



Connecting Communities:

Options and Considerations for Enhancing Rural Transit

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Eno
Center for Transportation

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About the Eno Center for Transportation

The Eno Center for Transportation (Eno) was founded in 1921 by William Phelps Eno (1859-1945), who pioneered the field of traffic management in the United States and Europe. Mr. Eno sought to promote safe mobility by ensuring that traffic control became an accepted role of government and traffic engineering became a recognized professional discipline. As a non-profit 501(c)(3) organization, Eno can look back on a long and proud history as a thought leader in national transportation policy with a strong training and leadership program.

The leader in its field for more than a century, Eno provides government and industry leaders with timely research and an independent voice on policy issues. Eno publishes rigorous, objective analyses on the problems facing transportation and provides ideas for, and a clear path toward possible solutions. In addition, for nearly two decades, Eno Transportation Weekly (ETW) has been the premier federal transportation policy publication for transportation leaders across the country.

Through its professional development programs, Eno cultivates creative and visionary leadership by giving public and private transportation leaders the tools and training they need to succeed together. Since its inception, Eno has instructed over 3,500 transportation professionals.

Eno enjoys a truly unique position as the hub of a network of transportation industry leaders with a smart and dedicated staff and a solid reputation for credible, independent, and impactful work.

Eno is committed to transparency, independence, and mission-driven work. In all our endeavors, Eno is guided by our core institutional values: independence, excellence, collaboration, relevance, and entrepreneurialism. We do not seek or accept financial support that would undermine these values or compromise our commitment to remaining unbiased and independent. Through our annual Impact Reports, we publish a full list of our donors and members to ensure accountability and uphold public trust.

A Note from the German Embassy

“Meridian, Mississippi – The Not Too Distant Future” – These words opened a dramatic scene in the X-Men film series, but today, they point to a very real possibility for the city of Meridian in the great State of Mississippi. A world of tomorrow shaped not by fiction, but by the choices we make about how people move through the community.

But like in all series, let us start with how we got here. The Government of the Federal Republic of Germany believes in good foreign policy which positively influences our host country. That is why the German Embassy in Washington D.C., in coordination with the Consulate General in Atlanta (also responsible for Mississippi), was given the opportunity to apply for project funding as part of the “Climate Bridge.” In thinking about climate impacts, we considered that one third of greenhouse gases come from transportation and therefore, public transportation is one important element in protecting the environment. In rural areas and smaller towns, removed from large metropolitan regions, public transportation can be particularly challenging – often not even seen as an option. It is often perceived as being inflexible and expensive. Our initial application had this wonderful title: “Public Transportation Goes Future! How customer-oriented modern mobility services can revolutionize rural areas and small Towns.” As you can see, I had some high-tech ideas already in mind as a solution (like app-based on-demand services with Autonomous shuttles).

But, in German, we have a saying: “Erstens kommt es anders und zweitens als man denkt”. While no translation between languages is perfect, and I fear the irony of the phrase in German is not captured here, this roughly translates as “sometimes things do not go as planned. And sometimes things simply are what they are.” I hesitate to say more, fearing I may pre-empt the study here, but the saying “keep it simple” is often more appropriate than fancy and cutting-edge technology.

By this point, you may have asked yourself: What does Germany have to do with a small city in Mississippi? Actually, there are many German factories operating in Mississippi. In fact, Germany is the third largest foreign investor in the state. So far, there are no German companies in, or around, Meridian specifically. Instead, the story goes like this: I recalled meeting former Meridian Mayor John Robert Smith at the joint “Track is Back” event with my Swiss and Austrian colleagues in 2022. Mayor Smith spoke passionately about public transportation in the south – which gave me the idea of using his hometown of Meridian as a study case. And it worked out!

So, beyond the presence of German factories in Mississippi, how else were German companies represented in this study? A household name in regional bus service – Greyhound– was acquired by Flix, a Germany company, in 2021, and they continue to provide daily service to Meridian. Deutsche Bahn, the state-owned German rail and bus service provider in Germany, met with us during the study to discuss how DB operates in Germany – and different strategies for regional transportation in the U.S. While we were glad to have the opportunity to talk about German companies in the

U.S., the greatest – and most important – aspect of this study was the opportunity for information sharing between two countries. Similarly, Germany faces challenges in rural areas of the country, and we are constantly looking for ways to improve our approaches to old problems in a rapidly changing world.

For the actual study, we embarked on a four-day field trip to Meridian, interviewing numerous Meridian residents, and we hosted an event at the German Embassy, inviting a list of practitioners and professionals in rural transit provision. After that it was crystal clear: Southern food is phenomenal, the people are amazing – and cities like Meridian could certainly benefit from public transportation. While the environmental impacts are important, there are numerous ways this asset could benefit residents and visitors – public transportation in Meridian is not just about buses or schedules. It's about opportunity, equity, and the kind of city they want to become – or return to being. Reliable transit connects people to work, education, healthcare, essential services, and an overall increased quality of life.

Economically, transit strengthens local businesses by bringing more customers through their doors. It attracts investment, increases property values near transit hubs, and establishes jobs in operations, maintenance, and infrastructure development. Environmentally, it reduces traffic and lowers emissions. There is a cost of not having transit, and we need to talk more about that.

I would like to thank the Eno Center for Transportation for going on this journey with me, for accepting our assignment, for investing so much time and energy, and for simply having fun. Thanks also for all the support from my colleagues at the German Consulate General in Atlanta. Finally, my special thanks, of course, goes to the wonderful people in Meridian – who are the stars of this paper.

What might Meridian, Mississippi (and other places in rural USA) look like now, not too far away? Read for yourself...

Joachim Eichhorn
Transportation Counselor,
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Executive Summary

Connecting Communities: Options and Considerations for Enhancing Rural Transit was developed out of a partnership between the Eno Center for Transportation and the German Embassy to explore different strategies and innovative approaches to providing transit in rural cities and regions. The study examines the persistent obstacles for rural communities to provide equitable, efficient, and financially sustainable transit options and evaluates potential solutions.

Rural areas face a range of challenges in providing public transportation. Rural populations are often older, lower-income, and more likely to have disabilities, which increases the importance of providing public transportation services. However, the low population density, dispersed development patterns, and limited public resources contribute to a high reliance on personal vehicles and difficulty providing high-quality transit at financially sustainable costs. Because of these factors, traditional methods of transit provision, like fixed-route systems, can be ineffective and costly to operate in rural areas. While some rural areas do provide fixed-route service, many areas are seeking other models that prioritize flexibility and lower costs instead of regularly scheduled service routes. These different models include on-demand service, where rides can be scheduled in advance with specific pick-up and drop-off locations, as well as models relying on partnerships with rideshare companies.

In this study, the Eno research team developed a series of case studies of transit provision in communities across the country to evaluate best practices, including the following:

- Fixed-route service: Provided by NRoute in Vicksburg, Mississippi
- On-Demand Microtransit and Fixed Route Hybrid Service: Provided by Bay Transit Express in Virginia
- Uber Transit Partnership: Provided in Kyle, Texas
- Lyft Rideshare Partnership: Provided in Monrovia, California

The report also examines the city of Meridian, Mississippi in greater depth, looking at both transit needs and service provision, and identifying challenges and opportunities for the region. The resulting analysis includes factors that are unique to Meridian as well as considerations that are comparable to other locations.

In analyzing these case studies, the report outlines the strengths and limitations of each transit model, evaluating them through key criteria such as operating costs, rider affordability, service flexibility, accessibility, geographic coverage, and infrastructure needs. It also identifies a range of resources available to rural transit providers, including federal funding opportunities. Beyond funding, the report emphasizes the

importance of building public and political support, implementing services strategically, and leveraging modern technology to improve access and usability.

Findings suggest that fixed-route systems remain an important option, particularly in moderately dense areas with centralized destinations, however new approaches to providing on-demand transit – particularly through microtransit providers like Via – offer important benefits including greater flexibility, shorter wait times, and more inclusive service. Rideshare partnerships, such as those with Uber and Lyft, provide the highest level of user convenience but can be cost-prohibitive and less accessible to individuals with disabilities if not accommodated properly.

Although rural transit presents significant structural challenges, this report offers a practical roadmap for communities to achieve critical transit priorities, outlining available federal resources and comparing different service models, including their respective benefits and trade-offs. With the right tools and support, rural transit systems can improve access to essential services, promote greater equity, strengthen local economies, and enhance overall quality of life.

Rural Transit in the United States

In the United States, approximately 66.3 million people live in census-defined rural areas.¹ The small cities, counties, and regions in which these rural populations live face unique challenges in providing residents access to various needs. These can include basic needs such as employment, healthcare, education, and weekly groceries, as well as overall social inclusion and community engagement. Rural regions are also typically home to older populations, with higher percentages of individuals with disabilities² and lower income levels.³ These three factors are significant indicators of the ability to own or operate personal vehicles, highlighting the pressing need for mobility options in these areas.

While the need for this service is apparent, the implementation of a rural transit system is a difficult task. Rural regions maintain lower population densities, requiring transit operators to cover much larger regions; transit users are sometimes forced to walk greater distances to access pickup points; and low frequency of the service can limit the feasibility of utilizing transit for daily work travel or other needs.⁴ Additional challenges, like limited workforce and public support for a system, are also factors.

Ultimately many of these barriers are intertwined and linked to one major thing – funding. Operating a public transit system is costly, and in rural areas, where it is more difficult to operate efficient routes, and where infrastructure and capital are costly and ridership is low, funding becomes an even greater challenge. Compared to urban areas, rural areas tend to have fewer public resources since they have lower incomes and tax bases. Furthermore, they have higher automobile ownership rates which reduces the demand and public support for transit services.

In order to assist in filling the financial gap, for rural and urban regions alike, Congress began subsidizing transit provision in the 1960s through the Urban Mass Transportation Act of 1964. Since this time, various pieces of legislation have improved the allocation of federal funding for transit. Funding for rural transit specifically has been provided since 1978, when the Section 5311 formula funding program was created to provide grants for transit programs in areas with population levels below 50,000 people. In the most recent transportation legislation, the Infrastructure Investment and Jobs Act (IIJA), Congress authorized up to \$108 billion for public transportation for fiscal years 2022 through 2026. Within this funding, more than \$4.58 billion was allocated to the Section 5311 formula funding program.⁵

Although the COVID-19 pandemic impacted transit operations significantly, as of 2023, there were 1,754 transit agencies operating in rural areas.⁶ These systems enable these populations to access the many day-to-day needs and have a better quality of life.

While these operators have all noted the importance of providing some kind of mobility service to residents, there are different types of transit systems which fill the needs of various communities most effectively. There are two main types of transit services in these areas: fixed route and demand response. (A “deviated fixed route service” is a combination of the two where a vehicle operates along a predetermined route with scheduled stops, but allows for the vehicle to deviate from the route to pick up or drop off riders within a defined area.) In addition to those traditional service types, some communities are also experimenting with rideshare solutions. For the purpose of understanding the benefits and effectiveness of each in rural regions, this paper will explore the three methods of provision – fixed route, demand response, and subsidized rideshare programs.

Comparing Rural Transit Options

The primary types of transit services in rural areas are fixed route and demand response, but this paper also explores innovative cities using rideshare partnerships to provide mobility options. For fixed route and demand response service, agencies use a transit bus or van to move passengers. Fixed route is a service where these vehicles are moving on set routes with a set timeline to pick up and drop off passengers at pre-determined stops along the route.⁷ Demand response service differs in that residents schedule a ride, typically by phone, online, or through a cell phone app, and the service picks up and drops off at locations determined by the user. While some demand response services may require some walking to optimize routes, this solution provides a greater level of accommodation for riders.⁸ This study relies on a case study of fixed route service in Vicksburg, Mississippi and an on-demand example from Bay Transit in Virginia to explore the difference between these two systems.

Rideshare partnerships are emerging solutions which rely on a rideshare service, in partnership with a city, to provide rides to residents through the app service. In this case, Uber’s partnership with a city in Texas and Lyft’s collaboration with a city in California are the cases explored. Residents rely on an app to call an Uber to their location, and this service delivers them to their destination in a traditional passenger vehicle.

It is worth noting that public organizations that use federal funds to support their fixed route or on demand service are also required by law to provide paratransit service. Paratransit is provided to users with a disability which limits them from accessing the general fixed route service. Under the Americans with Disabilities Act (ADA), for fixed route service, paratransit must be provided, at minimum, within three-fourths of a mile of each side of a bus route, for the same hourly availability, and at no more than twice

the general route fare cost. This complementary service enables individuals with disabilities to access similar benefits as the general population, with consideration for any additional mobility challenges.

On-demand service can more easily accommodate paratransit users given that these vehicles operate on a more door-to-door model. Assuming vehicles are ADA accessible, these services can more easily integrate the operations and provide similar levels of service. For the case studies below, the research focuses on comparing the general transit service, with an understanding that each model has varying ability to integrate paratransit service.

Operating Cost

Transit provision is costly. This is a well-known fact in providing this service, and the per capita expense is particularly high in rural areas with large geographic service areas and low population density. The federal 5311 funds are critical for the capital purchases and operations of rural transit systems. Overall, on the cost front, fixed route and on-demand services can be relatively comparable, depending on the overall level of service and other geographic, etc. factors, so it is difficult to definitively determine which outperforms the other. In the case studies discussed in this research, Bay Transit, an on-demand provider, improved efficiency after shifting to an on-demand structure. When considering cost per ride, on-demand services likely also outperform fixed route service in rural areas given the greater level of access for users.

While a rideshare partnership model can be effective and offer a high level of accessibility, this service is costly. At this time, cities engaging in a rideshare partnership serving seniors and individuals with disabilities can be eligible for funding from the Federal Transit Administration (FTA). Costs incurred by contracting with a shared mobility operator can also be eligible for FTA funds. However, FTA funding is not available for “exclusive-ride” services – which largely prevents typical rideshare operators from being eligible.⁹ In the programs evaluated for this study, the cities with rideshare partnerships are spending nearly \$1 million annually on their transportation programs. However, rideshare partnerships can be successful for cities and regions with larger tax bases and a high level of tourism traffic.

Cost to Users

Transit provision is a public service; it rarely breaks even or makes money. Most transit systems are subsidized by various federal, state, and local governments or other community partners. Because of this, the cost to residents typically does not reflect the full cost of the service and instead is a reflection of what service providers opt to charge riders – or how much a local entity is willing to provide in subsidies to riders. In the

cases of Vicksburg and Bay Transit operations, these entities charge low rates for service, between one to two dollars per ride. In Kyle, Texas, the city has opted to charge users \$3.14 per ride but also caps the subsidy per ride at \$10, therefore riders face the possibility that the fare will increase if the ride extends beyond the \$10 subsidy cap. On average, the city's subsidy per ride falls below the \$10 cap, but there is less certainty in rate as the cost per ride is contingent upon demand for rides at a given time. At this time the city of Kyle offers each resident and visitor 10 trips per month, which could change if popularity and ridership, and therefore costs, of the program increase.

Service Flexibility

The service flexibility category is intended to break down how amenable a service could be to changing schedules and the personal needs of users. With a fixed route system riders know that the service operates at certain times throughout the day – whether that is every 45 minutes, hourly, or on another timeline. Overall, the ability to cater to a specific schedule is very limited. An on-demand system does offer more flexibility in that a person can schedule a ride to a specific time that coordinates with their scheduling needs. Systems can vary here as some on-demand services require scheduling 24 hours in advance of the ride time. Others can accommodate rides in as little as 10-15 minutes, more closely mirroring a private rideshare timeline.

When comparing across the board, a rideshare partnership program does provide the greatest level of flexibility. These services operate as an on-demand system with less consideration for other riders and specific routes. While this is the case, a rideshare partnership is contingent upon the availability of drivers, meaning that an area with a lower population may not have the drivers available to respond to demand on a short timeline – or at all.

Level of Accessibility and Service Reach

Level of service measures the service experienced by users, considering factors like wait times, travel time, and comfort. Accessibility is a consideration within level of service, it is discussed independently here as the populations utilizing rural transit are often older or disabled. Accessibility is particularly important in these areas as required walking distance to bus stops can potentially be much greater distances – with populations of varying levels of ability.

A service functioning on a fixed route is often not able to pick users up near their front doors, and the locations someone can access once they are on a transit vehicle are also more limited. In rural areas, particularly those without town centers or high-density destinations, this leaves many riders outside a walkable distance to access the transit

services at the point of origin or from the closest stop to their destination, and therefore unable to rely easily on the service.

On-demand and rideshare models can offer much greater coverage and accessibility. While an on-demand service may require able-bodied individuals to walk a certain distance to a pickup point, both services function by picking up and dropping off at a pre-determined point. Transit provision of this nature may be more likely to provide accessibility needed for elderly people and others with limitations, while minimizing negative impacts from weather elements, and enhancing the overall comfort and ease of a transit experience. Additionally, because rides can be scheduled for specific times, these individuals are likely to experience lower waiting times and greater time reliability for pickup and drop off, further enhancing overall comfort.

Infrastructure and Capital Requirements

Different service types have differing infrastructure requirements, which may include the physical infrastructure needed at bus stops like benches, covering, stop signage, and other materials, as well as vehicles, bus depots, and maintenance facilities. Fixed route services require physical bus stop infrastructure as well as vehicles. For on-demand service, the requirements for infrastructure at a physical bus stop may be lower, but there are still vehicle needs. Compared to fixed route and on-demand services, the rideshare partnerships do not require the physical infrastructure costs given that rideshare functions by drivers utilizing personal vehicles.

In addition to these physical infrastructure costs, each of these services have some level of digital infrastructure, technology, and other administrative costs. While not required, fixed route services often offer some kind of smartphone application. On-demand and rideshare utilize a smartphone application in ideal situations. For an on-demand service, there would be early capital requirements to build out an application for trip scheduling, and a rideshare service would, at minimum, require some backend application adjustments to integrate subsidies into rides. It is likely a rideshare partner would design a corresponding application for program participants to utilize, as is the case with the partnership between Uber and Kyle, Texas.

Some of these capital requirements are eligible to be covered with Section 5311 funding, like physical bus stop infrastructure and vehicle needs, but local match requirement still exists for servicers.

Funding Rural Transit

As discussed above, funding transit in rural areas is a significant challenge. The FTA maintains a few formula funding programs to aid rural areas in providing transportation services. The primary program for providing these services is Section 5311 Formula Grants for Rural Areas, but there are additional situational funding streams from FTA available through programs like Section 5310 Enhanced Mobility of Seniors, Individuals with Disabilities and Section 5399(c) Low or No Emission Grant Program, as well as some Federal Highway Administration (FHWA) programs.

Section 5311 Formula Grants for Rural Areas

Section 5311 funds provide capital, planning, and operating assistance to states and federally recognized Indian tribes in rural areas with populations below 50,000. These funds are allocated at the state level and then distributed down to governmental authorities, tribal governments, nonprofit organizations, and other eligible recipients for the provision of public transit and intercity bus service.¹⁰

These funds can be used to pay for up to 80 percent of the cost of capital projects and up to 50 percent of operating costs. Additionally, the federal coverage for paratransit service costs is up to 80 percent.¹¹ While Section 5311 funds can be highly beneficial in subsidizing the high cost of transit provision, particularly in rural areas, these funds do require a match at the state or local level to fill the remainder of capital and operating costs.

<https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/funding/grants/40621/5311-rural-program-fact-sheet-fast.pdf>

Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities

Section 5310 funds can be allocated to communities of all sizes and are disbursed for the purpose of meeting transportation needs of older adults and people with disabilities who are facing inadequate transportation service. Funds are divided and distributed based on state shares of these populations.

For rural areas, these funds are provided to the appropriate state department of transportation, and the eligible subrecipients can include private nonprofit organizations, state or local government authorities, and operators of public transportation. Once received, funding can be used for traditional capital projects, or nontraditional projects which include capital and/or operating expenses that go beyond the requirements of the Americans with Disabilities Act (ADA) to serve the populations

described above. Similar to Section 5311, these funds can cover up to 80 percent of capital and 50 percent of operating costs.¹²

<https://www.transit.dot.gov/funding/grants/enhanced-mobility-seniors-individuals-disabilities-section-5310>

Section 5399(c) Low or No Emission Grant Program

The Low or No Emission Grant Program provides funding for the purchase or lease of zero-emission and low-emission buses or the acquisition, construction, and leasing of required supporting facilities for such buses. The program funding is disbursed based on submitted proposals. The federal contribution to a bus lease or purchase cannot exceed 85 percent of the total cost, and the corresponding facility cost cannot exceed 90 percent of the net project cost.¹³

<https://www.transit.dot.gov/lowno>

Federal Highway Administration Funding: Congestion Mitigation and Air Quality

The Federal Highway Administration (FHWA) also offers programs that can be utilized for rural transportation needs. One of these programs, the Congestion Mitigation and Air Quality (CMAQ) program offers formula funding grants to areas for air quality improvement related projects. These funds, which are distributed to State DOTs, may be used for any transit capital expenditures otherwise eligible for FTA funding as long as the project has an air quality benefit. Funds are prioritized for areas with high levels of ozone, carbon monoxide and/or particulate matter, which may not affect most rural areas as much as urban areas. However, in states without any air quality nonattainment or maintenance areas, this funding can be used for projects anywhere in the state that improve air quality.¹⁴

Additional Resources

Beyond these cornerstone programs, there are other discretionary grant programs through which rural and other areas can access additional pockets of funding. Additionally, the FTA maintains a suite of technical resource programs designed to aid in the planning and administering of a rural transit system. These resource programs include the following:

- **National Aging and Disability Transportation Center (NADTC):** NADTC promotes transportation for people with disabilities, seniors, and caretakers.
- **National Center for Mobility Management (NCMM):** NCMM supports strategies to enhance independent living, health, and economic vitality.

- **National Rural Transportation Assistance Program (RTAP):** National RTAP provides support to rural and tribal transit programs, including trainings and other resources.
- **National Center for Applied Transit Technology (N-CATT):** N-CATT works to enhance technology and innovations to improve efficiency in rural areas.
- **Shared Use Mobility Center (SUMC):** SUMC partners with the FTA to form the Mobility Innovation Technical Assistance Center (MI-TAC) which provides technical assistance and resources to communities around the country.

Additional information can be found here: <https://www.transit.dot.gov/rural>.¹⁵

Case Studies for Modeling Rural Transit Programs

The greatest barriers to providing rural transit are primarily funding and population density. The cost of providing a transportation service is high, and a large percentage of public transportation systems lose money and require subsidies to sustain operations. An added layer of difficulty for rural areas is that, by definition, these locations have smaller populations, meaning there is a smaller tax base from which to fund public services of this nature. Additionally, the populations in rural areas tend to be dispersed with lower population density levels. This leads to challenges in designing an efficient network that adequately and cost-effectively serves populations in need of transportation services.

Various rural areas across the nation have experimented with or piloted different methods of providing transportation access in their communities, and these have obtained varying levels of success based on an array of factors specific to each of these communities. The factors that affect success are various, but some of the major determinants are population size, density, and overall development patterns. In selecting a transit provision approach, or melding of multiple approaches, rural areas must appropriately evaluate their transportation needs.

Fixed Route Service: Vicksburg, Mississippi

When the average person thinks of bus transportation within cities, fixed route service is likely what comes to mind. One of the most basic and traditional public transportation offerings, fixed route bus service offers buses which operate along set routes, with defined stops, on set schedules. In larger urban areas, transit vehicles are often full-

sized buses (typically 40-feet long), but some smaller and rural areas rely on vans and smaller buses to improve efficiency.

Vicksburg, Mississippi is on the western border of the state, with a population of just over 20,000 and a total land area of about 33 square miles. This computes to a population density around 653 residents per square mile.¹⁶ While the density is on the lower end for traditional fixed route service, in 2006 Vicksburg launched a fixed route service, dubbed NRoute, which continues to operate today.

When planning and launching the bus service, city officials in Vicksburg first worked to gain public support for the system. In doing so, the city was able to generate financial support from various businesses, raising approximately \$300,000. Additionally, by working with the area's Congressional delegation, Vicksburg was able to obtain an earmark, or dedicated funding, in the amount of \$500,000 for the initial purchase of buses.¹⁷ This early capital funding support was critical for the initial phases of the launch which were followed by the city's applications for different formula funding, like the Section 5311 grants.

Today the buses operate in a 10-mile fixed radius around the city, with transfers occurring downtown. The initial seven routes have fallen to three as ridership dipped severely during the COVID-19 pandemic.¹⁸ A general bus fare is \$2.00 per trip with an additional \$0.25 cost for a transfer, but individuals can purchase a daily pass for \$4.00, weekly pass for \$15.00, or monthly pass for \$35.00. Senior citizens are able to access the service for \$0.75 per ride, and children between the ages of three and 12 ride for \$0.50.¹⁹

NRoute operates Monday through Friday from 8:00 AM to 5:00 PM with no weekend service available. Planners attempted to provide weekend service at one time, but the ridership demand was too low to justify the added cost of provision. The three routes continue to serve a variety of users, including many elderly members of the community and individuals with health issues, as well as some school-aged children. Frequent destinations are medical appointments, school, or general shopping needs. There are set stops at which passengers can board the transit vehicles, but one adjustment made to better serve users is that riders are able to request to stop and depart the bus anywhere along the route.

While NRoute has adjusted to many challenges which have arisen since its inception, the cost of providing transit, particularly in a rural area, is still high. NRoute operates a cash-based fare system, without modern fare collection. In 2023, the overall operating expenses were \$943,074. The largest contributor was the federal government which provided \$614,228, but the state and local governments chipped in \$16,634 and

\$295,341 respectively. And while the system did not generate revenue to cover much of the operating costs, NRoute reported \$16,871 in revenue from the 22,149 unlinked trips provided in 2023.²⁰ Based on this reported data on operational expenses, revenues and number of rides provided, total average expenses per trip were \$42.58 with the riders paying 76 cents towards the cost. (These numbers were reported by NRoute to the FTA, but as noted above, the NRoute system lacks modern fare collection systems and automated passenger counters.)

Via Transit Partnership for On-Demand Microtransit and Fixed Route Hybrid Service: Bay Transit Express, Virginia

The provision of on-demand service is increasingly common in smaller and rural areas. An on-demand service functions by allowing riders to schedule a ride through a channel (e.g., website, app, phone) selected by the service provider. In some communities, particularly ones with aging populations, some on-demand services utilize a simple phone system where a resident or visitor can call a number a certain amount of time in advance to schedule a pickup and drop off. In recent years, new technology has emerged, and companies are offering software as a service (SaaS) solutions for handling the back end of on-demand transit services. These software solutions have the added advantage of decreasing staff time spent fielding ride scheduling calls, and these services offer various route optimization analyses which can maximize route efficiency and use of vehicles.

Bay Transit is a local level, nonprofit partner which provides transit service in the Middle Peninsula and Northern Neck regions of Virginia. The organization provides transportation services to 12 counties: Charles City, Essex, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Richmond, and Westmoreland Counties. Previously, the region relied upon fixed route bus service and some seasonal trolley operations, but in June of 2021, Bay Transit, in partnership with a private firm (Via Microtransit), began a pilot program for on-demand service. The pilot lasted 18 months and was funded through a \$160,930 grant from the FTA's Integrated Mobility Innovation Program (IMI).²¹

Throughout Bay Transit Express' 18-month pilot, ridership grew slowly but consistently. Each month, about 64 percent of users were returning riders, but there were plenty of new riders attracted to the program. Throughout the duration of the pilot, about 85 percent of users took more than one ride with Bay Transit Express, and 63 percent took at least five trips, reflecting more consistent usage.²² When the pilot was completed, Bay Transit opted to continue the Express service, transitioning from IMI funding to the Section 5311 funding application process.

With the continuation of the program, in 2021, Bay Transit had one vehicle for microtransit rides which completed 692 rides. In 2022, still utilizing one vehicle, this number jumped to 5,329 rides. The year 2023 saw the introduction of two new microtransit vehicles, and between the three vehicles, there were 17,884 rides completed in 2023 and 20,639 rides completed in 2024.²³ While the program initially launched with a hybrid design of on-demand and fixed route services, Bay Transit has slowly phased out the remaining deviated fixed routes with the final deviated fixed route in the town of Tappahannock set to be dissolved by the end of the year.

Under the current structure, users can schedule a ride approximately 15 minutes in advance through a smartphone/tablet application called Bay Transit 4U or call a direct phone line for scheduling. Users provide a pickup and drop off address, and the Via software service will help with route optimization between pickups and drop offs, as well as route efficiency and other factors. A user may be required, if able, to walk a short distance to a pickup location to enhance the service's productivity.

The buses operate from 6:00 am to 6:00 pm Monday through Friday and users pay \$2.00 per ride for demand response rides, with various exceptions for specific routes which cover greater distances. Additionally, more frequent users can purchase larger ticket books at reduced rates, decreasing the cost of the service to the user. On average, riders were waiting 14.5 minutes or less following the first year of the program, while the previous service saw wait times of up to 45 minutes.²⁴

Of the many positive outcomes experienced by Bay Transit users, for city officials, the price tag on the program was certainly amongst these. The program required some capital investment before launch, with additional capital purchases in the years following. For these capital costs, the program had to invest \$300,000 for the purchase of three, lift-equipped for ADA accessibility, Ford Transit Vans (program initially launched with one vehicle). Additionally, Bay Transit invested about \$10,000 into the development of a branded cell phone app for the microtransit system. On the operation side, which included costs for labor, fuel, maintenance, and overhead, for fiscal year 2022 was \$84,814. The hourly cost of operation was \$37.39 – almost half the hourly operating cost of the previous fixed route service.²⁵

Right now, Bay Transit relies on support from the counties for the service, but they also receive funding from the state, as well as the 5311 funds from the federal government. Today, local funds are approximately \$24,000 per bus, and the state matches this per bus amount. Federal funding is higher at \$48,000 per bus.²⁶ Overall, the service is able to move a greater number of people through the region in a very cost-effective manner.

Uber Transit Partnership: Kyle, Texas

In recent years, Uber has begun partnering with cities to provide rideshare services to residents. Rideshare drivers are able to sign up to drive as normal, but each ride is subsidized at some percentage or fixed amount based on the city's agreement with Uber. While the first town to pilot this model was the Canadian town of Innisfil, one of the first U.S. cities was Kyle, Texas. Since Kyle's launch, additional Texas cities have explored partnerships with Uber including Pflugerville, Georgetown, and Wylie.

Kyle, Texas is a growing city just over 20 miles south of the state's capital city of Austin. From 2010 to 2021, the city's population nearly doubled from 28,000 to 52,000²⁷, driven by growth in the central Texas region, rising home prices in Austin, and other factors. During this period, Kyle also absorbed more land into its boundaries growing from about 19 to 31 square miles. Because of this, the population density has stayed pretty consistent around 1,470 people per square mile.²⁸

Prior to the partnership with Uber, the city of Kyle experimented with numerous forms of transit for residents including a trolley system, bus shuttle, and different microtransit options. Each option proved inefficient for the city based on the cost per ride, which was higher than the cost of an airline ticket to various cities across the U.S.²⁹ In response, the city looked for innovative options for transportation service provision which led to the current partnership with Uber.

The Kyle program initially launched in October of 2020 during the COVID-19 pandemic, which led to a slow growth in the service – providing ample time for public officials to observe and budget for future years. The initial budget was \$150,000 for the year, providing 8 rides per person per month and two airport trips. Aside from the airport trips, the service area was limited to the Kyle city limits. For these rides, users paid \$3.14 per ride as a tribute to the city's official title as the Pie (in this case pi) Capital of Texas. Residents were charged \$3.14, and the city subsidized an additional \$10 with users paying the additional amount beyond that. For the two rides to and from Austin-Bergstrom International Airport, the city covered 31.4 percent of the cost. After the first year of the program, city officials found that only 30 to 35 percent of the \$150,000 budget had been utilized, and the ridership was significantly higher than under any of the previous services.³⁰

Since the initial launch, the city has adjusted the parameters of the program, taking steps to expand the boundaries and accommodate additional riders. During the month of October 2022, there were 1,571 trips and 418 active riders in the Kyle program. The average trip length was 5.7 miles, the city was paying approximately \$8.11 per ride, and riders were waiting 11 minutes on average for a ride.³¹

Today the Uber Transit program in Kyle is in its fifth year of operation. Program boundaries have expanded to include the city's extraterritorial jurisdiction and some portions of the outlying suburbs of neighboring cities to capture those who come into Kyle for shopping, entertainment, healthcare, and other needs. The city continues to provide rides to residents and visitors alike for \$3.14 with up to \$10 subsidized beyond that cap, but a few adjustments have been made to other fares. Veterans can access the Austin Veterans Administration (VA) in south Austin for a flat fee of \$3.14 per trip, but as far as airport trips, the city now covers two-thirds of the fare with a cap at \$50 due to its popularity.³²

The slow roll out of the program and the ongoing adjustments to fare levels have allowed city officials to respond to the needs of residents and visitors while maintaining a pulse on the city's transportation budget. From August 2023 to August 2024, there were 47,313 trips taken through the program with 66,238 passengers. Excluding airport rides, trip length was 6.12 miles on average with the city paying about \$7.43 in subsidies. When including the airport trips, the city's subsidy rate increased to \$10.04. And while the city's dashboard does not have access to demographic information for understanding age and health data, the program provided about 900 rides to Ascension Seton Medical Center and 200 rides to the VA facility during this period.³³

While the initial budget for the program was \$150,000, the city's budget for this program has since grown to an estimated \$800,000.³⁴ For a city with budgetary means to do so, this program is a highly effective way to move residents around and provide them the freedom and flexibility of personal vehicles. The city's data also indicates this option may be very effective in decreasing instances of drinking and driving as 1,424 of the 47,313 trips take from August 2023 to August 2024 were taken between midnight and 2:00 am.³⁵ While this program is very scalable, it is more likely to experience success when administered in an area with a higher city budget for transportation.

Lyft Ride and Bikeshare Partnership: Monrovia, California

Much like the Uber partnership in Texas, Lyft has a similarly structured program with the city of Monrovia, California. While not a rural community, Monrovia's program differs in that the agreement with Lyft also includes subsidized bikeshare rides for users.

Prior to transitioning to the Lyft partnership, the city was spending approximately \$1 million annually on a dial-a-ride program. The city opted to shift this funding over to an agreement with Lyft to enable users to access Lyft rides and bikeshares at discounted rates rather than continuing the less utilized dial-a-ride program.

Monrovia structured the program with Lyft by geofencing an area largely limited to Monrovia city limits. Each user can call a rideshare through the Lyft app on a

“Standard” or “Wait & Save” ride, using a promotional code added to the app. Each user pays the first \$6.00 of a ride, and Monrovia subsidizes the ride beyond that amount. The program operates from 7 am to 10 pm Sunday through Thursday and from 7 am to 1 am on Friday and Saturday. For the bikeshare portion of the program, residents can use the Lyft app to locate a bike and ride for a discounted rate. The first 30 minutes of a ride costs \$1 and \$0.50 for each 30 minutes following.³⁶

While Monrovia maintains these options, it is worth noting that the city continues to offer an additional service for seniors and people with disabilities. These individuals can utilize one of the city’s marked shuttle vans or call a Lyft through the program, and each ride costs \$0.50.³⁷

Both Kyle and Monrovia have larger city budgets from which to fund their programs. This may not necessarily be a feasible option for a more rural region with a smaller tax base.

Rural Transit Provision: General Recommendations

Public Acceptance and Political Support

The first step in developing a transit system for a city is ensuring city officials, businesses, and residents are supportive of the service. Full support of providing mobility options for residents can mean things like providing initial financial support, optimizing routes and an ongoing commitment to the service and its success. If the city government is unwilling to support a public transportation system, it is unlikely a system will enjoy sustained success.

Another element of public acceptance and support is the way in which a public transportation system is marketed to potential users. An ongoing issue across the country, even in some large metropolitan areas, is the view that public transportation service is for certain groups of individuals rather something that should be capitalized upon and enjoyed by all races, income levels, and other potential categories of people. Public transit is a mobility tool for communities to employ in making it easier for ALL residents and visitors to get around. Certain strategies for encouraging people to try, and technology adaptations to make scheduling easier, can increase the likelihood that people will give the service a chance.

Determine Ridership

In the actual design of a public transportation system, a critical first consideration is who exactly the transportation is intended to serve. While residents are an obvious group, this could need to be more specific for some communities with attention to certain populations like the elderly or certain low-income groups. Elderly populations may benefit more from an on-demand service which picks up and drops off closer to their residency, decreasing the amount of time waiting in the elements or the distance needed to travel to a pickup point. Some cities, like Kyle, Texas discussed above, experience a large number of tourism-related visits. Providing a service which requires scheduling 24 hours in advance may not meet the needs of tourists. Additionally, attention to groups like residents versus visitors can also impact the days of the week during which service is needed. Residents traveling to and from work may only require Monday through Friday trips while tourists and visitors are far more likely to request weekend service. Furthermore, the issue of accessibility needs to be considered. In a subsidized ridesharing program, many vehicles and their drivers may not be able to provide the level of service needed to accommodate daily trips to work, elderly, and disabled individuals.

Select a System

Each of the transit structures discussed has advantages and disadvantages. Fixed route service is challenging to implement in a rural region because many small communities simply do not have the density to serve most of the population or sustain ridership. Fixed route service can require lengthy walking distances to pick up locations, decreasing the likelihood that elderly users can even access it and that those with a vehicle will choose to do so. Some cities do have the density to support fixed route service. Vicksburg, Mississippi has sustained fixed route service for more than a decade, surviving the COVID-19 pandemic. The city followed a development pattern which was long and narrow, bumping up to the Mississippi River, and many of its main attractions are concentrated in a central area. This development has enabled fixed route service to be a feasible option for Vicksburg.

Unfortunately, fixed route service is not feasible for most rural areas with low density and attractions peppering a spread-out region. In most of these cases, on-demand or rideshare services can be a more effective option. These systems can enable residents to schedule a ride in advance, and the route can be planned and optimized based on who has requested the service for that period. Cities who adopt an on-demand structure can apply for Section 5311 funding to cover a large portion of the capital and operating costs. With support from local businesses, the local level match is less of a burden for taxpayers.

For cities with significant tourism populations, a partnership with a ridesharing company can be a better transportation solution. Businesses that rely on tourism may be more willing to provide financial support. A ridesharing model offers the greatest level of flexibility for users, allowing them to schedule a ride at the time needed versus scheduling in advance (e.g., 24 hours, etc.), but there is obviously a limitation on the number of rides a user receives each month. Residents who use ridesharing services to and from work are likely to pay higher fares than users of fixed route services. Moreover, rideshare vehicles may not be able to accommodate disabled and senior riders. While a ridesharing model is the most flexible of solutions, it is reliant on the availability of drivers to operate in the area.

Technology Adoption

While there are a variety of creative strategies to get people to use public transportation, for younger users, technology can be a significant catalyst. The development of a smartphone application for on-demand service can make younger users more likely to explore public transportation. The use of a dated system like requiring users to call a phone line to schedule a ride can be a major deterrent to someone who has the option to simply take a vehicle or ask a friend for a ride. Smartphones are readily available and owned by most people who possess a cellphone. Combining an app-based scheduling platform with the option to continue to call in can ensure that the option of transit service is available to all users.

Sustain Ridership

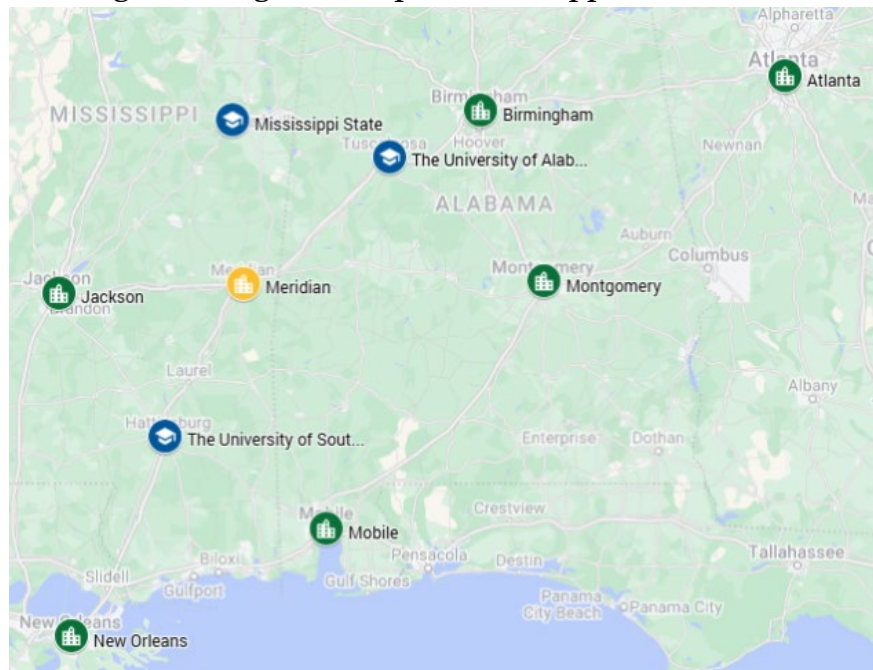
Many strategies for continued ridership are relatively obvious, like having a comfortable and reliable service that offers pickup and drop off at a reasonable location in the time required by the rider. Effective marketing strategies in teaching people about the benefits of public transportation can also be highly important. And in the case of Bay Transit, program administrators employed a creative method for trying to get riders to use the app for the first time and return for additional rides. For their system, users who booked their first ride in the app then received 10 rides for free. This increased the chances that someone more resistant to trying the new app would give the booking system a chance – and return for additional rides.

Rural Transit in Meridian, Mississippi

Geography

Meridian is the eighth most populous city in the largely rural state of Mississippi.³⁸ Located near the eastern border of the state, the city is approximately 90 miles from Mississippi's capital city of Jackson; 155 miles to Montgomery, Alabama; and 150 miles to each Mobile and Birmingham, Alabama. Still in driving distance are the large tourist destinations of New Orleans, Louisiana and Atlanta, Georgia at about 200 and 300 miles away respectively. As far as education, Meridian is a short trip from many large state universities including the University of Southern Mississippi in Hattiesburg, Mississippi State University in Starkville, and the University of Alabama in Tuscaloosa, Alabama.³⁹

Figure 1: Regional Map of Mississippi and Alabama



Source: Google. (n.d.) Meridian, Mississippi. Retrieved February 16, 2025.
<https://www.google.com/maps/>

Population and Demographics

According to 2023 Census estimates, the population of Meridian is 33,551. Of these individuals, nearly 63 percent are black, and about 30 percent are white. The median household income is \$34,657, compared to the national median of \$80,621 (2023), and 32 percent of the city's residents are living below the poverty line (national average is 11.1 percent). As it pertains to educational attainment, just under 21 percent of the

population possesses a college degree. For the downtown inhabitants specifically, these numbers dip to lower levels.⁴⁰

In rural communities, factors like car ownership and ability to drive are particularly relevant to understanding transit needs. Although car ownership is very costly, most households possess a vehicle in Meridian. Understanding the ability for various people to drive is more difficult, but some of the factors impacting this include age, health, and overall ability. In Meridian, about 18 percent of the population is 65 or older, and approximately 15 percent of the population have a disability.⁴¹ While not a comprehensive picture, and not a measure which captures those who cannot afford car ownership, there are vulnerable populations that could benefit from transportation access.

Meridian Layout and Attractions

As mentioned, Meridian is on the eastern border of Mississippi which is adjacent to Alabama. The city is situated within Lauderdale County which is about 703 square miles in land area. Given the population estimate of around 70,500, the population per square mile in Lauderdale County is about 100 individuals. For Meridian specifically, the land area is around 53 square miles, meaning the city has approximately 652 people per square mile.⁴² While the density within Meridian's city limits is significantly greater than the county as a whole, the numbers are still reflective of a smaller town within a largely rural county – and a far cry from the density traditionally thought of for highly efficient, fixed route public transportation.

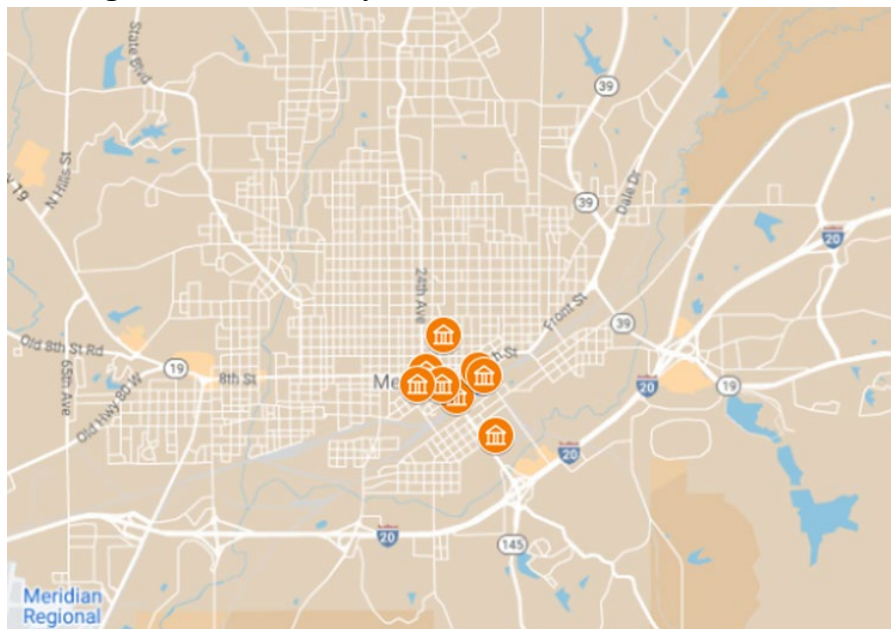
In its heyday, Meridian was a focal point for the region, stemming from the city's rich culture in arts, literature, music, and U.S. history. From about 1890 to 1930, Meridian was the largest city in Mississippi with a robust economy largely based on manufacturing.⁴³ Railroad operations carried on this period of economic prosperity following the Great Depression, but the simultaneous growth in interstate traffic and decline in rail operations greatly impacted the city in the second half of the 20th century.⁴⁴

During this time, Meridian experienced similar trends to the rest of the nation with many residents opting for the suburbs over downtown living. The city center suffered as a result, rendering many shops empty and the eventual vacancy and decline of entire blocks of the city. In recent decades, there has been a significant effort to revive the city's core, and the town's residents have begun to reap the rewards of these investments. Some of these investments have included the \$7 million restoration and renovation of the city's Union Station,⁴⁵ the \$25 million investment to revive the Grand Opera House now known as the Mississippi State University Riley Center for Education and Performing Arts (Riley Center),⁴⁶ the complete refurbishment and remodel of the

historic 1929 Art Deco Threefoot Building which is now the Threefoot Hotel,⁴⁷ the opening of numerous museums, and the revamping of downtown restaurants like Weidmann's, an establishment dating back to 1870 and believed by many to be the oldest restaurant in Mississippi.

With the enhanced focus on businesses and activities, there are numerous attractions which draw residents and visitors alike to the downtown region. For these art, history, and entertainment, Figure 2 shows the concentration of these attractions in the downtown region.

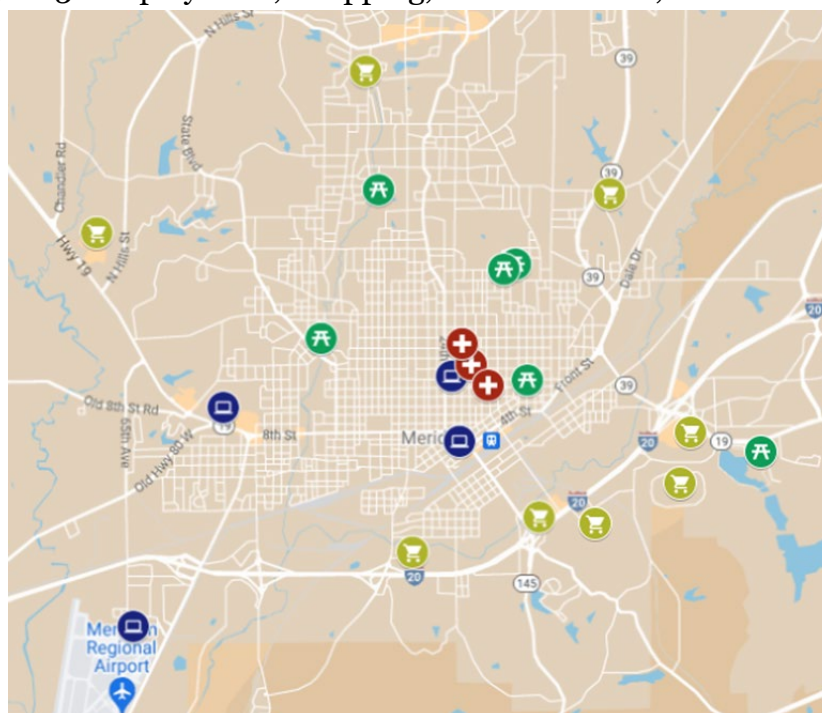
Figure 2: Art, History, and Entertainment Attractions



Source: Google. (n.d.) Meridian, Mississippi. Retrieved February 16, 2025.
<https://www.google.com/maps/>

While entertainment attractions are important for the residents of Meridian, these locations are not necessarily critical for day-to-day livelihoods. For daily use, residents are more likely to need transportation for education and employment, food, medical, and recreation/exercise uses. These locations are not concentrated in the downtown area, which makes it more difficult to provide efficient public transportation services. Figure 3 displays some of the primary employers, shopping areas, medical centers, and park and recreation locations.

Figure 3: Employment, Shopping, Medical Access, and Recreation



Source: Google. (n.d.) Meridian, Mississippi. Retrieved February 16, 2025.
<https://www.google.com/maps/>

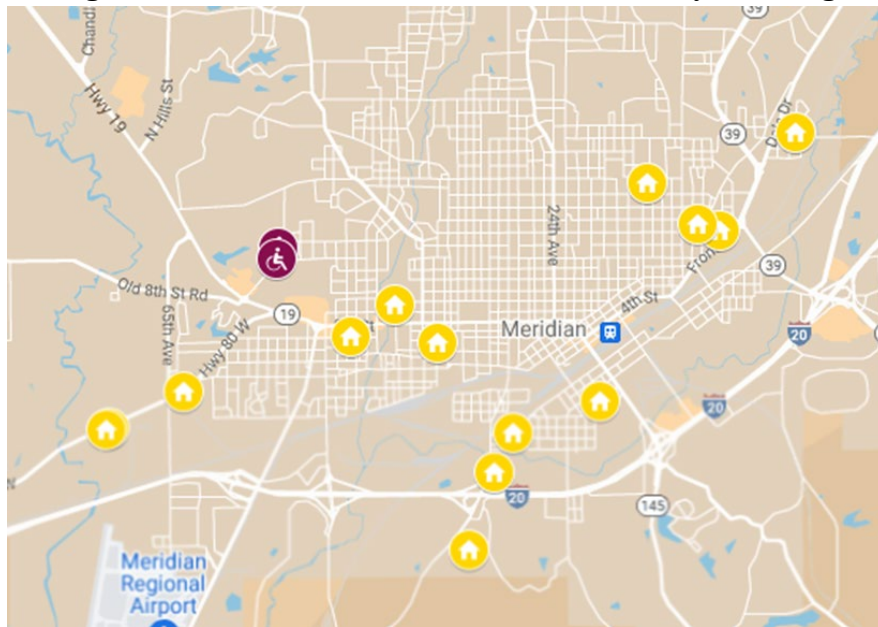
Beyond the hospital locations, and the corresponding employment at these centers, most education and employment, shopping, and recreation pepper the outskirts of downtown and surrounding suburbs. While it is possible to provide transit service to these various locations, it becomes increasingly difficult to utilize any kind of transportation service which runs on a fixed route as these locations are widespread, necessitating a greater number of routes with lower demand.

Aside from the major employers and education spaces in the downtown and downtown outskirts, a distinct feature of Meridian is the presence of Naval Air Station Meridian, which is about 20 miles northeast of downtown. The Station is a military training facility, which also trains some international personnel. While some trainees may be able to come to the base with a vehicle, many are unable to do the same. Additionally, many spouses are left without a means to access the downtown areas with a regular transportation option.

In determining travel patterns, a major piece of the equation is the origin of travel – or where these individuals are traveling from. Meridian has a number of neighborhoods spread out, but some of the most vulnerable on the transportation front would be those without vehicles or those unable to drive. The cost of vehicle ownership is very high and more likely to be a significant weight on someone with a lower income. Those unable to

drive could include the elderly or disabled residents. While age is more difficult to capture, in Meridian, there are a number of housing locations which target these groups. The Meridian Housing Authority maintains a number of affordable housing developments and units, and the city has two facilities which house individuals with disabilities. Figure 4 captures a number of the larger housing clusters, as well as the two facilities.

Figure 4: Affordable and Disabled Community Housing

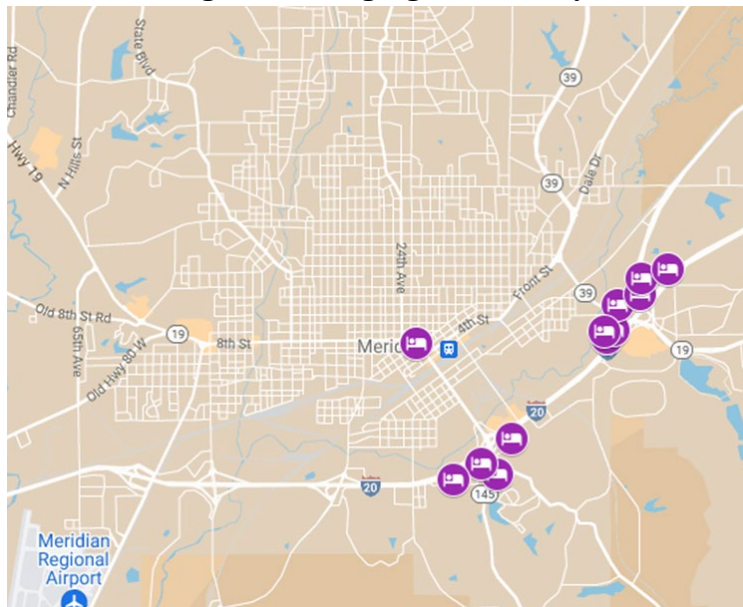


Source: Google. (n.d.) Meridian, Mississippi. Retrieved February 16, 2025.
<https://www.google.com/maps/>

Once again, these housing developments are sprinkled around the outskirts of the downtown region which could limit access to certain downtown amenities and create unique challenges in designing routes to accommodate the suburban sprawl.

Another consideration is for whom the transit system is designed. Meridian is a city with much to offer for tourism, including a growing arts scene steeped in a robust art and entertainment history. The city maintains an Amtrak hub at Union Station, sits at the intersection of numerous major highways, has a commercial airport, and is accessible by Greyhound regional service. If a transit consideration is tourism and downtown access, it is also important to include the lodging in which visitors are likely to stay. Figure 5 shows the location of major hotels in Meridian.

Figure 5: Lodging Availability



Source: Google. (n.d.) Meridian, Mississippi. Retrieved February 16, 2025.
<https://www.google.com/maps/>

Although the recently renovated Threefoot Hotel is located in the heart of downtown, the majority of hotels available are clustered along Interstate 20 on the southeast and eastern sides of Meridian. While these lodging options are conveniently located for travelers on I-20, for those traveling to Meridian by a non-passenger vehicle mode, mobility options are highly limited.

Meridian Mobility

As briefly mentioned above, Meridian sits at the confluence of numerous modal connections. The city can be accessed by highway, commercial air service, Greyhound, or Amtrak. This location and accessibility positions Meridian well for tourism, resident access to neighboring cities, and future development in the region.

Highway Connections

On the highway front, Interstate 20 is a major connection through Meridian. This east-to-west roadway connects Meridian with nearby cities like Jackson and Vicksburg, Mississippi to the west and Birmingham, Alabama and Atlanta, Georgia to the east. Additionally, Interstate 59 connects into Meridian on the west side of the city. This interstate links Meridian to cities further south, including the major tourist destination of New Orleans, Louisiana. When traveling south on I-59 from Meridian, travelers can also access one of the most significant roadways in the country for freight and the traveling public – Interstate 10.

Commercial Air Service

Meridian boasts the longest public runway in the state of Mississippi at its commercial service airport – Meridian Regional Airport. This facility is shared with the Mississippi Air National Guard which operates out of a portion of the airport also known as Key Field.

While air service is more limited due to the size of the city, there are on average two flights in and out of the airport each day. These four flights are all serviced by United Airlines and are direct flights to George Bush Intercontinental Airport (IAH) in Houston, Texas. Although direct flights to cities other than Houston are not available, there are numerous direct flights from IAH.

Regional Bus Service: Flix (Greyhound)

Greyhound (a subsidiary of the Flix bus company) operates an average of six buses through Meridian each day. In 2024, there were 3,456 individuals who traveled from Meridian and 3,782 who traveled to Meridian.⁴⁸ The availability of regional bus service allows Meridian residents and visitors to access other cities in the region and allows visitors to do the same.

Regional Rail Service: Amtrak

Meridian's renovated Union Station has stops for both Greyhound and Amtrak. The city is located along Amtrak's *Crescent* route, which is a long-distance route between New York City, New York and New Orleans, Louisiana that operates daily. In fiscal year 2024, there were 303,098 riders who utilized the *Crescent* route, an uptick from the route's 271,522 riders in fiscal year 2023.⁴⁹

Additionally, in 2023, Amtrak and the Southern Rail Commission submitted a \$14 million grant and began planning an extension of the *Crescent* line which would connect Meridian to Dallas, Texas.⁵⁰ The route would link Meridian to the capital city of Jackson as well as the city of Vicksburg, and is expected to bring more than \$73 million in economic benefits, and create nearly 80 direct jobs in Mississippi.⁵¹

Transit Service

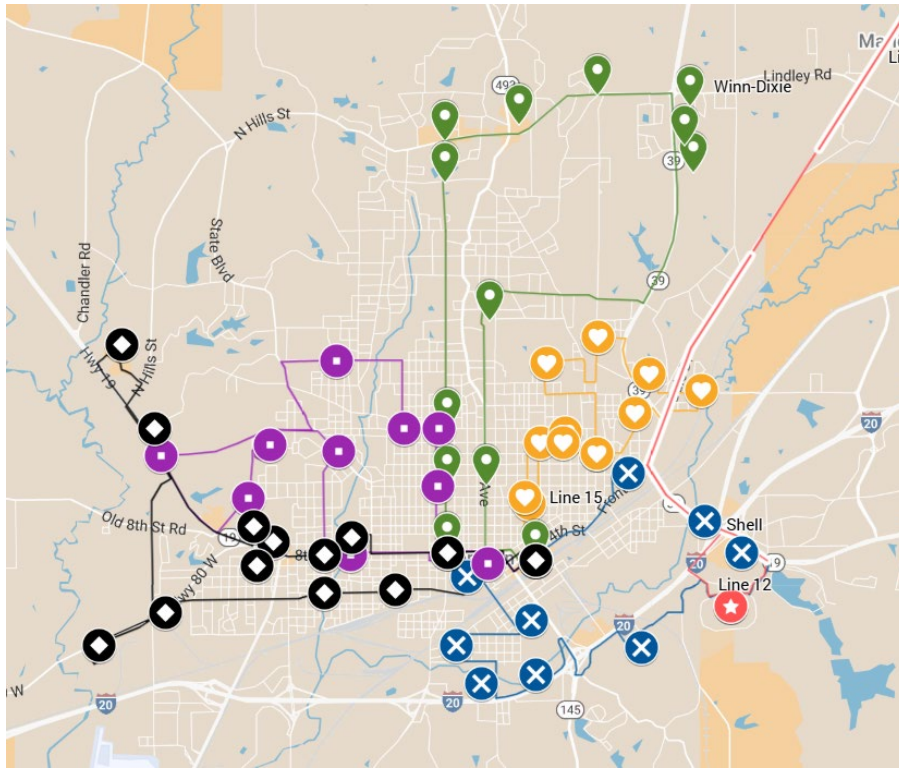
Meridian does currently have an on-demand transit service that is offered to the city's residents. The service is administered by Mississippi's only recognized tribal government, the Mississippi Band of Choctaw Indians. Choctaw Transit serves six counties in Mississippi with a total operating budget of approximately \$3 million. The tribe receives about \$1.1 million annually from the federal government through Section 5311 funding and contributes about \$900,000 from tribal funding. The remainder of the

funding comes from various cities and local entities who rely on the service, including Meridian, which contributes about \$100,000 annually.⁵²

Choctaw Transit operates the service in Meridian where riders can schedule a trip at least 24 hours in advance and pay \$3 per ride. According to Choctaw Transit, the market for the service is often individuals traveling to and from work, those living in one of the facilities for individuals with mental disabilities, shopping trips (often for elderly people), and some trips to and from the community college on the west side of town.⁵³ Because of the sprawling layout of the city and the many attractions sprinkled around the outskirts of the city, Choctaw Transit provides a needed mobility option for individuals to access employment, healthcare, education, and other needs.

It is worth noting that prior to the takeover of transit services by the Choctaw Tribe, Meridian did operate a city transportation service. There are differing recollections of the transit service's ultimate demise, but a large factor influencing the decline was overall lack of support through changing government administrations and the public. When the service was operational, there were at least six fixed routes covering the expansive city square mileage.⁵⁴ These routes circled different neighborhoods in each portion of town, connecting all routes in the downtown area. This allowed for transfers if needed or, at minimum, enabled all of the system users to access the downtown area – providing ways for individuals to travel to medical appointments and other needs. Figure 6 shows a very high-level display of how these routes were structured to cover each region of the city.

Figure 6: Former Fixed Route System Map



Source: Google. (n.d.) Meridian, Mississippi. Retrieved February 16, 2025.
<https://www.google.com/maps/>

While not fully displayed in Figure 6, one of the routes available was a fixed route service which traveled into the city from Naval Air Station Meridian northeast of town. This route allowed the individuals training, as well as spouses, to access the city for shopping, entertainment, and employment, creating a greater sense of an independent life for some of these individuals.

Funding information for the former service is limited, but the cost of multiple fixed routes coupled with limited ridership and political support eventually resulted in the discontinuance of this transit option. In the years following, Choctaw Transit took over the city's transit services, and they continue to operate today.

Recommendations: Meridian, Mississippi Transit

Short-Term Outlook

As was discussed above in the general recommendations for rural transit system decisions, Meridian residents and officials seeking to select the most effective system for

their community would be well served by considering how their population size, density, and geographic layout will affect the costs and utility of a transit system. Meridian has a smaller population with lower density compared to many of the cities with robust public transportation systems around the U.S. While the city is renovating numerous spaces and reinvesting in downtown, the population will likely continue to be smaller and also highly dispersed. Meridian is also home to many lower income residents, and maintains a greater percentage of older individuals and individuals with disabilities.

Given these factors, a fixed route system could be beneficial but the small population and large geographic service area would result in high per ridership costs. A fixed route system in a small, dispersed location such as Meridian could also have difficulty providing frequent enough service to meet the needs of residents.

The numerous demands on the city's budget at this time are also barriers to spending the level of funding that would be required for a rideshare partnership which meets the needs of users – particularly those on very limited budgets or those utilizing the current system for daily rides to and from work.

On-demand transit service is the most feasible means of meeting residents' mobility needs. Because the city already contracts with Choctaw Transit for service provision in Meridian, in the short-term, the city's most cost-effective model for service is to continue this relationship.

An additional consideration for the short term is that, while Choctaw Transit operations are adequate for weekday mobility services, the lack of weekend service will continue to leave a gap of unmet need for some residents and visitors. Without any service available, the city is unable to gain a full understanding of the demand for weekend service. The city could seek to fill these gaps by conducting a survey of residents' weekend transit demand, and by creating local partnerships to provide service. Many nonprofit entities within the city currently own and operate transit shuttles for organizational use. If an agreement could be reached between parties, nonprofit organizations could step in to provide some level of weekend service. This service would be most effective operating on a fixed route between hotels and downtown, as well as the Naval Air Station Meridian and downtown.

Medium-Term Outlook

While the Choctaw service does help some residents, its service is spread thin across the numerous counties served. As Meridian continues to grow, it could become beneficial for the city to launch its own fixed route service where the number of vehicles can be scaled up – contingent upon demand and desired level of service for residents. Meridian

should use the next couple of years to evaluate different factors around adopting a more robust system, such the following:

- **Understanding system cost and revenues:** Evaluating the cost of a more robust system run by the city would include factors such as acquisition of vehicles and operation costs, with consideration for various 5311 funds available for the city, as well as the labor required on the back end to administer a system.
- **Establishing local partnerships:** Local partners are critical for the success of a local transit system. Developing or redeveloping these relationships could open various doors in funding the local match required for Meridian's transit system. These partners will also be essential for the long-term success of the program, providing the local support needed to prevent any decline in governmental support.

Following the evaluation period, the city of Meridian has an opportunity to enhance mobility in the region and bolster the city's current rate of growth. The city should seek to obtain some level of local support, stemming from contributions by local businesses, expanding universities, and others, as well as federal funding through 5311 programs. With these funds, the city could reasonably acquire two to three transit vehicles for operation. These vehicles could operate Monday through Friday to provide a higher level of service specifically to residents, while also offering some level of weekend service for visitors and individuals at Naval Air Station Meridian and elsewhere. This acquisition and increase in service frequency in Meridian could be done in partnership with Choctaw Transit service or as a supplemental service provided by the city. Providing some level of service will encourage foot traffic to the downtown area, driving spending and helping local businesses.

An additional option that Meridian could consider in the medium to long term would be integrating a rideshare model into their system. Such a model could be administered separately or in conjunction with an on-demand service. Importantly, the high cost of rideshare service and lack of federal funding eligibility could pose budgetary challenges. However, as current transit equipment ages, a rideshare model could be a feasible mobility solution especially if the city were able to attract more residents and businesses to expand their tax base.

Looking Forward

Rural transit will continue to be a challenge for many regions. As individuals continue to live longer, there are limitations on ability when it comes to operating a vehicle. While many have family members and friends to lean on, there is a responsibility to provide mobility options, and an overall quality of life, to aging Americans. As Meridian

continues to grow and reestablish itself as a focal point for arts and music, transit services can help improve the quality of life for its residents.

Once Meridian has reestablished an effective means of transit for residents of the city, there is a long-term opportunity for the city to reemerge as an arts and culture stronghold for the region – and for the Southern U.S. as a whole. While the city has the major modal connections, Meridian can further enhance the region and state in reassessing regional connectivity. The city currently sees a certain number of regional bus trips a day, but these are limitations for certain types of travel including casual day trips, trips to neighboring university towns for athletic events, and other types of travel. Looking into different strategies for regional bus service, and coupling these with local transit solutions, can decrease congestion and environmental impacts and increase safety and mobility options for all Mississippians.

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