

# Extending the *Crescent* Daily Between Meridian and Fort Worth: An Economic Benefits Assessment

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March 27, 2023

## SUMMARY

***Rail Passengers* modeling indicates that an Amtrak proposal to extend service on the *Crescent* route from Meridian, MS, to Fort Worth, TX, while simultaneously operating a modified consist on the *Crescent's* current route to New Orleans, could generate as much as \$50.7 million annually in new economic benefits (2023 dollars) to a dozen communities that would be served and some \$207 million annually overall to the three states concerned – Mississippi, Louisiana, and Texas. The new service would add or support 661 permanent jobs across all industries, including 224 directly connected to the new service.**

For Mississippi alone, *Rail Passengers'* modeling suggests \$73.4 million in annual benefit to the state and to four locations in the state that would be served (Meridian, Jackson, the Jackson/Vicksburg airport, and Vicksburg), supporting 77 direct jobs in the state.

In Louisiana, *Rail Passengers* assesses \$70 million in annual benefit to the state and to three locations and the surrounding communities that would be served (Monroe, Ruston, and Shreveport), supporting 81 direct jobs in the state.

For Texas, *Rail Passengers'* modeling shows \$63.5 million in annual benefit through service to Marshall, Longview, Mineola, Dallas, and Fort Worth, which would support some 65 direct jobs.

Economic benefits will accrue in two ways – in the form of additional spending by passengers and by businesses serving those passengers or supporting the local economy, and also in the form of savings to municipalities, and passengers themselves. Additional spending from riders in local economies comes as passengers board and alight in different places, opening their wallets along the way in local hotels, restaurants, and retail establishments, and inducing business-to-business transactions. Savings come mostly through diverting vehicle miles traveled to rail, which produces savings to municipalities in the form of reduced road construction and maintenance, savings to society as a whole in the form of lower deaths and pollution emissions, and savings to riders themselves who more often than not experience a lower overall trip cost by taking a train than they do by driving, flying or riding a bus once the total costs are taken into account.

In this Research Note, we have added additional levels of initial analysis to an assessment originally performed for the City of Monroe, LA, of just a ten-stop portion of the extension. That work examined the potential total economic benefits to be gained by linking Jackson, MS, to Fort Worth, TX, closing a 345-mile gap between Jackson, MS, and Marshall, TX. To that initial assessment we have now added the additional ridership that would be generated in Meridian, and the effects of a proposed stop near the airport serving Jackson, MS. We performed our assessment using models co-developed by the Association and the University of Southern Mississippi's *Trent Lott Center*, plus the commercially available IMPLAN economic-impact planning tool.

In addition to the core assessment above, *RailPassengers* reports the following key findings:

- At 274,000 passengers, the new train should boast higher ridership than many other existing services, and significantly more ridership than Amtrak projected in a 2015 assessment of the new *Crescent* section

- The new train should remove many millions of vehicle-miles traveled (VMTs) from the highways and secondary roads of the three states served. **Taking cars off the road will create benefits which conservatively total at least \$9.9 million each year.**
  - o Most diverted trips will be from cars, with a small fraction diverting from buses
- In addition, by supporting an *ecosystem* of establishments and suppliers that would generate \$202.2 million per year, the new service should produce an additional 11% gain in induced new travelers, injecting **\$3 million worth of new visitor-related revenue each year into the economies of communities considered in this analysis.**
- **Annual tax receipts from all sources can be expected to rise by \$14.9 million.**

## FINDINGS

*Rail Passengers* assesses that operating the additional Crescent section from Meridian, MS, to Fort Worth, TX – stopping at the Jackson/Evers Airport, Jackson, Vicksburg, Monroe, Ruston, Shreveport, Marshall, Longview, Mineola, Dallas, and terminating in Fort Worth – could generate a **total economic benefit of \$207.48 million annually**. Statewide benefits would add \$61 million in Mississippi, \$56.8 million in Louisiana, and \$38.9 million in Texas. Benefits specific to the 12 communities considered could reach \$50.7 million.

Rail Passengers’ analysis suggested that **total annual ridership on the new segment could be in the range of 276,256, including the two endpoints**. This is roughly 95,000 riders higher than Amtrak estimated in its 2015 assessment of the *Crescent* extension’s potential. The difference in our estimate from Amtrak’s derives from several factors. First, the Amtrak 2015 analysis did not include several stops, such as the Jackson, MS, airport, or Monroe, or Ruston. We have done so and based on the demographics these counties and parishes, as well as their proximity to important sources of travel demand, *Rail Passengers* estimates Jackson/Evers airport ridership of 10,458, Monroe annual ridership of 18,258, and Ruston annual ridership of 13,964. Together, these account for close to 45 percent of the difference between *Rail Passengers*’ estimate and Amtrak’s eight-year-old estimate for the Southern Rail Commission.

Next, since the time Amtrak’s estimate was produced, populations in the areas served have grown substantially. The nine counties have collectively grown by 474,082 residents in the past ten years. *Rail Passengers*’ nationwide modeling suggests that the new service could capture between eight and eleven percent of that new population.

Moreover, Amtrak projections often underestimate ridership demand on new routes. *Rail Passengers* considers and models the characteristics of the communities, and the types of institutions present which can shape travel demand, such as Federal government facilities, hospitals, universities, major tourist attractions and sporting events, and others, as well as network effects. This relatively small rail segment will create connections between mega-regions and existing Amtrak services linking population centers totaling 110 million people. More than simply linking Jackson to Marshall, this would connect New York to Los Angeles with a swing through Southern states, enabling regional daytrips between any of 35 communities, college towns and tourist destinations across the three-state region encompassing Texas, Louisiana, and Mississippi.

Our modeling suggests that of the total ridership, another 11 percent represent travelers who would stay home and not spend any money in the absence of the service. That 11 percent

induced ridership can be expected to generate **an additional increment of \$3 million** of new visitor spending every year.

Together, the 12 communities considered in this analysis should expect to see roughly **5.8 million vehicle-miles traveled**, or VMTs, removed from highways and secondary roads thanks to a combination of existing visitors and residents who will shift some of their driving to using the train and new visitors who would not travel to these locations using any travel mode if the train did not exist. Reducing VMTs can be expected to reduce costs imposed on municipalities and states for highway and road maintenance, reduce pollution and emissions, and reduce the number of deaths from motor-vehicle crashes. Road maintenance savings are projected to be worth roughly **\$9.9 million annually**.

Results from the IMPLAN model show that new induced visitor spending on Lodging, Restaurants, Entertainment, Shopping and Local Transportation, combined with the stimulus effects of savings from reduced VMTs and spending on the rail operation itself, can be expected to support an additional **Labor Income increment of \$46.5 million** and **Value-Added effects** – i.e., incremental contribution to Gross Domestic Product from industry-to-industry transactions – **of \$91.8 million annually**.

Due to time constraints, *Rail Passengers* did not include any economic effects from capital spending in its assessment of economic benefits from the new service. A future study thoroughly updating the capital spending plan could be used to calculate additional benefits to the states' economies during the 5–10-year period during which capital investments would be made in building or upgrading stations and improving rights-of-way, tracks and signaling. These benefits would include labor income and value-added effects from construction spending, business-to-business purchases of materials and components.

## METHODS AND APPROACH

For this assessment of the value of restored rail service, we calculated more than 70 variables for the counties that would encompass the station stops the City of Monroe asked us to examine, as well as additional counties to expand the span of the analysis to both endpoints of the proposed new extension. These were Lauderdale County, MS, Hinds County, MS, Warren County, MS, Ouachita Parish, LA, Lincoln Parish, LA, Caddo Parish, LA, Harrison County, TX, Gregg County, TX, Wood County, TX, Dallas County, TX, and Tarrant County, TX. In addition, some stimulus from the annual boardings and alightings at Jackson airport were modeled using Hinds County as a base.

Based on those selections, we began by updating key assumptions from the Amtrak 2015 Crescent assessment<sup>1</sup>, including examining Census Bureau data for population and income changes in the counties studied between 2015 and today<sup>2</sup>. Significant population and income growth have taken place throughout the areas we studied, but especially in nine counties that would be served by this route. According to 2021 Census Bureau estimates, these communities grew by a net 474,082 residents since the previous Census enumeration.

Since 2016, *Rail Passengers* has been assessing and comparing ridership at every station stop in the Amtrak system to understand the differences in the ways that populations in rural counties use Amtrak's long-distance routes compared with more suburban or urban communities.

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<sup>1</sup> <https://irp.cdn-website.com/be785d40/files/uploaded/Feasibility%20Study.pdf>

<sup>2</sup> U.S. Census QuickFacts v2022 - <https://www.census.gov/quickfacts/fact/table/US/PST045222>

The new *Crescent* extension would have characteristics broadly similar to Amtrak's *Empire Builder*, *Texas Eagle* and *Sunset Limited* routes, and our previous station-by-station work allowed us to generalize about likely passenger behavior on this new route. This work underpins our county-by-county ridership estimates, which consider whether the station stop is located in an urban, suburban, or rural area, the size of the population, the degree of population growth recorded during the intervening years from prior studies or assessments, the 2021 median income of the county in which the station is located, and the current average Amtrak fare for similar long-distance segments.

We then used our county-by-county ridership estimates to calculate the ways in which ridership increments in a given locality affected outcomes such as new visitor spending in various categories, the number of trips into and out of a locality, the percentage of trips taken in each travel mode (rail, car, bus or air), removed vehicle miles traveled (VMTs) and the savings associated with reduced VMTs in the form of pollution reductions, avoided fatalities and reduced per-mile road maintenance costs which are typically borne by the municipality. These calculations, in turn, are used to calculate additional business activity generated across industries. This two-step process is explained in more detail below.

## How Our Modeling Works

Our proprietary *Rail Passengers* model uniquely assesses 47 variables, such average bus operating revenues, passenger miles by car, emissions control costs per unit of CO<sub>2</sub>, percentage of rail riders who are visitors versus residents, and so forth. Our model examines the way in which those variables interact with each other to produce different outcomes in the form of additional increments of spending or savings to consumers. The model's assessment produces outputs estimating the effects of ridership on things like visitor spending across different categories and the savings that riders can expect to pocket because of not driving or flying. The two core drivers of our model are ridership and mileage. Ridership figures drive the additional increments of spending, while mileage figures drive the savings produced. This is Step 1 of our economic-benefits modeling process, and it produces a useful accounting of direct benefits stemming from rail ridership all on its own. We then combine this work with an additional step to broaden our view of the benefits of rail.

In Step 2, we enter our model results/outputs into IMPLAN, a modeling tool widely used by universities, the Federal government, and economic-development agencies<sup>3</sup>. IMPLAN relies on Input-Output (I-O) analysis, which looks at inter-industry relationships within an economy. It captures all monetary market transactions *between industries*. By doing this, analysts can use the tool to study the effects of a change in one or several economic activities – say, introducing a passenger rail service -- on an entire economy. Uniquely among economic-study tools, IMPLAN also includes transactions between industries and institutions and between institutions themselves, giving a truly complete picture of all monetary market transactions taking place over a given time period.

Put more simply, after *Rail Passengers'* model identifies the spending that enters a particular economy from the rail service, the IMPLAN tool traces the flow of that money through

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<sup>3</sup> For more detailed explanations of IMPLAN, visit <https://implan.com/application/>

other parts of the local economy and the extent to which those flows generate additional labor income, value-added benefits, and tax effects.

## Notes and Limitations

The purpose of this Research Note was to add additional analysis to an original assessment commissioned by the City of Monroe, encompassing both endpoints of the proposed extension of Amtrak's Crescent between Meridian, MS, and Fort Worth, TX. Our scope was to assess the scale of economic benefits from restored passenger service, using a set of station stops supplied by Monroe and other requesters, updating ridership projections initially provided by Amtrak. This document is not a formal Operations Analysis, and our work did not consider a range of factors, such as, but not limited to:

- The final operating schedule of the service, which will affect whether the train is desirable or attractive to passengers
- Costs of required station improvements for each station based on an in-situ assessment of existing physical conditions or ADA compliance
- Costs for rolling stock and locomotives that might be used in the service
- An updated assessment of track conditions and signaling by operating company and territory, or
- Changes in operating conditions by proposed host railroads

As mentioned previously a worthwhile next step would include re-examination and baselining of needed capital investments in light of changes to host railroad operations, physical and geographical changes in the relevant operating territories, and pending broad-based Federal investments in Amtrak rolling stock systemwide. Previous Amtrak estimates for station platforms and improvements ranged from \$500,000 to as much as \$1.5 million per station stop. All of these capital investments, as well as additional capital spending by communities above and beyond those amounts to produce a more attractive station or adapt the facilities to mixed-use development, would produce additional economic benefits during the course of construction, which could and should be modeled.

## RIDERSHIP PROJECTIONS

As noted earlier, significant population and income growth have taken place throughout the areas we assessed, but especially in nine counties that would be served.

*RailPassengers* own ridership analysis assesses that annual ridership on a potential new Crescent extension service should reach in the range of **276,256 riders**, based on the mix of urban, suburban, and rural counties which would be served by this route, and the opportunities for interconnection between East and West Coast megaregions. Our present estimate is 53% higher than Amtrak estimated eight years ago.

Estimated Annual Ridership By Station												
Meridian	Jackson /Evers APT	Jackson	Vicksburg	Monroe	Ruston	Shreveport	Marshall	Longview	Mineola	Dallas	Fort Worth	TOTAL
16,220	10,458	20,041	13,509	18,258	13,964	23,813	15,213	13,662	13,304	64,651	53,162	276,256

Source: Rail Passengers LD Characteristics Model

*RailPassengers'* previous work suggests that there is a stronger relationship between the population size of the county and the share of ridership than there is between median income for a county and its ridership. Since 2016, our work examining ridership across all Amtrak-served origin/destination points shows that rural and lightly populated areas are outsized users of passenger rail service, often producing annual trip numbers that are multiples of the catchment area's population rather than fractions.

## PASSENGER SPENDING

New, incremental visitor spending brought to each served community because of the new train service was assessed at **\$3 million annually**. It is important to note that this is not all the spending captured in our modeling work, but simply the value of a portion of the new spending. There are more effects from a broader view of visitor spending captured elsewhere in the model, particularly in the IMPLAN Labor Income, Value-Added and Output values. Some visitors would still make the trip, but might drive, or take a bus or drive. Our model captures them as well. But the Visitor Spending figure reported here calculates the value of visitors who would not travel at all in the absence of rail service.

The calculation underlying the percentage we apply to arrive at this figure was developed in 2017 through extensive research and literature review:

*# of passengers deboarding X fraction of passengers assumed to be nonresident X fraction of "induced" passengers (i.e., passengers who only took the trip because the train route exists) X lodging/restaurant/entertainment/shopping/local transportation spending per person reported by tourist bureaus in each state.*

Annual Induced New State Visitor Spending From I-20 Corridor Initiative						
State	Lodging	Restaurants	Entertainment	Shopping	Local Transportation	Total New Spending
Mississippi	\$ 81,058	\$ 154,632	\$ 178,459	\$ 101,197	\$ 90,113	\$ 605,459
Louisiana	\$ 174,602	\$ 207,878	\$ 116,861	\$ 104,774	\$ 220,716	\$ 824,831
Texas	\$ 387,644	\$ 405,844	\$ 169,073	\$ 244,538	\$ 400,628	\$ 1,607,727
<b>TOTAL</b>	<b>\$ 643,305</b>	<b>\$ 768,354</b>	<b>\$ 464,392</b>	<b>\$ 450,509</b>	<b>\$ 711,457</b>	<b>\$ 3,038,018</b>

Source: Rail Passengers Railway Benefits Calculator, IMPLAN Economic Modeling Tool

## ENVIRONMENTAL BENEFITS

Annual Reduction In Vehicle Miles Traveled (VMTs)		
County/State (Station)	VMTs Removed	Road Mx Savings
Lauderdale County, MS (Meridian)	569,391	\$ 882,857
Jackson/Evers Airport (Rankin County)	367,113	\$ 569,219
Hinds County, MS (Jackson)	703,536	\$ 1,090,854
Warren County, MS (Vicksburg)	474,246	\$ 735,333
Ouachita Parish, LA (Monroe)	555,586	\$ 861,452
Lincoln Parish, LA (Ruston)	390,922	\$ 606,137
Caddo Parish, LA (Shreveport)	522,030	\$ 809,423
Bossier Parish, LA (Shreveport)	144,615	\$ 224,229
Harrison County, TX (Marshall)	252,377	\$ 391,318
Gregg County, TX (Longview)	226,648	\$ 351,425
Wood County, TX (Mineola)	220,703	\$ 342,207
Dallas County, TX (Dallas)	1,072,535	\$ 1,662,997
Tarrant County, TX (Fort Worth)	881,932	\$ 1,367,462
<b>TOTAL</b>	<b>5,445,130</b>	<b>\$ 9,894,914</b>

Source: Rail Passengers/USM Railway Benefits Calculator

Trains are inherently energy efficient. In the United States, the Oak Ridge National Laboratory reports in Edition 39 of the Transportation Energy Data Book that as of 2018 Amtrak consumed 1,535 Btus per passenger mile, compared with 2,840 Btus per passenger mile for personal automobiles<sup>4</sup>. Thus, every reduction in vehicle-miles traveled helps to reduce the energy intensity of passengers' travels.

A 2007 study for the American Bus Association – “Comparison of Energy Use & CO2 Emissions From Different Transportation Modes” – found CO2 levels generated by trains, air travel, cars, and buses were estimated to be 177 grams per passenger mile, 243 grams per passenger mile, 371 grams per passenger mile, and 299 grams per passenger mile, respectively<sup>5</sup>. Once again, every VMT saved translates into less pollution emitted.

*Rail Passengers'* calculation of the economic value of these reductions is extremely conservative, however, and is based on work by the U.S. Department of Transportation and the Victoria Transport Policy Institute (“Transportation Cost and Benefit Analysis II – Air Pollution Cost”). **The Institute notes that CO2 Emissions are very difficult to price, given varying climate forecasts and future discounting behavior.** Per ton, studies have estimated that CO2 Emissions have an impact from \$17 to \$917. However, there are credible estimates that put that cost well over \$1,000 and even \$1,600 per ton. The current guidance from the U.S. Dept. of Transportation for assessing the social cost of carbon is \$57 per ton.<sup>6</sup> To remain in line with DOT, this is the figure *Rail Passengers* used in its modeling.

With this calculation, it is estimated that passengers aboard the new train would save the counties/parishes together at least **\$300,951 each year**. *Rail Passengers* nonetheless believes a more robust model to price emissions' true costs would likely result in a higher savings number.

## SAVINGS FROM REDUCED VEHICLE MILES TRAVELED (VMTs)

Reducing the total number of vehicle miles traveled (VMTs) also translates into a reduced need to spend on roadway maintenance, both on highways and secondary roads, due to the fraction of reduced wear-and-tear imposed on the roadways.

<sup>4</sup> Transportation Energy Data Book: Edition 39, Table 2.13 Passenger Travel and Energy Use, 2018 - [https://tedb.ornl.gov/wp-content/uploads/2021/02/TEDB\\_Ed\\_39.pdf#page=63](https://tedb.ornl.gov/wp-content/uploads/2021/02/TEDB_Ed_39.pdf#page=63)

<sup>5</sup> M. B. & Associates, "Comparison of Energy Use & CO2 Emissions From Different Transportation Modes," American Bus Association, 2007.

<sup>6</sup> US DOT – Benefit-Cost Analysis Guidance for Discretionary Grant Programs, p 40



We assume the train riders (not including the newly induced riders) who live in a region need to travel no matter what travel mode is provided. If the train was not there, they would take cars, planes, or buses. One of the values our model calculates is how many passenger miles traveled would have happened in cars if there were no passenger rail service. The Railway Benefits Calculator model *Rail Passengers* co-developed with the University of Southern Mississippi estimates the accrued annual savings to municipalities from reduced road wear-and-tear, assigning the savings to the fraction of trips diverted from the roads to trains.

## OVERALL BENEFITS FROM DIRECT OPERATIONS

### Annual Estimated Economic Benefits of Crescent I-20 Extension

Presented below are the aggregate results of all the calculations and formula results from both the *Rail Passengers* model and the IMPLAN model's calculations of additional benefits in the form of Labor Income, Value-Added and total economic Output.

Results at the county level for counties in which station stops will be located are driven primarily by ridership at these stations. Results at a state-wide level are primarily driven by induced state-level spending not captured at the station level and the effects of maintenance and support spending on rail rights-of-way in each state.

As noted earlier, *Rail Passengers* did not include the benefits of a projected five- to seven-year capital investment program that will be required to improve railbeds and signals, construct new tracks and sidings, and bring stations into compliance with Americans with Disabilities Act (ADA) access standards. This would create significant additional benefits beyond the \$207 million annual benefit our model calculated.

*NOTE: The "Output" column includes amounts from the Labor Income and Value-Added columns, but also includes other inputs. Output cannot be viewed as the sum of Labor Income and Value-Added.*

Annual Estimated Economic Benefits of I-20 Corridor Initiative to Selected Counties										
County/State (Station)	Visitor Spending	Reduced Pollution	Reduced Crash Fatalities	Avoided Road Maintenance	Avoided Travel Costs (vs Other Modes)	Rail Operations & Maintenance Spending	Labor Income	Value Added	Output*	Total Economic Benefit
Lauderdale County, MS (Meridian)	\$ 163,054	\$ 26,852	\$ 87,707	\$ 882,857	\$ 1,241,396	\$ -	\$ 374,587	\$ 708,240	\$ 1,341,846	\$ 3,743,712
Jackson/Evens Airport (Rankin County)	\$ 105,129	\$ 17,313	\$ 56,549	\$ 569,219	\$ 800,386	\$ -	\$ 52,315	\$ 82,369	\$ 164,849	\$ 1,713,445
Hinds County, MS (Jackson)	\$ 201,469	\$ 33,178	\$ 108,371	\$ 1,090,854	\$ 1,533,863	\$ -	\$ 462,838	\$ 875,098	\$ 1,657,978	\$ 4,625,713
Warren County, MS (Vicksburg)	\$ 135,808	\$ 22,365	\$ 73,052	\$ 735,333	\$ 1,033,960	\$ -	\$ 304,110	\$ 574,297	\$ 1,088,442	\$ 3,088,959
Ouachita Parish, LA (Monroe)	\$ 293,923	\$ 26,201	\$ 77,023	\$ 861,452	\$ 1,221,007	\$ -	\$ 527,246	\$ 924,766	\$ 1,686,155	\$ 4,165,761
Lincoln Parish, LA (Ruston)	\$ 206,811	\$ 18,436	\$ 54,195	\$ 606,137	\$ 859,127	\$ -	\$ 370,982	\$ 650,685	\$ 1,186,415	\$ 2,931,120
Caddo Parish, LA (Shreveport)	\$ 276,171	\$ 24,618	\$ 72,371	\$ 809,423	\$ 1,147,262	\$ -	\$ 774,065	\$ 1,357,676	\$ 2,475,494	\$ 4,805,339
Bossier Parish, LA (Shreveport)	\$ 76,506	\$ 6,820	\$ 20,048	\$ 224,229	\$ 317,819	\$ -	\$ 137,238	\$ 240,709	\$ 438,893	\$ 1,084,315
Harrison County, TX (Marshall)	\$ 152,872	\$ 11,902	\$ 30,486	\$ 391,318	\$ 602,266	\$ -	\$ 364,381	\$ 635,995	\$ 1,148,619	\$ 2,337,464
Gregg County, TX (Longview)	\$ 137,288	\$ 10,689	\$ 27,379	\$ 351,425	\$ 540,868	\$ -	\$ 327,234	\$ 571,158	\$ 1,031,523	\$ 2,099,171
Wood County, TX (Mineola)	\$ 133,687	\$ 10,408	\$ 26,660	\$ 342,207	\$ 526,681	\$ -	\$ 318,651	\$ 556,177	\$ 1,004,466	\$ 2,044,109
Dallas County, TX (Dallas)	\$ 649,667	\$ 50,580	\$ 129,560	\$ 1,662,997	\$ 2,559,472	\$ -	\$ 1,548,525	\$ 2,702,810	\$ 4,881,330	\$ 9,933,606
Tarrant County, TX (Fort Worth)	\$ 534,213	\$ 41,591	\$ 106,535	\$ 1,367,462	\$ 2,104,622	\$ -	\$ 1,273,333	\$ 2,222,487	\$ 4,013,858	\$ 8,168,281
Mississippi State-Wide	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,345,740	\$ 31,897,949	\$ 61,039,917	\$ 61,039,917
Louisiana State-Wide	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,042,948	\$ 27,335,935	\$ 56,826,347	\$ 56,826,347
Texas State-Wide	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,337,142	\$ 20,496,206	\$ 38,870,997	\$ 38,870,997
<b>TOTAL</b>	<b>\$ 3,066,596</b>	<b>\$ 300,951</b>	<b>\$ 869,936</b>	<b>\$ 9,894,914</b>	<b>\$ 14,488,729</b>	<b>\$ -</b>	<b>\$ 46,561,334</b>	<b>\$ 91,832,556</b>	<b>\$ 178,857,129</b>	<b>\$ 207,478,256</b>

\* - Includes Labor Income and Value Added values, but not a total  
Source: Rail Passengers Railway Benefits Calculator, IMPLAN Economic Modeling Tool

## ADDITIONAL RESULTS

### Annual Tax Revenues Created by the I-20 Corridor Initiative

Recall that our study protocols look not only at direct spending by visitors, but at the business-to-business transactions that are spurred on by the visitors’ activities. All of these activities – from staying in a hotel to eating at a restaurant, visiting an entertainment venue, buying local goods, or renting a car – support employees who in turn make purchases and pay sales taxes or property taxes, or cause retail outlets to buy additional goods, or induce supporting businesses to supply services to the hotels or restaurants or stores. Each of those transactions produces tax revenues at varying levels depending on the jurisdiction. The IMPLAN model captures those tax effects at the county level, which are presented in this table summarized by state.

Annual Tax Revenues Created By I-20 Corridor Initiative						
State	Sub County General	Sub County Special Districts	County	State	Federal	Total Tax Revenue
Mississippi	\$ 101,014	\$ 243,396	\$ 202,126	\$ 1,353,838	\$ 3,088,640	\$ 4,989,015
Louisiana	\$ 137,983	\$ 211,499	\$ 124,793	\$ 754,307	\$ 3,507,014	\$ 4,735,596
Texas	\$ 296,275	\$ 649,013	\$ 209,841	\$ 968,129	\$ 3,082,222	\$ 5,205,479
<b>TOTAL</b>	<b>\$ 535,272</b>	<b>\$ 1,103,908</b>	<b>\$ 536,760</b>	<b>\$ 3,076,274</b>	<b>\$ 9,677,875</b>	<b>\$ 14,930,090</b>

Source: Rail Passengers Railway Benefits Calculator, IMPLAN Economic Modeling Tool

## Definitions, Explanations and Notes

**Visitor Spending** – captures additional spending in the local economy exclusively from the roughly 5% to 7% of annual ridership that would not be there but for the train service.

*# of passengers deboarding X fraction of passengers assumed to be nonresident X fraction of “induced” passengers (i.e., passengers who only took the trip because the train route exists) X lodging/restaurant/entertainment/shopping/local transportation spending per person reported by tourist bureaus in each state.*

**Road fatalities** – an extremely conservative set of assumptions which uses a U.S. Dept. of Transportation figure related to, but different from, the U.S. Dept. of Labor’s statistical value of a life saved. DOT refers to this figure as the “comprehensive cost” of road fatalities, and in our model examines only the subset of existing passenger miles shifted directly from car to rail

**Road maintenance** – derived from reductions in annual Vehicle Miles Traveled (VMTs) by non-resident passengers (i.e., assumes residents will likely drive to and from their preferred stations to use the train, so the rail service only reduces the VMTs imposed by non-residents).

**Labor Income (IMPLAN)** – All forms of Employment income, including Employee Compensation (wages, salaries, and benefits) and Proprietor Income.

**Value-Added (IMPLAN)** – The difference between an Industry's or establishment's total Output and the cost of its Intermediate Inputs; it is a measure of the contribution to GDP. Value Added is a large portion of Output, as it encompasses Labor Income (LI), Other Property Income (OPI), and Taxes on Production and Imports (TOPI).

**Output (IMPLAN)** – For all Industries, output equals the value of Industry production, which is equal to sales plus net inventory change, but details vary depending on industry sector. For wholesale and retail, Output is equal to gross wholesale margin or gross retail margin, respectively, not gross sales. In other words, the value of production for wholesale and retail sectors is the value of the services they provide and doesn't include the value of the items sold within their establishment. Output includes labor income and value-added, but also other intermediate inputs. Thus, in the tables we present, it's not accurate to add labor income and value-added to yield Output.