Michael Sussman, CEO

Rail-Enabled Rural Economic Development

Rural, less populated communities across the continent are challenged to improve their local economies due to the prevailing development approach that hyper-focuses on attracting the largest new industries. Progress can be achieved through rail-enabled industrial development that attracts and serves numerous smaller businesses throughout a region or corridor. The purpose of this document is to clarify a way of thinking about and implementing rural logistics-based economic development.

Strategic Rail Finance's founder, Michael Sussman, has overseen the recapitalization and growth of rural shortline railroads across America for 30 years, including the Dakota, Missouri Valley and Western, Iowa Interstate, Progressive Rail, Iowa Pacific, Laurinburg & Southern, Iowa Northern, and Utah Central.

The Port of Rosedale, Mississippi, engaged Strategic Rail Finance from late 2023 to early 2024 to assess the viability of investing in rebuilding and reopening the Great River Railroad (GTR). The following excerpts from our report and action plan present a breakthrough approach to rail-enabled rural economic development. Readers can relate to these Mississippi references as practical examples. We have omitted the underlying report's commercial, construction, and operational details.

What Is the History of the Great River Railroad?
The ROW stretches from Metcalfe, Mississippi, near Greenville, north to the Port of Rosedale. The Rosedale-Bolivar County Port Commission acquired the track and ROW from the Illinois Central Gulf Railroad in 1981. The GTR and its 30-mile right-of-way (ROW) have been out of service since 2001.

North America's freight rail network comprises six large Class I railroads, which extend across significant portions of the continent, and approximately 650 Class II and III railroads, including terminal, branch, and regional railroads commonly referred to as shortline railroads. The GTR was a Class III shortline railroad. Its closure is part of the shrinkage of the rail network across rural America, which has seen rail route mileage almost halved since 1920, while the U.S. population—and the need for goods and services—has more than doubled over the same period.

The history of public-sector efforts to revive failed private-sector rail operations is full of important lessons. Most importantly, successful public ownership of freight rail operations requires actively assisting shippers in evaluating and accessing freight rail logistics.

This report differs from the static documents consulting firms typically produce. It is an evolving action plan that provides a platform for informed decision-making and progress. The key elements built into the action plan are:

1) Stakeholders, including shippers, economic development and community leaders, and transportation providers, are cataloged in a contact database organized by sectors, organizations, and roles to support ongoing activities.

2) An economical, safe reconstruction plan is specified for each mile of track.

3) A working spreadsheet was built with all costs and revenues of project management, materials, construction, and operations.

4) Initial users are identified and quantified.

The scope of this plan reflects the input of many individuals in Mississippi, whom we met, including representatives from the business sector, railroads, policymakers, and the community. People appreciate being heard and respected for their ability to contribute knowledge and perspectives.

How Can Rail-Enabled Rural Economic Development Benefit the GTR, the Delta, and the State?

Transportation infrastructure is vital to the economic vitality of a town, county, or region. Although trucks remain a key mode of transport, the lack of freight rail service limits a community's attractiveness to many shippers. It also worsens the impact of commercial truck transportation on roads and bridges. When rail service is unavailable, highway maintenance budgets, air quality, community safety, and quality of life all decline.

For example, Columbus, Mississippi, has been a surging industrial center owing to its location at the confluence of highways, the Tennessee-Tombigbee Waterway, and multiple rail lines. In comparison, substantial portions of Mississippi are less attractive to industry because they lack rail service, and trucks are impractical and expensive for many bulk commodity movements. Consider the industrial development occurring in Grenada, Mississippi, now that effective freight rail service has been restored via a fully functioning Grenada Railroad. Over the last four years, local economic development leaders have attracted new industries utilizing rail transportation.

The Port of Rosedale is a stable, well-managed service provider for local agriculture-related businesses in Bolivar County. It also has the advantage of being located on the Mississippi River. As such, the port has a valuable opportunity to greatly expand service to the state by re-establishing rail service via a rebuilt GTR.

However, success in less populated rural areas, such as the Delta and North-Central Mississippi, requires a different economic development approach than has served the larger towns of Columbus, Jackson, and Gulfport.

Rail-Enabled Rural Economic Development Features:

1. Attract smaller businesses, which are not typical targets for economic development
2. Attend to the needs of existing businesses and the opportunities they present, not just new businesses
3. Aggregate the needs and opportunities of all these businesses into viable new service plans and infrastructure investments
4. Emphasize regional opportunities for developing natural resources
5. Identify and address gaps and shortcomings in current transportation services

6. Develop plans that optimize whole industrial systems and supply chains
7. Design and invest in infrastructure across whole regions and corridors
8. Repurpose existing infrastructure and brownfield properties
9. Connect existing and new businesses as customers and suppliers in synergistic commerce
10. Bridge the gaps in coordination between rail, waterway, and highway service providers

Rail and trucking networks are valuable to the extent that they facilitate movement to and from larger areas of the marketplace for sourcing and distributing materials and goods. Truck networks have a relatively stable value because roads and highways, which the public sector maintains as a public investment, are nearly ubiquitous. In contrast, the value of the rail network to local and rural America has decreased over time as more of the network's branches have been taken out of service. Mississippi has a significant opportunity to reverse that decline locally by restoring both the GTR and the nearby 93-mile section of the Columbus and Greenville Railway (CAGY), which has been out of service since 2001. While investment in the GTR appears to be viable, the return on investment would be significantly enhanced if the CAGY were rebuilt because it would connect the GTR and the Ports of Rosedale and Greenville to all the towns, counties, rail lines, destinations, and businesses east of the CAGY's current terminus in Greenwood.

What Is Collaborative Infrastructure Development and Why Is It Needed for Rural Economic Development?

Collaborative Infrastructure Development is an approach to infrastructure conception and investment that bridges gaps in understanding and coordination among businesses, governing jurisdictions, and public and private sectors.

Overreliance on competition between towns, counties, states, and private sector actors leads to supply chains and infrastructure projects that are narrowly developed around individual businesses and properties. Therefore, the location and design of new investments unfold as an amalgam of disconnected land transactions, which produce unnecessarily inefficient and costly supply chains, as well as diminished economic and environmental vitality.

More often than not, new infrastructure benefits only a few stakeholders, which limits the return on investment. Systems thinking is nearly absent. Consultants usually view stakeholder engagement as a hassle rather than a valuable source of insights, which limits the knowledge they can gain. Their engagement is almost always limited to town halls and poster presentations, which prevents them from obtaining valuable perspectives through thoughtful one-on-one conversations.

In contrast to typical infrastructure projects, which are often developed to serve a single port, town, county, or shipper, we sought the perspectives of numerous port directors, economic development leaders, transportation providers, and shippers. To clarify the viability of investing in rebuilding the GTR, we employed a radical inclusion approach, which uncovers supply chain opportunities that are only apparent when you hear the plans and ideas of all stakeholders and potential users.

This approach revealed opportunities that would have otherwise remained hidden. For example, Steel Dynamics (SDI) in Columbus, Mississippi, is building a biomass-fueled power generator that plans to source feedstock from outside the state. At the same time, the in-state wood products

industry struggles with an oversupply of biomass that lacks a customer. Connecting SDI with in-state sources of feedstock would benefit the industries involved and Mississippi's economy. Shuttling material to the power plant by rail and distributing steel products back to the state's rural areas by rail would provide an excellent baseload use of a rebuilt CAGY while stimulating new manufacturing facilities along the line.

Similarly, while visiting a county-owned rail line in the Three Rivers Planning & Development District in northeast Mississippi, we discovered a rail tie recycler in Amory that could process approximately 90,000 scrap ties from the GTR rebuild alone. Having a disposal site in the state would be an excellent resource. This synergistic connection would support the development of two publicly owned railroads.

Like many components of infrastructure systems, rail lines function best when designed to serve multiple businesses and towns. If there are long stretches without customers, the costs of building, maintaining, and operating the line become impractical and unworkable. While there are mega-size businesses that ship enough individually to justify the costs of a single-customer rail line, rural America needs rail service for its many smaller companies.

The success of the Port of Rosedale and a rebuilt GTR requires the collective engagement of the region's economic development community. Their ongoing input is necessary to identify and support existing, new, and prospective businesses to utilize rail transportation to and from the Mississippi River and other locations.

The state's economic development professionals and shippers strongly support rebuilding these rail lines. We have identified, cataloged, and spoken with leaders of the towns and counties adjacent to the out-of-service GTR, the in-service and out-of-service sections of CAGY, and the north–south rail lines that connect or would connect with all sections of the CAGY. They receive many inquiries about locating in the area that insists on rail service.

Who Will Benefit from Renewed Rail Service and the Rebuild?

Numerous industries and local economies across central Mississippi will benefit from the new rail-port service at the GTR and the currently out-of-service sections of the CAGY. We have identified the following candidates:

1. The forest products industry, including new energy and alternative products
2. Other agricultural and soil enhancement producers
3. The steel and aluminum industries centered in Columbus, Mississippi
4. Prospects for new industrial land development in each of the counties and towns along the GTR and the CAGY
5. Current industrial prospects that the Mississippi Development Authority is fielding
6. Prospects under consideration by other economic developers across the state
7. Existing Mississippi businesses that might be interested in rail-barge service
8. Industrial supply chains for new energy and waste/scrap/residual streams, including logistically advantaged siting of new state gathering and processing facilities
9. Businesses seeking to improve the environmental footprint of their products and associated supply chains by utilizing rail transportation (for instance, Eion distributes a

limestone-alternative, CO_2-absorbing soil amendment material that depends on carbon credit trading)

This approach echoes successful strategies from the past. The nation's 19th-century rail expansion succeeded precisely because it focused on entire-state logistics and infrastructure investments, even before customers were present. Large deposits of coal and other minerals, extensive forests providing abundant timber, and nearly unlimited tracts of land were available for development. However, building the infrastructure to develop and utilize these resources required a level of capital that could only be gathered through collective effort and foresight. Towns, states, the federal government, the business community, and investors collaborated to develop and implement plans for development and resource utilization.

If Mississippi follows a similar path today, it can greatly benefit from embracing this multidimensional opportunity for land, resource, and transportation development.

What Are the Keys to the Success of the GTR?

1. Base the rebuilding of the track on an informed understanding of rail operations and value engineering
2. Design the rebuild to include a comprehensive plan to procure, deliver, distribute, retrieve, replace, and dispose of track construction materials.
3. Engage existing port tenants and prospects in practical, commercially focused conversations
4. Assist each potential shipper in working through the logistics-related challenges of modal conversion and business expansion, including materials loading, storage, and transportation
5. Study freight data for the Mississippi River and Arkansas River commerce to pinpoint opportunities for new services at the Port of Rosedale
6. Involve all the economic development entities in the state that can contribute to the success of the GTR and the port by advancing rail-enabled economic development
7. Map the natural resources and related stakeholders across the various commodity sectors prevalent in Mississippi, such as wood products and other agricultural items, steel, aluminum, manufacturing, and chicken farming
8. Become familiar with the geographies and current logistics of sourcing materials and distributing products for Mississippi’s heavy freight shippers
9. Invent new practical strategies that benefit from a new rail–port connection with the Ports of Rosedale and Greenville
10. Expand the range of beneficiaries from these solutions by embracing all ports up and down the inland river system as synergistic “sister” ports to the Ports of Rosedale and Greenville
11. Place GTR operations under the management of the Port of Rosedale, which is practical and doable, given their proven track record of assisting customers with barge and truck logistics
12. Initiate the State Rail Authority, as Governor Reeves mentioned in his 2024 annual address, and make rebuilding the GTR and the CAGY their central focus at the outset

Full Reinvestment in the GTR and CAGY as a Private and Public Statewide Collaboration
Freight rail service is too essential to a state's economic vitality and quality of life to be left to the railroads under their current business model. Class I railroads, in particular, emphasize long trains and long-distance hauls to and from major ports, terminals, and the largest shippers. This has been an understandable reaction to operating in a competitive freight landscape, where public resources fund road construction and maintenance. Providing the trucking industry with a publicly funded infrastructure has enabled it to move shipments of any size and distance, largely ignoring social and environmental impacts, which has kept the industry artificially cost-competitive.

However, there is an increasing desire to return to railroads as a more economically and environmentally advantageous means of shipping freight, thereby growing the industry for the benefit of shareholders, investors, customers, and the long-term vitality of associated communities. Mississippi government leadership can facilitate this growth by utilizing the state's extensive network of economic development professionals in a statewide program of rail-enabled economic development.

This innovation can encourage Class I railroads and the state's shortline railroad owners to collaborate with Mississippi as a testing ground for expanding rail service.

Railroad companies do a professional job of safely managing the trains they run, and they are well-capitalized for their stable, ongoing operations. They are, however, minimally staffed for local and statewide relations with the marketplace, the public, and governing bodies. Growing the rail industry requires active engagement in all these areas. Otherwise, service and business growth depend wholly on contracting with and serving only the largest industrial enterprises. This is why many rural, less-populated areas in Mississippi and across the continent struggle to establish the level of local rail connectivity necessary to support balanced industrial development and prosperous communities.

Achieving even the first-phase GTR development opportunities to serve existing port tenants requires state leadership to establish a new level of effectiveness in interacting with the Class I railroads. Canadian National Railroad is the sole connecting carrier at Greenwood, where cars interchange with the CAGY from Metcalfe. They do not currently offer local service from that point directly south to Baton Rouge and New Orleans. They haul local traffic from there north to Memphis, Tennessee, then load onto trains heading south. This will not suffice as a viable alternative to barge shipments down the Mississippi River.

Railroads and economic development professionals must refocus their collective efforts on smaller commercial enterprises and the local communities they can serve in rural North America.

Achieving ultimate success in developing the required multi-county, multi-entity collaboration depends on gaining endorsement from the Mississippi Development Authority and Governor Reeves. The Ports of Rosedale and Greenville, along with Strategic Rail Finance's nonprofit affiliate, OnTrackNorthAmerica, can offer the necessary leadership. However, the governor's approval is essential for effective engagement with federal and state agencies, counties, economic development organizations, major businesses in the state, and the railroads.

What Is the Likely Future Demand for Freight Rail Service in Rural Mississippi and Elsewhere?

Rail transportation is expected to remain in high demand, particularly for companies developing and offering alternative fuel sources, fertilizer components, and other innovative product designs incorporating environmental considerations into their marketing and funding strategies. Across the range of products and commodities, an increasing emphasis is being placed on the ecological footprint of the supply chain and its impact on customer appeal, marketing, and investor criteria. This is highly relevant in Mississippi. One company currently making a $300 million single-facility investment in the state reported that CO_2 savings from their wood products are a critical investment criterion for their financial backers. Lowering their environmental footprint with efficient rail logistics would significantly improve their access to growth capital and customer interest. Other vital enterprises in the state have similar environmental concerns. SDI, for example, promotes the ecological use of scrap material as feedstock for its Columbus plant, which is at the core of its business case. The contribution of rail transportation to supply chain sustainability can be a key incentive for companies, investors, and lenders to invest in the state of Mississippi.

OnTrackNorthAmerica has conducted extensive research on the robust social, environmental, and financial benefits of freight rail transportation. See our Land Freight Lifecycle Impact Calculator. As the full impact of transportation modes becomes apparent over the next several years, the numerous benefits of rail freight, in addition to decreased CO_2 emissions, are expected to encourage more businesses to utilize rail logistics. For example, each truckload of freight causes road damage equivalent to the damage caused by 9,500 passenger vehicles. The weight carried by a one-mile train with 80 railcars requires a 27-mile convoy of trucks on the highway to move the same goods. Railroads are the most space-, energy-, and capital-efficient means of moving heavy weight over land.

Freight railroads enable economic development to be uncoupled from the continued expansion of truck traffic. Railroads pay for their track construction and maintenance, so the state benefits from rail-enabled economic growth in both the short and long term.

Mississippi faces a significant funding shortfall for highway and bridge maintenance. The most recent analysis of pavement needs by the Mississippi Department of Transportation (MDOT) revealed that 87% of state-maintained lane miles require repair, rehabilitation, or preventive maintenance, and nearly 42% require more extensive maintenance. The total cost of all repair and maintenance procedures is estimated to be almost $4 billion; however, at current funding levels, the state only meets approximately 10% of its annual pavement needs.

As Mississippi continues to expand its industrial base, the amount of freight to be transported will unavoidably increase, requiring both trucks and trains. Moving more of this expanding volume of cargo by rail is critical to avert highway congestion, safety issues, and maintenance shortfalls. Introducing existing and prospective businesses to all the environmental, social, and logistical benefits of improved rail connectivity in, out of, and through Mississippi will significantly contribute to the state's prosperity.

What Are the Next Steps?

1. Compare the transportation and business economics of moving freight from Rosedale to Baton Rouge and New Orleans by barge, truck, and rail under both low- and high-water conditions. Each port tenant and customer needs to answer the following questions:
    - How much are they shipping by barge south on the Mississippi?
    - What is the seasonal nature of these shipments on a monthly basis?
    - What are the temporal (timing) concerns relative to these shipments?
    - What is their ability to store products during low-water delays, and what are the associated costs?
    - What are the trucking costs and availability from Rosedale to Baton Rouge and New Orleans during the year's low-water/high-demand periods?
    - What are the costs of moving the same freight volume by rail?
    - How would railcars be acquired, and what would the cost of partial-year usage be?

2. Mississippi commodities have traditionally been exported overseas, owing to the state's strategic location at the base of the Mississippi River watershed, the fourth largest in the world. Along with Louisiana, Mississippi holds a competitive edge over other states in the watershed because it is situated closest to loading docks for ocean-going ships. However, Port of Greenville President Tommy Hart confirmed that opportunities to use the Mississippi River upstream to distribute more Mississippi goods to the heartland of America have not been fully explored. During our research, we identified two existing power plants north of the Port of Rosedale that showed strong interest in sourcing wood pellets as a replacement fuel for their boilers. Further research will reveal more opportunities to move Mississippi goods upriver into the heartland.

Concluding Thoughts

Strategic Rail Finance has developed innovative public-private funding solutions to address rail capitalization challenges. As we develop the comprehensive funding strategy for the GTR and the CAGY, we will coordinate a combination of the applicable public funding options listed in Exhibit H, potentially including an FRA Railroad Rehabilitation and Improvement Finance (RRIF) Loan. Private funding alongside public funding can play a key role.

The GTR and the CAGY are excellent candidates for USDOT Consolidated Rail Infrastructure and Safety Improvements (CRISI) grant funding because the program seeks ready-to-advance projects. As rebuilding projects involving existing rail ROWs, these rebuilds do not require time-consuming National Environmental Policy Act (NEPA) assessments that handicap many other grant applications.

At the heart of all our funding solutions is a financial model similar to the one we developed for the GTR rebuilding and operation (Exhibit E). Rather than basing the model on annual generalizations and hypothetical formulas, we focus on details, current material prices, thoughtful operating design, and contractor quotes. It is presented as a working Excel spreadsheet rather than a static PDF to facilitate its utility and ongoing refinement.

For more information:
msussman@strategicrail.com

1700 Sansom Street, Suite 701
Philadelphia, PA 19103
(215) 564-3122
www.strategicrail.com