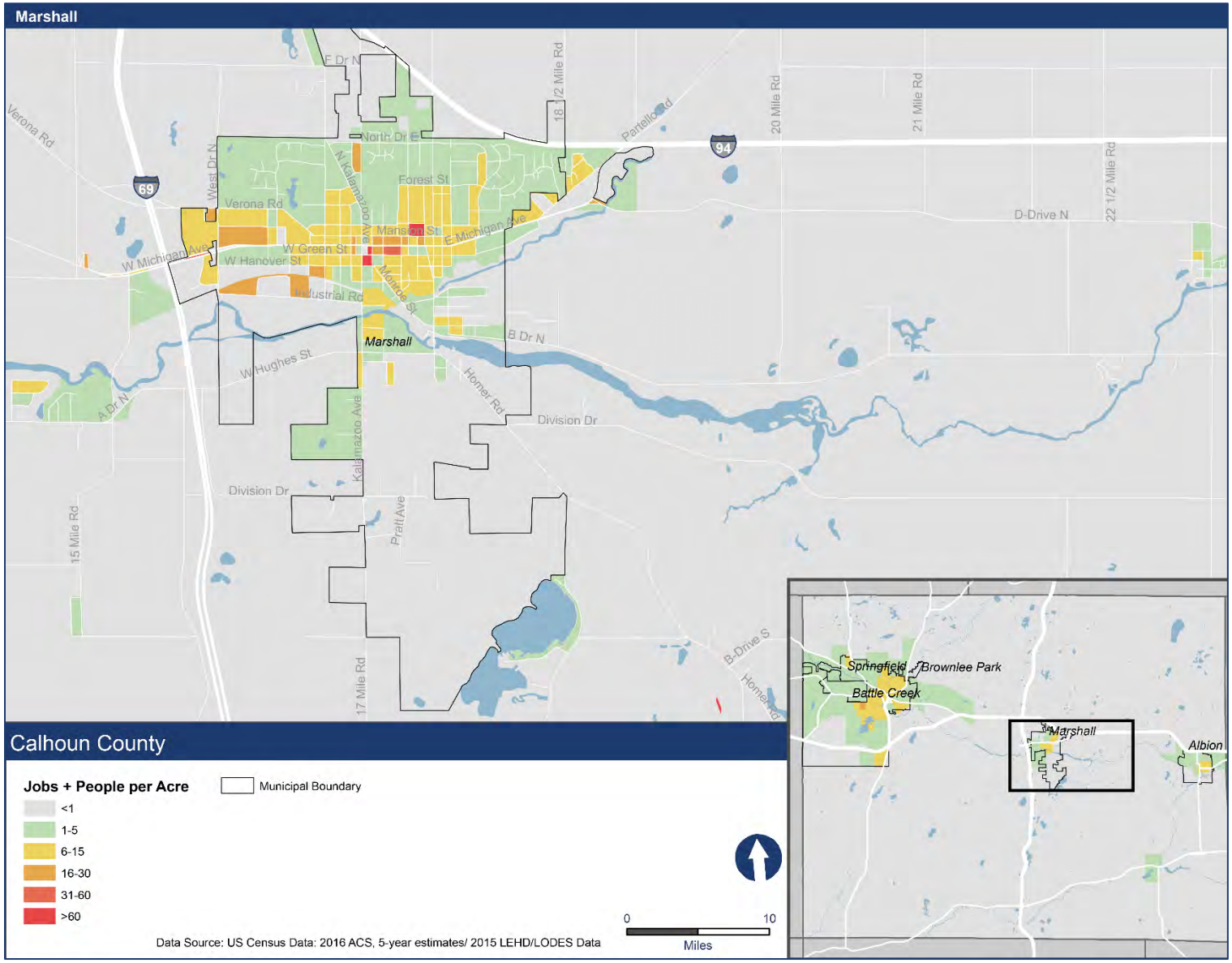
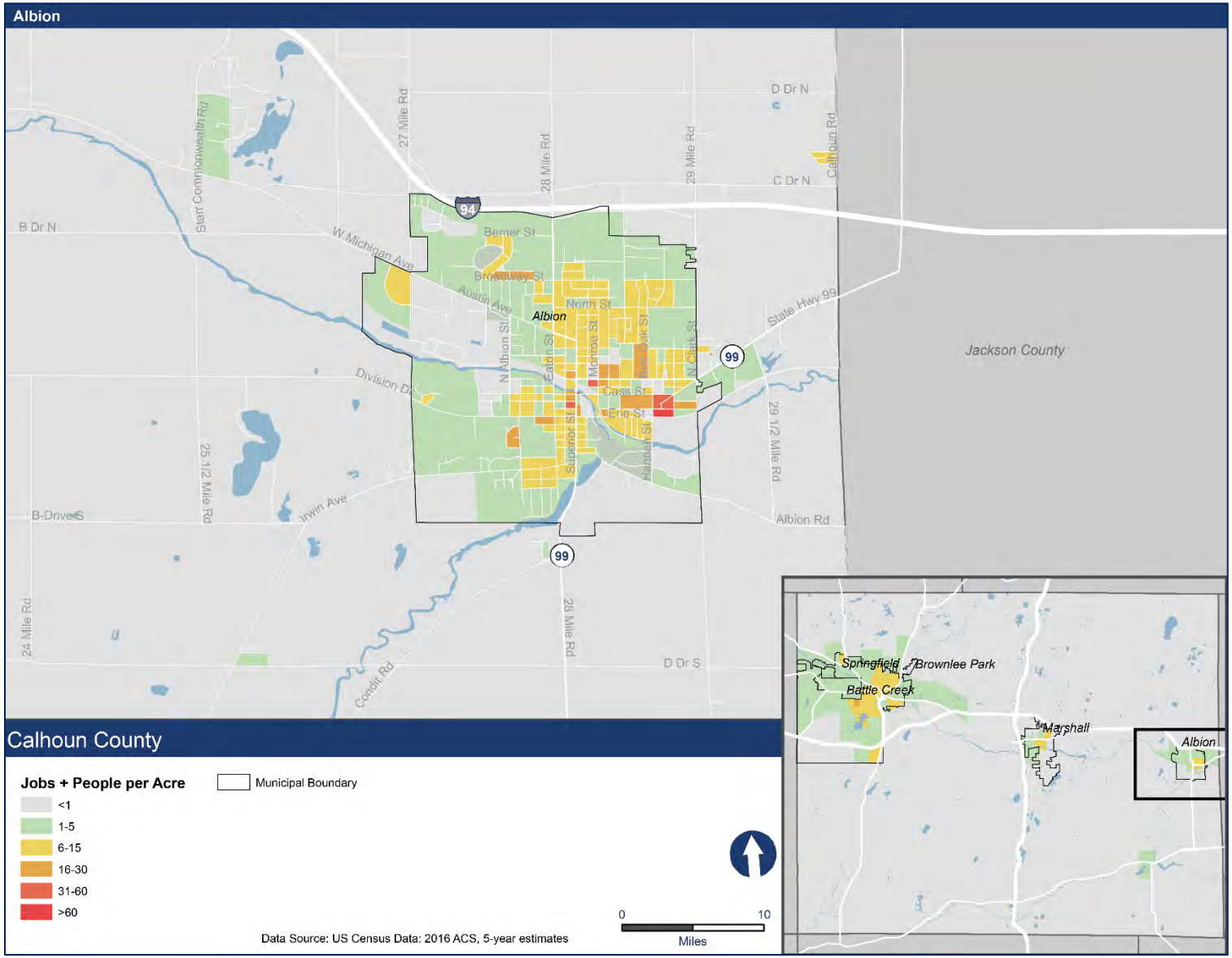


Figure 18: Transit Potential, Albion



Travel Flows

Daily travel flows in the county provide important information about travel and commute patterns. Daily travel flow data analyzed in this section comes from the Battle Creek Area Transportation Study (BCATS) regional travel model. The following figures break down daily travel flows, estimated in 2010, by Transportation Analysis Zone (TAZ) for all trip origins, destinations, and internal travel. All travel lines are drawn from the center (or centroid) of each TAZ, and are not representative of the exact location of trip origins and destinations.

Figure 20 thru **Figure 22** show daily travel flows (by number of trips) between TAZ pairs that have more than 200 daily trips for Battle Creek, Marshall and Albion. The highest origin and destination pairs in the county are between two areas in Battle Creek, which appear to be primarily residential, and Emmett Charter Township, southeast of Battle Creek. Many manufacturers and businesses are located in this part of the county, but the activity density in this TAZ is very low and is likely not supportive enough for a local bus route; there is no fixed-route service from the city center to this area currently. Most of the travel to and from the Battle Creek area happens within close proximity, suggesting that most people live relatively close to where they work. The same is true for travel near Marshall and Albion. There are, however, still areas where interjurisdictional travel, to and from Battle Creek, is over 1,200 person trips a day. These areas include Bedford Charter Township, the area near East Leroy, and Marshall.

Figure 23 shows the potential travel flows around the region based on the employment location for Calhoun County Residents. Most residents work within Calhoun County, with high concentrations of jobs held in the north west region of the county, near Battle Creek. Outside of the county, the highest concentrations of jobs are held in Barry and Kalamazoo Counties. Areas in gray have less than 75 residents employed there and are considered insignificant. Overall, more jobs are held by Calhoun County residents within the county (30,372) than people outside of the county (25,073) (**Figure 19**). Even less residents are employed outside the county (24,542).

Figure 19: Inflow, Outflow, and Intercounty Flow of Workers in Calhoun County

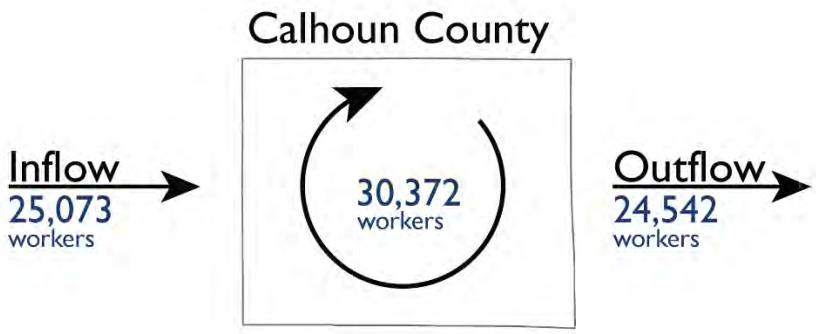


Figure 20: Daily Travel Flows between TAZs, Battle Creek

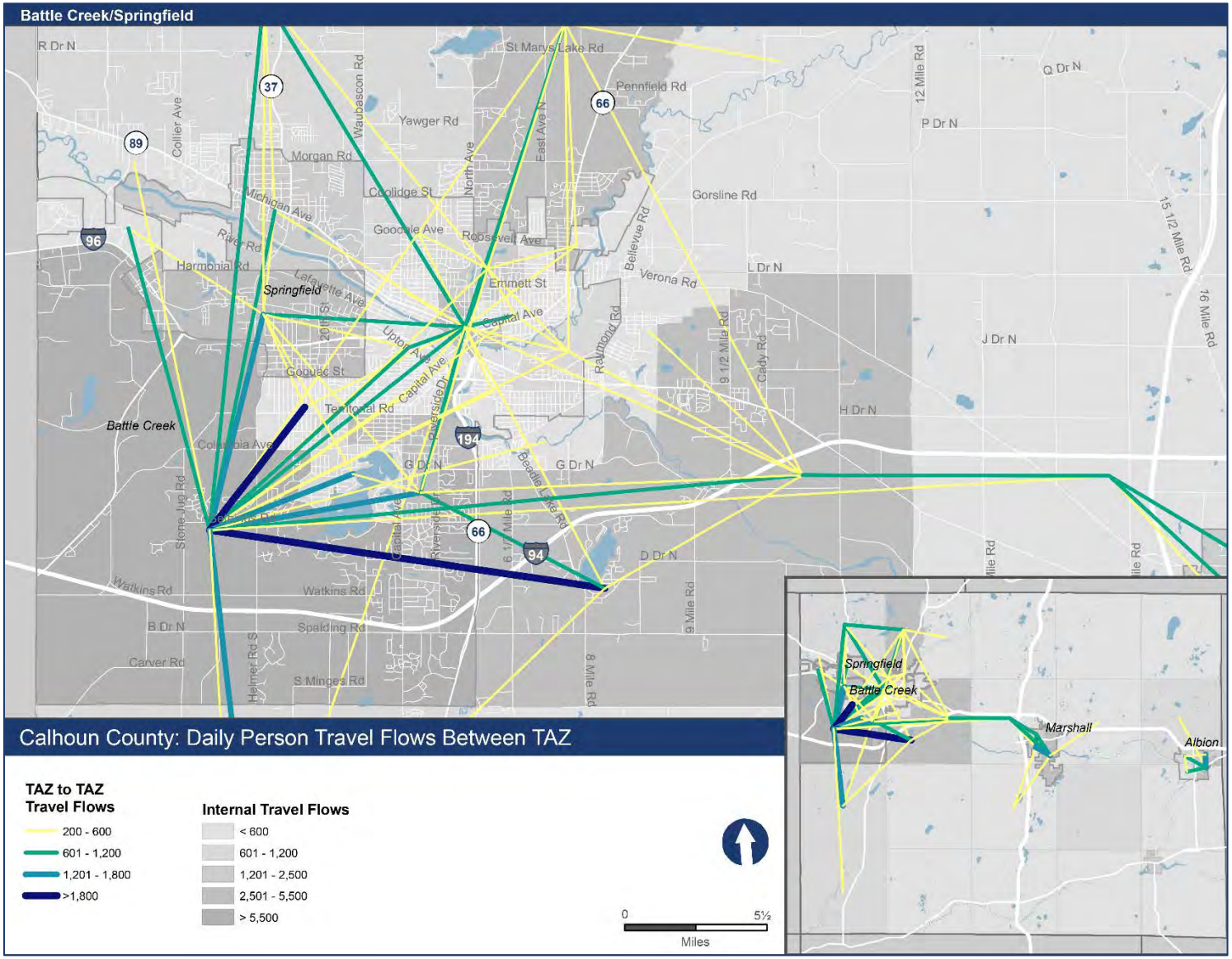


Figure 21: Daily Travel Flows between TAZs, Marshall

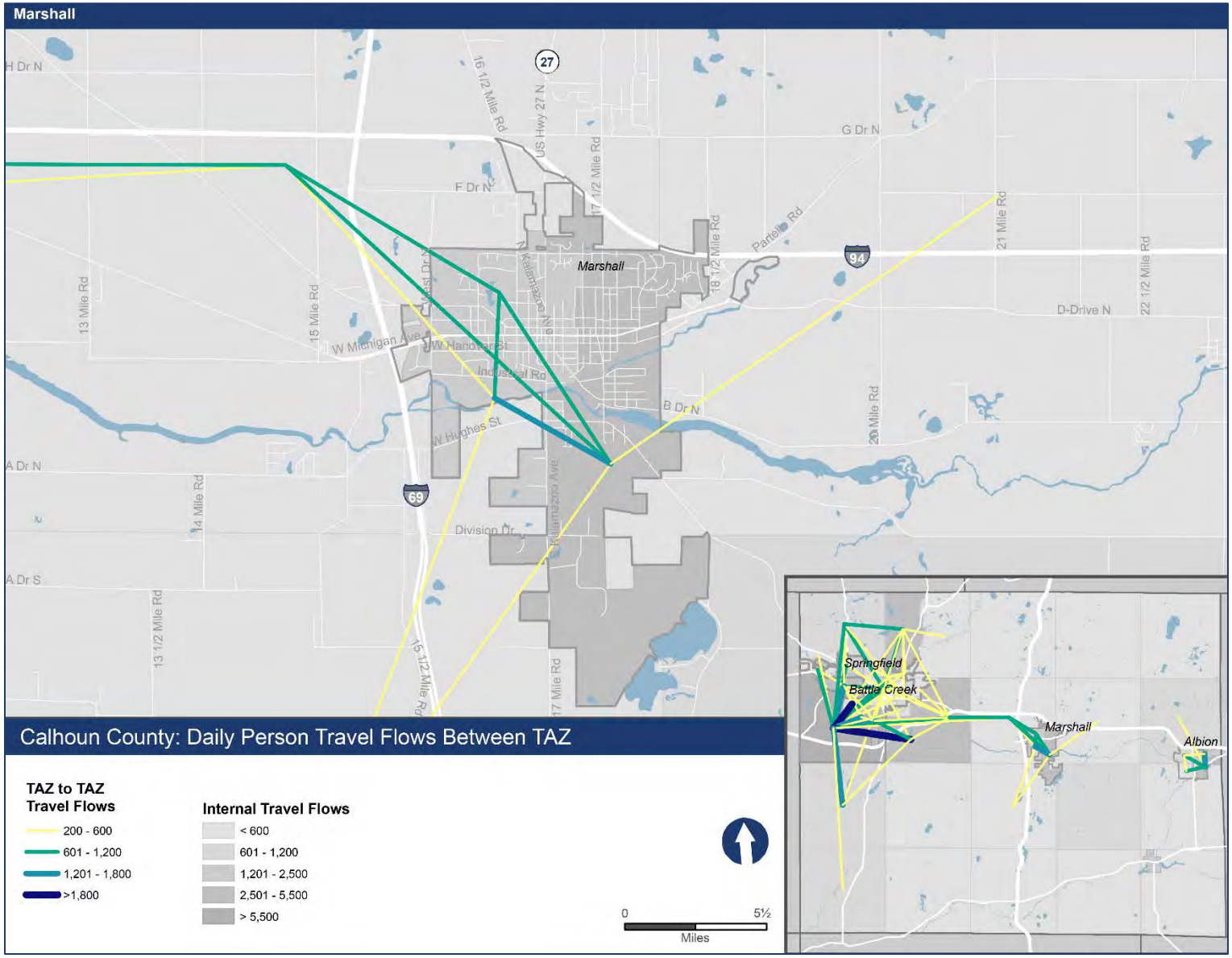


Figure 22 : Daily Travel Flows between TAZs, Albion

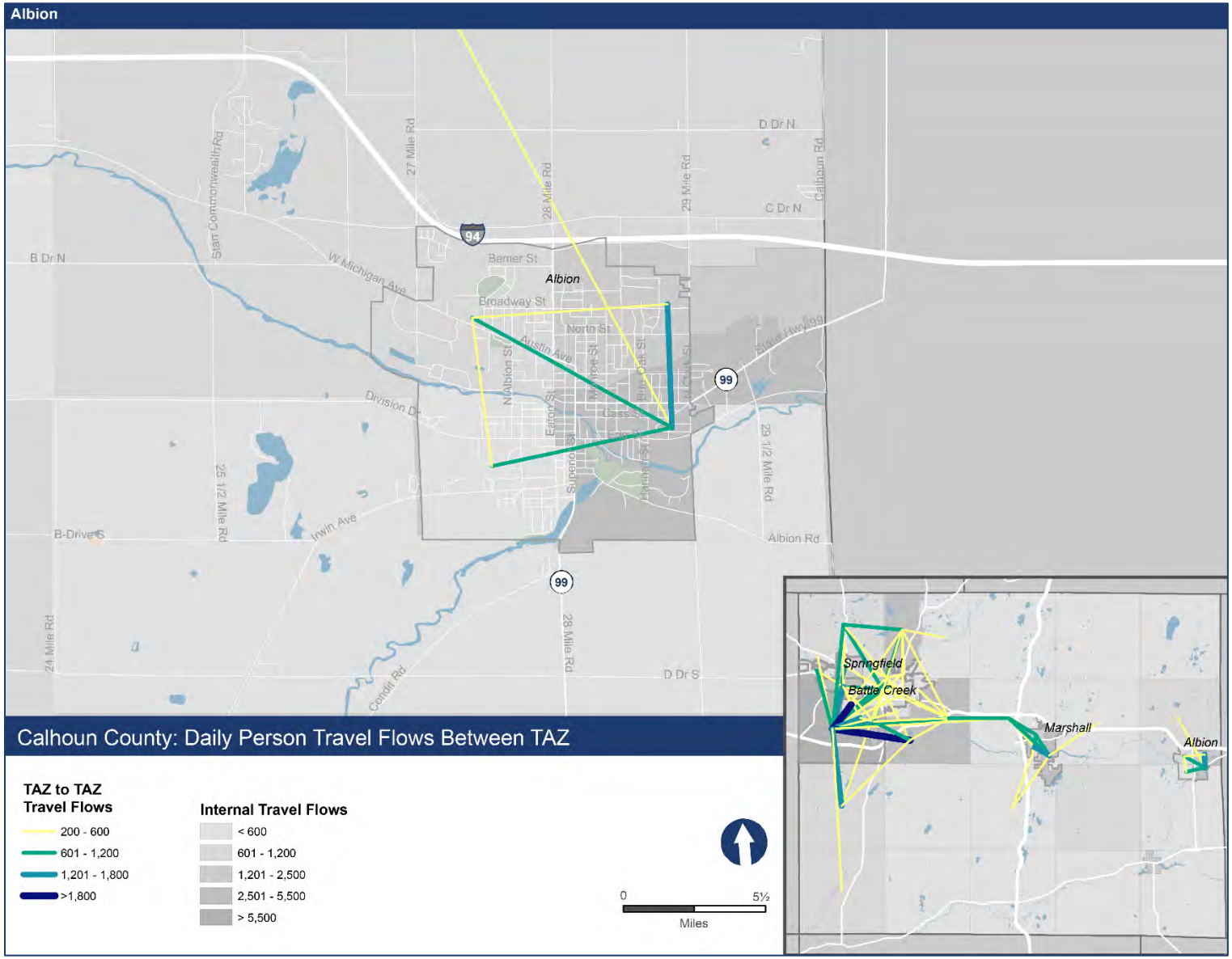
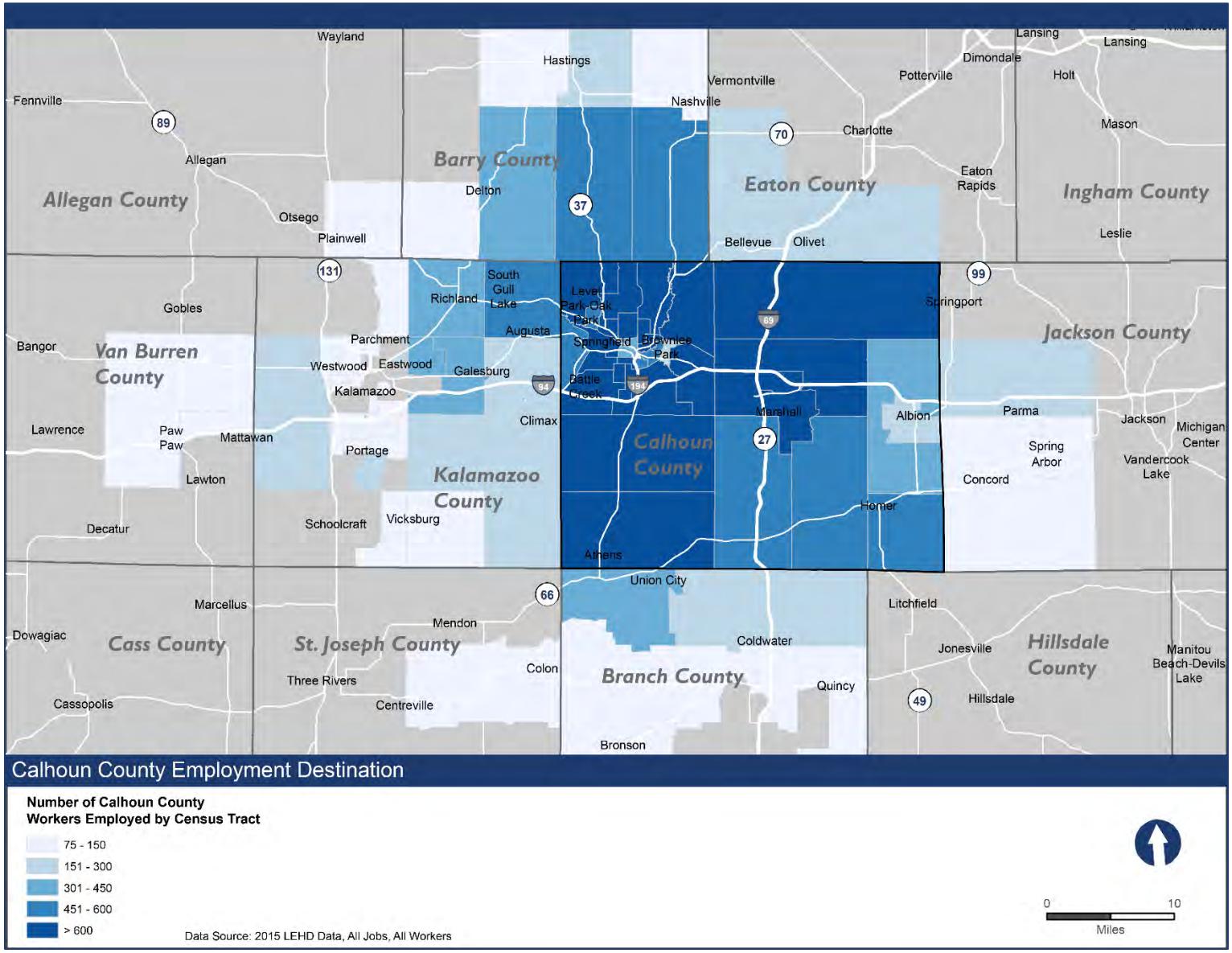


Figure 23: Calhoun County Residents Employment Location by Census Tract



1.5. Gap Analysis

Coverage Gaps

Outside of Battle Creek, Marshall, and Albion, Calhoun County residents have minimal to no access to basic amenities such as health care and grocery stores. For example, Homer has access to one commercial grocery store, Family Dollar, which provides a limited selection of produce items. Health care facilities and specialists can also only be found within the three cities. There are amenities outside the county, in Jackson County for example, that Albion residents could access with a shorter trip, but these are unreachable by transit due to the service area boundaries.

There are multiple areas outside of these three cities that have concentrations of more than five percent of the population having no access to a household car. There are very high concentrations of seniors outside of these cities. In fact, the lower concentrations of seniors are found near the city centers. Transportation options outside the cities are widely unavailable to everyone. Furthermore, transportation options outside of the county are unavailable. Demand response service areas can be seen in relation to amenities and concentration of senior and zero-car households in **Figure 24** through **Figure 29**.

Level of Service Gaps

There is also a gap in the availability of service throughout the day. Many of the demand response riders are seniors or people with disabilities who do not use the service to commute during peak weekday periods. Community Action provides service countywide, as the service gets further out from Battle Creek, the service hours become shorter due to the fact that driver shifts are fixed, and it takes longer to get from the bus depot in Battle Creek further out in the service area. The only area in Calhoun County that has service in the evening is Battle Creek, and this service is not always available to residents who are not seniors and do not have a disability. Weekend service is limited to Battle Creek as well, apart from seniors and people with disabilities in Albion who have service for 3.5 hours on Saturday. Complete span and day of service information is shown in **Table 7**. Homer has no transit services that are not privately run for specific customers.

Table 7: Span of Service for Demand Response Services in Calhoun County

Provider	Service Area		Days of Service	Start Time	End Time
BCT Tele-Transit (ADA gets priority)	Battle Creek		Monday- Friday	5:15 a.m.	12:00 a.m.
			Saturday	9:15 a.m.	5:00 p.m.
Marshall DART	Marshall		Monday – Friday	7:00 a.m.	6:00 p.m.
Community Action (60+ and/or ADA)	Countywide	Albion	Monday – Friday	8:00 a.m.	4:00 p.m.
		Albion	Saturday	8:00 a.m.	11:30 a.m.
		Battle Creek	Monday - Friday	8:00 a.m.	4:30 p.m.
Albion-Marshall Connector	Marshall and Albion		Monday – Friday	7:30 a.m.	5:30 p.m.

Figure 24: Senior Population Access to Amenities, Battle Creek

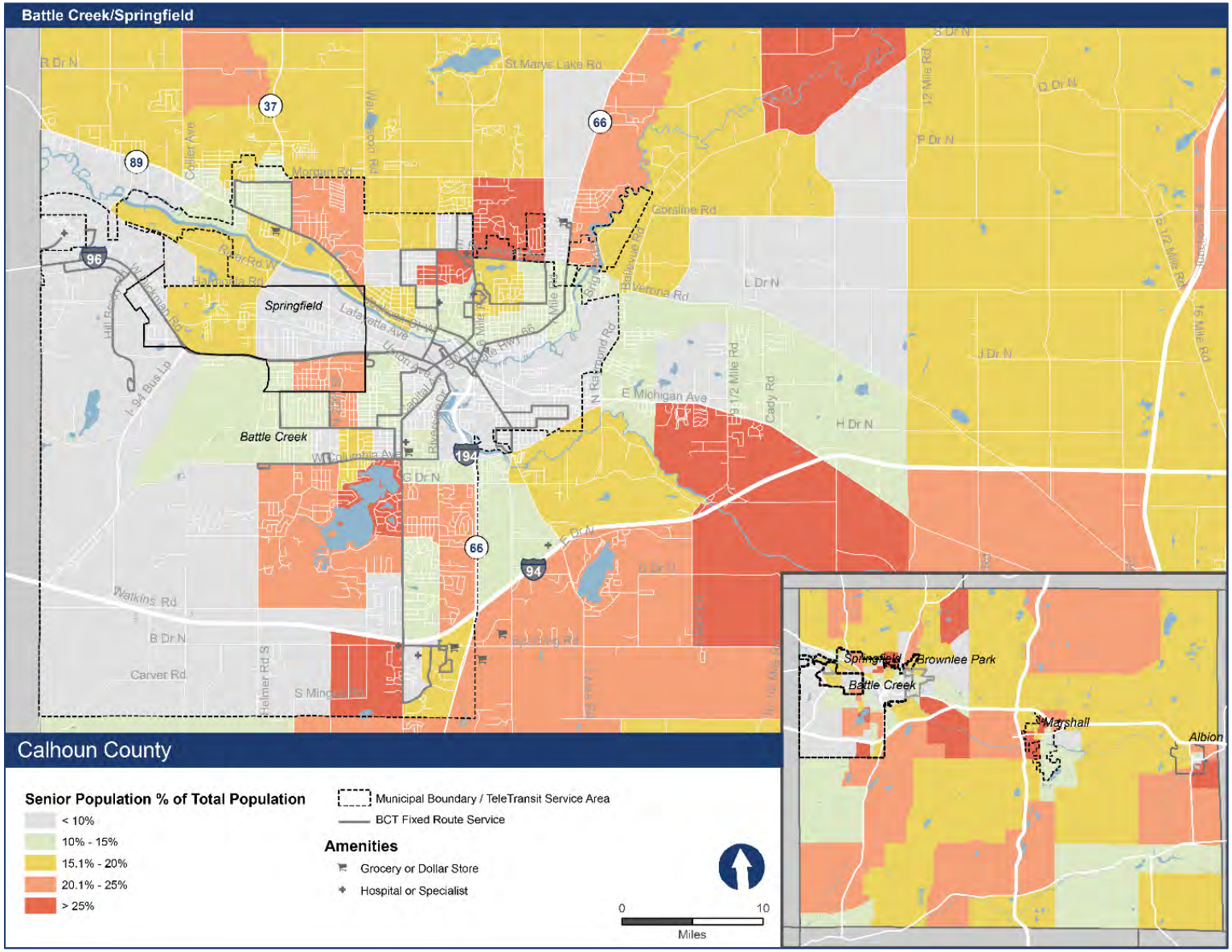


Figure 25: Senior Population Access to Amenities, Marshall

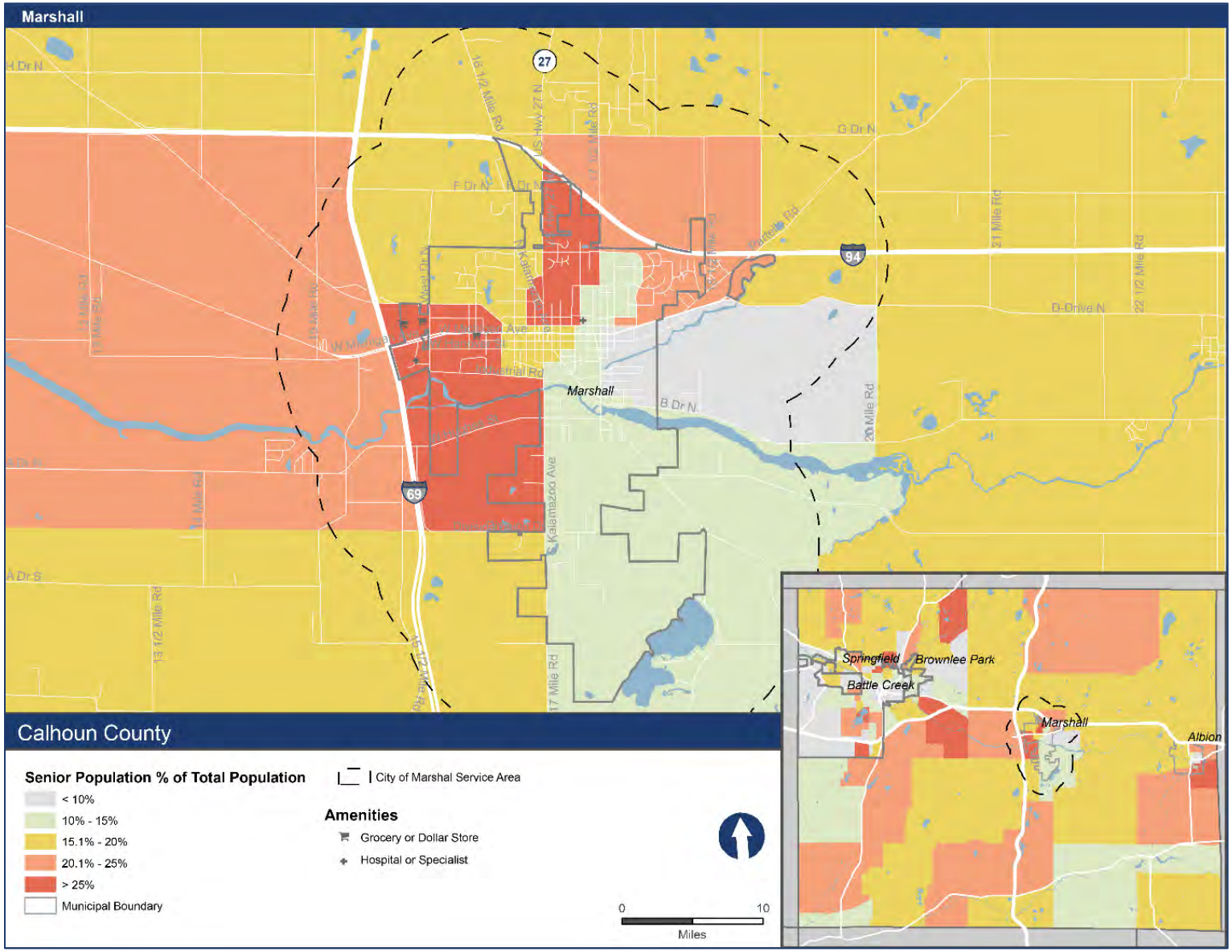


Figure 26: Senior Population Access to Amenities, Albion

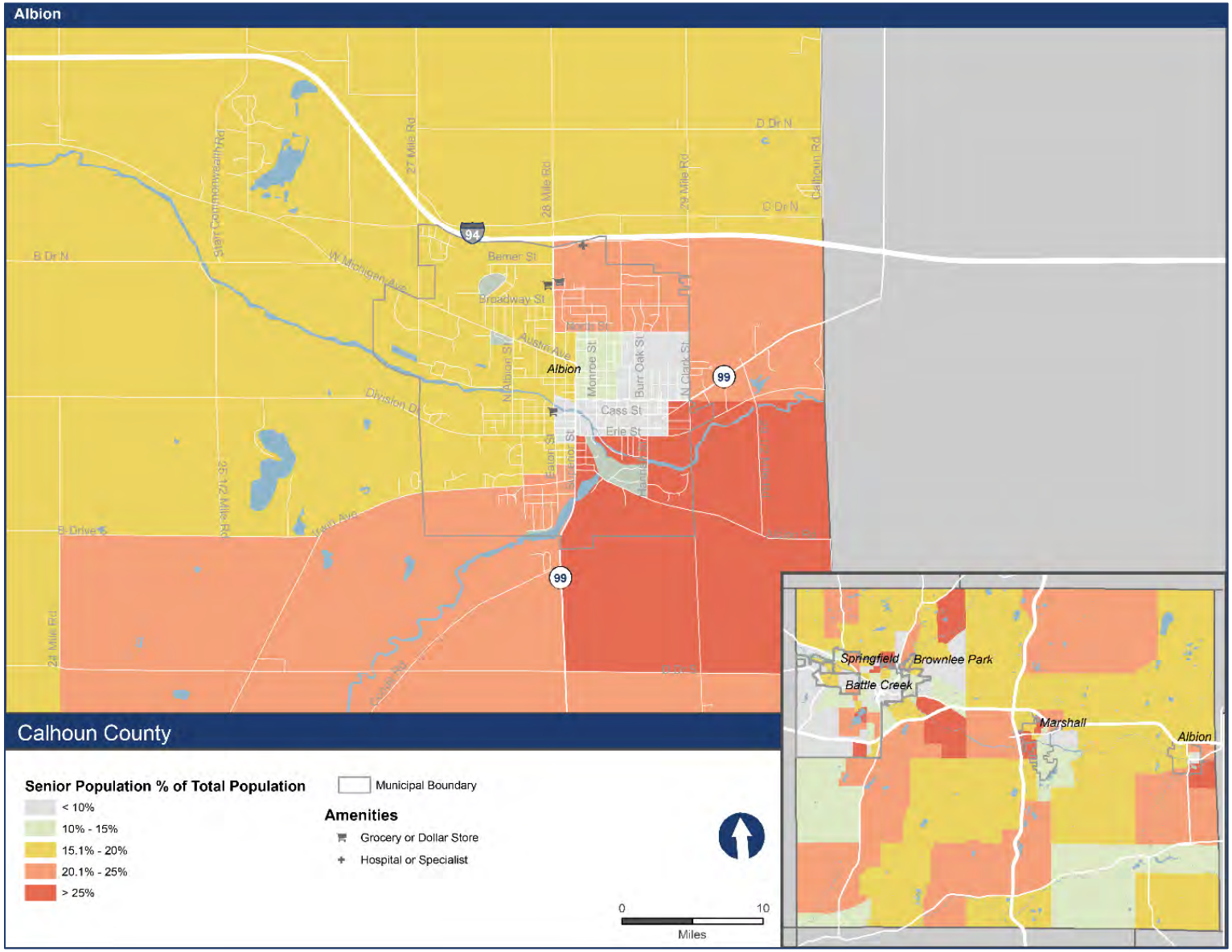


Figure 27: Zero-car Households Access to Amenities, Battle Creek

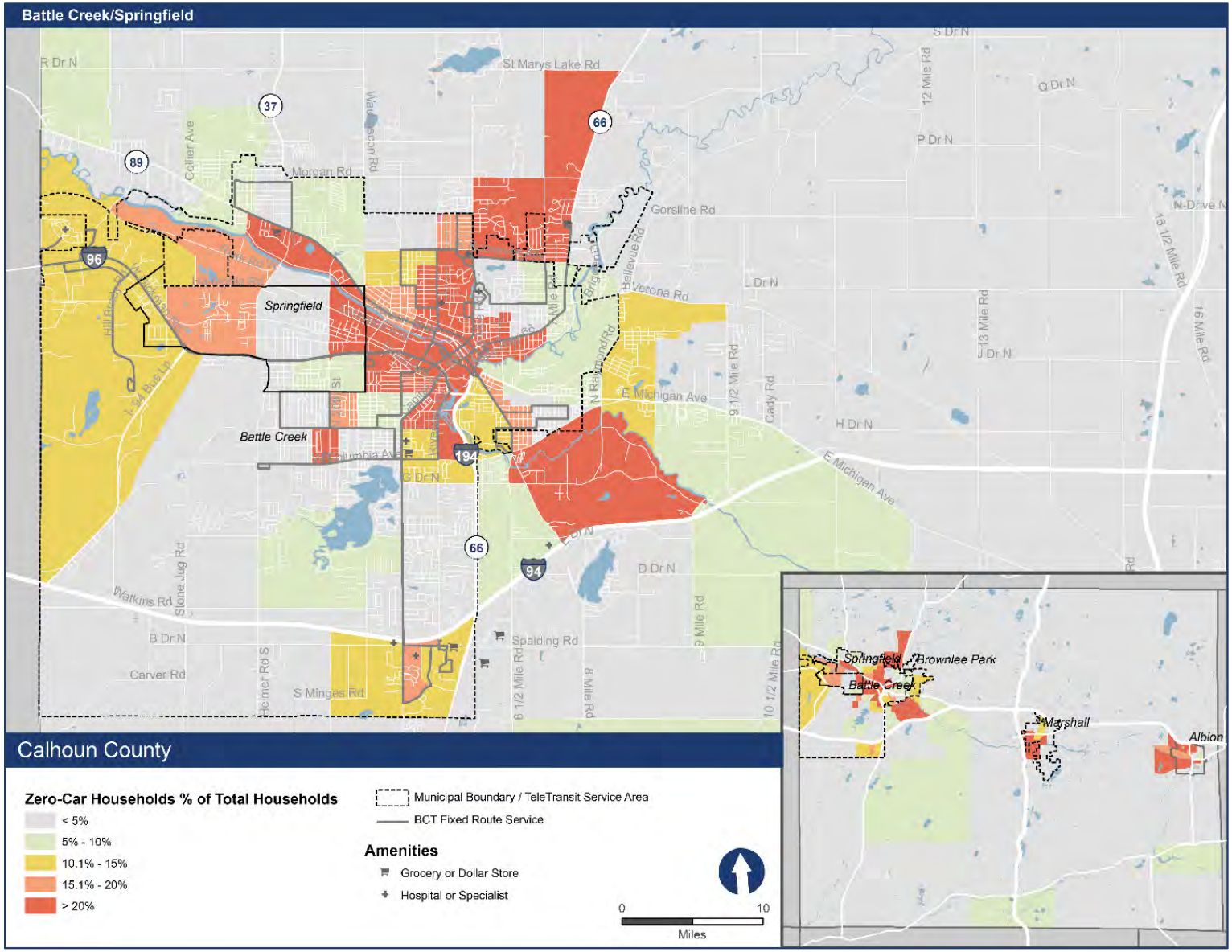


Figure 28: Zero-car Households Access to Amenities, Marshall

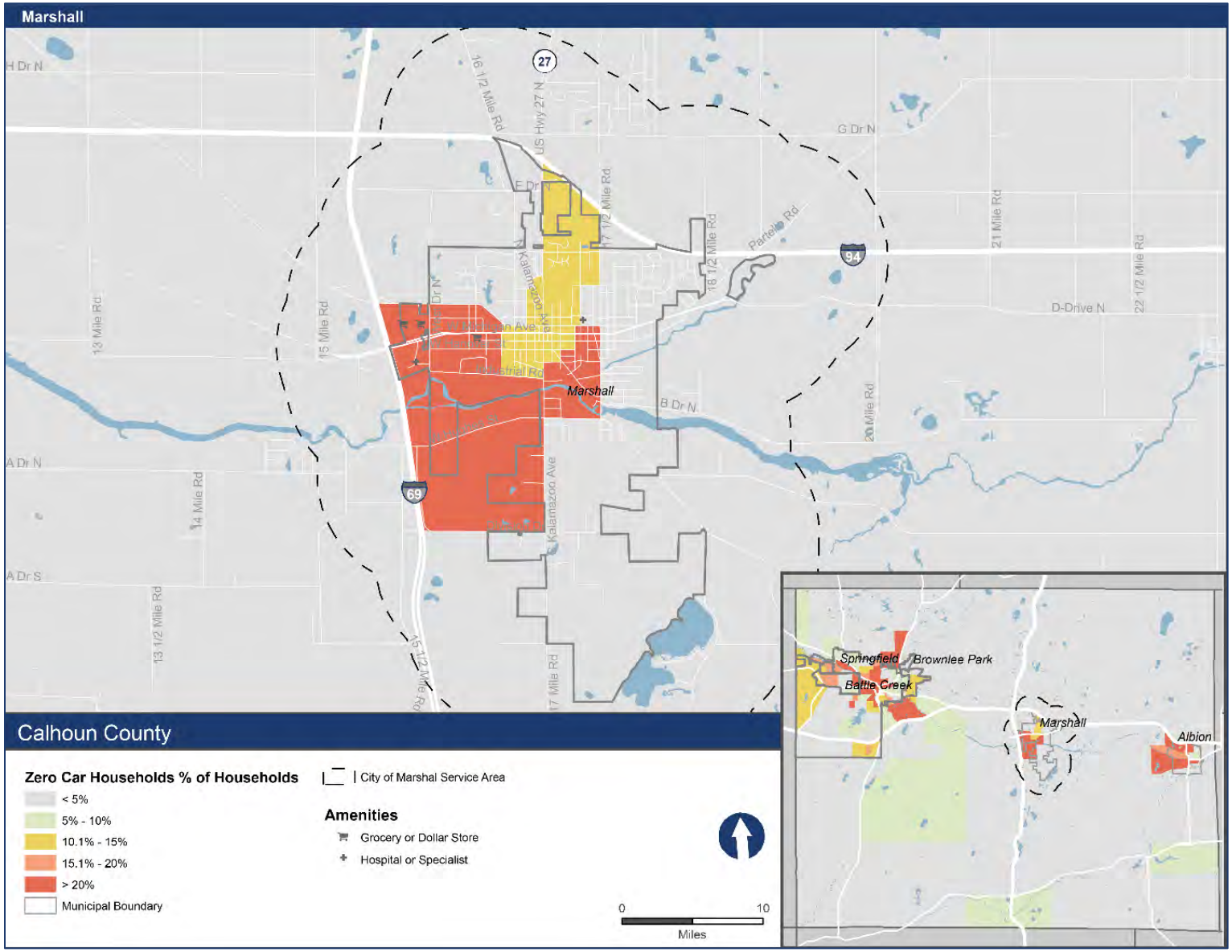
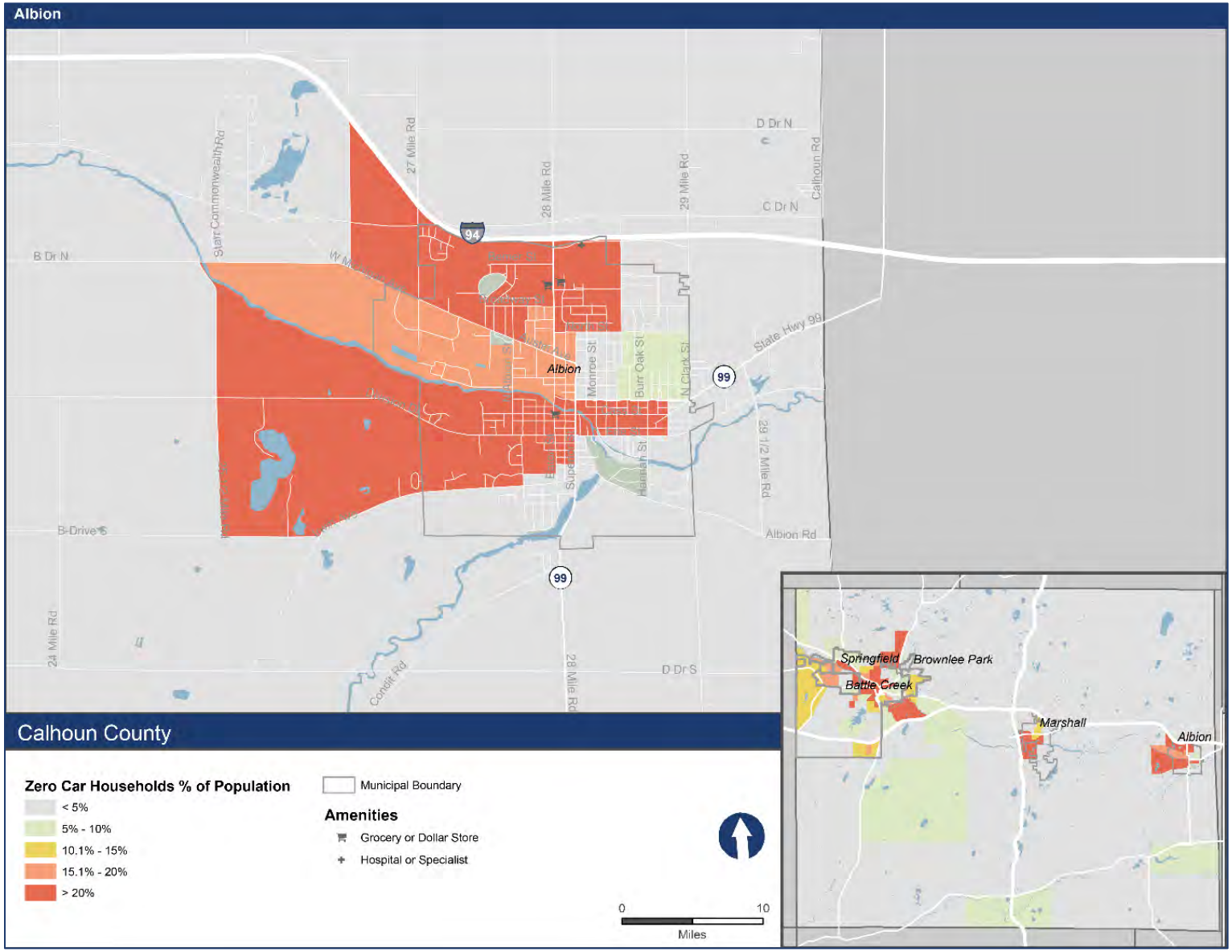


Figure 29: Zero-car Households Access to Amenities, Albion



2. VISION, GOALS, AND OBJECTIVES

The vision, goals, and objectives for public transportation in Calhoun County were developed primarily through a robust stakeholder outreach process. On March 21, 2019, 26 stakeholders from a variety of industries and perspectives (including transportation, economic and workforce development, employers, health care, and social and senior services) participated in a workshop to develop a shared vision for public transit in Calhoun County.

The workshop began with a presentation that provided an overview of the county transit study, highlighted key findings from the existing conditions analysis, and summarized transit service goals from the transit plans and studies of other Michigan counties. Next, participants gathered in small groups to apply the SOAR (Strengths, Opportunities, Aspirations, and Results) analysis model to current and future transit services in the county.

The breakout groups combined organizations with shared perspectives: transportation providers; county departments, municipalities, and other public entities; nonprofit stakeholders; and workforce/economic development organizations. The aim of the workshop was to use comments from the breakout groups to identify the elements of a composite vision for county transit services that represented all of those perspectives.

Vision elements included:

- Values the county's transit plan and services should reflect
- Policy goals that should be supported by the plan and services
  - Short-term priorities among policy goals
- Roles of county government and other partners regarding funding and support for transit services
- Preferred governance and service delivery models for a countywide transit system

Stakeholders' comments about strengths, opportunities, and aspirations gave insight into the values and policy goals they would like to see county transit services address. Some comments also identified specific service-related goals. Comments about desirable results will be useful as transit investment priorities and performance measures are developed later in the project.

Based on the consensus among stakeholders at the visioning workshop, as evidenced by the comments most commonly offered across breakout groups, two draft vision statements for future transit service in Calhoun County were considered by the Calhoun County project managers and the project Steering Committee.

The preferences of the Steering Committee members were evenly divided between the two alternative vision statements. The following vision statement, with minor word changes suggested by Steering Committee members, and an accompanying set of guiding principles, was selected.

The vision statement for future public transportation services in Calhoun County is as follows:

> ***The Calhoun County Transit Study and its public and private partners envision cost-effective, user-friendly, sustainable, and equitable transit options for all county residents that offer connections to all aspects of community life.***

Goals and objectives that are widely supported by stakeholders but not explicitly asserted in the vision statement can be incorporated into accompanying principles, transit investment decisions, funding agreements, partnership MOUs, operating contracts, strategic plans, and other documents.

The guiding principles listed below will be considered as future public transit services for Calhoun County are developed and implemented.

Guiding Principles for Public Transit Service in Calhoun County

— The goal of transit services will be to provide equitable access to all county residents. Within the constraints of available funding and support, services will be designed to:

  - Connect communities.
  - Offer options in rural communities and other outlying areas.
  - Provide mobility for vulnerable populations such as older adults, people with disabilities, and residents with lower incomes.
  - Attract choice riders.

- Transit services will be designed with the customer in mind so that they are easy to understand and use, affordable, safe, comfortable, and convenient.
- When possible and appropriate, transit technologies will be used to improve efficiency and customer convenience.
- Transit services will be coordinated with neighboring counties, cities, and transit authorities to facilitate regional travel.
- A broad, inclusive set of partners will be involved in planning, designing, operating, and funding transit services. Coordination and collaboration across sectors (government, human services, education, transportation, health care) and jurisdictions (federal, state, county, municipal) will be pursued.
- Sources of transit service funding that are stable, sustainable, and equitable across communities will be sought.
- Transit services will be planned and designed with other Calhoun County public policy goals in mind, such as contributing to workforce and economic development, increasing environmental sustainability, and improving health and wellness of individuals and communities. Transit services will help to advance such goals by connecting people and jobs; making Calhoun County an attractive location for new employers; using energy-efficient vehicles and practices; and providing access to health care, nutritious food, exercise, and wellness programs.

2.1. Values for Transit Service

Through their comments on the strengths of existing services, opportunities and aspirations for future services, and the results they would like to see from improved transit services in the county, workshop participants expressed the values that they feel the county's transit plan, and transit services, should reflect. These include:

- Safety
- Trusted providers
- Collaboration
- Equity of access to service and support (especially financial) for services
- Connectivity
- User-friendliness of services
- Broad community support
- Environmentally and financially sustainable
- Multimodal

2.2. Goals for Transit Service

Transit policy goals identified include the following:

- **Equitable access**—including countywide connectivity; service to rural and other outlying areas; service for vulnerable populations such as older adults, people with disabilities, and residents with lower incomes; and attractiveness to choice riders.
- **Broad and inclusive partnerships**, coordination, and collaboration across and within sectors and jurisdictions. Suggested partners include employers, medical providers, nonprofit organizations, Michigan Department of Transportation (Michigan DOT or MDOT), organizations that provide services and programs for veterans and seniors, transportation providers, and local communities.
- Cooperation and **coordination with regional neighbors**—counties, cities, and transit authorities. Transit authorities in Jackson and Kalamazoo Counties were specifically mentioned.

- **Stable, sustainable, and equitable funding** for transit services. Stable funding can be achieved by utilization of support from varied sources, both current and new; dedicated funding sources are especially helpful. Public education may be needed to increase awareness of the benefits of transit service and expand support. Funding equity can be achieved by tying contributions to services received and providing an opt in/out option for local communities and other partners.
- **Support for related public policy goals**—workforce and economic development, environmental sustainability, and health and wellness. Transit services can help to advance such goals by connecting people and jobs; making Calhoun County an attractive location for new employers; using energy efficient vehicles and practices; and providing access to health care, nutritious food, exercise, and wellness programs.
- **Use of technology**, which can improve efficiency and increase customer convenience.
- **Overall user friendliness of transit service**—convenient schedules (span of service and frequency, 24-hour or less advance notice), easy to understand and use, affordable, safe, and comfortable.

3. POLICY FRAMEWORK / EVALUATION METHODOLOGY FOR PRIORITIZING TRANSIT INVESTMENTS

The purpose of the transit investment evaluation framework is to provide policy guidance to Calhoun County transit decision makers as they distribute capital and operating funds for transit services in the future.

In the short term, and for the purposes of this study, the framework has been used to evaluate service alternatives to identify a service scenario for implementation. Once a countywide transit system is established, utilizing the framework in the future to evaluate potential services, programs, and projects will ensure that funded services will help the county to achieve the goals laid out in the shared vision for transit services developed by stakeholders.

The evaluation criteria used in the investment framework are drawn primarily from the vision statement and the accompanying guiding principles, policy and service goals identified during the stakeholder visioning workshop, and other comments expressed during the visioning workshop.

Specific measures for ranking potential programs, services, and projects are listed below for each evaluation criterion.

Community Support

- Level of general public support: comments offered during project outreach events and online survey responses
- Serves a need stated by the public and/or likely users
- Number of supporting partner organizations

Transportation Benefits

- Priority of need addressed (based on number of goals addressed in **Section 2.2**).
- Number of priority needs addressed: serves a target market, provides access to jobs/workforce development transportation, serves a rural or outlying community, connects Calhoun County communities, provides regional connection, provides service to previously unserved area or group (equity)
- Number of likely users: estimated annual ridership (scale to be developed once ridership for service alternatives is estimated)

Cost and Funding

- Total annual operating cost once implemented
- Start-up cost: capital
- Start-up cost: non-capital
- Availability of stable, sustainable funding source
- Availability of local matching funds for federal, state grants
- Availability of contributions from partner organizations
- Communities that benefit from the service/program/project contribute financially

Implementation

- Implementation timeframe: short term (1-3 years), medium term (3-5 years), long term (longer than 5 years)
- Difficulty of implementation
- Broad political support (municipalities, county, MDOT, partner organizations)
- Endorsement of providers

Estimated Performance

- Estimated cost per one-way passenger trip (if applicable)

- Estimated cost per vehicle hour (if applicable)
- Estimated one-way passenger trips per vehicle hour (if applicable)

Support for Other County Goals

- Will contribute significantly to achievement of other county goals: environmentally sustainable services, facilities, and vehicles; improved health and wellness of communities and individuals; enhanced economic development; or future goals to be determined.
- Serves a target market
- Provides access to jobs/workforce development transportation
- Serves a rural or outlying community
- Connects Calhoun County communities
- Provides a regional connection
- Provides service to previously unserved area or group

The full evaluation methodology is described in more detail in **Appendix D**.

4. GOVERNANCE ALTERNATIVES

This section describes two alternative governance structures for overseeing and administering public transit services in Calhoun County. Both are based on the formation of a public transportation authority under Michigan Act 196 of 1986. These options were identified through research into the organization of transit services in neighboring Michigan counties, interviews with representatives of Michigan Department of Transportation and other counties, and discussions with the Calhoun County project team and transit stakeholders.

For each alternative, the sections below describe the structure, its advantages and disadvantages, and summarizes the steps necessary for its implementation.

4.1. Governance Alternative 1: Creation of Separate Public Authorities for the Urban and Non-Urbanized Sections of Calhoun County

Act 196 of 1986 provides for the establishment of a public authority by a political subdivision or a group of two or more subdivisions. Under this alternative, one authority would be created to administer the countywide demand response services described in **Section 5**. A second authority would be established to administer fixed-route service in the Battle Creek urbanized area. Creation of two authorities in the county would require a revision to the Act 196 amendment obtained by Kalamazoo County for that purpose. Section 124.454 of Act 196 currently allows counties with populations between 240,000 and 255,000 to form two authorities; the population of Calhoun County is approximately 135,000.

The countywide authority, Calhoun County Transportation Authority (CCTA), would be responsible for securing funding and overseeing the delivery of demand response services throughout the county. The CCTA would be directed by a governing board composed of members selected by a process determined by the authority. Exercising its power under Act 196, CCTA would create a millage district and levy a millage to support public transportation services within the area of the authority. If the millage is not passed, alternative funding sources would need to be identified.

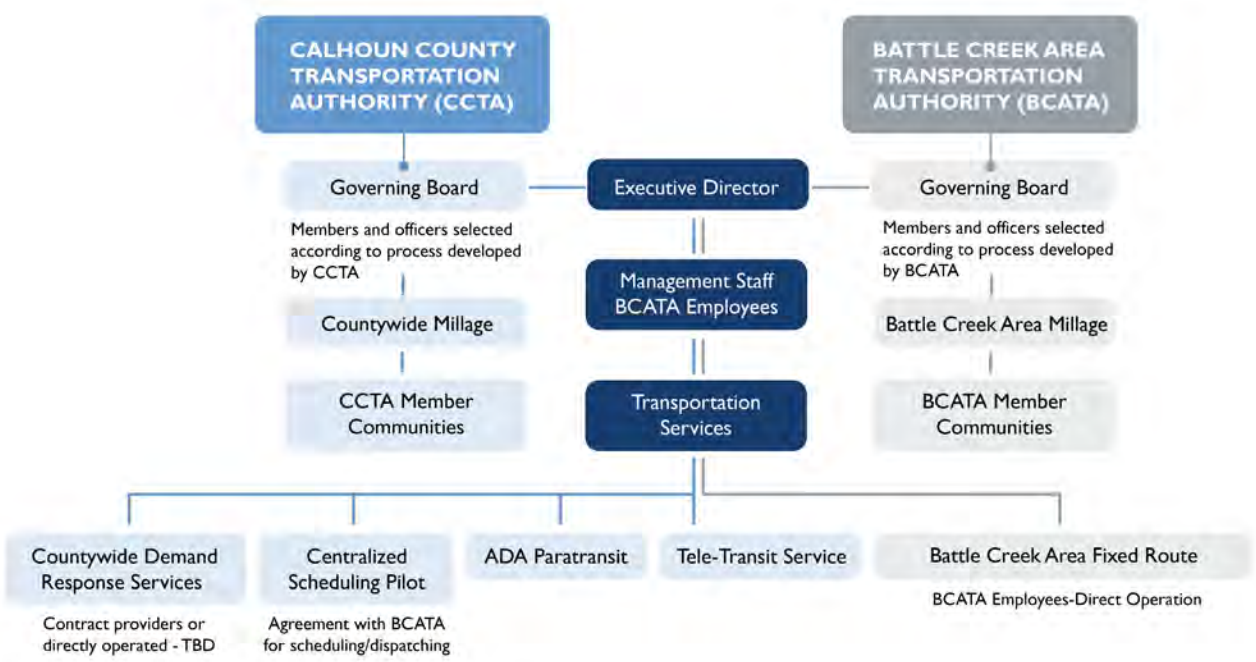
The urbanized area authority, Battle Creek Area Transportation Authority (BCATA), would be created following the same process as CCTA and would possess the same powers and responsibilities. BCATA would also have the ability to create a millage district and levy a millage to support fixed-route public transportation services in some communities within the Battle Creek urbanized area. **Figure 30** shows the roles of the two authorities and staff under this alternative.

Case Example: Kalamazoo County

In Kalamazoo County, the Kalamazoo County Transportation Authority (KCTA) was formed to administer demand response service outside of the City of Kalamazoo a number of years before the Central County Transportation Authority (CCTA) was created to oversee the urbanized area services. Historically, demand response service in the county has been provided by a private operator under contract to KCTA. With the formation of CCTA in 2016, employees and assets of the city's transit system were transferred to CCTA and used to deliver fixed-route services (previously the city's ADA paratransit services had been combined with the KCTA demand response services in the remainder of the county). Fixed-route services were rebranded as Metro, part of a new countywide brand (other services in the brand are known as Metro Connect and Metro Share).

The membership of the board for the CCTA includes representatives of the City of Kalamazoo (3); City of Portage (2); Kalamazoo, Comstock, and Oshtemo Townships (1 each); rural communities (2 at-large members); communities outside of CCTA boundaries (1 at-large member). Members of the KCTA Board are all at-large representatives. Members of both boards are appointed by the county Board of Commissioners.

Figure 30: Governance Structure under Alternative 1



4.1.1. Service Planning and Delivery

Service Delivery

Battle Creek Area Fixed-Route and Demand Response Services

Management and operations staff, vehicles, facilities, and other assets that are currently used to provide fixed-route service in the Battle Creek area would be transferred to the new BCATA. Act 196 grants public authorities the ability to conduct collective bargaining and enter into agreements with labor organizations representing public transportation system employees under such circumstances. It also requires the retention of existing retained employees and the continuation of rights and benefits contained in the bargaining agreement that exists at the time of the acquisition of the public transportation system, for the remainder of the term of that agreement. Transfer of existing BCT staff and assets from the City of Battle Creek to the new BCATA would not only benefit employees and create opportunities for enhanced service delivery efficiencies, but would also ensure the smoothest transition of service delivery to the new governance structure.

Countywide Demand Response Service

Existing demand response services that are available in the County, including BCT Tele-Transit, Community Action, Marshall Dial-A-Ride Transit, the Albion-Marshall Connector, and transportation services for seniors funded with Calhoun County's senior millage, as well as new services implemented in accordance with this study, would be administered by the new CCTA.

A pilot program is currently being implemented to test centralized scheduling and dispatching for two providers of demand response service in Calhoun County. The pilot includes trip requests for Tele-Transit trips that are outside of the Tele-Transit service area or at times when the system is at capacity, and trips provided by Community Action. Assuming that the pilot program successfully demonstrates the feasibility and efficiency of centralized scheduling and dispatching, it is recommended that the pilot program services, and any expansion of the services that are coordinated in this way, be included in those overseen by CCTA. Should BCATA become the

preferred provider of centralized scheduling and dispatching, it would be recommended that CCTA contract with BCATA to provide those functions of its service.

There are several options for the delivery of CCTA's demand response services under centralized scheduling and dispatching. CCTA could issue one or more Request for Proposals (RFPs) for the services under its jurisdiction and contract with one or more of the current providers or a new private contract operator for their delivery.

Service Planning
Transit service planning for CCTA's services could be conducted by staff of BCATA (see staffing section below); planning for BCATA services could be conducted by existing and/or new staff of BCATA.

4.1.2. Management Staff

As in Kalamazoo County, one individual would serve as Executive Director of both CCTA and BCATA under this alternative. The Executive Director and other management staff, together with operations staff, are all employees of BCATA. Support services such as human resources, IT, and financial management for both authorities would be through BCATA. The two governing boards would work closely together, even meeting jointly; and individual members could sit on both boards.

4.1.3. Local Funding

As mentioned above, Act 196 gives public authorities formed under it the ability to form millage districts and levy taxes for the support of public transportation services. Taxes are not to exceed five mills of the state equalized value on each dollar of assessed valuation of taxable property in the communities that are members of the authority. The state equalized value is typically 50 percent of the market value of a property.

As part of this governance structure, both CCTA and BCATA would create millage districts for the communities they serve, and levy taxes to support the services they oversee. The CCTA's district would be countywide, and the BCATA's would be the portions of the urbanized area that receive fixed-route service. The revenue raised would be used at a minimum to provide the required local match to federal and state grants and possibly to increase the resources available to each authority beyond that level. In Kalamazoo County, the KCTA countywide millage is currently .315 mills, and the CCTA urbanized area millage is currently .75 mills.

4.1.4. Advantages and Disadvantages

Advantages of the two-authority structure include the following:

- Easier process of establishing and running the new CCTA – i.e., the ability to take advantage of BCT staff's collective decades of experience and institutional knowledge in operating transit, federal compliance, etc.
- Enhanced coordination of services, administration, and planning for more effective and efficient services.
- Continued employment and collective bargaining agreement rights, benefits, etc. for BCT employees.
- Development of a structure for creating a dedicated local funding source to support transit services and provide local match needed for federal and state grants; both entities have access to more diverse funding sources.
- Setting of different millage rates for urbanized area and rest of county, reflecting the differences in type and level of services available in each area.
- Travel options between Battle Creek and other communities – bringing employees and shoppers to Battle Creek, and giving Battle Creek residents access to jobs and services in other communities.
- Potential promotion of existing transit services in Battle Creek as part of a countywide branding strategy (more visibility, awareness of the value of transit service, leading to greater usage and local support).\ Consolidation is supported and encouraged by MDOT.

The primary disadvantage of this approach is:

- Requirement of an amendment to Act 196.
- A two-tiered structure is not as streamlined as a single authority overseeing all public transit services in the county, which is the structure used by Jackson County, where the Jackson Area Transportation Authority oversees the provision of fixed-route and demand response service in the City of Jackson and demand response service in the rest of the County.

4.1.5. Implementation Steps

The first step in creating two public authorities to oversee public transportation services in Calhoun County will be to obtain the opinion of legal counsel regarding the specific actions needed to comply with the provision of Act 196 and an accompanying timeline.

Some important initial actions, however, include the following:

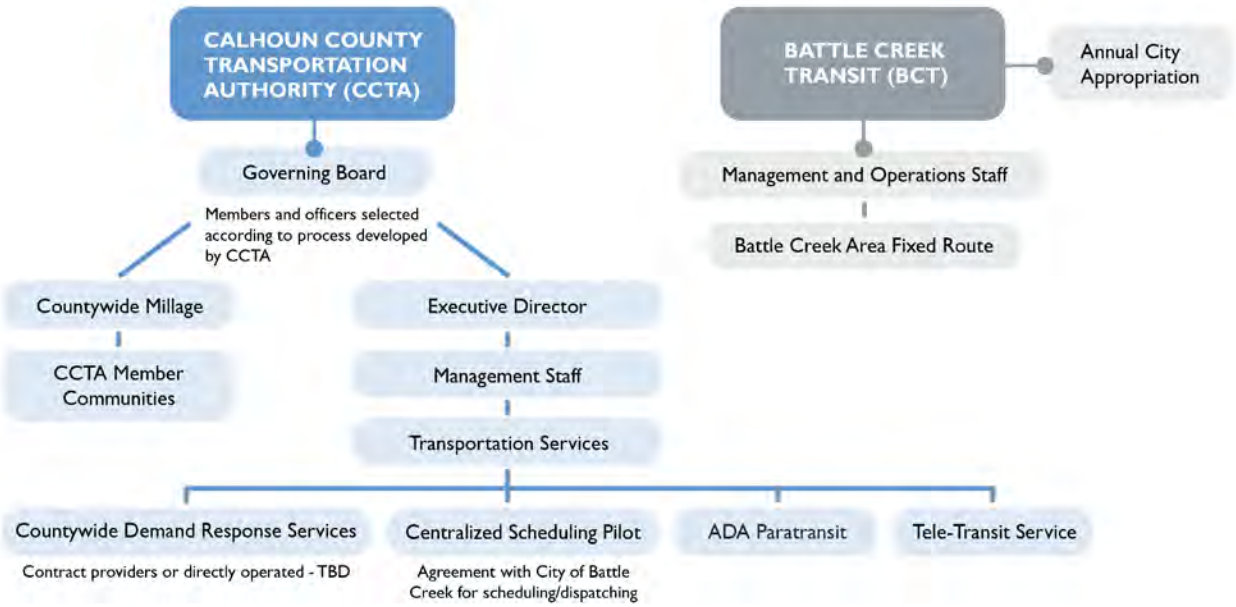
- Identify or hire an individual to spearhead the creation of the authorities and transition to the new governance structure.
- Conduct a comprehensive outreach process with a broad group of stakeholders and interested parties (including Michigan DOT, elected officials, local government leaders, and transportation providers) to discuss potential plans for the formation of CCTA and BCATA and address any issues or concerns.
- Pursue an amendment to Act 196 to allow Calhoun County to form two public transportation authorities.
- Prepare articles of incorporation for the two authorities in accordance with Act 196. Articles must include, among other items, the name and membership of the authority, its powers and duties, the process for selecting members and officers of its governing board, and the names of those members and officers.
  - The vision for public transportation services in Calhoun County and its accompanying guiding principles, developed by the Stakeholder Advisory Committee for this project, should form the basis for the mission and goals of the two authorities' governing boards.
- Develop and implement public information and ballot initiative campaigns for the millages to inform the public's understanding of the changes.
- Develop a detailed transition plan to cover issues such as transfer of staff, vehicles, facilities, and other assets from the City of Battle Creek to BCATA; branding strategy for CCTA services; and staffing and funding needs for both authorities and their initial services.

4.2. Alternative 2: Creation of a Public Authority for Countywide Demand Response Service and Continued Operation of Fixed-Route Service by the City of Battle Creek

Under this alternative, a new authority would be created to oversee all demand response services in the county, like under Alternative 1. Demand response services in the county would be operated by one or more of the current transportation providers, or a new private contractor. Local funding would be raised by means of a countywide millage to support those demand response services.

Fixed-route service in the Battle Creek area would be overseen differently than under Alternative 1. Management, operation, and local funding of fixed-route service would remain the responsibility of Battle Creek Transit, as a department of the City of Battle Creek, and its funding partners. The CCTA would administer BCT's complementary ADA paratransit service. The City of Battle Creek would remain responsible for providing local funding, in addition to fare revenues, to BCT. **Figure 31** shows the roles of the CCTA and BCT under this alternative.

Figure 31: Governance Structure under Alternative 2



4.2.1. Advantages and Disadvantages

The primary advantage of Alternative 2 would be the continued management and operation of Battle Creek Transit services as a department of the City of Battle Creek. Which may be preferable to the city if it would like to retain the direct responsibility for the provision of transit service for residents of Battle Creek.

In addition, this alternative might also be a shorter-term, interim governance option prior to the implementation of Alternative 1, allowing more time for transition planning before the creation of two new authorities and millage districts.

The main disadvantages of keeping Battle Creek area fixed-route service operationally separate from other services in the county would be:

- The continued reliance on annual appropriations from the city to support Battle Creek area services, as opposed to a dedicated local source of funding from a millage.
- Missed opportunities for coordination and consolidation of public transportation services in the county, including likely monetary savings from such coordination.

4.2.2. Implementation Steps

The implementation steps for the creation of CCTA that are outlined above would still be necessary under Alternative 2. If Battle Creek area fixed-route service remain the responsibility of the city, implementation steps would consist of arrangements for the transition of the centralized scheduling and dispatching pilot, and further expansions of that project, to CCTA at an appropriate time.

4.3. Operational Consolidation and Branding

Under both alternatives, this plan recommends that demand response services throughout the county become the responsibility of the CCTA. This will enable CCTA and BCATA (Alternative 1) or BCT (Alternative 2) to achieve

economies of scale and enhance the return on investment in demand response service provided to the public. Decisions on how services are branded would ultimately lie with the CCTA's board, in coordination with BCATA or BCT; however, it is recommended that fixed-route service remain branded separately from demand response services to prevent the perception that countywide funding is being used pay for service that is only in the urbanized part of the county.

5. SERVICE PLAN

5.1. Countywide Demand Response Transit

The following service plan was developed based upon feedback received on the two scenarios presented to the public and stakeholders in August 2019 and stakeholder feedback received in November 2019 and February 2020 (see **Appendix A** and **Appendix B**). It is important to note that the recommended service plan represents the vision for public transportation service in Calhoun County. Implementation of the service plan is contingent upon adequate funding, and it is expected that service elements will be rolled out, and adjusted, over time as necessary. For example, service may initially be offered only to those populations that qualify for service today, and it will be slowly made available to the general public as resources allow.

Under the recommended service plan, demand response public transit service would be available for any person. Demand response service would operate under the countywide transit authority. For service provision and fare purposes, Calhoun County would be geographically divided into five zones and the fare structure for this service would be zone-based, with discounts for seniors and persons with disabilities. The possibility of passes and/or discounts for students and/or veterans will be considered. This service plan allows riders the flexibility to travel on any day of the week, while providing reduced fares for people with disabilities and seniors and those who schedule shopping trips from "outer" zones 2-5 to Battle Creek on designated days, zones are illustrated in **Figure 32**. A summary of the service characteristics are provided in **Table 8**.

Reservations would be made by phone or, once the technology is implemented, by web or mobile application. Same-day ride requests would be available, as capacity allows, in smaller geographies (e.g., City of Albion, City of Marshall, and City of Battle Creek). For all other services, reservations would generally be made 24 hours in advance. This may transition to same-day reservation for all trips in the future, as resources and technology implementation allow.

City of Marshall, Albion-Marshall Connector, and Community Action service would be integrated under the new authority, with a potential option for other providers to participate in service provision. Approximately, 17 vehicles would be used to operate the service in maximum service; the fleet would be slightly larger, around 23 vehicles, to ensure an adequate spare ratio of slightly above 20 percent. A potential service schedule by vehicle for on-demand services is illustrated in **Figure 33**.

Table 8: Proposed Service Plan Characteristics Summary

Element	Description
Governance	Demand response service operates under the new CCTA. CCTA provides demand response services in all parts of the county (including the BCT fixed-route service area).
Service	Area-dedicated vehicles will be designated to serve shorter trips within the Cities of Marshall and Albion. Current special/program-specific transportation services provided by Community Action will continue to be provided (for example, service to support the Foster Grandparents program). Trips will be made daily between Albion and Marshall when demand exists. This will maintain the current service of the Albion Marshall Connector. Service in the county will be available on weekdays from 6:00 a.m. until 9:00 p.m., and on Saturdays from 9:00 a.m. until 6:00 p.m. (with more vehicles in service during busier times of day). Service hours may be rolled out gradually and services hours by time of day will be adjusted over time to best match demand. Service in the Battle Creek and Springfield area will be available from 5:00 a.m. until 3:00 a.m. on weekdays and 9:00 a.m. until 6:00 p.m. on Saturdays.

Element	Description
	Additional service in the Battle Creek area to meet known and estimated demand, including additional late-night service for second- and third-shift worker.
Fare	The county will be divided into five zones, with a zone-based fare structure. Discounted fares offered to seniors and persons with disabilities. Discounted scheduled trips to Battle Creek (from outside Zone 1) will be available to all customers at least once per week.
Reservations	Riders can schedule trips via phone initially; web and mobile booking options would be made available as feasible. Riders must call to reserve a ride 24 hours in advance for some curb-to-curb services (initially). Same-day ride requests will be accepted in higher demand areas (i.e., Cities of Albion, Marshall, and Battle Creek) as resources and technology allow.

Figure 32: Proposed Service Map

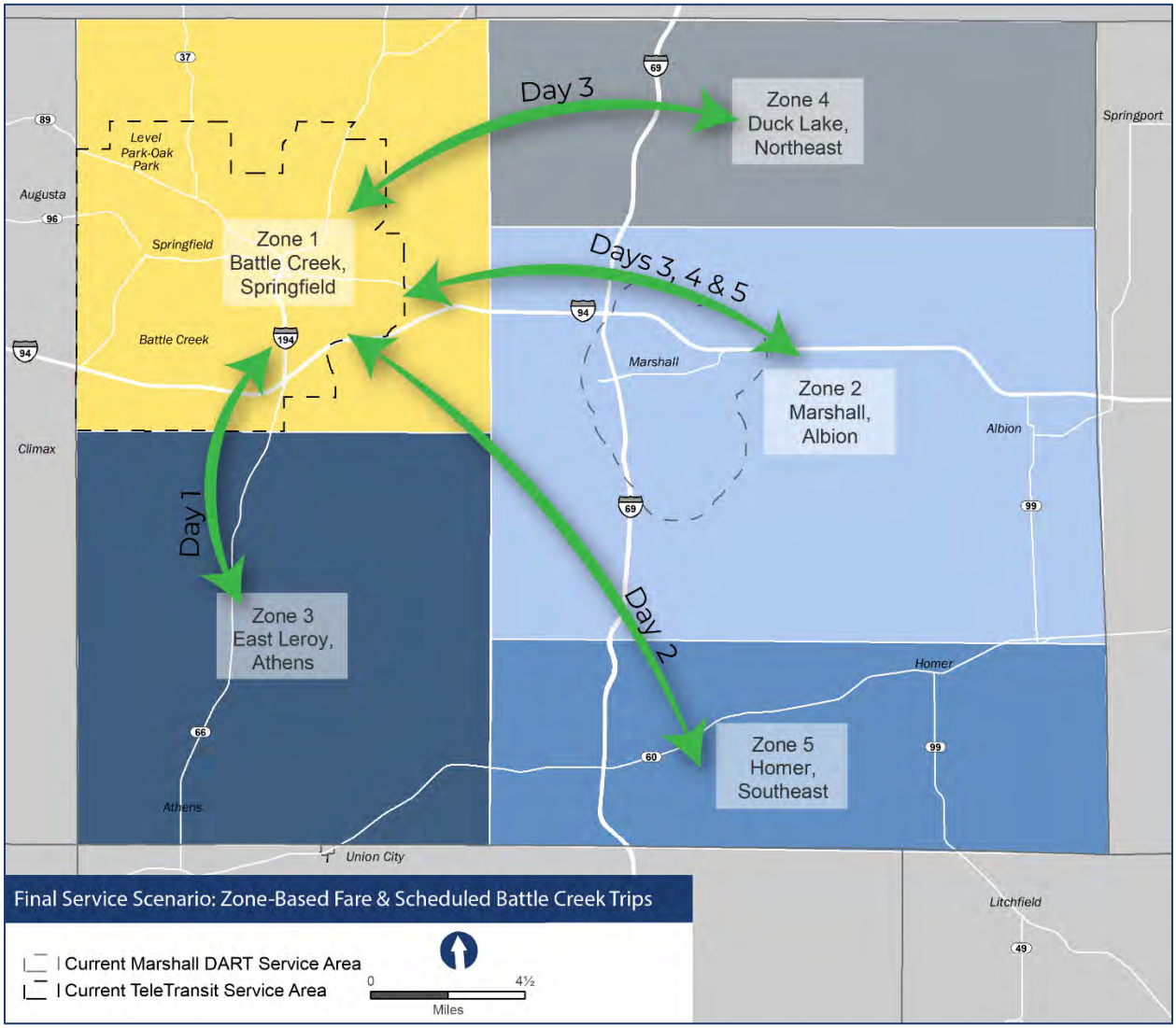
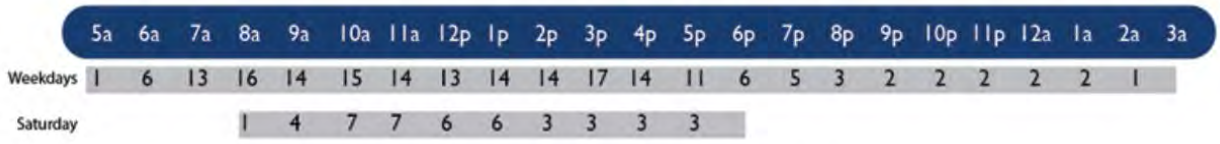


Figure 33: Number of CCTA Vehicles in Service by Hour



5.1.1. Estimated Demand for Service

In order to estimate the total amount of service that will be needed in the County outside of the Battle Creek area, if service were to be made available to the general public, the project team used a methodology developed by the National Center for Transit Research (NCTR) to estimate ridership of rural demand response transit services. Based on nationwide trends in demand response ridership, the model uses demographic data and other community characteristics to calculate a single ridership estimate. Details on this methodology can be found in **Appendix C**. For this analysis, an average fare of $1.65 was assumed; in reality, fares will be lower for some individuals and higher for others. If average fares are below this amount, demand will likely be higher than the estimates from this analysis. It is also important to note that the numbers below represent unconstrained demand and do not include the demand for service in the BCT Tele-Transit service area. The results from the demand estimation are:

- Weekday Projected Ridership = 330 (per day) = 83,400
- Saturday Projected Ridership = 160 (per day) = 8,400

Today in Calhoun County, between the services available outside of the Battle Creek area (Community Action, Marshall DART, and the AMC), approximately 70,000 rides are provided to residents, while the estimated demand is approximately 92,000.

To estimate the demand for Tele-Transit trips in the current Battle Creek Transit service area, current data was used as a starting point. The current Tele-Transit service provides 23,250 rides annually and denies approximately 250 rides a month due to limited resources and space. Given the current denial rate, the annual demand for demand response transit was estimated to be 26,250. Due to changes in service availability from other demand response service providers in Calhoun County in early 2020 and observed increases in demand for Tele-Transit service as a result, it is estimated that the actual demand for trips is even higher, and there are known workforce (late shift) transportation needs in the County that the CCTA could also address.

The recommended service plan for the entire County includes nearly 48,000 vehicle revenue hours (one revenue hour of service is the equivalent of one vehicle operating for one hour.) Based on predicted passengers per hour (using a combination of existing productivity rates and national and peer agency figures for rural demand response services[23]), the service plan is estimated to provide nearly 136,400 trips annually, exceeding the estimated demand for service in the County of at least 118,000 annual trips and the current annual number of trips provided in the County today by all providers, which is approximately 94,000.

Public outreach completed as part of this study showed that people desire more options to travel in the evening and on weekends than are available today. Engagement with stakeholders providing a workforce development perspective also indicated that there are many workers in the County who seek ways to get to work for second and third shift jobs. The service plan goes above and beyond known and estimated demand for service in order to meet these workforce travel requirements. There could be potential opportunities for the CCTA and/or BCATA to partner with local providers to make these trips possible in a cost-effective manner.

[23] The CCTA's services are expected to achieve productivity levels of between 2.2 and 4.6 passengers per revenue hour, depending on the type of service and location. Service productivity assumptions used to develop the service plan are based on current productivity figures for DART, BCT Tele-Transit services, and national averages for similar types of services.

Population projections by the Michigan Department of Transportation do not anticipate significant population growth overall in Calhoun County over the next 10-20 years. As stated in the Existing Conditions section of this report, however, the number of older adults in Calhoun County will outnumber the population that is 18 years old or younger by 2027.[24] This increase in the senior population could lead to increased service demand in the coming years, as an increased senior population has a positive correlation on demand. For this reason, it is recommended that the CCTA monitor for increases in demand in service and conduct planning to consider ways to address it.

5.2. Complementary ADA Paratransit Strategy

The Americans with Disabilities Act (ADA) of 1990 is civil rights legislation that prohibits discrimination on the basis of disability. The U.S. Department of Transportation (DOT) regulations set forth in 49 CFR Parts 27, 37, 38, and 39 implement the transportation-related provisions of the ADA (as well as those of Section 504 of the Rehabilitation Act of 1973, as amended), identifying actions that transit providers must take to ensure that people with disabilities have access to public transportation services, vehicles, and facilities. The Federal Transit Administration (FTA) is responsible for enforcing these regulations.

U.S. DOT's ADA regulations include a number of non-discrimination requirements that apply to public entities whether they provide fixed-route or demand response service. Other requirements apply specifically to either fixed-route service or demand response service for the general public.

This section summarizes the requirements that would apply to Calhoun County as a public provider of public transportation services, as well as the operator of BCT's ADA paratransit services. While the focus is on requirements for ADA paratransit and other demand response services, nondiscrimination and cross-cutting requirements are summarized very briefly as well.

Citations refer to 49 CFR Part 37, primarily. FTA's ADA Circular 4710.1, Americans with Disabilities Act Guidance, is an excellent source of information and guidance regarding ADA requirements, and may be found at: https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/americans-disabilities-act-guidance-pdf.

5.2.1. Non-Discrimination and Requirements Across Modes

All public entities are prohibited from the following discriminatory practices, regardless of the mode(s) of service they operate:[25]

- Denying an individual with a disability the opportunity to use general public service
- Requiring an individual with a disability to use priority seats
- Imposing special charges on an individual with a disability
- Requiring an individual with a disability to be accompanied by an attendant
- Refusing to serve an individual with a disability due to insurance coverage or conditions
- Refusing to serve an individual with a disability because of behavior that is offensive, annoying, or inconvenient

Public entities must also:

- Establish a process for handling requests for reasonable modifications to policies and practices

[24] Independence for Older Adults. The Coordinating Council of Calhoun County, May 2017
[25] 49 CFR 37.5

Public entities must also meet the following requirements to ensure access to their services, vehicles, and facilities by people with disabilities:

- Purchase accessible vehicles[26]
- Maintain accessibility equipment and features[27]
- Use lifts, ramps, and securement systems[28]
  - Accommodate wheelchairs and other mobility devices
  - Use securement locations
  - Use securement systems and belts
  - Recommend, but not require, transfers to a vehicle seat
  - Allow standees on lifts
- Provide assistance with accessibility features
- Allow service animals and oxygen or portable respirators onboard vehicles
- Provide accessible service information
- Train staff in the safe operation of vehicles and equipment, and provide assistance to individuals with disabilities respectfully and courteously

5.2.2. ADA Complementary Paratransit Service

Fixed-Route Service

Public entities that operate (or contract for) fixed-route service for the general public must also provide paratransit service for individuals who are unable to use accessible fixed-route service due to a disability. ADA paratransit service must be comparable to fixed-route service with respect to six service characteristics, which are defined in the ADA regulations.

At present, Battle Creek Transit operates fixed-route and ADA paratransit service (Tele-Transit) in the Battle Creek area. Tele-Transit serves the general population as capacity allows. While the recommended service plan described above does not include recommendations for new fixed-route services in other parts of Calhoun County, the regulatory requirements regarding ADA paratransit service criteria and eligibility are stated below in the event that such services are implemented in the future.

Operation of ADA Paratransit Service

As part of both governance alternatives presented in **Section 4**, it is recommended that the operation of ADA paratransit service be consolidated with the operation of other demand response services in the county and overseen by CCTA. Performance of key functions related to ADA paratransit in such a consolidation scenario are described below.

Eligibility

Today, responsibility for operation of ADA paratransit service falls to BCT (as a department of the City of Battle Creek) as the public operator of fixed-route transit service. Under Governance Alternative 1, BCATA would have ultimate responsibility for operation of the service. If that function is performed by another entity through a contract or other arrangement, such as CCTA, BCATA would have the responsibility to ensure that all the requirements that it would be subject to if it operated the service directly are carried out by the contractor or other entity. The same applies to Governance Alternative 2. BCT would continue to bear ultimate responsibility for meeting ADA requirements, and would need to monitor service as provided by CCTA for compliance with those requirements.

[26] 49 CFR 37.71, 37.77
[27] 49 CFR 37.161, 37. 163
[28] 49 CFR 37.165, 37.167, 37.173

The process of determining the eligibility of individuals could also be performed by CCTA under contract or some other arrangement with BCATA or BCT. However, it is recommended that BCATA or BCT retain responsibility for determining eligibility. Benefits of that approach included the ability to take advantage of the knowledge and experience of the staff who currently perform that function and the flexibility to use those staff members to carry out other duties when they are not making and documenting eligibility determinations, and to maintain a connection between the level of fixed-route service and the ADA paratransit service that complements it.

Reservations, Scheduling, and Dispatching

In order to increase efficiency and offer more trip opportunities to customers, it is recommended that the processes of reserving, scheduling, and dispatching ADA paratransit service be combined with those functions for the general public demand response services operated by CCTA, and any other demand response services added to the countywide system in the future (such as a job access service). One staff and one scheduling software system would be used accept trip requests, schedule them onto vehicle runs, make any necessary adjustments on the day of service, and collect data required for billing and reporting purposes.

Service Delivery

One fleet of vehicles should be used to provide all the demand response services provided in the County. Given the current operation of services by a variety of providers, it is recommended that CCTA issue a Request for Proposals (RFP) for a service contractor. The successful proposer could be either one of the current operators or a private for-profit transportation company.

Funding and Governance

Following the Kalamazoo County model, ADA paratransit services would be funded with revenues from the countywide millage. Decisions regarding the service would be made jointly by CCTA and BCATA. If preferable to stakeholders in Calhoun County, the service could be supported by revenues from the Battle Creek millage or city general funds (depending on whether Governance Alternative 1 or Alternative 2 is chosen as the organizational structure). BCATA or BCT could also be the lead entity with regard to decisions concerning the service.

Regulatory Requirements—ADA Paratransit Service Characteristics

ADA paratransit service must meet the six service characteristics discussed below in order to maintain comparability to fixed-route service.

Service Area

ADA paratransit service must be provided, at a minimum, in corridors that measure ¾ of a mile on each side of all non-commuter fixed routes. Small areas that are not within corridors, but are completely surrounded by them, must also be served. Individuals do not need to live inside of the ADA service area to be served, but they must be making trips within that area.

Service may be provided on either a curb-to-curb, door-to-door, or door-through-door basis as a general policy, but customers who need door-to-door service must be given that level of assistance (this is known as "origin to destination" service).

Days and Hours of Service

ADA paratransit service must be available on the same days, and during the same hours, as fixed-route service.

Fares

The fare for an ADA paratransit trip may be no more than twice the base adult (non-discounted) fare for a comparable trip on the fixed-route service.

Personal care attendants must travel free of charge, but companions are to be charged the same fare as the ADA passenger.

Response Time

"Next day" service must be provided. That is, reservations must be taken until close of normal business hours for trips that will be provided on the following day, no matter how early the requested pickup time is. This includes

Sundays, holidays, and any other days on which the transit provider's offices are not open, but which precede a service day. Voicemail is an acceptable means of taking trip requests on Sundays or holidays, but messages must be retrieved in time to schedule trips that are requested for the next day's service, even if the requested pick-up time is at the beginning of the service day.

Customers must also be allowed to make reservations up to 14 days in advance of their desired travel date.

Pick-up and drop-off times may be negotiated with customers but may not be more than one hour before or after the individual's desired pick-up/drop-off time.

Trip Purposes

The transit provider may not impose trip purpose restrictions or priorities on ADA paratransit customers.

Capacity Constraints

ADA paratransit service must be operated without "capacity constraints." Capacity constraints include:

- Waiting lists
- Limits on the number of trips an individual may request or be provided
- A pattern or practice of a substantial number of trip denials or missed trips
- A pattern or practice of a substantial number of significantly untimely pick-ups
- A pattern or practice of a substantial number of excessively long trips
- Other policies or practices that have the effect of limiting use of the service

Adequate telephone system capacity to handle calls for trip reservations and information without long hold times is also considered an important aspect of service capacity.

In order to ensure that the capacity of ADA paratransit service is not constrained, transit providers are expected collect and analyze data periodically to identify any patterns or practices that could indicate capacity constraints.

Regulatory Requirements—ADA Paratransit Service Eligibility Determinations

In addition to the service criteria that paratransit service must meet in order to be considered comparable to fixed-route service, ADA regulations define specific eligibility criteria that individuals must meet in order to use ADA paratransit service, and required elements of the eligibility determination process to be used by transit providers.

Eligibility Determination Process

In addition to providing service in accordance with the criteria described above, all public entities that provide ADA paratransit service must establish a process for determining who is eligible to receive these services. Determinations must be made within 21 days of the receipt of a completed application. Documentation of eligibility (a letter or ID or both) must be provided to persons determined eligible. An appeals process must also be available for persons who are determined ineligible or only eligible under certain circumstances ("conditional eligibility"). A separation of authority must be maintained between those involved in the initial determination and those hearing appeals.

Eligibility for ADA paratransit service is defined in the regulations as follows:

1. Individuals who, because of a disability, are unable to independently board, ride, or disembark from accessible fixed-route vehicles (i.e., the person cannot "navigate" the system).
2. Individuals with disabilities who cannot use the fixed-route service because the route that they need to use for a particular trip is not accessible (to be considered an "accessible route," all vehicles operated on the route must be accessible).
3. Individuals with disabilities who have specific impairment-related conditions that prevent them from getting to or from fixed-route stops/stations.

Temporary as well as permanent disabilities and needs are to be considered.

As the regulatory definitions suggest, ADA paratransit eligibility is based on functional abilities, not on a type of disability or mobility aid used. Also, eligibility can be trip-specific (a person can use fixed-route under some conditions and needs paratransit under other conditions). Eligibility decisions are therefore either: unconditionally eligible, conditionally eligible, temporarily eligible (either conditional or unconditional), or not eligible.

Attendants and Companions

Personal care attendants of eligible individuals must always be served and travel free of charge. One companion, in addition to a personal attendant, must always be accommodated. Other companions are to be served on a space available basis. Companions are to be charged the same fare as the eligible individual.

Visitors

Visitors to the area must be provided 21 days of service (in a 365-day period) if they have documentation of ADA paratransit eligibility from another area or if they claim to have a disability that prevents them from using the fixed-route service. If the visitor does not have eligibility documentation from another area and does not have a disability that is apparent, documentation of disability can be requested. Transit agencies can require visitors to go through the local eligibility process if they need more than 21 days of service in a given 365-day period.

No-Show Policy

Finally, transit agencies may establish a process for suspending the eligibility of riders who abuse the system with frequent no-shows. No-show policies are to be designed locally, but general guidelines include that rides that are missed because of issues outside of the person's control may not be considered no-shows; the suspension must be for a reasonable period of time; and the proposed suspension must be able to be appealed.

Demand Response Service

ADA regulations also address the provision of demand response service for the general public. The demand response service for Calhoun County outside of the Battle Creek area that is included in the service plan described above would be such a service.

Public entities that provide demand response service for the general public are required to provide an equivalent level of service to people with disabilities, including those who use wheelchairs.[29] Equivalency is determined with respect to the following characteristics of the service, which are similar to the requirements for ADA complementary paratransit service: service days and hours, service area, response time, fare, trip purpose priorities or restrictions, capacity constraints, and the availability of information and reservations capability.

The important comparison for equivalency is between service that is available to customers with disabilities and customers without disabilities. For example, people with disabilities must not be offered limited service areas, days/hours of service, or trip purposes; required to make trip reservations farther in advance or charged higher fares; or provided less access to service information or trip reservations systems than people without disabilities.

Operators of general public demand response service may acquire vehicles that are not accessible to and usable by people with disabilities, including those who use wheelchairs, but only if the service, when viewed in its entirety, provides an equivalent level of service to people with disabilities. Transit providers are required to certify equivalency to FTA if inaccessible vehicles are acquired.

Transportation Network Company Partnerships

Increasingly, local governments and transit providers are partnering with Transportation Network Companies (TNCs) such as Uber and Lyft or providers of microtransit service such as Via to offer on-demand service that features use of a smartphone application (app) to request and pay for trips. Such services can provide an option for first/last-mile transportation to fixed-route stops or stations, trips during times of low or very high demand, and trips in areas without the density to support fixed-route service.

[29] 49 CFR 37.77

FTA has interpreted the applicability of DOT's ADA regulations to such services, which it refers to as shared mobility, in a Dear Colleague letter (https://www.transit.dot.gov/regulations-and-guidance/policy-letters/dot-dear-colleague-letter-equity-access-shared-mobility) and a list of FAQs (https://www.transit.dot.gov/faq?combine=&shs_term_node_tid_depth=2186).

This guidance makes clear that ADA transportation regulations apply to such services, whether or not federal funds are used to support them. Transit providers that utilize TNCs or microtransit operators for demand response service have the responsibility to meet ADA requirements for acquisition of wheelchair-accessible vehicles, unless equivalent service is otherwise provided for people with disabilities, using the equivalency criteria discussed above. The accessibility requirement could be met by requiring the TNC or microtransit partner to provide a sufficient number of accessible vehicles, contracting with a separate entity for the provision of accessible service, or using the agency's own paratransit fleet to provide accessible service. Access to reservations for individuals with disabilities who are unable to use a smartphone or need to speak with a reservation agent to request a trip must also be provided. All requirements noted above regarding non-discrimination, use, and maintenance of accessibility equipment also apply to TNC or microtransit services. Staff of TNC or microtransit partners must also be trained to provide assistance to people with disabilities with respect and courtesy.

Use of smartphone apps to reserve and pay for trips may also raise Title VI and environmental issues for transit providers, as failure to provide alternatives for individuals who do not have smartphones, credit cards, or bank accounts because of low incomes may discriminate against those individuals.

Deviated Fixed-Route Service

Deviated fixed-route service (sometimes referred to as route deviation service, flexible service, or flex routes) runs along a set route. Riders may call to request a curbside pick-up within a certain distance of the route. The deviation zone may be a fixed distance, typically up to ¾ of a mile, or flexible. Since the route is specified, the bus must return to the point where it left the route after a deviation. Deviations must usually be requested in advance.

A variation of route deviation service is point deviation service, which operates with fixed time points (usually at major activity centers or connection points to other transit services). Riders who live between the time points may call to request a curbside pick-up. The bus returns to the next time point after a deviation.

Deviated service is sometimes implemented to combine the accessibility of demand response service with the scheduled reliability of fixed-route service. In areas of lower demand, deviated service may allow both fixed-route and ADA paratransit service to be provided on the same vehicle.

The interpretive guidance from DOT that is included with its final regulations notes that U.S. DOT regards route deviation systems to be demand-responsive systems for the general public, and therefore not subject to the requirements for complementary paratransit service, but to the requirement for an equivalent level of service for persons with disabilities.[30]

In recent interpretations, FTA has drawn a distinction between route deviation systems in which the general public may request deviations and those in which deviations are available only to persons with disabilities.[31] In the latter case, FTA regards the deviated service as a form of complementary paratransit which the entity is using to serve customers with disabilities, and therefore subject to the ADA paratransit comparability criteria noted above, rather than the equivalency standard required for general public demand response service.

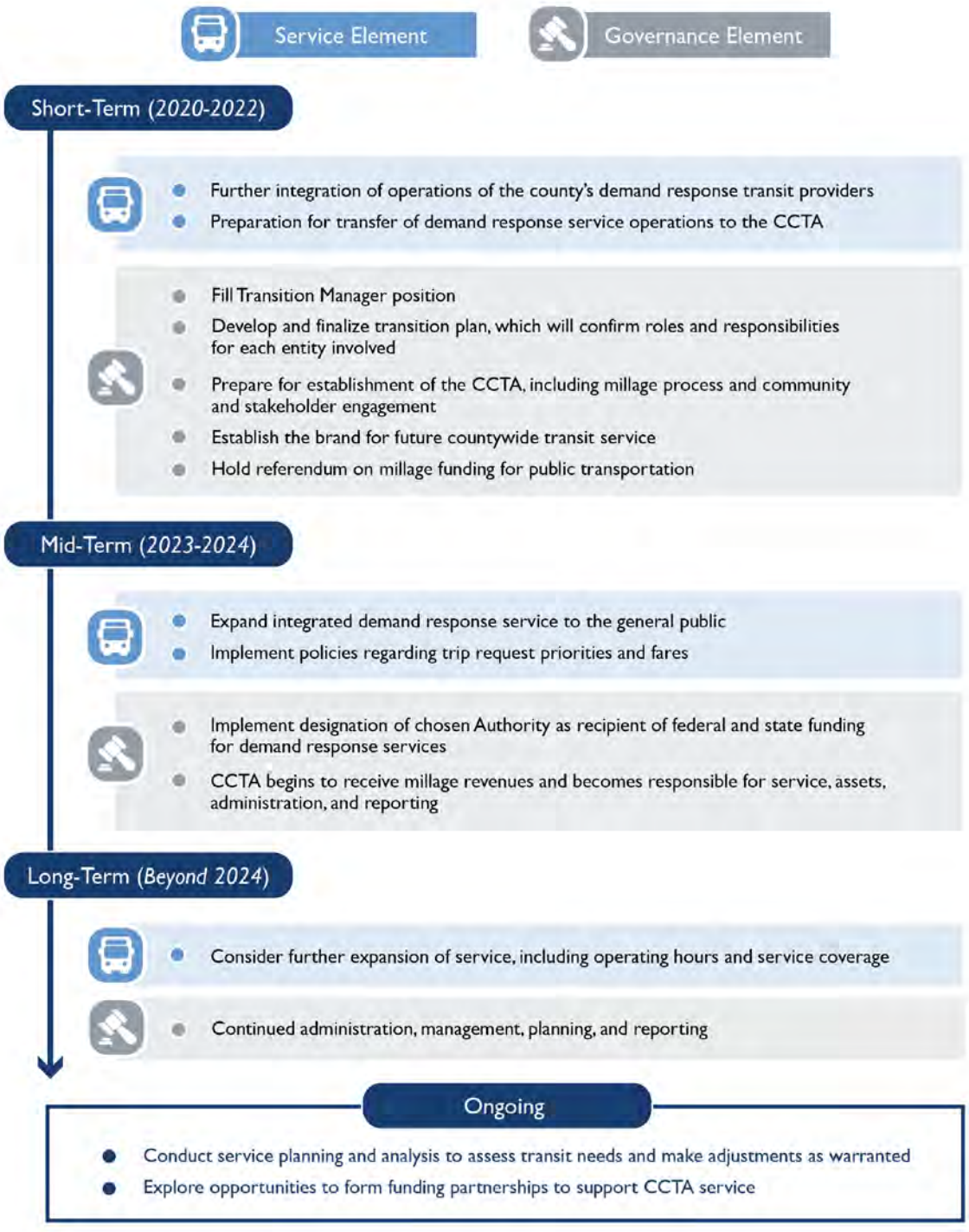
[30] 49 CFR 37 Appendix D, Subpart A

[31] https://www.transit.dot.gov/regulations-and-guidance/civil-rights-ada/california-department-transportation-caltrans-sacramento

6. IMPLEMENTATION PLAN

This section provides a detailed implementation plan for the next five years to develop a countywide transit system. Each year is broken out by service and governance elements to highlight the necessary components for implementation. A summary of the implementation action items, and timeline is detailed in **Figure 35**.

Figure 34: Implementation Plan Timeline



6.1. Short-term (2020 – 2022)

Community Action will continue to operate the portions of its operations that are not yet integrated through the Coordinated Mobility Pilot with Battle Creek Transit (BCT). Marshall DART and Albion-Marshall Connector will continue to operate independently in their respective current service areas. BCT will continue to operate fixed-route and Tele-Transit service under the city's governance, with the same federal, state, and local funding streams.

During the short-term phase, conversations with businesses – especially trip-generating entities such as health care providers – should continue to happen regarding how the service can help meet their needs, and opportunities to form funding partnerships for service should continue to be explored.

Years 1 and 2 (2020 and 2021):

Service Element

As is being undertaken through the Calhoun County Coordinated Mobility Pilot, the county should continue the move toward integration of operations of all demand response transit providers in Calhoun County into a one-stop scheduling system/centralized dispatch that improves scheduling for the partner organizations and efficiency of the demand response transit service in the County. Battle Creek Transit (BCT) will continue to lead dispatch and scheduling with the new technology, and BCT Tele-Transit and Community Action vehicles will continue to be dispatched, through the same platform, to meet a variety of ride requests.

As part of the pilot project, mobility plans will be developed by the providers and shared with partner organizations to ensure rider needs are met and the appropriate provider is booked for each trip. Mobility plans will help the providers leverage existing funding and identify the need for additional funding or funding opportunities based on rider information.

Governance Element

In the first two years of implementation, the County should prepare for formation of one of the two governance structures discussed in **Section 4**, under the State of Michigan Public Transportation Act (Act 196 of 1986), and approval of a dedicated local funding source(s) (millage(s)) to support transit services.

As a first step, the County should obtain the opinion of legal counsel regarding the necessary next steps and timeline for implementation of an Authority(ies). Another very important step will be to hire and assign responsibility for transition planning to a Transition Manager and to pursue an amendment to Act 196 to allow Calhoun County to form two public transportation authorities. The Transition Manager serve as the key coordinator of all activities related to the establishment of the CCTA. Key responsibilities would include: establishment and facilitation of a working group of local stakeholders that would meet regularly to discuss and negotiate logistics, timing, roles, and responsibilities of all involved parties (including designated funding recipient status, ownership and usage of facilities and assets, roles of the authorities with respect to direct employment of staff, use of third-party contractors, etc.); development of a detailed transition plan documenting all of the outcomes from discussions and negotiations; coordination of a millage education campaign; and potential coordination of an amendment to Act 196 (working with the County's legal counsel). The Transition Manager will work closely with County, BCT, Community Action, and City of Marshall staff to develop the transition plan.

The County should also conduct a comprehensive outreach process with a broad group of stakeholders and interested parties (including Michigan DOT, elected officials, and transportation providers) to discuss potential plans for the formation of BCATA and/or CCTA and address any issues or concerns. Using information collected during the outreach process, a decision regarding the desired governance structure should be made. The County and its partners should begin to develop a more detailed action plan for achieving the desired governance and funding strategy.

Year 3 (2022):

Service Element

Assuming a successful outcome from the Calhoun County Coordinated Mobility Pilot, there would be integration of scheduling and dispatch for demand response service from BCT Tele-Transit, Community Action, City of Marshall, Albion-Marshall Connector, and participating private providers. Dispatch and scheduling would continue

to be led by BCT, and service would be expanded to all populations in the County who currently qualify for demand response service. Trips specifically for Community Action-sponsored activities will be automatically scheduled into the system. In addition, all involved parties should prepare for the transition of responsibility for all demand response services in the county to be transferred to the CCTA in Year 4.

An evaluation of the feasibility of web and mobile app technologies for same-day reservations should be conducted. The possibility of contracting with providers for technology and/or operations should be explored further.

Governance Element

Development and finalization of the detailed transition plan should be completed in Year 3, along with ongoing outreach activities. The county and its partners, working with the Transition Manager, should also develop and implement millage public information and a ballot initiative campaign to inform the public's understanding of the proposed changes. The millage vote(s) should occur in this year.

The formation of the CCTA according to the provisions of Act 196, which is an element of both governance structure alternatives, should take place in Year 3. This will entail identifying a process for selecting board members, creating the board, and drafting articles of incorporation. If BCATA is part of the selected governance structure, procedures for its formation should also take place in Year 3. The new authority will make a final determination regarding whether countywide demand service should be contracted (and to whom).

In this year, the brand (name, logo, etc.) for future countywide transit service should be finalized and the process for designation of authority(ies) as recipient(s) of federal and state funding for demand response services in Calhoun County should occur.

Dependent upon the authority structure, begin to negotiate logistics for transfer of City of Marshall's DART and Albion-Marshall Connector and Community Action assets, services, and administration to the new authority. This would include facility and vehicle ownership and/or lease agreements.

6.2. Mid-term (2023-2024)

Year 4 (2023):

Service Element

In Year 4, the CCTA becomes the provider of all demand responses in Calhoun County. Service between cities or outside of the Cities of Albion and Marshall would likely remain on a reservation-only basis; same-day and on-demand ride requests would initially be available only in smaller service areas such as DART's current service area.

While the amount of service planned is estimated to meet the demand, the CCTA should implement a policy regarding how trip requests are prioritized if there are times during which request volumes exceed the service capcity.

A fare structure will need to be implemented that is compliant with the ADA and does not increase costs significantly for current riders. Specifically, it is proposed that:

- Senior rides and rides for people with disabilities ride for free or cost $1 (with suggested donation of $2).
- Rides for other adults are approximately $3-10 each way, depending on distance.
- Possible low-income, student, and/or veteran discounts implemented (policy decisions to be made by CCTA board).
- Trips booked by a third party (e.g., a health care provider or social services organization) on behalf of riders would pay a pre-negotiated fare (e.g., $12-30, depending on zone/distance) to cover a larger portion of cost to provide the trip.

Possible partnerships for NEMT and other travel with veteran organizations, health care providers, and/or other agencies should be considered.

Governance Element

Any facility and/or vehicle lease or transfer agreements negotiated in the previous year would go into effect in Year 4.

Administrative and operational functions of Community Action, City of Marshall-operated services, and Tele-Transit service are transferred to the Authority(ies). It is anticipated that Community Action and City of Marshall staff who primarily work on/provide transit, would become CCTA or BCATA employees (depending on which authority is designated as the official employer.

Year 5 (2024):

Governance Element

The Authority(ies), as appropriate, will (continue to) re-award funding, through partnerships and operating agreements, to the providing entities (as applicable) based on the amount of service (administrative, scheduling/dispatch, and service hours) provided.

6.3. Long-Term (Beyond 2024)

Service Element

If not already done, expand demand response service to the general public everywhere in the county. Additional service adjustments could be considered based upon available funding include:

- Implement or adjust zone system for fare pricing
- Expand hours of service into late-night and to weekends.
- Implement same-day service countywide.
- Implement scheduled Battle Creek Shopping Trips for a reduced fare based on zones.

Governance Element

Further governance of the CCTA depends upon which governance alternative is chosen; accountability and reporting to the public on the effectiveness of the service will inform the CCTA Board's governance-related activities.

7. FINANCIAL PLAN

The purpose of a financial plan is to develop a reasonable forecast of likely available funding for capital and operations expenses. As the future cannot be predicted with certainty, a financial plan relies on realistic assumptions and generally becomes less accurate over the mid- to long-term as more factors can change in the interim.

In the short-term, as Calhoun County prepares for implementation of a new authority to oversee operations of demand response service, operations of existing services including BCT Tele-Transit, Community Action, Marshall Dial-a-Ride, and the Albion-Marshall Connector are expected to continue as they do today, with the added benefit of additional coordination due to implementation of the MDOT-funded Coordinated Mobility Pilot in FY2019 and FY2020.

In the mid- to long-term, the establishment of an authority (the CCTA) to oversee demand response public transportation in Calhoun County is intended to enhance access for the public to transportation services while achieving operational efficiencies that will reduce the administrative costs associated with service provision. Whether fixed-route transit services in the Battle Creek area remains under the governance of BCT or transfers to BCATA, it is anticipated that a high level of coordination and administrative function-sharing will benefit all transit services in the County and will enhance the public's return on investment in public transportation.

7.1. Available Funding Sources

7.1.1. Federal

For services inside the Battle Creek urbanized area, Section 5307 funding for capital and operations would apply. For services outside the Battle Creek urbanized area, the primary federal funding sources for capital and operations would be Sections 5310 and 5311. Discretionary federal grant funding for which the CCTA would qualify could also become available.

Urbanized Area Formula Funding (Section 5307)
Federal funding is available transit operators in urbanized areas under the federal program provisions of 49 USC Section 5307. These funds, which are distributed by formula to urban areas, are available to be programmed by eligible transit operators for either capital or operating uses. When used toward operating expenses, Section 5307 funds can reimburse up to 50 percent of eligible operating expenses. (Fares and special grant funding are not considered "eligible operating expenses.") States are responsible for determining how Section 5307 funds are allocated within an urbanized area. Because Section 5307 funds would support both demand response and fixed-route services in the urbanized area, the funding would likely be split in a proportional way between these two modes, regardless of whether fixed-route service continues to be operated by BCT or becomes operated by BCATA.

Enhanced Mobility of Seniors and Individuals with Disabilities Program (Section 5310)—Previously the Elderly and Disabled Program
Funds through Section 5310 are apportioned for urbanized and rural areas based on the number of seniors and individuals with disabilities, with 60 percent of the funds apportioned to designated recipients in urbanized areas with populations larger than 200,000, 20 percent to states for use in urbanized areas of fewer than 200,000 persons, and 20 percent to states for use in rural areas. The federal share for capital projects is 80 percent and for operating grants is 50 percent. Section 5310 serves as a single formula program to support the mobility of seniors and individuals with disabilities, providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and ADA complementary paratransit services. Section 5310 recipients must certify that projects selected are included in a locally developed, coordinated public transit-human services transportation plan.

Formula Grants for Rural Areas (Section 5311)
Section 5311 provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000. Funds are apportioned on a formula basis, with over 80 percent of funds apportioned on land area and population in rural areas, and under 20 percent of funds apportioned based on land area, revenue-vehicle miles, and low-income individuals in rural areas. Capital expenses are funded at up to 80 percent of net project costs, while operating expenses are funded at up to 50 percent of net project costs. Low-income populations in rural areas are incorporated as a formula factor and job access related projects are an eligible project under Section 5311. Marshall DART and the AMC service both receive Section 5311 operating assistance today.

7.1.2. State

Local Bus Operating Assistance Program
The primary source of state funding for operating transit services in Calhoun County is the Local Bus Operating Assistance Program administered by MDOT. While this program can reimburse transit systems up to 60 percent of eligible expenses, due to the availability of funding statewide, the percentage for rural areas in recent years has been close to 38 percent (and around 32 percent for urban areas). MDOT anticipates that this percentage will remain similar in future years.

Specialized Services Program
MDOT also administers the Specialized Services Program, which is primarily funded through the Federal Section 5310 program (described above), that provides operating assistance to private, nonprofit agencies, and public agencies providing transportation services primarily to elderly persons and persons with disabilities. Community Action currently receives funding through this program for its transportation services.

Local Community Stabilization Funding
Local governments in Michigan receive funding through the Local Community Stabilization Authority (LCSA), which levies the local community stabilization share tax and collects annual maintenance fees for the use of public rights-of-way from telecommunications providers. The LCSA distributes the revenue generated to local and intergovernmental units of government throughout Michigan for local purposes, which can include transportation. The City of Marshall currently uses funding from the LCSA to fund a small portion of its DART service.

7.1.3. Local

Senior Millage (Current)
The senior millage was initially approved by Calhoun voters in November 1996 and renewed in 2000 and 2006. The initial levy amount was approved up to .75 mills annually. In August 2010, the Millage levy was again approved for a ten-year period at .7452 mills. In FY2018, Calhoun Seniors Services' revenues were: $2,571,800 from property taxes (i.e., the senior millage) and $167,800 from personal property tax reimbursements, $18,775 from interest and dividends and $65,534 from Firekeeper's revenue sharing. In the same year, Community Action received a contractor for $485,000 from the Senior Services' budget to provide transportation services.

Countywide Millage (Potential Future)
The creation of the CCTA would initiate a variety of issues and opportunities in regard to a millage. The CCTA would have the ability to levy a millage with the approval of a majority of the registered electors residing in the County that would be served by the authority through a general or special election. The additional funds obtained through a possible millage could be used to expand services.

While many other communities in Michigan have been successful in passing millages to support local transit services, the CCTA and its supporting jurisdictions would need to organize to present a compelling plan and vision for how the millage would be used. This would include providing the public specific information on the revenue amount that would be generated and details on the services that would be provided with the funding. Some residents may be confused regarding the services that will be funded or whether the millage would replace other funding sources for transit, so education, communication, and advocacy will be required to help the public understand the benefits the millage will bring.

Other Local Contribution Options
While a countywide millage would be the most straightforward way of funding service, providing local contributions to the CCTA via general fund appropriations is another option; in addition, communities could seek grant funding, or use other types of revenues, to support their participation in the CCTA.

7.1.4. Other

Private grant funding; partnerships with entities such as large employers, social services organizations, and medical services providers; and advertising are additional potential revenue streams, some of which are currently in place in the County to fund transit services. The CCTA should strongly consider and discuss all of these funding options with potential funding partners in the County.

7.2. Capital Budget

Capital expenses are those for significant purchases such as vehicles, facilities, and equipment that, in most cases, extend beyond a single fiscal year. Most capital assets depreciate over time and must eventually be replaced. In some cases, capital funding can also be used for one-time expenses such as studies or start-up expenses.

On a year-to-year basis, replacement and purchases of revenue vehicles are typically the largest capital expenses for small to mid-size transit agencies. Battle Creek Transit, Community Action, and the City of Marshall receive federal and state funding to cover purchase of replacement revenue vehicles on a schedule that has been determined in consultation with MDOT.

7.2.1. Vehicles

Table 9 details the current fleets of Battle Creek Tele-Transit, Community Action, and the City of Marshall. The City of Marshall uses its fleet to operate both the DART and AMC services.

Table 9: Current Vehicle Fleet by Operator

Current Operator	Vehicle Type	Year Purchased	Capacity
Community Action	SUV	2010	5
	SUV	2010	5
	Van	2011	15
	Van	2011	7
	Van / Lift	2012	6
	Van	2014	5
	Van / Lift	2014	6
	Van / Lift	2016	5
	Van	2016	9
	Van	2016	9
	Van / Lift	2016	5
Marshall DART	Cutaway	2010	16
	Cutaway	2011	16
	Cutaway	2018	16
	Cutaway	2018	16
	Cutaway	2019	16
AMC	Cutaway	2015	16
BCT Tele-Transit	Van	2010	10
	Cutaway	2012	16

	Cutaway	2012	16
	Cutaway	2013	16
	Cutaway	2015	12
	Cutaway	2015	12
	Cutaway	2016	12
Total Existing Fleet			**24**

SUVs, vans, and cutaway buses typically have useful lives of eight, eight, and ten years, respectively (per the FTA).[32] Therefore, a number of these vehicles are currently or soon to be due for replacement over the next five years. The conceptual capital budget below assumes replacements of these vehicles to bring the fleet up to a "state of good repair," such that all vehicles are within the FTA-defined useful life benchmarks. The authority(ies) should maintain a mix of vehicle types to meet the needs of all demand response trips.

7.2.2. Technology

Third-party entities can be used to provide the technology needed for on-demand (i.e., app-based) ride requests. Some providers charge flat start-up costs of between $50,000 and $100,000 (or more; $75,000 has been assumed in this case) for this technology, as well as recurring annual fees beginning at $45,000 and increasing based on the number of vehicles in service using the technology and the number of trips provided. These costs are factored into the conceptual capital budget, assumed to take effect in FY2022. It is possible that the vendor the CCTA selects to operate a portion or all of its services would provide the technology as part of its hourly cost; however, this has not been assumed to be the case.

7.2.3. Facilities

The facilities used by providers in the County today are adequate for the current fleet size. Currently, there are facilities in Battle Creek and Marshall. The CCTA should pursue agreements with the owners of these facilities to continue vehicle storage and operations from these facilities in the short term. In order to best accommodate countywide expanded service, in the longer term, the CCTA should consider partnerships to obtain use of, or the acquisition of, facility space in Albion to reduce costs associated with vehicle deadheading (e.g., vehicles traveling to a garage location while not in service).

7.2.4. Conceptual Capital Budget

A conceptual capital budget for the CCTA is shown in **Table 10**. The costs shown in this budget are estimates based on the best available information. It is assumed that vehicles acquired for CCTA's services would not be larger than 15 or 16-passenger vans. The expense of replacing vehicles already past their useful life benchmarks are assumed to occur in FY2021 or FY 2022; in reality, CCTA may need to stagger these replacements as funding becomes available. This plan assumes that the fleet will consist of fifteen 7-passenger vans and eight 15-passenger vehicles.[33]

Table 10: Conceptual Capital Budget for the (FY2021 – FY2026)

Need	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Technology service fees	$0	$75,000	$58,900	$58,900	$58,900	$58,900
Technology costs per vehicle	$0	$193,200	$199,000	$205,000	$211,100	$217,400
Technology fees (per trip)	$0	$27,300	$28,100	$28,900	$29,800	$30,700

[32] See: https://www.transit.dot.gov/TAM/ULBcheatsheet.

[33] Not all vehicles need to be replaced in this time frame.

Need	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Vehicle replacements	$254,600	$98,300	$90,000	$139,100	$286,600	$98,400
Branding contract	$15,000	-	-	-	-	
Vehicles purchased by type	8 (all vans)	3 (all vans)	1 (15-psgr)	4 (all vans)	3 (all 15-psgr)	1 (15-psgr)
Total	**$269,600**	**$372,800**	**$339,000**	**$395,500**	**$550,600**	**$370,400**

As of 2019, the federal government and the State of Michigan together cover most capital expenses incurred by transit agencies in the state (with relative contributions of 80 and 20 percent, respectively).

7.3. Operating Budget

In Calhoun County in FY2019, between all public providers of demand response service outside of the Battle Creek area (Community Action, Marshall Dial-a-Ride, and the Albion-Marshall Connector), a combined total of over $1 million was invested to provide the service. In addition, BCT spent approximately $1.1 million in FY2019 providing its Tele-Transit service. These services are primarily provided to residents with disabilities and seniors, as well as all residents in the Cities of Marshall and Albion. This section includes information about anticipated service demand, current operating funding sources, and a conceptual operating budget for the CCTA through FY2026. As explained in this section, there are a number of variables with implications for the operating budget.

7.3.1. Current Funding Sources

Table 11 shows the funding sources for operating revenues for the services operating in Calhoun County.

Table 11: Current Operating Revenue Sources

	Community Action	Marshall DART	AMC	Battle Creek Tele-Transit*
Funding Sources from FY2019 – FY2020 budget[34]	■ $485,000 from senior millage (FY2018) ■ $16,600 from expected reimbursement from State Specialized Service Operating Assistance[35] (Section 5310) ■ Fares are donation-based and suggested at $2.00; relatively few riders pay the donation.	■ $187,500 from current property taxes ■ Local Comm Stab Share Tax ($5,700) ■ RTAP ($5,400) ■ Federal Section 5311 ($61,400) ■ State operating assistance ($129,900) ■ State grant ($89,800) ■ Fares ($48,000) ■ Interest ($1,500) ■ Misc. Rev. ($9,700)	■ Section 5311 ($15,100) ■ State operating assistance ($32,000) ■ Passenger fares ($8,000) ■ Miscellaneous revenue ($2,000) ■ Contributions from other sources (Oaklawn and Albion) ($35,000)	■ Section 5307 ($382,000) ■ State operating assistance ($435,300) ■ Local operating assistance ($340,900) ■ Farebox revenues ($93,400) ■ Other revenues ($4,800)

**Amounts shown for 2019 are estimates derived from agency-wide totals based on the proportion of all of BCT's service that is demand response (Tele-Transit).*

7.3.2. Assumptions of the Conceptual Operating Budget

The conceptual operating budget shown in **Section 7.3.3** was developed based on the following assumptions:

- The cost per revenue hour of operating the service was assumed to be equivalent to Battle Creek Transit's operating cost per hour of approximately $105.00 for Tele-Transit service in FY2019.[36]
- The cost of providing each revenue hour of service will increase at a rate of 1.5 percent annually.

It is important to note that the operating budget shown below is based on an assumed 47,960 vehicle revenue hours of service provided in FY2023 onward; should the CCTA find that demand is low at certain times when service is scheduled, but high at other times, or that its resources do not enable this level of service, it would have significant flexibility to adjust the total amount of service provided and/or redirect service hours to the times of day with the greatest demand.

In addition to adjusting its total amount of service, the CCTA will also have the option of adjusting fares to increase revenues and/or bring demand more in line with the amount of service it is able to supply. Furthermore, implementation of on-demand travel options, currently planned for FY2022, would come with significant benefits for riders but potentially more costs if drivers are not able to achieve a high number of passengers per hour when offering this type of service. For these reasons, using the evaluation methodology described in **Appendix D**, staff responsible for service planning for the CCTA will monitor the service productivity and make adjustments to how,

[34] The table only includes funding sources for DART and AMC service of at least $1,000. Most data in the table comes from the City of Marshall's FY2020 Amended Budget or the Senior Millage 2018 Annual Report.
[35] Assumes 40 percent expected contracted rides (10,080) to be reimbursed at rate of $4.07 per one-way passenger trip based on the current number of trips currently being fulfilled by Community Action.
[36] Costs could be significantly lower (e.g., $50 to $75 per vehicle revenue hour) if a third-party contractor were to be used to provide the service; however, using Battle Creek Transit staff would provide CCTA with access to more experienced drivers and managerial and operational expertise. Whether to directly operate or purchase services for the CCTA would be a decision to be made by the CCTA's governing board.

or how much, service is provided. For example, depending on available resources, it may only be possible initially to implement on-demand travel options in more densely populated areas of the County.

7.3.3. Staffing Cost Implications for Governance Alternatives

If stakeholders in Calhoun County decide to pursue Governance Alternative 1, in which there would be two transit authorities with integrated operations, they could likely realize cost savings through the sharing of administrative functions between the two authorities. While the number of bus operators an agency requires is directly related to the amount of service provided, there is an opportunity for sharing staff between agencies when it comes to operations supervisors, dispatchers, mechanics, and administrative and executive staff. This is because agencies that provide more service generally achieve more economies of scale relative to smaller agencies. For example, were the CCTA to function completely independently, it is likely that it would still need one FTE to handle functions such as accounting and human resources; whereas one staff person, or perhaps 1.5 FTEs, could handle those functions for both agencies through operational integration, reducing the total cost across both agencies.

Table 12 shows the combined total estimated number of FTE positions would be needed by the two operationally integrated authorities under Governance Alternative 1 and the total estimated number that would be needed by CCTA and BCT if the operated independently, as under Governance Alternative 2. (The total numbers shown include BCT's current staff plus the estimated additional staff needed to implement the CCTA service plan.) The estimated number of needed CCTA employees by category were identified using data from six peer agencies[37] regarding their average numbers of employees by labor category per revenue hour of service (or revenue mile, in the case of mechanics) and applying those averages based on the CCTA's service plan.[38]

Table 12: Estimated Number of FTEs Needed under Governance Alternatives 1 and 2

Position Type	Hourly Rate[39]	Governance Alternative 1 – Total FTEs Required (CCTA and BCATA operationally integrated)	Governance Alternative 2 – Total FTEs Required (CCTA and BCT, minimal integration)
Mechanics	$25.86	6	7
Operators	$22.32	45	45
Supervisors	$22.72	3	4
Custodial staff	$19.28	4	4
Dispatchers	$23.44	4	5
Grant administrators and/or other administrative staff	$18.53	7	8
Other positions (Director)	$53.99	1	2
Total		**70**	**75**

[37] Peer agencies include, City of Jackson Transportation Authority, Kalamazoo Metro Transit System, Bay Metropolitan Transit Authority, Macatawa Area Express Transportation Authority, Missoula Urban Transportation District- Mountain Line, and Berkshire Regional Transit Authority in Massachusetts.

[38] In some cases, the difference between the estimates under the two governance alternatives are a function of rounding (e.g., if the authorities were estimated to require 0.8 and 0.35 FTEs for a specific labor category, they might each hire 1.0 and 0.5 FTEs, respectively; whereas together they could likely meet their combined need for that labor category with 1.0 or 1.25 total FTEs). In a couple of cases, the analysis showed that BCT has a higher staffing level relative to peer agency averages and, therefore, that some BCT staff could likely take on additional responsibilities within the same total level of FTEs.

[39] Hourly rates for mechanics, operators, custodial staff, and dispatchers were taken from BCT for the year 2019 based on the average employee in each category having approximately 9-10 years of experience. For other labor categories, average wages for the region from the U.S. Bureau of Labor Statistics were used.

Table 13 shows the estimated wage cost savings that could be realized under Governance Alternative 1 through the sharing of some staff functions. The salaries are based on the hourly rates in **Table 13** plus an additional 30 percent to account for the cost of providing non-salary benefits.

Table 13: Estimated Staff Cost Savings with Shared Staffing Plan under Governance Alternative 1

FTE Type	Total Estimated Annual Savings from Wages	Total Estimated Annual Savings from Wages and Fringe Benefits[40]
Mechanics	$53,800	$69,900
Operators	-	-
Supervisors	$47,300	$61,400
Custodial staff	-	-
Dispatchers	$48,800	$63,400
Grant administers and/or other administrative staff	$38,500	$50,100
Director position	$112,300	$146,000
Total Savings	**$300,600**	**$390,800**

It is important to note that because these estimates are based on peer agency averages, they may not take unique circumstances in Calhoun County into account. The CCTA Transition Manager would be responsible for working with local partners and the CCTA Board to conduct more thorough analysis to identify the staffing needs of the CCTA, including development of specific position descriptions, responsibilities, and wages.

7.3.4. Conceptual Operating Budget

Table 14 below shows the costs that CCTA would likely incur to continue operating the services that are currently operated in Calhoun County, as well as all additional services planned, including general demand response service in Albion, pre-scheduled and discounted shopping trips to Battle Creek from non-urban parts of the County five days per week, additional general demand response capacity countywide, and additional service – including late night service – in Battle Creek. This conceptual operating budget also includes expenses to hire a Transition Manager to lead coordination and establishment of the CCTA as well as miscellaneous other expenses and the cost of office space and/or other expenses for the transition period.

Table 14: Conceptual Operating Budget for the CCTA (FY2021 – FY2026)

	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Hiring of ~0.6 FTE Transition Manager	$65,000	$65,000	$0*	$0	$0	$0
Office space lease and other transition expenses	$10,300	$10,300	$0*	$0	$0	$0
Marshall DART service	$456,100	$476,900	-	-	-	-
Community Action service	$492,300	$514,800	-	-	-	-
AMC service	$93,600	$97,900	-	-	-	-

[40] Fringe benefits were assumed to be an additional 30 percent of the employees' wages. This number was taken from the U.S. Small Business Association. https://www.sba.gov/blog/how-much-does-employee-cost-you.

		FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Proposed CCTA Service	Local services within Albion and Marshall	-	-	$770,700	$782,300	$794,000	$805,900
	Service between Albion and Marshall	-	-	$292,500	$296,900	$301,400	$305,900
	Pre-scheduled and discounted trips to Battle Creek	-	-	$167,200	$169,700	$172,200	$174,800
	Expanded general public countywide demand response service – five days per week and Saturdays	-	-	$2,228,100	$2,261,500	$2,295,400	$2,329,900
	Expanded Tele-Transit in Battle Creek, including late night service (until 3 a.m.)	-	-	$1,886,300	$1,914,600	$1,943,300	$1,972,400
Estimated CCTA savings from sharing staff under Governance Alternative 1 (see Section 7.3.4)		-	-	($262,200)	($266,200)	($270,200)	($274,200)
Total Estimated Annual Operating Expenses (for service offered countywide)		**$1.12 M**	**$1.16 M**	**$5.08 M**	**$5.16 M**	**$5.24 M**	**$5.31 M**

**Staffing, office space, and other expenses are assumed to be incorporated into the service cost estimates after the agency is established and becomes a direct funding recipient; therefore, they are no longer listed as separate line items after the transition to the CCTA is completed.*

Section 7.4 below identifies local funding needs required for implementation of all service included in the conceptual operating budget.

7.4. Operating Funding Needs

As discussed above in **Section 7.1**, there are a number of ways that the CCTA's operating expenses could be funded. This section provides estimates of likely revenues and local funding needs if the CCTA were to implement the service plan.

7.4.1. Assumptions

The operating revenue sources and needs in this section were developed based on several assumptions:

- Federal Section 5307 funds will increase by two percent annually.
- Federal Section 5311 operating support will cover 18 percent of the CCTA's annual operating costs.
- MDOT local bus operating assistance will remain at 38 percent for non-urban service and 32 percent for urban service.
- MDOT Specialized Service Operating Assistance (Federal Section 5310) reimbursement at $4.07 per one-way passenger trip. The Specialized Services Program funding is expected to grow as service hours increase, with contracted rides assumed to be funded at a rate of $4.07 per trip.
- The senior millage will continue to be a reliable funding stream for the provision of CCTA's service, with the CCTA continue to serve seniors and people with disabilities throughout the county at current or, more likely, higher service levels compared to today.[41]
- Revenues from the senior millage dedicated to transportation will increase at a rate of two percent annually.

[41] The CCTA will need to track which rides it provides to individuals eligible to receive assistance through the senior millage and which rides are eligible for specialized service operating assistance.

- FY2023 to FY2026 passenger fare projections are based on current average per-trip revenues for BCT Tele-Transit service in the urban area is assumed to have a per-trip average fare of $1.52 and the assumed per-trip average fare for services operating primarily outside of the Battle Creek area is $1.65.

7.4.2. Operating Funding Needs

Anticipated funding and funding needs are shown in **Table 15**. Local funding needs (the "local funding gap") is equal to the difference between the total estimated cost of implementing the service plan and the sum of all likely operating revenues other than local contributions.

Table 15: Operating Revenue Sources and Funding Needs for the CCTA (FY2021 – FY2026)

	FY2021	FY2022	FY2023	FY2024	FY2025	FY 2026
State Specialized Services Operating Assistance (Federal 5310)	$16,600	$16,600	$20,000	$20,000	$20,000	$20,000
Federal 5311 – non-urban (18%)	$83,400	$87,900	$564,100	$572,900	$581,900	$591,100
Federal 5307 – for CCTA service in urban area only	-	-	$561,000	$572,200	$583,600	$595,300
State operating assistance – non-urban (38%)	$208,900	$218,400	$1,249,800	$1,268,500	$1,287,500	$1,306,800
State operating assistance – urban (32%)	-	-	$574,000	$582,600	$591,300	$600,200
Senior millage	$494,700	$504,600	$514,700	$525,000	$535,500	$546,200
City of Marshall funding	$197,300	$200,300	-	-	-	-
Interest, advertising, other misc. revenue	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000
Funding from private partners	$35,000	$15,000	$15,000	$15,000	$15,000	$15,000
Passenger fares – non-urban area	$86,400	$86,400	$155,200	$155,200	$155,200	$155,200
Passenger fares – urban area	-	-	$64,300	$64,300	$64,300	$64,300
Total Revenues	**$1.13 M**	**$1.14 M**	**$3.73 M**	**$3.79 M**	**$3.85 M**	**$3.91 M**
Total Estimated Expenses (from Table 12)	**$1.12 M**	**$1.16 M**	**$5.08 M**	**$5.16 M**	**$5.24 M**	**$5.31 M**
Local Funding Gap	**($10,000)***	**$20,000***	**$1.35 M**	**$1.37 M**	**$1.39 M**	**$1.40 M**
Anticipated millage for countywide demand response service (including Battle Creek area)			**0.389 countywide millage for public transportation**			

**Because millage implementation is planned for FY2023, the estimated funding gap in FY2021 and FY2022 would need to be addressed in another way, such as through local funding or a transition grant.*

As shown in **Table 15**, the local funding gap averages $1.38 million per year between FY2023 and FY2026. To develop the millage estimate,[42] an additional three percent of this average (approximately $41,400) was added for contingency, to ensure the authority can cover any unexpected cost changes, such as fuel cost increases. Any increases in property tax values will further increase the contingency. This plan estimates that a millage of 0.389 for public transportation would be required to fully implement the service plan.

As noted previously, the total expenses associated the service plan would depend heavily on whether the CCTA decides to operate the service directly or use a private, third-party contractor to operate the service. All amounts shown in the conceptual operating budget and the two funding alternatives (or variations thereupon) would be subject to adjustment as more information becomes available.

[42] The millage rate estimate is based on the 2019 Calhoun County Equalization Report Total Taxable Real and Personal Property Values.

APPENDIX A: STAKEHOLDER AND PUBLIC ENGAGEMENT

At the start of the project, two groups of key stakeholders were established to support the Calhoun County Transit Study. These included:

- Steering Committee (SC) – Responsible for strategic direction of the project, thought leadership, and interaction with decisionmakers in government.
- Advisory Panel (AP) – Larger group providing insights from a diverse set of perspectives. The AP includes representation from local, regional, and state government; riders; the business community; and community-based and minority-serving organizations.

The Steering Committee provided project and thought leadership to inform the study's approach and recommendations. The SC included prominent leaders from throughout the region who provided guidance to the project team as necessary regarding the project's direction to heighten opportunities for effective and seamless implementation. The SC ensured consideration of the needs of all the region's residents. Members included representatives from local government and regional organizations who are familiar with the needs of various constituencies throughout the County.

The Advisory Panel brought together a diverse group of stakeholders from a variety of perspectives to provide insights into issues related to public transportation needs in the region, as well as the project goals and operations plan, based on their areas of expertise. AP members hold leadership positions in a variety of local governments, community-based organizations, businesses and business groups, minority and disability groups, the education community, and others. The AP's involvement in the project supported buy-in to the process from a diverse set of regional leaders and help shape the public conversation regarding any changes that may result from this project. A complete list of AP members can be found in the Appendix.

Each group met four times over the course of the project. The first meeting was a joint meeting of the Steering Committee and the Advisory Panel, with a separate debrief afterwards for Steering Committee members. Meetings were held roughly every other month following the initial meeting, with each group meeting separately each time. Whenever possible, the Steering Committee met after the Advisory Panel, to enable Advisory Panel feedback to factor into the recommendations made by the Steering Committee.

Two rounds of Public Outreach were conducted. Engagement with the general public in Phase I included the creation of a project website, social media engagement, an online survey, and two pop-up events. These educated the public about different types of transit services that could be appropriate for the region and helped the project team identify community priorities and needs for local and regional transit connections. Feedback received in this phase informed the creation of draft scenarios, along with the stakeholder outreach and the analyses performed by the project team.

In Phase II outreach, two draft service scenarios were developed based on feedback from Phase I outreach and was presented to the public. Feedback received during this phase was used to inform the final service plan and how to prioritize service recommendations for implementation.

Section A.1 and **Section A.2** summarize the public outreach results.

A.1. Phase I Outreach Results

The Phase I survey was conducted to facilitate initial input from the public to inform the goals and direction of the Countywide Transit Study (CTS). The survey was open from April 3, 2019 through June 1, 2019. A total of 785 surveys were completed, of which 109 surveys were submitted on paper surveys and 676 were completed online. Two pop-up events were held in late April – one in Marshall and one in Albion – to collect survey responses and enhance community awareness about the project and survey. Responses to the survey have been organized by the following topics:

- Demographics

- Current travel behavior
- Priorities and preferences for travel
- Vision for public transit in the county

A.1.1. Demographics of Survey Respondents

Respondents were asked to provide the following demographic information, gender, race, age, home zip code, annual household income, and employment status. Only a portion of the respondents provided answers to these optional questions.

Overall, significantly more respondents were female than male. However, about one-third of respondents (32 percent) did not provide an answer to this question (**Figure A-1**). Sixty-three percent of respondents provided ages of between 25 and 64. Nearly 15 percent of respondents provided that they were over the age of 65 (**Figure A-2**). Ninety percent of respondents reported their race as white and seven percent reported their race as African American (**Figure A-3**). Of the 522 respondents who provided information on their employment status, the most common responses were employed full-time (64 percent) and retired (15 percent) (**Figure A-4**).

Figure A-1: Phase I Survey Results - Gender

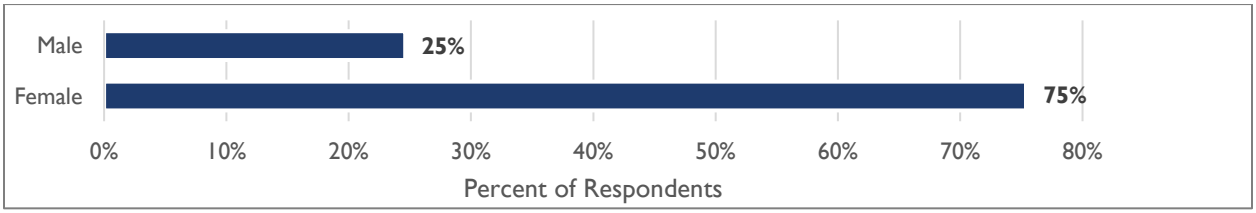


Figure A-2: Phase I Survey Results - Age Range

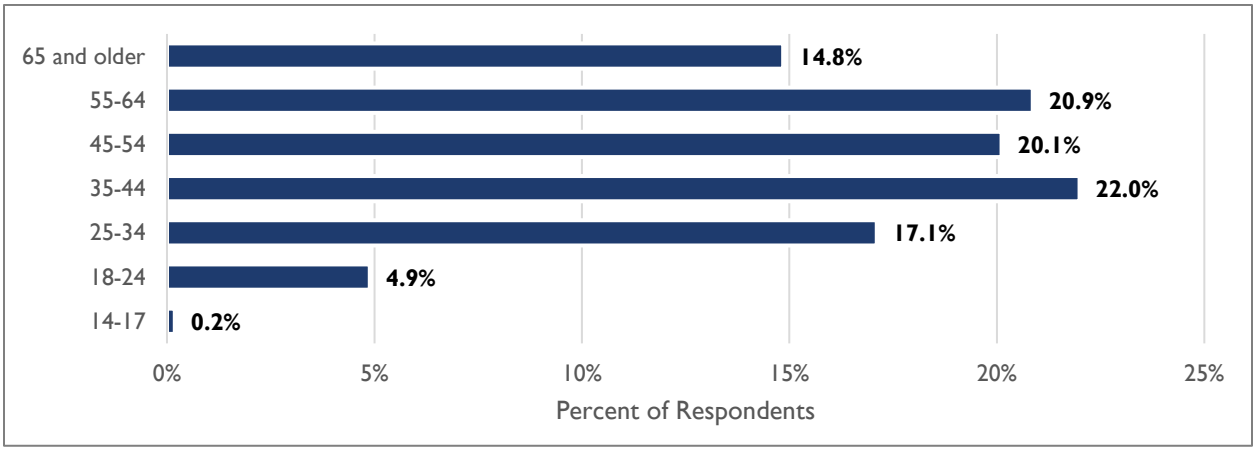


Figure A-3: Phase I Survey Results - Race

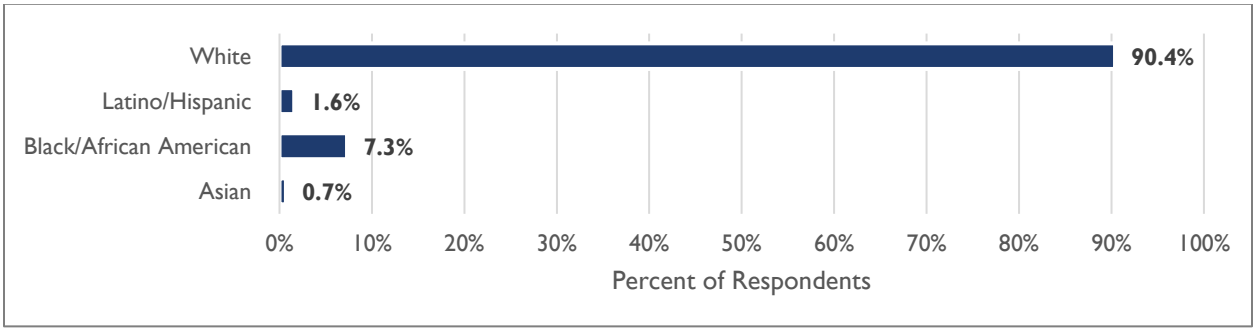
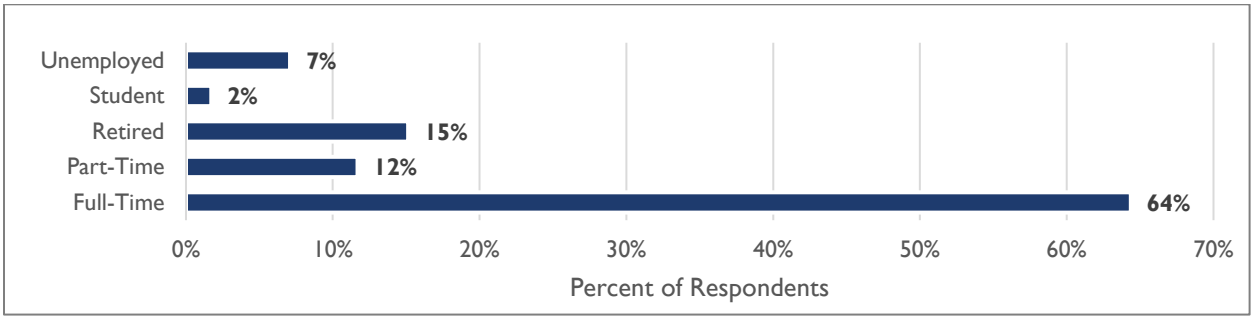
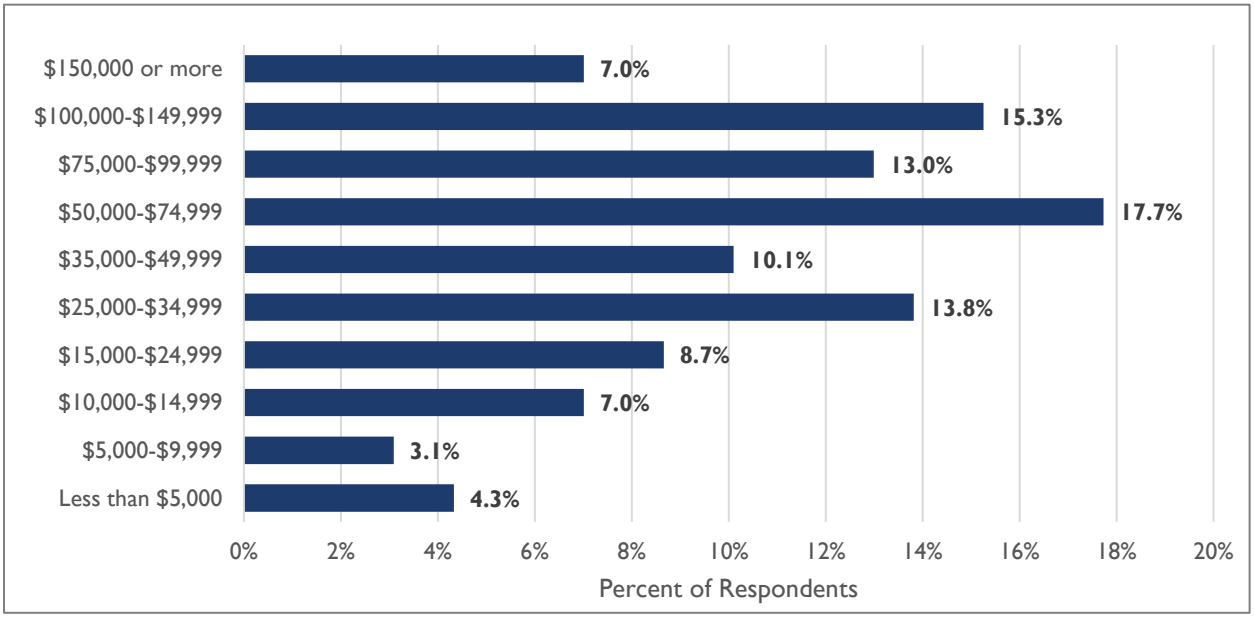


Figure A-4: Phase I Survey Results - Employment Status



Thirty-seven percent of respondents who provided income information reported household incomes of less than $35,000 per year (**Figure A-5**). The 2019 threshold for low income in Calhoun County is $32,100.[43] Given household incomes countywide, low-income residents are proportionately represented in the sample.[44]

Figure A-5: Phase I Survey Results - Annual Household Income



Respondents were asked to provide their home zip code. The breakdown of responses by home zip code is shown in **Table A-1** The cities of Albion and Marshall are overrepresented in the sample, which is likely due in part to the locations of pop-up events. Springfield is also highly represented in the sample, and those living in the most rural areas are underrepresented.

[43] U.S. Department of Housing and Urban Development (HUD), Income Limits, https://www.huduser.gov/portal/datasets/il/il2017/select_Geography.odn

[44] According to ACS 2016 5-year estimates, forty percent of Calhoun County residents have an annual household income less than $35,000.

Table A-1: Phase I Survey Results - Home Zip Code

Home Zip Code	Count	% of Respondents	Share of Calhoun County Population
Albion	110	21%	6%
Battle Creek	115	22%	38%
Homer	16	3%	1%
Marshall	146	28%	5%
Springfield	85	16%	4%
Union City	7	1%	1%
Other	19	4%	55%
Outside of Calhoun	29	5%	-

A.1.2. Current Travel Behavior

Respondents were asked how frequently they use the following transit services: Battle Creek Transit – Regular (Fixed-Route local) bus service, Battle Creek Transit – Tele-Transit, Albion Marshall Connector, Marshall Dial-a-Ride, Community Action, and Amtrak. They could provide only one answer ranging from "Rarely or never" to "five or more times [per week]." Anyone who did not give an answer was included in a group that was assumed to not use transit. The majority (79 percent) of respondents said they rarely or never use public transit. The breakdown of responses to this question is provided in **Table A-2**. For the remainder of the analysis, transit use frequency is grouped into two types, frequent rider and non-rider. A frequent rider is defined as anyone who uses public transit services at least 1-2 times per week. A non-rider is defined as anyone who did not answer the question, said they rarely or never used transit, or said they use transit less than once per week. While those who use transit less than once per week are most appropriately considered infrequent riders, they were included in the non-rider category to enhance simplicity and because they make up a relatively small portion (eight percent) of all responses. Nearly all transit users reported a home zip code in Albion, Battle Creek, Marshall, or Springfield. This is not surprising given that most public transportation services in the community are in those areas.

Table A-2: Phase I Survey Results - Transit Use Frequency

Frequency of Use	Count	% of Respondents
Rarely or never	557	79%
Less than once	55	8%
1-2 times	40	6%
3-4 times	19	3%
5 or more times	34	5%
No Answer/Don't use	79	11%

Sixty-two percent all respondents provided income information. Sixty-two percent of frequent riders who responded to the question reported making less than $34,999 in annual household income, compared to 19 percent of non-riders. The full breakdown of rider type by income ranges are provided in **Table A-3**. In general, the higher a respondent's household income, the less likely she was to report using public transportation.

Table A-3: Phase I Survey Results - Transit Usage by Annual Household Income

Income Range	Non-Rider		Frequent Rider	
	Count	Percentage of Non-Riders	Count	Percentage of Frequent Riders
Less than $5,000	11	2%	10	11%
$5,000-$9,999	8	1%	7	8%
$10,000-$14,999	24	4%	10	11%
$15,000-$24,999	27	4%	15	16%
$25,000-$34,999	52	8%	15	16%
$35,000-$49,999	43	6%	6	6%
$50,000-$74,999	82	12%	4	4%
75,000-99,999	62	9%	1	1%
100,000-149,999	72	11%	2	2%
150,000 or more	33	5%	1	1%
Not Given	259	38%	22	24%
Total	***673***		***93***	

As shown in **Table A-4,** frequent riders were more likely to report being retired, unemployed, or employed on a part-time basis than non-riders. Non-riders were more likely to report being employed full-time.

Table A-4: Phase I Survey Results - Transit User Type by Employment Status

Employment Status	Non-Rider		Frequent Rider	
	Count	Percentage of Non-Riders	Count	Percentage of Frequent Riders
Not Given	242	*35%*	21	*23%*
Retired	63	*9%*	16	*17%*
Student	8	*1%*	1	*1%*
Unemployed	28	*4%*	9	*10%*
Full-Time	303	*44%*	33	*35%*
Part-Time	48	*7%*	13	*14%*
Total	***692***		***93***	

Respondents were asked to identify the transit services they use at least once per month. Only 196 respondents provided an answer to this question. Those that did not provide an answer were assumed to use no services at least once per month (**Table A-5**). This finding is in line with the answers to the previous questions regarding transit use frequency; only 148 respondents stated that they use transit on a weekly basis. The most used transit services based on survey feedback are Marshall Dial-a-Ride, Battle Creek Transit – local bus service, and Amtrak, respectively.

Table A-5: Phase I Survey Results - Transit Services Used

Service	Count	% of Those Who Use Any Service
Amtrak	53	27%
Community Action	13	7%
Marshall Dial-a-Ride	72	37%
Albion Marshall Connector	37	19%
BCT Tele-Transit	16	8%
BCT Regular Bus	65	33%
No Answer/No services	589	85% of total

Figure A-6 shows the breakdown of transit services used by provided age range. Marshall Dial-a-Ride is predominantly used by those 65 and older, while Amtrak and Battle Creek Transit's local bus services are most frequently used by those under 55 years old.

Figure A-6: Phase I Survey Results - Transit Services Used at Least Once a Month by Age Range

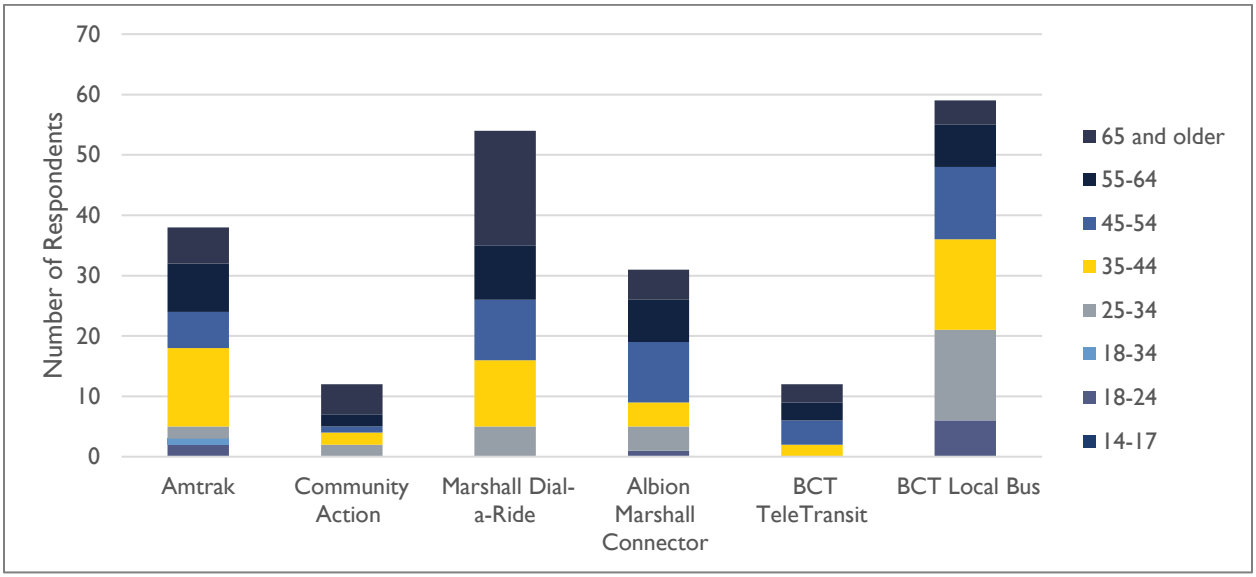
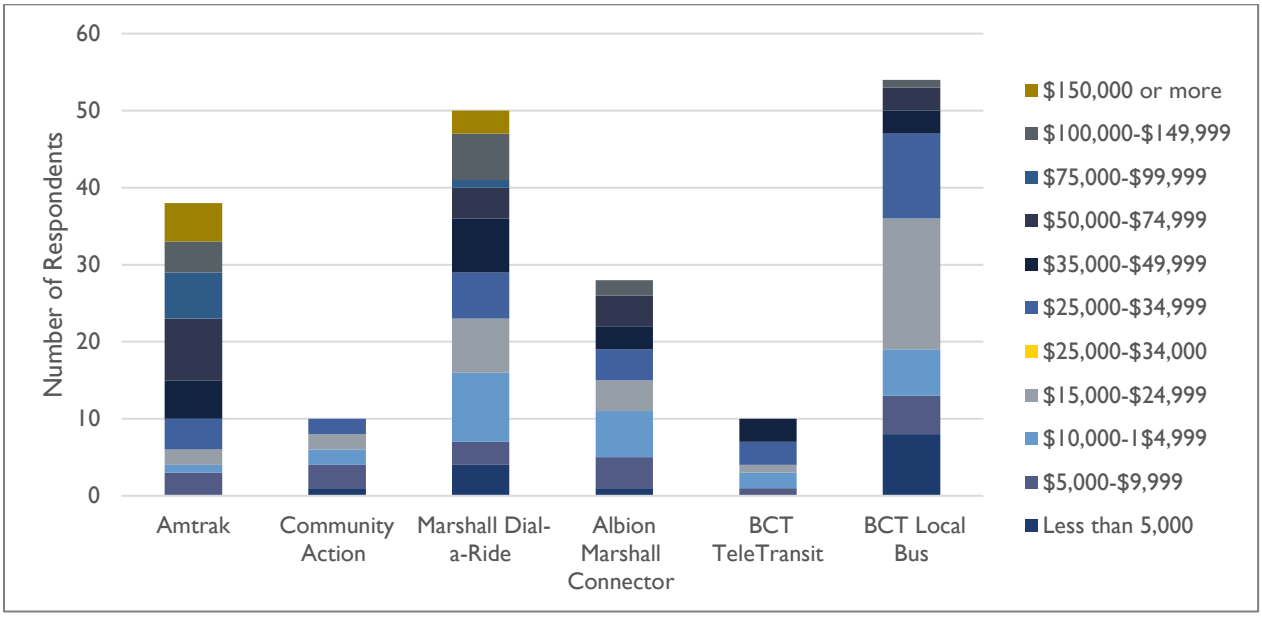


Figure A-7 shows the breakdown of transit services used by annual household income range. Respondents with household incomes higher than $75,000 reported using Amtrak more than any other service. Those with household incomes less than $25,000, who are all considered to have low incomes, use Battle Creek Transit's local bus service, Albion-Marshall Connector, Marshall Dial-a-Ride, and Community Action more than people from other income ranges. Low-income respondents reported using Amtrak the least.

Figure A-7: Phase I Survey Results - Transit Services Used at Least Once per Month by Annual Household Income



Respondents were asked to provide the most common purposes for their transit trips. Respondents were able to select up to two answers for this question, so many gave more than one answer. Of the 785 respondents, 695 provided at least one response. The breakdown of trip purposes by rider type is shown in **Table A-6.** For frequent riders, the three most common transit trip purposes were medical or other appointments, shopping or errands, and work, respectively. Among infrequent riders,[45] the most common trip purposes, in order, were medical or other appointments, other, shopping or errands, and visiting friends or family.

Table A-6: Phase I Survey Results - Transit Trip Purposes

Trip Purpose	Frequent Rider	% of Purpose Total	Infrequent Riders	% of Purpose Total	Grand Total
Work	40	*70%*	17	*30%*	*57*
School	13	*48%*	14	*52%*	*27*
Shopping/errands	48	*62%*	29	*38%*	*77*
Visiting friends/family	11	*33%*	22	*67%*	*33*
Medical/other appointment	50	*59%*	35	*41%*	*85*
Other	3	*9%*	31	*91%*	*34*
I don't regularly use transit	2	*0%*	498	*100%*	*500*

Respondents were asked what barriers they experience, if any, to using public transit. Of the 785 respondents, 664 provided an answer to this question. Respondents were asked to select all barriers that applied, and many gave more than one answer. Thirty-nine percent of those who answered this question selected that they did not use public transit because it was not available or did not go where they needed to go. The same number of respondents selected 'Other' as a barrier. Of the 259 'Other' responses, 71 percent (84) said that they did not use

[45] Infrequent riders here includes those who said they rarely or never take transit or take transit less than once per week.

public transit because they had access to a private vehicle. The breakdown of answers for this question are outlined in **Table A-7**.

Table A-7: Phase I Survey Results - Barriers to Using Public Transit

Barriers	Count	% of Those Who Provided a Response
I use it regularly	41	6%
Need Assistance	17	3%
Never occurs to me	141	21%
It doesn't run regularly	93	14%
It takes too long	83	13%
Isn't available/doesn't go where I need	257	39%
Other	259	39%

Other Modes Used at Least Once per Week

Respondents were asked what other travel modes, apart from public transportation, they use regularly and the most common purposes for those trips. Of the 785 respondents, 628 answered the other mode question, and 611 answered the trip purpose for other modes question. The questions allowed up six responses each and the results are shown in **Figure A-9** and **Figure A-8**. The majority of reported trip purposes, fifty-one percent (as a percentage of all responses) are drive alone as a regular mode of travel while twenty-three percent are drive or get a ride with a friend or family. The most common trip purposes among those using non-transit modes were, by far, work and shopping or errands (making up three quarters of all trips).

Figure A-9: Phase I Survey Results - Other Travel Modes Used Regularly

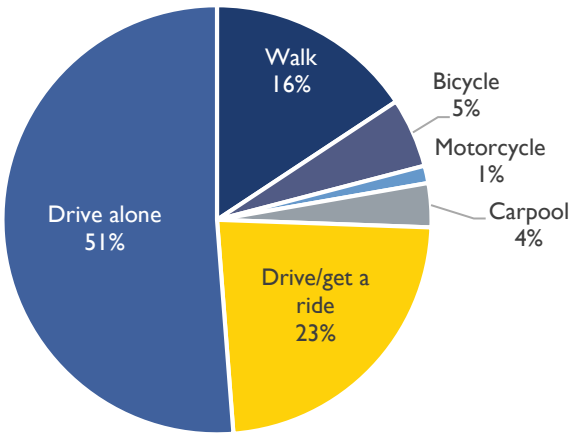
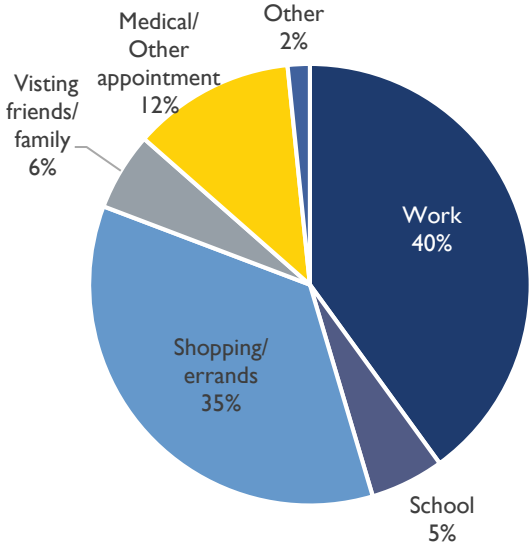


Figure A-8: Phase I Survey Results - Common Trip Purposes for Other Travel Modes Used



A.1.3. Priorities and Preferences for Travel

Respondents were asked how they would prioritize walking farther to catch a bus versus waiting longer, having a shorter travel time versus having to transfer between bus vehicles, and whether they would rather pay less for a service or have a more frequent service. Their responses could range from one to five, one being strongly disagree and five being strongly agree and are shown in **Table A-8**. When given the statement "I would rather wait longer for a bus than walk farther for a shorter wait," respondents gave an average score of 3.5, with a majority of people saying they agreed. When given the statement "I would rather ride the bus longer if it means I do not have to transfer," respondents gave an average of 2.7 with a majority expressing disagreement. When given the statement "I would be willing to pay a little bit more for a more frequent service," respondents gave an average score of 3.4 with a majority of people saying they agreed. These responses seem to indicate that people have a preference more for curb-to-curb demand responsive service than regular route service, and are willing to deal with longer wait times in order for that option to be available.

Respondents were also asked to provide their preferences for transit types, times of day, and days of the week and the responses are also shown in **Table A-8.** They were asked how likely they were to use a type of transit on a scale of one (very unlikely) to five (very likely). The types of transit were local bus, dial-a-ride, shared ride (app based), flexible bus, and commuter bus. All transit types were ranked "maybe" (three) or lower, indicating that many survey respondents are unlikely to use transit and are most likely to continue to use other modes. When asked how likely they were to use transit during different periods of time during a day, respondents rated morning peak and afternoon peak the highest. Respondents were also asked to provide how likely they were to use transit on different days. Respondents reported, overall, that they were most likely to use transit on the weekdays.

Table A-8: Phase I Survey Results - Priorities and Preferences for Transit

Preference	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Average Score	# of Respondents
Cost vs. Frequency	11%	8%	31%	26%	23%	3.4	605
Walking vs. Waiting	14%	8%	26%	23%	29%	3.5	624
Travel Time vs. Transfers	30%	16%	27%	14%	13%	2.7	612
Regular Local Bus	25%	10%	24%	20%	21%	3.0	573
Dial-a-Ride Tele-Transit	26%	13%	24%	15%	23%	3.0	572
Share Ride App Based	28%	10%	23%	20%	18%	2.9	545
Flexible Bus Route	25%	12%	28%	18%	18%	2.9	538
Commuter Bus Service	34%	10%	25%	15%	16%	2.7	535
Morning Peak	24%	10%	20%	15%	30%	3.2	511
Midday	35%	11%	24%	12%	18%	2.7	490
Afternoon Peak	22%	7%	20%	22%	29%	3.3	500
Evening	35%	11%	22%	13%	18%	2.7	489
Late Night	55%	8%	15%	6%	16%	2.2	477
Weekdays	21%	7%	20%	17%	35%	3.4	530
Saturdays	27%	11%	22%	16%	24%	3.0	523
Sundays	35%	13%	21%	11%	19%	2.7	521

A.1.4. Vision of Public Transportation in Calhoun County

Respondents were invited to provide a comment regarding their vision for public transportation in Calhoun County. Of the 785 survey respondents, 179 provided a response for this question. The responses were added to

a world cloud and then edited down to find major themes that can be seen in **Figure A-10**; the size of the words relates to the number of times the word or theme was mentioned in all comments.

Overall, the most reoccurring themes were the need to get to medical appointments, the need to be able to do errands and shopping, and the desire for expansion of services to weekends, evenings and more places. Many people noted a desire to have some kind of service to destinations in Battle Creek as well. While there were many people who indicated that they would not be likely to use the service, or who offered comments on who should be eligible for service, there were very few responses indicating a full lack of support for the provision of (more) public transportation service in the County. There were also a number of references to transportation network companies such as Lyft and Uber and a few comments about long wait times (e.g. for Dial-a-Ride service in Marshall and Tele-Transit service).

Figure A-10: Phase I Survey Results - Calhoun County Public Transportation Vision Cloud

A.1.5. Key Takeaways

A majority of respondents currently use personal vehicles to get around the county and their responses indicate that they are likely to continue to do so. However, many of these current and future auto users noted that they see the benefit of public transportation being available for everyone in the community, especially those who would depend on the service such as seniors and residents from low-income households. Those who indicated that they would be likely to use public transportation, perhaps unsurprisingly, indicated strong support for more transit service being available. There were very few respondents who indicated a complete lack of support for the provision of (more) public transportation service in the County.

The most recurring themes with respect to the vision for public transportation in the County were the need to get to medical appointments, the need to be able to do errands and shopping, and the expansion of services to weekends, evenings and more places. Many people noted a desire to have some kind of service to destinations in Battle Creek, as well as a desire for public transportation to be affordable, safe, and accessible for everyone.

Responses to the service preferences questions indicate that respondents are more interested in curb-to-curb, demand response service than any other type of service, and are willing to sacrifice travel time and wait times in favor of an affordable service.

A.2. Phase II Outreach Results

For Phase II of Outreach, a booth at the Calhoun County Fair, from August 11th - 17th was used to facilitate discussion and gather input from stakeholders and the public. Materials used for outreach included information about the study, detailed information about each scenario, and an activity used to help guide people to plan their preferred service using elements from the two planned scenarios. The public also had the opportunity to provide comments in person and online. The following outlines the engagement process and the results from public input.

The following information was provided at the booth in the form of boards:

- **Introduction to the plan**

This included a brief description of the Transit Study and its goals. It also provided a brief snapshot of what residents expressed regarding travel priorities in the study's initial survey.

Figure A-11: CTS Calhoun County Fair Booth

- **Scenarios**

The following information was highlighted for each scenario:

  - Benefits and Drawbacks,
  - Service Hours,
  - How the Service Works,
  - Ride reservation, and Fare pricing.

Each board was presented noting that the scenarios presented to the public and stakeholders were for the purpose of discussion and was not a formal proposal to the County Board of Commissioners at the time.

Participants were then invited to indicate their preferences using stickers after reviewing the scenario boards. The project team instructed participants to take three stickers, which matched the color of the zone in the county where they resided (based on the map provided to them), to complete the activity. The goal of this activity was to collect feedback on elements of the scenarios that were most important to the participants. The following resident zones were represented:

- Battle Creek/Springfield

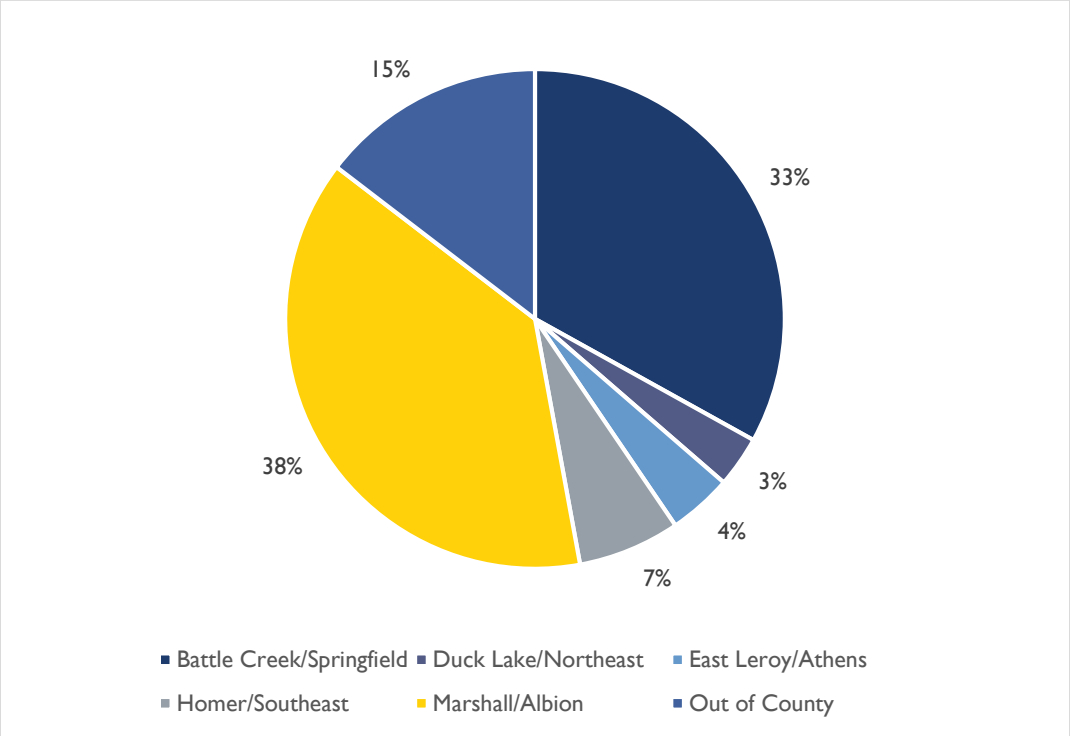
- Marshall/Albion
- East Leroy/Athens
- Duck Lake/Northeast
- Homer/Southeast
- Out of County

Flyers were also handed out to participants at the fair. The flyers highlighted the benefits and drawbacks of each scenario, alongside a description of the proposed services. It also directed participants to the website for more information and opportunities to provide additional feedback.

A.2.1. Overall Outreach Results

Approximately, 121 participants indicated their priorities across three categories: Service Availability, Price and Value, and Service Scheduling. As shown in **Figure A-12,** the majority (38 percent) of respondents resided in Marshall/Albion, and one-third resided in Battle Creek/Springfield. Fifteen percent indicated they lived outside of Calhoun County, with an equal amount residing in Homer/Southeast, East Leroy/Athens, and Duck Lake/Northeast.

Figure A-12: Phase II Survey Results - Respondents by Resident Zone

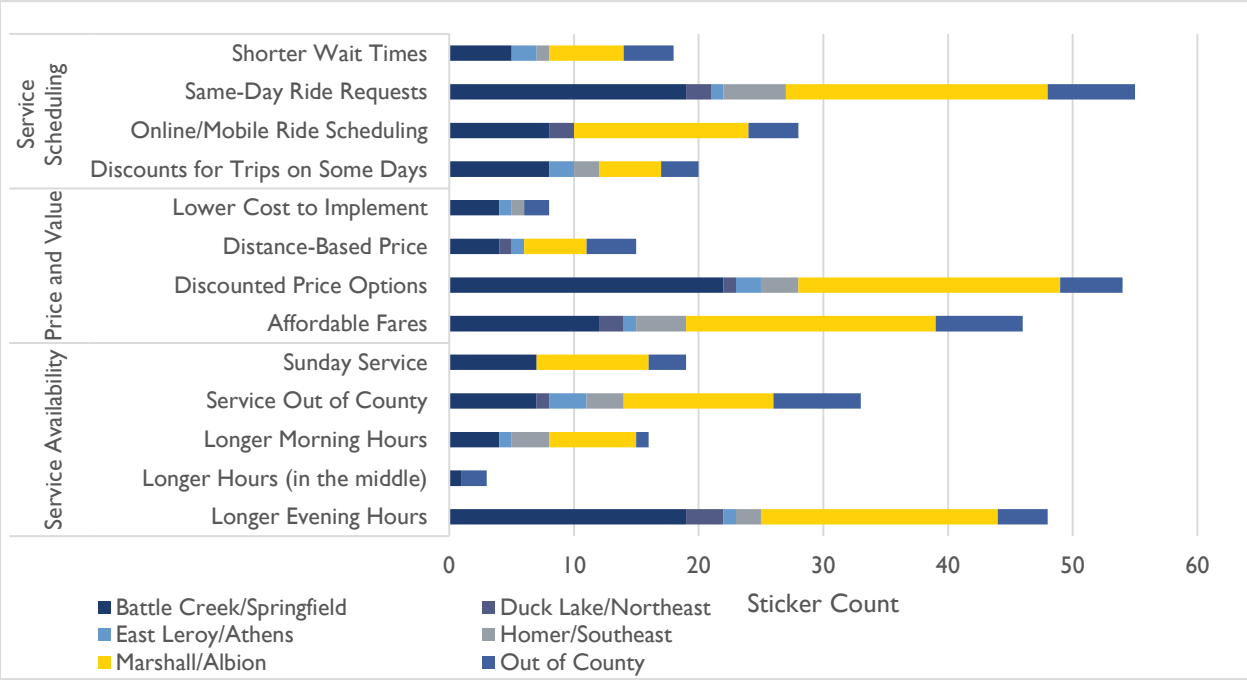


As shown in **Figure A-13**, 45 percent of the respondents within the Service Scheduling category chose *Same-Day Ride Requests*, the ability to schedule rides for the same day, as the most important element. Twenty-three percent of responses in this same category chose *Online/Mobile Ride Scheduling*, where riders would be able to book a trip online or through a mobile app. In this category, *Discounts for Trips on Some Days* and *Shorter Wait Times* were less important to respondents with seventeen and fifteen percent, respectively, of sticker counts.

In terms of Service Availability, 40 percent of the respondents expressed the preference for *Longer Evening Hours*, where service is available late at night from 8:00 p.m.–12:00 a.m. This was followed by a preference for *Service Out of County* at 28 percent – which also happened to be the most important element for Out of County residents.

Sixteen and thirteen percent of respondents chose *Sunday Service* and *Longer Morning Hours*, respectively, as their preferences. *Sunday Service* was especially preferred by Battle Creek/Springfield, Marshall/Albion, and Out of County residents. In this category, some residents, just three percent, expressed that they preferred *Longer Hours* in both the morning and evening hours. Respondents were instructed to place their vote in the middle of the two options to indicate that both were equally important.

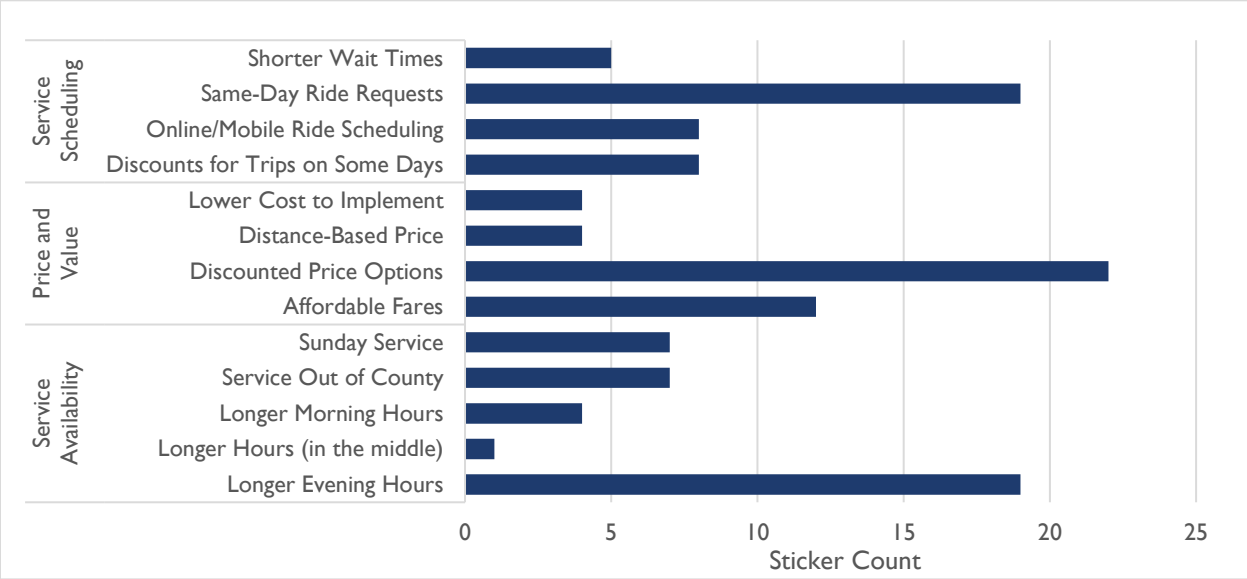
Figure A-13: Phase II Survey Results - Service Preference by Resident Zones



A.2.2. Battle Creek/Springfield Responses

One third of respondents resided in Battle Creek/Springfield. The most commonly preferred elements mirrored that of the overall preferences of all resident zones: *Same-Day Ride Requests, Discounted Price Options*, and *Longer Evening Hours*. For Service Scheduling, however, *Online/Mobile Ride Scheduling* and *Discount for Trips on Some Days* were equally preferred by residents which strayed from the general trend. A breakdown of Battle Creek/Springfield residents' preferences can be found in **Figure A-14**.

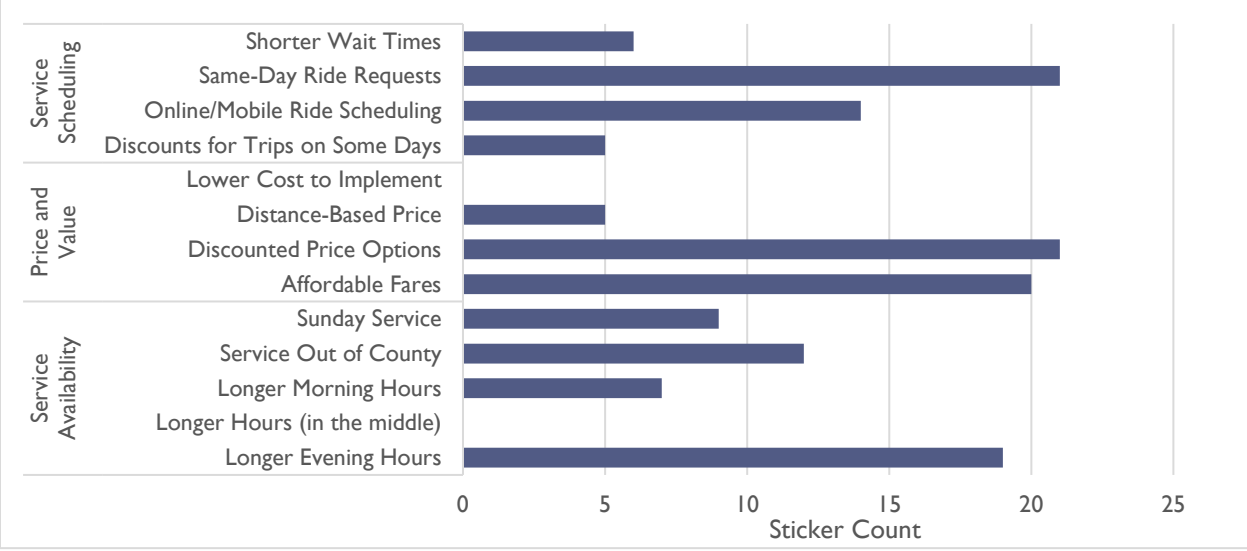
Figure A-14: Phase II Survey Results - Service Preference of Battle Creek/Springfield Residents (n=120)



A.2.3. Marshall/Albion Responses

Thirty eight percent of respondents resided in Marshall/Albion. As seen in **Figure A-15**, the most commonly preferred elements mirrored that of the overall preferences of all resident zones: *Same-Day Ride Requests, Discounted Price Options*, and *Longer Evening Hours*. Compared to other resident zones, Marshall/Albion residents had a stronger preference for *Online/Mobile Ride Scheduling* and a slight preference for *Shorter Wait Times* over *Discounts for Trips on Some Days*.

Figure A-15: Phase II Survey Results - Service Preference of Marshall/Albion Residents (n=139)

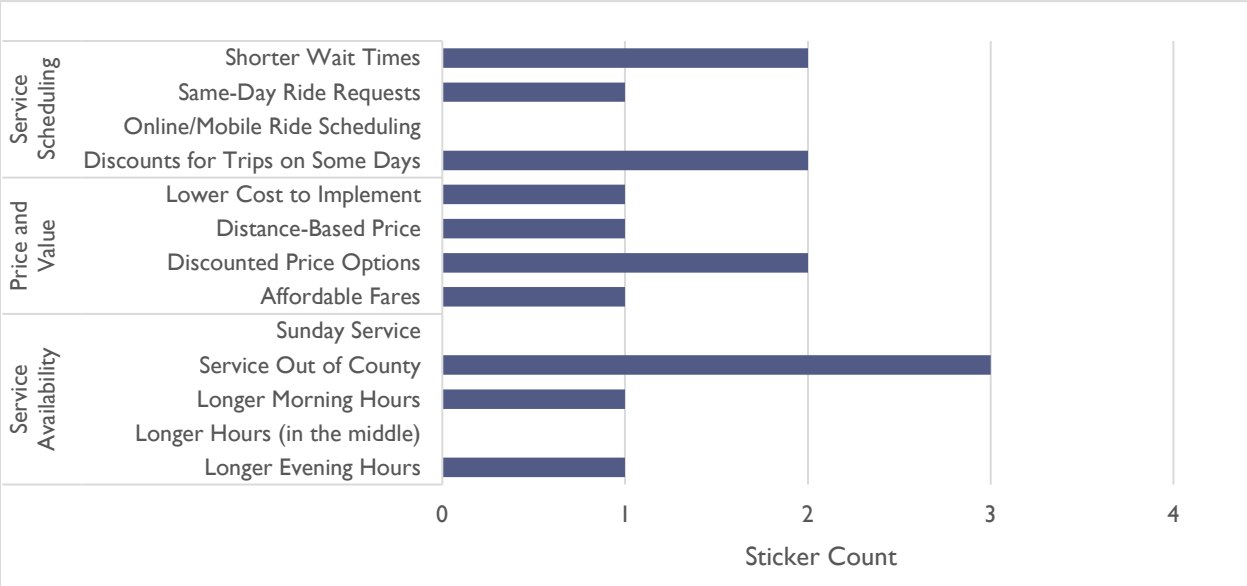


A.2.4. East Leroy/Athens Responses

Four percent of respondents reside in East Leroy/Athens. The breakdown of these residents' preferences is shown in **Figure A-16**. For Service Scheduling, *Shorter Wait Times* and *Discounts for Trips on Some Days* were equally

important, followed up by *Same-Day Requests*. *Online/Mobile Ride Scheduling* was not selected as a priority. For Price and Value, residents chose *Discounted Price Options* as a priority. The remaining options in the category were equal. Unlike the overall trend, *Service Out of County* was the preferred element for Service Availability, with equal preference for *Longer Morning Hours* and *Longer Evening Hours*. No respondents selected *Sunday Service* as their priority.

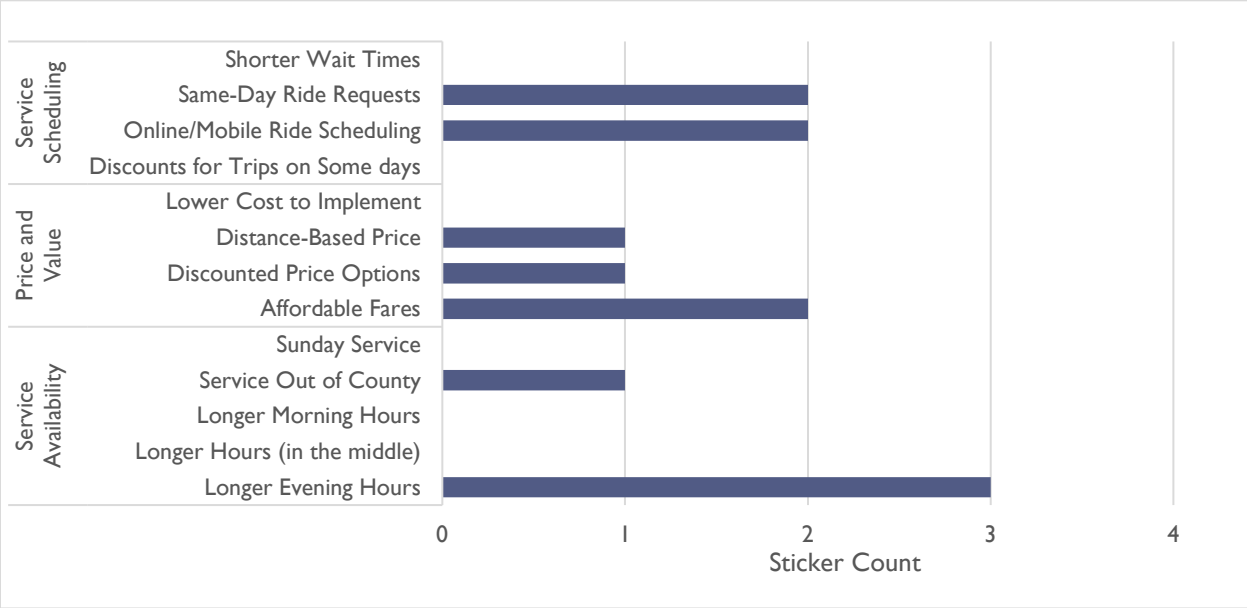
Figure A-16: Phase II Survey Results - Service Preference of East Leroy/Athens Residents (n=15)



A.2.5. Duck Lake/Northeast Responses

The Duck Lake/Northeast zone had the fewest respondents for this activity, representing just three percent of responses. For Service Scheduling, *Same-Day Ride Requests* and *Online/Mobile Ride Scheduling* were preferred over *Shorter Wait Times* and *Discounts for Trips on Some Days*. For the Price and Value category, the most important element is *Affordable Fares*, contrary to the overall trend. Like most of the other resident zones, *Longer Evening Hours* was a priority for Service Availability, as shown in **Figure A-17**.

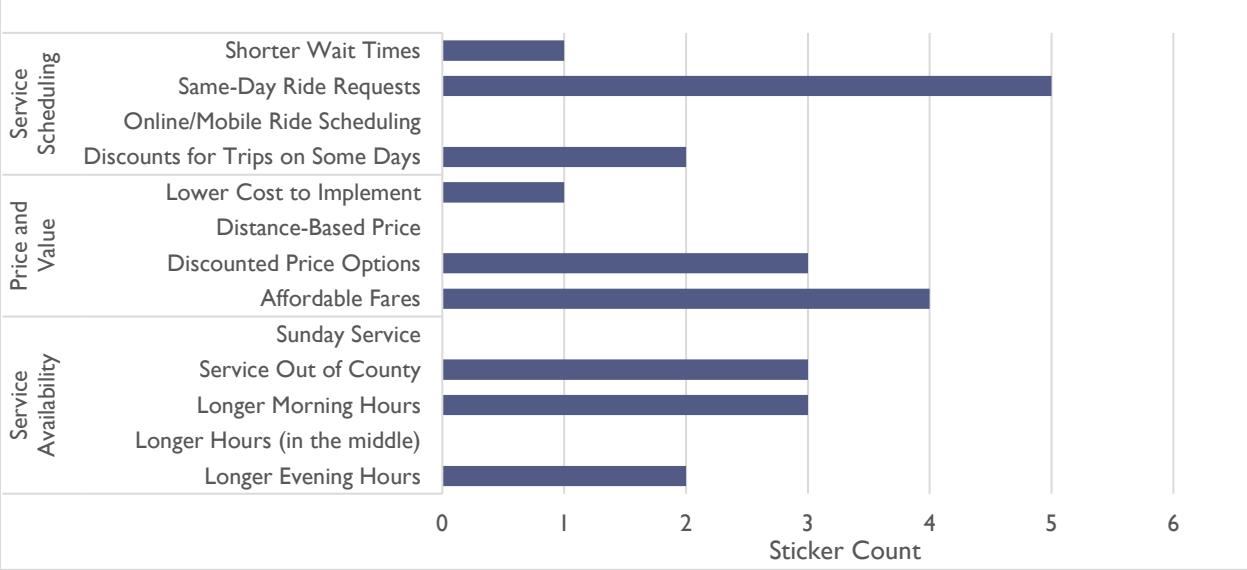
Figure A-17: Phase II Survey Results - Service Preference of Duck Lake/Northeast Residents (n=12)



A.2.6. Homer/Southeast Responses

Seven percent of respondents reside in the Homer/Southeast resident zone. As shown in **Figure A-18**, Online/Mobile Ride Scheduling was not chosen as a priority for the respondents, contrary to overall trends of this category. For Price and Value, more Homer/Southeast residents preferred Affordable Fares over Discounted Options. Service Out of County and Longer Morning Hours had equal preference for Service Availability.

Figure A-18: Phase II Survey Results - Service Preference of Homer/Southeast Residents (n=24)

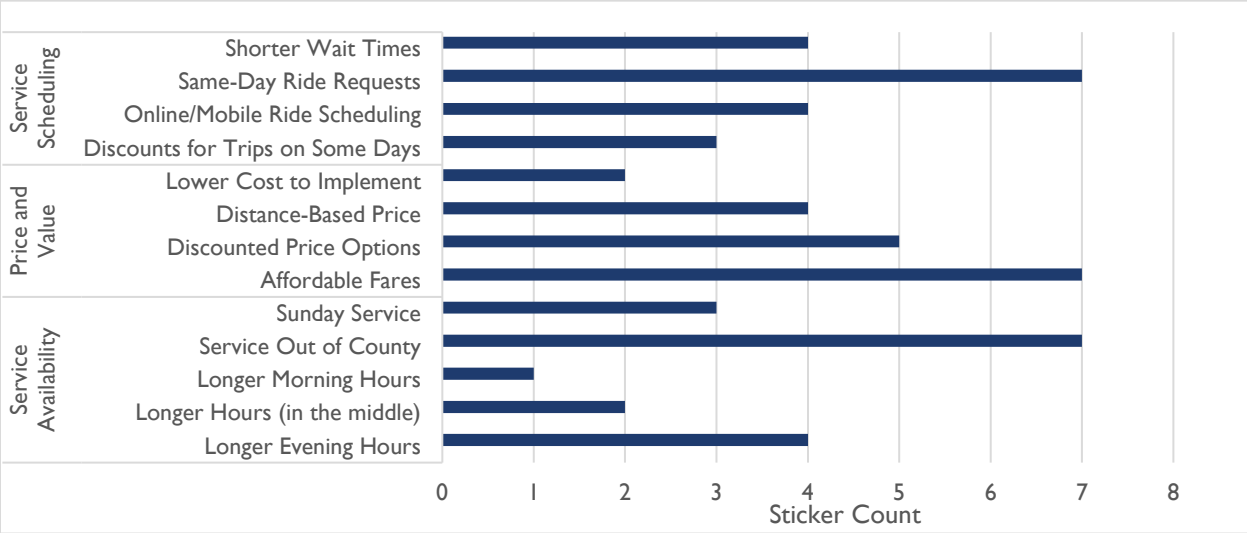


A.2.7 Out of County Responses

Fifteen percent of respondents lived Out of County. As shown in **Figure A-19**, Out of County residents have a strong preference for *Same-Day Ride Requests*, similar to the overall trend. Other options are close to a tie. For

Price and Value, this resident zone chose Affordable Fares over Discounted Price Options. Service Out of County was the most prioritized element for the Service Availability category.

Figure A-19: Phase II Survey Results - Service Preferences of Out of County Residents (n=53)



A.2.8. Feedback from Comment Cards and Website

Participants were encouraged to submit feedback with comment cards at the booth or online through CalhounCountyTransit.org. The project team received six written comment cards and three online submissions, each comment was entered into a database.

There are four comments that expressed a preference for Scenario 1 – one of which pointed to the inflexibility of bus schedules in Scenario 2. Another comment in support of Scenario 1 brought up a need for evening transit service. Two comments expressed a desire for more service, requesting extended hours and higher frequency for the bus service – one of which specified the request for additional service between the City of Battle Creek or Marshall and Albion, adding that earlier morning service should align with school hours and run until 6:00 p.m.

Single comments addressed the following points:

- General support for the project noting the socioenvironmental benefits of increased transit service.
- A preference for Scenario 2 – citing its compatibility with the ageing population in rural townships.
- A preference for same-day service and online booking as complementary features.
- A request for more free public transportation, noting concerns of Dial-a-Ride costs.

APPENDIX B: SCENARIO DEVELOPMENT

Two scenarios were developed by the project team to present to stakeholders and the public. The purpose of developing the scenarios was to identify two potential options for transit service in Calhoun County that were both realistic (though they would both require more operational funding than is allocated to public transportation in the county at present) but were different enough that they would elicit reactions and discussions to help the project team understand people's preferences. The project team planned to use the two-scenario comparison to inform development of the final scenario. The two scenarios presented for evaluation are described below.

B.1. Scenario 1: Countywide Demand Response Service with Zone-Based Fares

In this scenario, curb-to-curb public transit would be available throughout the entire county for any person. The service under this scenario would operate under a new countywide authority. Service will be provided from any point to any other point in the county, or outside the county for an additional cost. The service would operate from:

- Weekdays: 5:00 a.m. – 10:00 p.m.
- Saturday: 9:00 a.m. – 6:00 p.m.
- Sunday: 10:00 a.m. – 3:00 p.m.

The County would be geographically divided into five zones (as shown in **Figure B-1**). The zones will be used to identify the trip fare; in other words, fares will be distance-based. For example, as shown in the **Table B-1,** if a trip's origin and destination are within the same zone, a minimum fare would be charged. If a trip's destination is in a zone directly next to the trip's origin zone, the fare would increase. The fare would increase further for a destination two zones away. For those who do not qualify for ADA service, trips that could be made using the BCT fixed-route service would have a significantly higher cost. A maximum fare would be considered for senior citizens and persons with disabilities. Service up to a limited number of miles (e.g., 10) outside of the county lines could be made available to Calhoun County residents who make reservations at least 48 hours in advance.[46] This would allow people to gain access to demand response services provided in other counties to reach final destinations outside of Calhoun County.

Table B-1: Potential Fare Structure for Scenario 1

Example One-Way Fares by Type	*Within Zone*	*To Adjacent Zone*	*Two Zones Away*	*Within BCT fixed-route service area*	*Up to 10 miles outside county*
General Passengers	$3.00	$6.00	$9.00	$12.00	$16.00
Senior Citizens	$2.00	$3.00	$4.00	$6.00	$8.00
Persons with Disabilities	$2.00	$3.00	$4.00	$5.00	

Rides could be requested by phone, online, or via a mobile application. Reservations made 24 hours in advance would receive priority; but there would be no requirements for advance reservations.

From the customer's point of view, there would be one provider, regardless of where in the County a person lives. A similar zone-based fare model can be seen in Jackson County, Michigan.[47] Battle Creek Transit's Tele-Transit operations would become part of the countywide system. While all dispatching and scheduling would

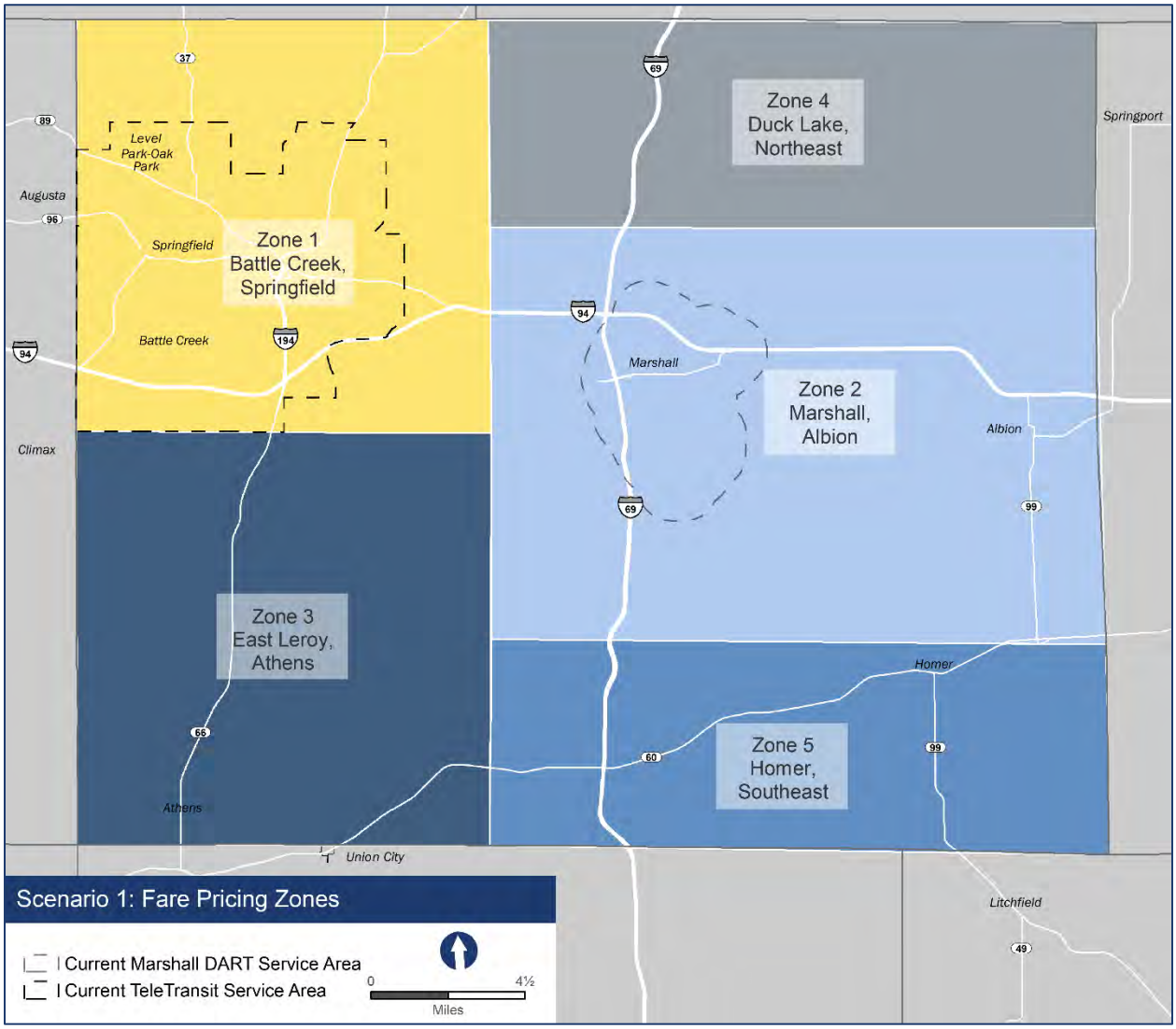
[46] If desired, some limitations on outside-county trips (e.g., the number of times per year that people can make such trips) could be implemented.
[47] Jackson County Transit. http://www.jacksontransit.com/fares.php#reserve_a_ride

happen in a central location and have the countywide system's branding, ADA paratransit-eligible customers would continue to be the top priority for service within Battle Creek Transit's fixed-route service area. Service for ADA-eligible customers would continue to be provided at the current fare, and would be of at least the same level and quality compared to current service. Some Community Action vehicles (likely those not tied to programs offered by Community Action) would become incorporated into the new countywide service. Marshall DART service would continue to operate, but under the countywide agency's branding. At least two dedicated vehicles would be assigned within the current Marshall DART service area so that Marshall residents do not see any decline in service. The service would operate under a new countywide authority.

There are a few policy options that the County could consider implementing to make this type of service more accessible to people of all incomes and more efficient (respectively):

- Discounted fares for eligible residents from low-income households.
- Discounted fares (e.g., fare reduced by $1 to $2) for trips originating in some areas (e.g. Monday – Zone 1, Tuesday – Zone 2, etc.) on certain days of the week. This would increase efficiency by encouraging people to make trips that are flexible in timing on the same day.

Figure B-1: Scenario 1 Zones



B.2. Scenario 2: Local Demand Response with Weekly Service to Battle Creek

In this scenario, local curb-to-curb public transit would be available daily. On specific weekdays (depending on the residents' home location), scheduled trips would be available to and from the Battle Creek area at a discounted price. This scenario uses the same five-zone structure as Scenario 1. Local trips are defined as those either within Zone 1 or within Zones 2 through 5 (travel between any of the Zones 2 through 5 would count as local). On a weekly basis, as shown in **Figure B-2**, trips would be provided between each of the individual Zones 2, 3, 4, and 5 (on respective weekdays) and Zone 1 (the Battle Creek area), and vice-versa, at the cost of a within-zone trip. A potential fare structure is show in **Table B-2**.

The service would operate from:

- Weekdays: 6:00 a.m. – 9:00 p.m.
- Saturday: 9:00 a.m. – 6:00 p.m.

The fare structure for local trips would be distance-based, with discounts for seniors and persons with disabilities, similar to Scenario 1. For those who are not ADA-eligible, trips that could be made using the BCT fixed-route service would not be eligible for this service. No trips outside the county would be provided.

Table B-2: Scenario 2 Potential Fare Structure

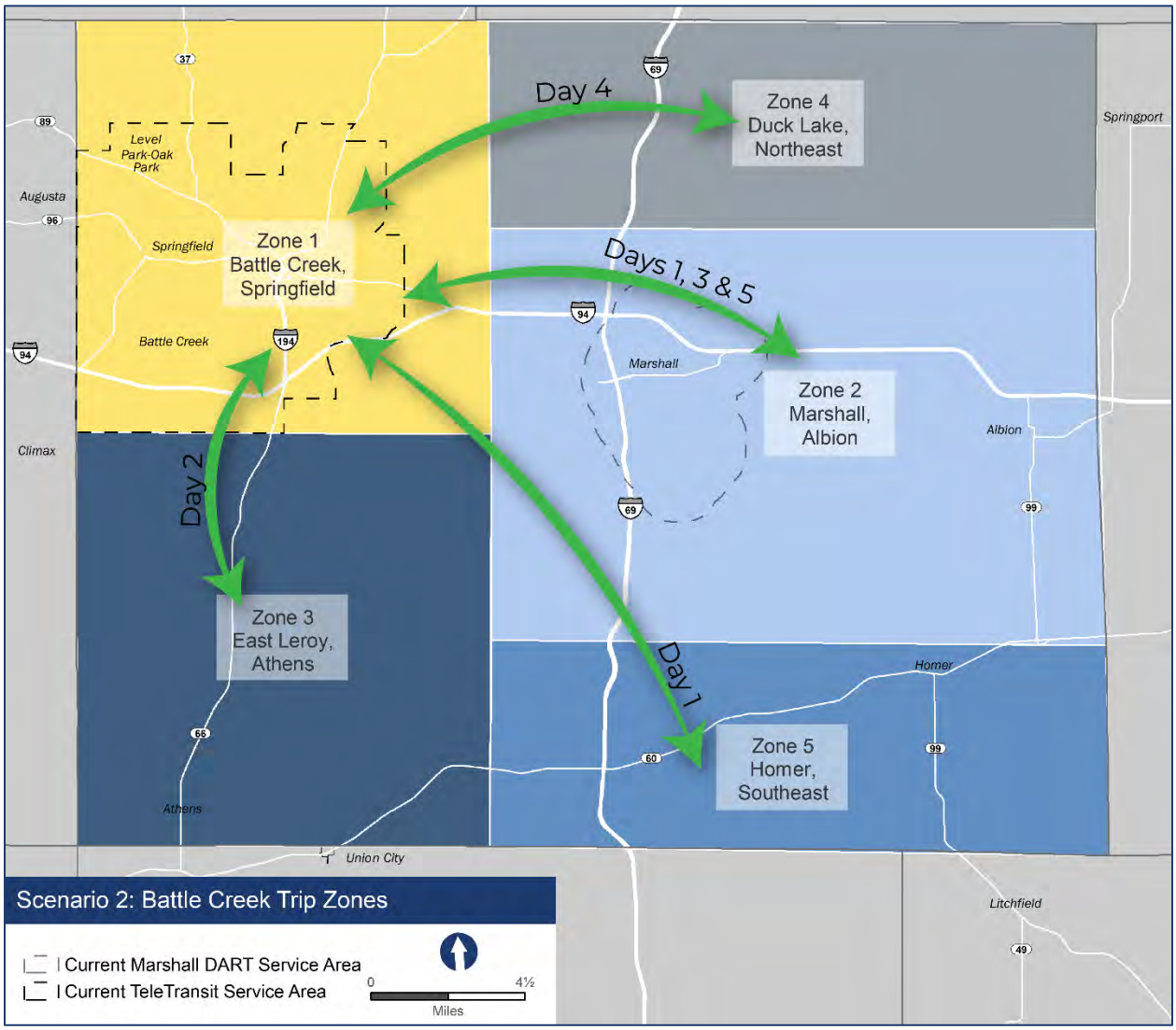
Example One-Way Fares by Type	*Within Battle Creek Zone, or Within All Other Zones*	*To Battle Creek Zone on Scheduled Day*	*To Battle Creek Zone Not on Scheduled Day*
General Passengers	$4.00	$4.00	$8.00
Senior Citizens	$2.00	$2.00	$5.00
Persons with Disabilities	$2.00	$2.00	$5.00

Reservations would be made by phone, which is the current ride scheduling process and would require no additional technology. Reservations made 24 hours in advance would be preferred and prioritized; however, same-day service would be provided as capacity allows (i.e., if it would not have any significant negative impacts to schedules created for advance reservation trips).

The service under this scenario would operate under a new countywide authority. From the customer's point of view, there would be one provider, regardless of where in the County a person lives. As in Scenario 1, Battle Creek Transit's Tele-Transit operations would become part of the countywide system. While all dispatching and scheduling would happen in a central location and have the countywide system's branding, ADA paratransit-eligible customers would continue to be the top priority for service within Battle Creek Transit's fixed-route service area. Service for ADA-eligible customers would continue to be provided at the current fare and would be of at least the same level and quality compared to current service. Some Community Action vehicles (likely those not tied to programs offered by Community Action) would become incorporated into the new countywide service. Marshall DART service would continue to operate, but under the countywide agency's branding. At least two dedicated vehicles would be assigned within the current Marshall DART service area so that Marshall residents do not see any decline in service.

As with Scenario 1, there are potential policy options such as discounted fares for making the service more accessible to residents from low-income households.

Figure B-2: Scenario 2 Battle Creek Trip Days



The recommended public transit service scenario was shaped from the evaluation of the two draft scenarios, both by the project team as well as based on input from stakeholders and the public. The recommended scenario, outlined in **Section 5**, considers the valuable and informative feedback received from the public and the stakeholders.

The public outreach process, outlined in **Appendix A**, helped the project team understand which service scenario *features* are most important to residents in and around Calhoun County. Respondents expressed a strong preference for same-day ride requests, online/mobile ride scheduling, and discounted price options for people with disabilities, low-income, seniors and/or students.

Stakeholders were presented with both service scenarios and asked to evaluate each one using a scoring rubric derived from the policy framework and evaluations rubric created by the consultant team. Stakeholders were grouped by their affiliations (non-profit representatives, transportation providers, cities, etc.) and given a half hour to discuss amongst themselves and come up with a total score for each scenario. The highest possible score for each scenario was 25 points. Overall, stakeholders scored scenario 1 slightly higher (16.6 points versus 15.2); among the cities and the consultant team, however, Scenario 2 scored slightly higher.

Table B-3: Stakeholder Group Scenario Scoring Activity Results

Stakeholder Group	Scenario 1 Total Score	Scenario 2 Total Score
Non-Profit	18	13
Transportation Providers	17	15
Workforce	15	10
Cities	15	18
Consultant Team	18	20
Average	***16.6***	***15.2***

Much of the feedback received from stakeholders included concerns about the following points:

- If longer hours are not included, a major portion of the workforce will be left out.
- Discounted fares for seniors needs to be comparable to the current fare offered to seniors.
- Funding will be a major issue; it may be beneficial to consider asking for constributions from the major ride generators - i.e., major employers such as Oaklawn.

The total scores given to each evaluation criterion by the consultant team are shown below (**Table B-4**). Not every measure for the criterion was scored because cost estimates were still under development and performance of the service is not yet known, as will be the case as the evaluation framework is used in the future. Scenario 1 scored higher for Support of Other County Goals and Transportation Benefits. Scenario 1 provides more opportunities for regional connections by providing trips outside the county, and better supports workforce development by providing more hours of service. Scenario 2 scored higher for Cost and Funding and Implementation. Scenario 2 has a lower annual operating cost and has a shorter term and less complex implementation outlook.

Table B-4: Consultant Team Evaluation of Scenarios

Evaluation Criterion	Scenario 1 Score	Scenario 2 Score
Community Support (1 of 3 measures included)	1	1
Transportation Benefits (2 of 3 measures included)	6	5
Cost and Funding (1 of 7 measures included)	1	3
Implementation (3 of 4 measures included)	4	6
Estimated Performance (0 of 3 measures included)	n/a	n/a
Support for Other County Goals (6 of 6 measures included)	6	5
Total Score	***18***	***21***

Table B-5: Comparison of Two Presented Scenarios with Final (Recommended) Scenario

Scenario 1	Countywide Service with Zone-Based Fares	Scenario 2	Local Service with Scheduled Trips to Battle Creek	Final Service Scenario	Service in Participating Jurisdictions with Scheduled Trips to Battle Creek
Costs to Riders	Zone-based fares Discounted fares for seniors and people with disabilities	***Costs to Riders***	Zone-based fares; weekly trips to Battle Creek area would cost the same as within-zone fare Discounted fares for seniors and people with disabilities	***Costs to Riders***	Zone-based fares, discounted fares for seniors and people with disabilities Possible passes and/or discounts for students and/or veterans
Span	M-F: 5:00 a.m. – 10:00 p.m. Sat: 9:00 a.m. – 6:00 p.m. Sun: 10:00 a.m. – 3:00 p.m.	***Span***	M-F: 6:00 a.m. – 9:00 p.m. Sat: 9:00 a.m. – 6:00 p.m.	***Span***	Hours vary by part of county. In general, M-F: 6:00 a.m. – 9:00 p.m. (until 3:00 a.m. in the Battle Creek area) Sat: 9:00 a.m. – 6:00 p.m.
Reservations System	Phone, online, or app-based	***Reservations System***	Phone only	***Reservations System***	Phone or, upon implementation, web- and app-based
Advance Reservations	Reservations 24 hours in advance preferred; same-day service will be provided as capacity allows; wait times will generally be lower for those who request 24 hours in advance.	***Advance Reservations***	Reservations 24 hours in advance preferred; same-day service will be provided as capacity and timing (in the case of trips to Zone 1) allows.	***Advance Reservations***	Same-day service in smaller geographies (e.g., City of Marshall); reservations 24 in advance for all other services; may transition to same-day for all trips in the future as resources and technology allow.
Prioritization of Rides	People with disabilities in BCT fixed-route service area; otherwise, all riders	***Prioritization of Rides***	People with disabilities in BCT fixed-route service area; otherwise, all riders	***Prioritization of Rides***	Seniors and people with disabilities, those participating in Community Action Programs

Scenario 1	Countywide Service with Zone-Based Fares	Scenario 2	Local Service with Scheduled Trips to Battle Creek	Final Service Scenario	Service in Participating Jurisdictions with Scheduled Trips to Battle Creek
Service Area	Countywide, 5 zones and up to 10 miles outside county boundaries	***Service Area***	Service covers entire county only; service defined as "local" would be provided daily, with countywide service (depending on origin location) offered only on specified days.	***Service Area***	Entire county
Governance	Countywide authority, merged with Battle Creek Tele-Transit (similar to Kalamazoo)	***Governance***	Countywide authority, merged with Battle Creek Tele-Transit (similar to Kalamazoo)	***Governance***	Countywide authority for all demand response services; fixed-route service operated either by BCT or by a new authority (BCATA)
Other Provider Roles	Community Action partially incorporated into countywide service; Marshall DART fully incorporated at current service level; AMC service eliminated (with the current need for that service met through the new service)	***Other Provider Roles***	Community Action partially incorporated into countywide service; Marshall DART fully incorporated at current service level; AMC service eliminated (with the current need for that service met through the new service)	***Other Provider Roles***	City of Marshall, Community Action, and AMC service integrated under the countywide authority
Total System Cost	TBD	***Total System Cost***	TBD	***Total System Cost***	See **Section 7.**
Number of Vehicles	TBD	***Number of Vehicles***	TBD	***Number of Vehicles***	Est. 17 in operation during maximum service; fleet of approximately 23

Scenario 1	Countywide Service with Zone-Based Fares	Scenario 2	Local Service with Scheduled Trips to Battle Creek	Final Service Scenario	Service in Participating Jurisdictions with Scheduled Trips to Battle Creek
Benefits	Countywide access on any day; distance-based fares incentivize shorter trips; use of newer technologies for booking trips; more service hours	***Benefits***	Reduced fares on designated days benefits people traveling to Battle Creek; zone-based trips to Battle Creek are more efficient; lower total cost of operating system	***Benefits***	Reduced fares for people with disabilities and seniors, flexibility to travel on any day of the week (Monday through Saturday); discounts for scheduled Battle Creek trips

APPENDIX C: DEMAND ESTIMATION METHODOLOGY

This appendix describes the methodology used to estimate ridership demand for proposed demand response service in Calhoun County.

C.1. Methodology

The National Center for Transit Research (NCTR) developed a methodology for estimating ridership of rural demand-response transit services in 2016.[48] Based on nationwide trends in demand-response ridership, the model uses demographic data and service characteristics to calculate a single ridership estimate.

C.2. Background

Demand response ridership estimation was performed for all areas of Calhoun County outside of Battle Creek using Model #1 from the NCTR report, which calculates ridership based on seven characteristics of the demand response service: service area population, percentage of population over 65 years old, percentage of population without access to a vehicle, percentage of population with access to a different demand-response service, whether the agency also operates a fixed-route service, whether the agency operates strictly within a municipality, and the fare. In addition, a set of constants accounts for regional differences in ridership behavior. The model's final equation was calibrated against National Transit Database data from 731 rural demand-response transit agencies across the United States. This equation is described below:

Natural log of ridership =

- 0.83 × natural log of population
- + 7.99 × percentage of population aged 65 or older
- + 21.15 × percentage of population without access to a vehicle
- - 0.65 if the agency also operates a fixed-route service[49]
- - 0.41 × percentage of population that has access to other demand-response service
- + 0.77 if the agency operates strictly within a municipality
- - 0.24 × natural log of the fare
- + 0.50 as FTA Region 5 service

NCTR also considered the influence of people with disabilities on ridership but did not find a statistically significant effect, due to the availability of the demand response services to the general public.

C.3. Ridership Estimation

Ridership for the non-urban parts of the county was estimated using the Model #1 equation. Figures from the American Community Survey (ACS) provided the population inputs (total population, senior population, and no-car populations). The average fare was assumed to be $1.65 per trip.

NCTR's model assumes 365 annual days of service and calculates average estimated annual ridership. As the service is proposed to operate Monday through Saturday for a total 307 days per year, to calculate annual ridership, the result from the Model #1 equation was scaled from seven days per week to six days per week. Daily ridership was found according to the 307-day service year.

To estimate the demand for trips in the current Battle Creek Transit Tele-Transit service area, a different approach was taken. The current service provides 23,250 rides annually and denies around 250 rides a month due to limited resources and space. Given the current denial rate, the annual demand for demand response transit in

[48] For more information, see: https://www.nctr.usf.edu/wp-content/uploads/2016/09/21177060-NCTR-NDSU08.pdf.

[49] The presence of fixed-route service has a great impact on ridership estimations. While this model did not include the Tele-Transit service area, it did include the presence of fixed-route service because the rest of the county has the opportunity to connect to this service with the demand response service.

the urban part of the county was estimated to be a minimum of 26,250. Due to changes in service availability from Aequitas Mobility Services in Calhoun County in early 2020, and based on reports of increased Tele-Transit demand, it is estimated that the actual demand for trips is even higher, and there are known workforce (late shift) transportation needs in the County.

C.3.1. Data Sources

Population characteristics for Calhoun County was accessed from the US Census Bureau's American Community Survey five-year estimates for 2011-2015, table numbers B01001 (population by age and total population) and B08014 (workers without access to a vehicle and total workers). Population growth data for Calhoun County was sourced from the Bureau of Economic and Business Research at the University of Florida for 2015-2020.

C.3.2. Limitations

The model was formulated to estimate ridership for the entire service area for demand response, and is not able to take into account level of service details about the fixed-route services provided locally or likely variations in fares for different demographic groups. The model is intended to be used as a relatively high-level planning tool. For this reason, two different methods were used for the urban and non-urban portions of Calhoun County. The senior population is expected to rise in the next decade while overall population is estimated to stay relatively the same. This could increase demand in the future and is not accounted for in this analysis.

APPENDIX D: PERFORMANCE MEASURES AND STANDARDS

Calhoun County stakeholders have identified a vision and accompanying guiding principles to which all future transit services in the county should adhere. As expressed in the vision statement:

The Calhoun County Transit Study and its public and private partners envision cost-effective, user-friendly, sustainable, and equitable transit options for all county residents that offer connections to all aspects of community life.

The seven guiding principles highlight the importance of the following goals to the County's future transit network:

- Equitable access
- Customer-friendly services
- Inter-county and regional connections between communities
- Involvement of a broad, inclusive set of partners
- Stable, sustainable, and equitable funding sources
- Support for other county public policy goals

Implementation of a performance monitoring system, based on a selected set of performance measures and associated standards or benchmarks, will enable the county to track progress toward this vision, and to ensure that funded services and programs are making good use of the resources invested by the county.

Following an overview of performance measurement and a review of the approach to transit performance monitoring in Michigan, this memo presents potential and suggested performance measures for individual transit services and the county's transit network as a whole, as well as associated standards and benchmarks. Suggestions for performance monitoring procedures are also presented.

D.1. Performance Measurement Basics

Performance monitoring of transit services enables a transit funder or provider to achieve a number of goals:

- Make operating or capital funding decisions
- Meet federal or state requirements that are a condition of funding, and comply with other statutory/regulatory requirements
- Monitor trends, identify potential problems, improve service, and document successes
- Track progress toward meeting goals and objectives
- Demonstrate the wise use of public funds for local/regional transit services and the value of those services to their communities

A performance monitoring system has two major components: the specific measures that are selected to indicate progress toward desired goals and objectives and associated standards or benchmarks for performance, and the procedures employed for collecting, reporting, and reviewing performance data.

Identifying specific performance measures to be tracked requires a tradeoff between the amount of information that is desirable for thoroughly evaluating all aspects of service and the feasibility of data collection, reporting, and compilation for transit providers and funders. For best success, measures should link directly to goals and objectives, be specific to different service types or areas, and be based on data that is easy to collect. Widely used performance indicators include those that measure:

- Efficiency
  - Cost per revenue vehicle hour or vehicle mile
- Effectiveness
  - Cost per one-way passenger trip

  - Farebox recovery ratio or subsidy per one-way passenger trip
- Productivity
  - One-way passenger trips per vehicle revenue hour

Service quality and safety/security are other areas that may be measured in a performance monitoring system. Possible service quality measures applicable to fixed-route and demand response services include:

- Service quality—Fixed-route services
  - Service span (hours during which service is provided on weekdays, weekends)
  - Average system peak headway (time between scheduled trips)
  - Revenue miles per square mile of service area
  - Revenue miles or hours per capita
  - On-time performance or service reliability (there are many options for defintions of these measures)
  - Number and nature of complaints and compliments, and number per 1,000 passenger trips

- Service quality—Demand-response services
  - On-time performance for pick-ups and drop-offs: number, percentage of pick-ups made within an established "window" around the agreed upon pick-up time; number of drop-offs made before stated appointment time
  - Travel time: number, percentage of trips within established maximum travel time
  - Missed trips: number, percentage of trips not provided due to error or operational problems
  - Denied trips: number, percentage of trip requests that cannot be placed on vehicle schedules
  - Telephone access for reservations and trip information: number, percentage of calls on hold for more than established maximum desired times
  - Number and nature of complaints and compliments per 1,000 passenger trips

Many transit providers, including rural providers, are required to comply with standardized reporting requirements for the National Transit Database (NTD), which can be a source of performance data. As described below, Michigan Department of Transportation (MDOT) has also established uniform state data reporting requirements for transit providers. Providers may identify additional data to track in order to measure progress toward local goals and objectives.

Another important element of performance monitoring is to define not only specific measures of aspects of performance, but standards or benchmarks for each area. In other words, what defines acceptable or better levels of performance (or unacceptable levels)? A transit provider may track and evaluate its performance over time, compare performance to that of peer systems, or use industry standards or benchmarks.

Finally, procedures and schedules for collecting, reporting, and analyzing performance data must be developed to ensure that information is actually used to improve service and meet performance goals.

All aspects of monitoring the performance of transit services in Calhoun County are discussed in the following sections.

D.2. Performance Measurement in Michigan

MDOT's Office of Passenger Transportation administers federal and state funding for public transportation services in the state from a number of grant programs. Transportation providers utilize MDOT's online Public Transportation Management System (PTMS) to submit grant applications and report financial, operational, and asset condition information throughout the fiscal year.

MDOT uses reported revenue and expense data to make payments of operating assistance to providers. Information that describes the characteristics and condition of vehicles, equipment, and facilities is used to fulfill federal transit asset management requirements, make asset replacement decisions, and, together with ridership

data, assess vehicle utilization. Reported operational data includes passenger trips, ridership breakdowns by type of rider, vehicle miles, vehicle hours, and fuel usage.

While MDOT has not established ranges of acceptable performance or performance targets, providers may use the report generation function of PTMS to access performance data pertaining to their own services or those of other providers. Using the data and tools that are part of PTMS, providers may measure their performance in a number of areas, selected to reflect local priorities, either over time or in comparison to peer systems.

Performance data from PTMS for counties and transit systems located near and similar to Calhoun County in terms of area characteristics and fleet size is presented in the performance measures section below.

D.3. Performance Measures to Guide Calhoun County Funding Decisions

D.3.1. Performance Measures

A simple list of performance measures that will enable Calhoun County (or a new public transportation authority or authorities charged with overseeing transit services in the county) to evaluate existing and proposed services for which transportation providers are seeking funding, or that the new authority(ies) are considering for implementation includes:

- Cost per vehicle hour
  - Total operating expenses/total vehicle hours (including deadhead hours between pull-out and pull-in from the agency facility, but excluding hours for scheduled operator breaks)
- Cost per vehicle mile
  - Total operating expenses/total vehicle miles (including deadhead miles but excluding miles traveled for operator breaks)
- Cost per passenger
  - Total operating expenses/ one-way passenger trips (including both fare-paying and non-fare-paying riders)
- Passengers per vehicle hour
  - One-way passenger trips/total vehicle hours
- Farebox recovery ratio
  - Farebox revenues/total operating expenses, may also include local subsidies and contract revenues to measure support not only from riders but also local communities

Those measures are all applicable to both fixed-route and demand response services, but the standards for acceptable performance will be different for each type of service. Successful fixed-route services will achieve higher numbers of passengers per vehicle hour than successful demand response services, for example. Standards may also vary by size or type of area—both fixed-route and demand response services in nonurban areas are likely to exhibit higher unit costs (per vehicle hour or vehicle mile) and lower productivity than those that operate in higher density urban areas.

For example, **Table D-1** shows several measures of 2018 cost and productivity—cost/passenger trip, cost/mile, cost/vehicle hour, passenger trips/vehicle hour, and passengers/mile—for Calhoun County providers and those operating similar services in neighboring counties. Measures are shown for Battle Creek Transit and Jackson Area Transportation Authority, which operate service in similarly sized urban areas, the larger Kalamazoo urban area, the small city of Marshall, and non-urbanized county services in Branch, Jackson, Kalamazoo, St. Joseph, and Van Buren counties. Services captured in the urban area statistics include both fixed-route and demand response services; county service statistics refer to demand response service only.

As can be seen in **Table D-1**, services that operate in the medium-sized urban areas of Battle Creek and Jackson show higher levels of productivity and lower unit costs than the county services that operate in nonurban areas. Services in the larger Kalamazoo urban area show even higher productivity and lower unit costs. Even if performance measures were calculated separately for the fixed-route and demand response services provided in the urban areas, the same pattern is likely to be evident.

Table D-1: Performance Indicators, Selected Michigan Transit Providers, 2018

Service/Provider	Passengers/ Vehicle Hour	Passengers/ Vehicle Mile	Cost/ Passenger	Cost/Vehicle Hour	Cost/Vehicle Mile
Urban Medium—Regular Service (Fixed-Route and Demand Response)					
Battle Creek Transit	11.59	.81	$9.85	$107.67	$7.95
Jackson Area Transportation Authority	11.09	.88	$7.60	$84.24	$6.70
Average	**11.34**	**.85**	**$8.73**	**$95.96**	**$7.33**
Urban Large—Regular Service (Fixed-Route and Demand Response)					
Kalamazoo Central County Transportation Authority	14.12	1.03	$5.30	$74.86	$5.44
Nonurban City—Regular Service (Demand Response)					
City of Marshall	3.97	.30	$12.00	$49.21	$3.77
Nonurban County—Regular Service (Demand Response)					
Jackson Area Transportation Authority	.82	.05	$148.01	$121.60	$.05
Kalamazoo Central County Transportation Authority	1.83	.13	$26.56	$48.71	$3.43
Branch Area Transit Authority	4.37	.33	$13.46	$58.82	$4.43
St. Joseph County Transportation Authority	2.02	.11	$23.86	$48.31	$2.54
Van Buren County Board of Commissioners	2.36	.16	$19.95	$47.17	$3.29
Average	**2.28**	**.16**	**$46.37**	**$74.76**	**$3.50**

Source: Reports generated by PTMS by F. Featherly, MDOT Office of Passenger Transportation, July 2019 and Mallory Avis, Battle Creek Transit Manager, September 2019

Performance measures and standards for brand new services may be less stringent during implementation and ramp-up phases than measures and standards for existing services, to recognize that time is typically needed for potential riders to become more aware of new services and for ridership to grow.

D.3.2. Ranges of Acceptable Performance

Table D-2 presents performance data for different types of transit services that can be used to determine acceptable levels of performance, or performance standards or benchmarks, for future services that are funded

with Calhoun County resources. Fixed-route deviated fixed-route (also known as route deviation, flexible service, or flex routes) and demand response service data is included.

Table D-2: Performance Data, Standards, and Benchmarks

Service Type and Performance Measure	TCRP Report 136 (2007 data)	2017 Greater Minnesota Transit Investment Plan	2017 GMTIP Technical Memo: Performance Measures and Standards	2017 Rural Transit Fact Book (national averages, 2015 data)	Peer Michigan Services*
Fixed-Route					
Cost/ Vehicle Hour	---		$85	---	$74.86 large urban $95.96 average, medium urban
Cost/ Vehicle Mile	---		---	$3.51	$5.44 large urban $7.33 average, medium urban
Cost/ Passenger	---	20-35% over system average, review route	$5	$9.11	$5.30 large urban $8.73 average, medium urban
Passengers/ Vehicle Hour	---		15	11.2	14.12 large urban 11.34 average, medium urban
Fare or Cost Recovery Ratio	---	5% above required local share: total 20% rural, 25% urban	15%, including local subsidy	.12	---
Deviated Fixed-Route					
Cost/ Vehicle Hour	---		$50	---	----
Cost/ Vehicle Mile	---		---	---	--
Cost/ Passenger	---		$6	---	---
Passengers/ Vehicle Hour	---	8 urban 5 rural	8	---	---
Fare or Cost Recovery Ratio	---	5% above required local share: total 20% rural, 25% urban	15%, including local subsidy and contract revenues	---	---
Demand Response					
Cost/ Vehicle Hour	$35-74 single municipality $32-78 single county	---	$60	---	$49.21 nonurban city $74.76 average, nonurban county
Cost/ Vehicle Mile	$2.57-5.84 single municipality	---	---	$2.22	$3.77 nonurban city

Service Type and Performance Measure	TCRP Report 136 (2007 data)	2017 Greater Minnesota Transit Investment Plan	2017 GMTIP Technical Memo: Performance Measures and Standards	2017 Rural Transit Fact Book (national averages, 2015 data)	Peer Michigan Services*
	$1.49-5.75 single county				$3.50 average, nonurban county
Cost/ Passenger	$5-31 single municipality $8-31 single county	---	$15	$14.68	$12 nonurban city $46.37 average, nonurban county
Passengers/ Vehicle Hour	2.4-7 single municipality 2-6.2 single county	3 urban 2 rural	3	2.6	3.97 nonurban city 2.28 average, nonurban county
Fare or Cost Recovery Ratio		5% above required local share: total 20% rural, 25% urban	15%, including local subsidy and contract revenues	.07	---

*Fixed-route data also includes urban demand response service

Sources for **Table D-2** include:

- TCRP Report 136, Guidebook for Rural Demand Response Transportation: Measuring, Assessing, and Improving Performance (2009), which includes 2007 performance data obtained from 24 representative rural demand response systems
- The 2017 Greater Minnesota Transit Investment Plan, developed by the Minnesota Department of Transportation, and a corollary technical memo entitled Performance Measures, Evaluation Criteria, and Targets—Policy Framework (2016), which present perofrmance measures and standards for different types of transit services in Greater Minnesota (i.e., outside of the Twin Cities metropolitan area). The performance measures and standards set forth in the technical memo were substantially scaled back in the final GMTIP, but are instructive nonetheless.
- The 2017 Rural Transit Fact Book, prepared by the Upper Great Plains Transportation Institute/Small Urban and Rural Data Center of North Dakota State University. Performance data for 2015 was drawn from the Rural National Transit Database and represents national averages.

This data can also be used in the application of the policy framework and methodology for evaluation of potential transit investments discussed in **Section 3**.

D.3.3. On-Demand Services

On-demand services may be considered for implementation in Calhoun County in the future. Such services deliver trips in real time and feature use of a smartphone app for the request of and payment for trips. Transportation Network Companies (TNCs) such as Uber and Lyft provide on-demand service that is referred to as ridesharing or ride hailing. Microtransit services enable transit providers to retain more control over vehicles, drivers, and service policies than ridesharing/ridehailing services. Microtransit providers such as Via and TransLoc offer transit providers either the technology to operate their own on-demand service or turnkey operations operated by the contractor that include vehicles and drivers.

On-demand services have been implemented in other areas—typically as pilot projects— to replace or substitute for fixed-route service in areas of low density, provide first/last-mile connections to bus stops or transit stations, meet needs during periods of low demand, such as employment trips to 2nd or 3rd shift jobs, or offer options to

specific groups of target riders, such as individuals with lower incomes. In some areas, on-demand services provide a component of ADA complementary paratransit service, or premium service for ADA-eligible riders.

Since partnerships between local governments or transit agencies and microtransit providers are still relatively new, data regarding performance and standards is limited.

According to the 2019 report, Partnerships Between Transit Agencies and Transportation Network Companies (TCRP 204), which interviewed 37 transit agencies that partnered with a TNC, only 27 percent have developed a formal evaluation framework or process for their partnership services. The most common performance measures used are 1) cost per trip, 2) customer satisfaction, 3) ridership or use, and 4) overall [pilot] costs. The report noted that agencies often use ridership/use and costs as their indicators of success. In rare cases agencies measure new populations served to see mode shift. Many of the surveyed agencies set a benchmark for each metric to be an improvement from the cost and performance of the service(s) that many of these pilots are replacing.

Table D-3 shows the performance indicators that some of the agencies surveyed for TCRP 204 apply to their TNC/microtransit partnerships.

Table D-3: Examples of Indicators of Success for Surveyed Agencies

Agency	Type (intent)	Vendor & Agreement	Indicators/Metrics
BBB	Paratransit	Lyft – Formal, Subsidized	Overall ridership Cost per ride Rider satisfaction
CapMetro	First Mile / Last Mile	RideAustin (non-profit TNC) – Formal, Subsidized	Overall ridership Cost per ride Rider satisfaction Overall cost of pilot vs. cost of fixed-route
CPTA Rabbit Transit	Paratransit	Lyft, Uber – Formal, Subsidized	Monthly ridership
GRTC	Paratransit	UZURV, RoundTrip (hybrid network companies) – Formal, Subsidized	Overall ridership % of ADA trips taken on CARE On-Demand
LA Metro	First Mile / Last Mile	Via – Formal, Subsidized, Mobility on Demand[50]	Ongoing: developing indicators that align with project goals
LAVTA	First Mile / Last Mile	Lyft, Uber, DeSoto Cab Company (local) – Formal, Subsidized	Monthly ridership Cost per ride Origins and destinations
MBTA	Paratransit	Uber, Lyft – Formal, Subsidized	Monthly ridership Overall cost savings Customer mobility
Omnitrans	Paratransit	Lyft, Taxi company (local) – Formal, Subsidized	Monthly ridership
PSTA	Late Night, Paratransit, First/Last Mile,	Uber, United Taxi, Wheelchair Transport, Care Ride, Lyft, Goin[51] –	Overall ridership Lower response time Number of unique users

[50] FTA program that provides funding to qualified mobility activities- "The federal share of project costs under this program is limited to 80 percent…The applicant must provide the local share of the net project cost in cash, or in-kind". https://www.transit.dot.gov/research-innovation/mobility-demand-mod-sandbox-program

[51] They have three intents (late night, paratransit, and first/last mile), the vendors each have different roles to meet each different intent.

		Formal, Subsidized, Mobility on Demand	

D.4. Evaluating Progress Toward Achievement of Calhoun County's Transit Vision

The second aspect of performance monitoring that pertains to the development of countywide transit services in Calhoun County is tracking progress toward the achievement of the vision and guiding principles for transit services developed by Calhoun County stakeholders. Data that could be collected to that end is shown below.

- Equitable access
  - Number of communities that receive transit services
  - Service hours per capita by community (scheduled fixed-route service hours or actual demand response service hours)
  - Ridership by community
- Connections between communities
  - Number of intercity routes or services
- Options in rural/outlying areas communities
  - Service hours per capita in rural communities
  - Number of communities receiving service for the first time
- Mobility for vulnerable populations
  - Systemwide ridership by older adults, people with disabilities, and individuals with lower incomes
- Support for access to jobs/workforce development
  - Number of trips provided systemwide for work, training, and education
  - Number and description of collaborative projects between transit providers and employers and educational institutions
- Regional coordination/connections
  - Number of routes or services that provide connections to neighboring counties
  - Number and description of collaborations with neighboring transit systems to coordinate services
- Cost-effective services
  - Overall cost per vehicle hour, by service type
  - Overall cost per vehicle mile, by service type
  - Overall cost per passenger trip, by service type
- User-friendly services: easy to use, affordable, safe, comfortable, convenient
  - Customer satisfaction as measured through online or onboard surveys
  - By service type: span of service, service frequency (fixed-route), response time or advance notice for trip reservations (demand response), accident rate, average fare, availability of service information in multiple formats (print, online, translated if necessary), percentage of population within 1/2 of a mile of a transit route or in a demand response service area
- Partnerships and collaboration
  - Number and description of collaborative projects between transit providers and stakeholders, including employers, non-profit organizations, educational insititutions, health care providers, neighboring governments or transit providers, and others
  - Number of organizations that provide financial or in-kind support for transit services
- Sustainable, stable, equitable sources of funding
  - Number of funding sources that support transit services
  - Local subsidy per capita by community
- Support for other county public policy goals
  - Measures selected to capture alignment with goals that may be set in the future

D.5. Performance Monitoring Procedures

A suggested approach to collecting, reporting, and reviewing performance data from the county's transit services consists of four steps:

- Initial collection of key performance measures at the time of funding decisions
- Periodic, updated performance reports from service providers
- Analysis of data to monitor trends, identify potential problems, and support adjustments to services
- Periodic monitoring of service delivery to verify reported data

While the preferred governance structure for countywide transit services has yet to be selected, this discussion assumes that at least one new public transportation authority will be created to oversee services outside of the Battle Creek area. Staff and the governing board of that authority would have responsibility for carrying out the performance monitoring procedures outlined below for those services. Responsibility for monitoring the performance of Battle Creek area services would fall either to the City of Battle Creek or a new authority formed to oversee those services, depending on the governance and funding alternative selected. If a new authority is created for the Battle Creek area, the suggested performance monitoring procedures described here would be applicable. If the city continues to oversee and provide local funding for Battle Creek area service, its current performance monitoring procedures would also continue.

D.5.1. Initial Performance Measures

As discussed in **Section 3**, the policy framework and methodology for prioritizing transit investments includes several performance measures among the criteria to be used to evaluate potential services: anticipated cost per one-way passenger trip, cost per vehicle hour, and one-way passenger trips per vehicle hour.

For new service proposals, this data would be submitted by transportation providers responding to an RFP for contracted services issued the county transportation authority or developed internally by service planners working for the authority, either as in-house staff, contractors, or through a local agreement with a planning agency such as BCATS. The performance measures and the information presented above about ranges of performance and standards/benchmarks would be used by the authority, together with the other selection criteria built into the framework and methodology, to determine whether or not a particular service or project should receive county transit funding.

Periodic Reporting

Once services are implemented, ongoing reporting, by service type, to the county authority will help both the authority and the service provider to identify changes and determine if any corrective action is required.

In addition to the basic performance measures of efficiency and effectiveness, measures of service quality should be included in monthly reports.

Monthly reports are most helpful. Comparing each month's performance to the same month in the preceding year as well as to the previous month can smooth out seasonal variations in performance data. At a minimum, selected standards or benchmarks should be met; the goal should be to achieve modest improvements in each measure over the course of a year.

Monthly reports should also be shared with any consumer advisory committees that are established, not only to keep them apprised of the system's performance, but also to review established standards for their compatibility with actual operating experience, and to obtain riders' input on corrective actions that may be needed.

To track progress toward achievement of the stated vision for Calhoun County transit services, the measures suggested above could be calculated annually for the transportation system as a whole, rather than for any one service or program, and compared to the previous year's measures.

Analysis of Performance Data

More thorough analysis of performance measures should be conducted quarterly. Reasons for the failure of any services to meet standards or for declining performance should be explored, and corrective actions considered.

Periodic Service Monitoring

To check on service delivery and verify the accuracy of reported data in a more qualitative way, staff of the county authority could implement a system of ongoing service monitoring.

In addition to review of performance data, on-street monitoring of services is useful to observe arrival, boarding and drop-off times, driver behavior, and vehicle condition, especially if conducted at random. Periodic visits to providers' operating facilities to inspect vehicles, review maintenance files, and check driver files for documentation of licenses, training, drug and alcohol testing, and other requirements, is also helpful.

A thorough and complete complaint investigation process that ensures a timely written response to every customer who lodges a complaint, and review of complaint records and data, is another way to monitor service.