BATON ROUGE – NEW ORLEANS INTERCITY RAIL FEASIBILITY STUDY

TECHNICAL MEMORANDA:

#1: SUMMARY OF PRIOR AND ON-GOING EFFORTS

#2: STAKEHOLDER OUTREACH APPROACH

#3: FUNDING AND FINANCING OPTIONS

#4: CAPITAL AND OPERATING PLAN

FINAL REPORT • FEBRUARY 2014

Prepared for:

Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes

Capital Region Planning Commission

Baton Rouge Area Foundation

Prepared by:
HNTB Corporation

State and Federal Project Numbers:
H.010052 and H.010053

The preparation of this report has been financed in part through grants from United States Federal Highway Administration in accordance with Grant Agreement Numbers H.010052 and H.010053 and a grant from the Baton Rouge Area Foundation.

TECHNICAL MEMORANDUM #1

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1 INTRODUCTION

There has been a long history of promoting passenger rail service in the Baton Rouge to New Orleans corridor by local, regional and state organizations. Regular passenger rail service in this corridor was discontinued in 1969 and virtually since that time efforts have been underway to restore service. The Southern High Speed Rail Commission was created in 1982 as the Louisiana – Mississippi – Alabama Rapid Rail Transit Commission and has been working since then to develop and implement a vision for passenger rail service in the central Gulf Coast region. The Louisiana Department of Transportation and Development (DOTD), the New Orleans Regional Planning Commission (NORPC), the Capital Regional Planning Commission (CRPC) and municipalities and parishes have all been involved in activities to develop and promote rail service in the corridor. Non-profit organizations, including the Baton Rouge Area Foundation (BRAF) and the Center for Planning Excellence (CPEX), have also been very active in advocating passenger rail service. In 2010, the Louisiana Legislature enacted House Bill No. 1410 authorizing the formation of Louisiana Intrastate Rail Compact(s) which allows parishes and municipalities to join together "to develop a system of railways, transitways, and other transportation facilities; to provide for the powers and duties of such compacts; to authorize compacts to issue bonds and raise revenues subject to voter approval."

The purpose of this current *Baton Rouge to New Orleans Intercity Rail Feasibility Study* is to strengthen the coalition of support for passenger rail service between Baton Rouge and New Orleans and to identify a clearly-defined process for moving the project forward to implementation. A Strategic Business Plan will be developed to describe the primary issues and opportunities involved in implementing passenger rail service in the corridor. This plan will include an updated capital and operating plan with strategies for a minimum build return to service project. The study will also address legal and institutional issues with particular emphasis on identifying funding sources and establishing the role of the Intrastate Rail Compact in developing service in the corridor.

This document is intended to provide an inventory of previous and on-going work in the corridor. The *Baton Rouge to New Orleans Intercity Rail Feasibility Study* is not intended to duplicate or recreate any of these previous efforts. There is an extensive body of knowledge in place that provides extensive information on the problems impeding rail service and the physical improvements that are necessary to address those problems. The current study will synthesize and update this previous work and use is as a base on which the strategic business plan will be based to provide a clear direction to move these plans forward to implementation.

This document summarizes previous and current studies that are focused on implementing passenger rail service in the Baton Rouge – New Orleans corridor. Also included is a summary of federal transportation funding programs that have the potential for being sources of funding for the capital and/or operating expenses of passenger rail service. The *Baton Rouge to New Orleans Intercity Rail Feasibility Study* will include additional detailed analysis of funding options at the state and regional level and will also address public/private funding opportunities.

2 SOUTHERN HIGH SPEED RAIL COMMISSION

In June of 1982 the U.S. Congress adopted legislation to create an interstate compact between the states of Mississippi and Louisiana and any contiguous states to study the feasibility of rapid rail transit service in the Gulf Coast region. The Louisiana – Mississippi – Alabama Rapid Rail Transit Commission (later the Southern Rapid Rail Transit Commission (SRRTC)) was quickly formed and agreed to initiate a feasibility study for proposed commuter rail service linking New Orleans to three potential termini: Baton Rouge, Slidell and Mobile. One of the goals of this effort was to have service in place for the 1984 Louisiana World Exposition. Based on the results of this study effort, the decision was made to pursue the implementation of daily round trip passenger service between Mobile and New Orleans. This new service, operated by Amtrak and known as the Gulf Coast Limited began service in April 1984 and operated during the World Exhibition. State funding to continue this train could not be secured and service was terminated in January 1985.

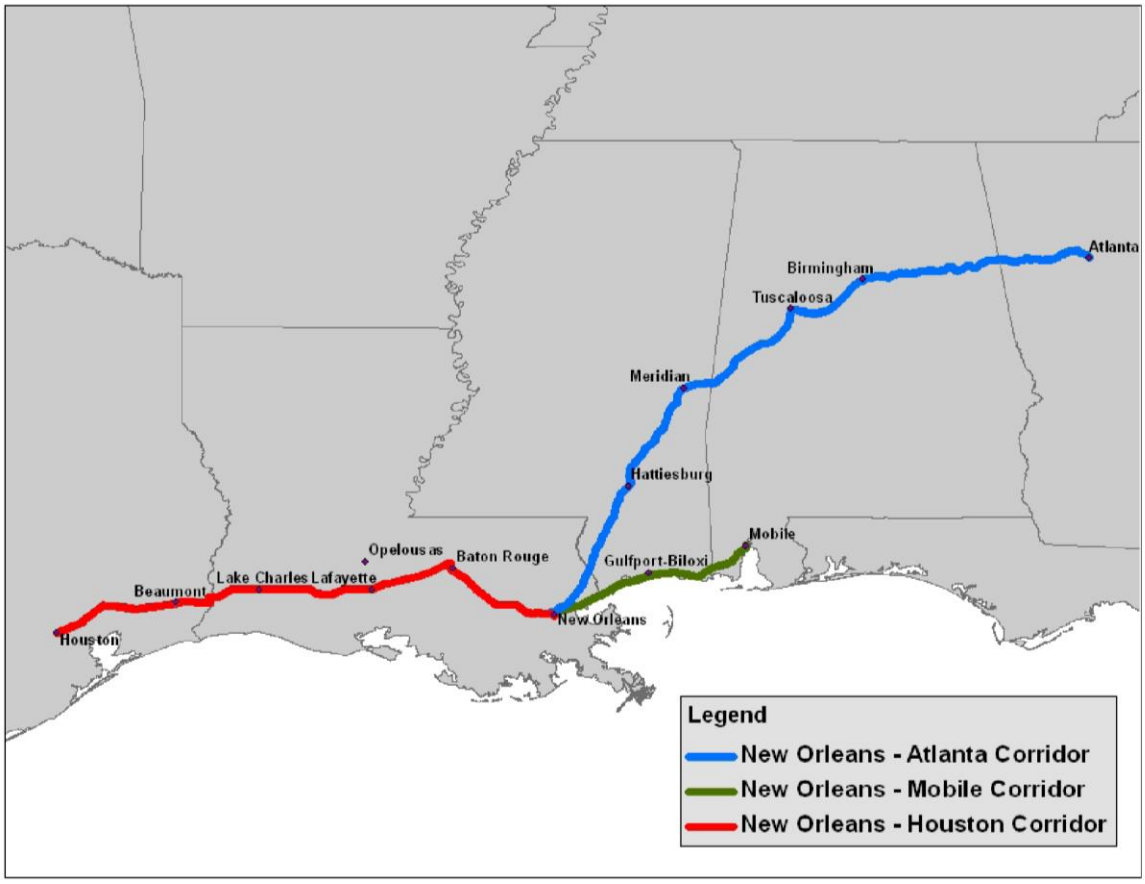
In 1986 the City of New Orleans granted funds to the SRRTC to conduct a feasibility study for proposed commuter rail service between New Orleans and the Mississippi Gulf Coast and between New Orleans and Baton Rouge. The resulting New Orleans Regional Rail Transit Program identified alternative alignments and operating scenarios for high-speed light-rail service in New Orleans and for commuter operations linking the city to points east and west.

Another evaluation was conducted by Amtrak for proposed rail passenger service connecting New Orleans, Baton Rouge and Shreveport along the old route of the Southern Belle operated by Kansas City Southern prior to the inception of Amtrak. However, the findings resulted in poor track along some portions of the proposed route, especially between New Orleans and Baton Rouge. This would have substantial rehabilitation costs in upgrading the track to accommodate passenger train service. Given the very high projected capital costs associated with this proposal route, it was not given further consideration.

The Intermodal Surface Transportation Efficiency Act (ISTEA), adopted by Congress in 1991, provided for the identification of emerging high-speed rail corridors in addition to the existing Northeast Corridor. In 1995, members of the Southern Rapid Rail Transit Commission initiated efforts to secure designation of what was originally called the Deep South High Speed Rail Corridor. When the Transportation Equity Act for the 21st Century (TEA-21) was enacted in 1998, language was included to formally designate the Gulf Coast High Speed Rail Corridor.

The Commission (which changed its name to the Southern High Speed Rail Commission and is now known as the Southern Rail Commission) continues to work for improved and additional rail passenger service in the tri-state area as adequate funds are become available through local, state and federal sources. Capital and study projects on The Gulf Coast High Speed Rail Corridor are also a primary focus within the commission in its efforts to expand rail passenger service in and around the tri-state area and beyond.

Figure 2-1: Gulf Coast High-Speed Rail Corridor



Source: Lake Charles to Meridian Corridor Development Plan, June 2007.

Key commission studies of passenger rail service in the Baton Rouge – New Orleans corridor are described below.

2.1 DEEP SOUTH HIGH SPEED RAIL CORRIDOR FEASIBILITY STUDY (1995)

In 1995, the SRRTC undertook a study to define a corridor or corridors for high speed rail passenger service through Louisiana, Mississippi and Alabama that could also provide a connection for HSR service between Texas and Florida. The study recommends a primary route that parallels the I-10 corridor along the Gulf Coast stretching 393 miles from Atmore, AL to Lake Charles, LA. Baton Rouge to New Orleans is an important segment of this longer corridor. The study identifies the benefits of implementing service, provides an estimate of ridership, and suggests an incremental approach for implementing service and capital improvements. The study recommends stations in Baton Rouge, LaPlace, New Orleans International Airport (Kenner) and New Orleans. This study was provided the documentation that was instrumental in obtaining the federal designation as a high speed rail corridor.

2.2 LAKE CHARLES TO MERIDIAN CORRIDOR DEVELOPMENT PLAN (2007)

The overall goal of this analysis was to determine the impact of introducing high-speed rail passenger service on freight rail operations in the 400 mile long corridor between Meridian, MS and Lake Charles, LA. Based upon this impact, the study attempted to determine the level of infrastructure improvements that would be necessary to allow passenger service to be implemented without negatively affecting future projected freight operations. The study used computer models to simulate rail operations to determine the effect of both start up service (two round trips per day at 79 mph) and long term high speed service (six round trips per day at 90 mph) on the Meridian to Lake Charles freight network. The analysis included the introduction of two round trip trains per day between Baton Rouge and New Orleans. Based on this analysis, the study determined the rail infrastructure capital improvements and provided an order of magnitude cost for implementing each type of service.

This study concluded that significant improvements to the rail network were required to provide additional capacity and to allow for higher operating speeds. The study identified a total cost of approximately $2.7 Billion (2007 dollars) to implement the full high speed rail service. Of this amount, approximately $280 million was for improvements between Baton Rouge and New Orleans. However this does not include the investments identified in previous reports in the Gulf Coast High Speed Rail Corridor Development Plan and that portion of the New Orleans Gateway Improvement Project related to HSR, which together totaled about $350 million in 2007dollars.

3 BATON ROUGE – NEW ORLEANS INTERCITY PASSENGER RAIL FINAL REPORT (2010)

An extensive study of the feasibility of implementing passenger rail service between Baton Rouge and New Orleans was conducted for the Southern High Speed Rail Commission by a team of consultants lead by Burk-Kleinpeter, Inc. (BKI) and supported by HDR Engineering, Inc. (HDR) This study included the following elements:

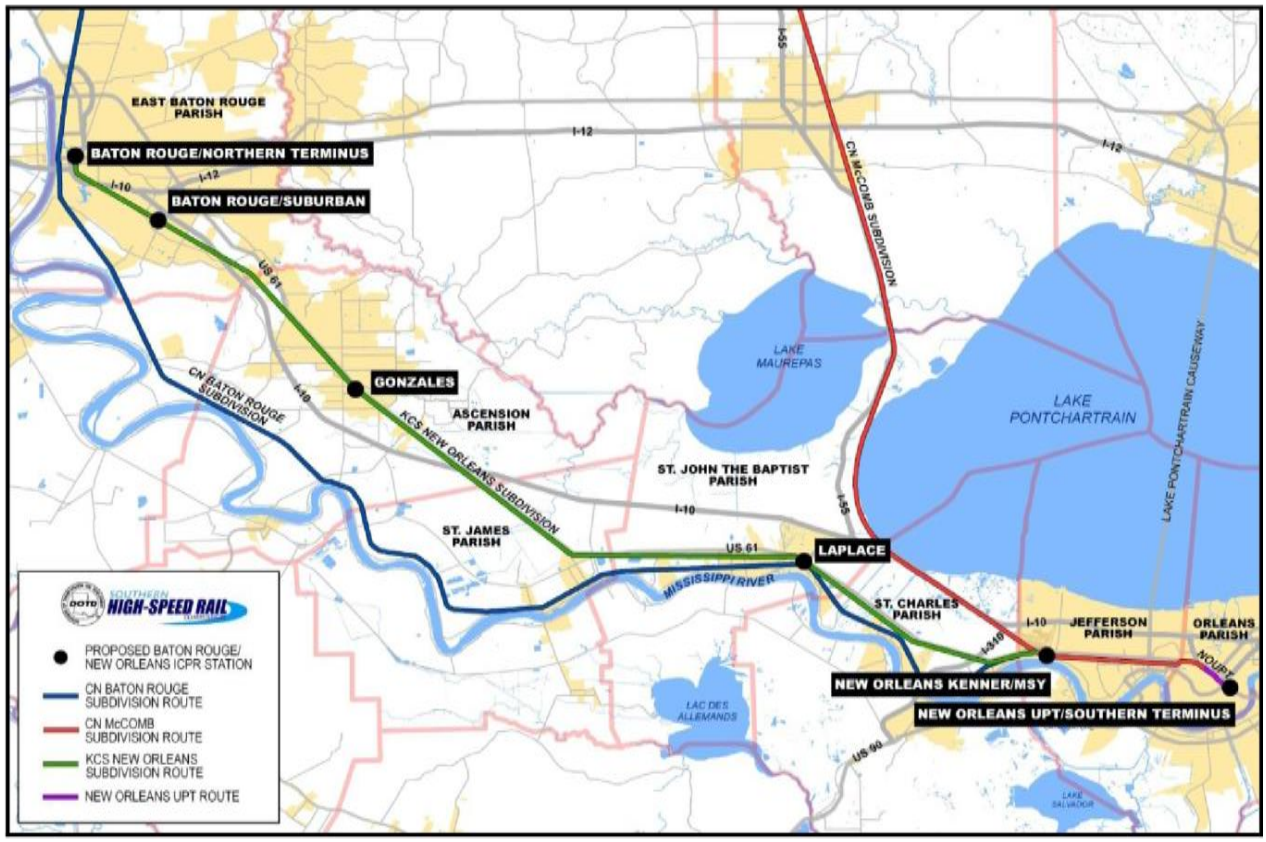
1. Executive Summary
2. Discussion of institutional issues
3. Analysis of service goals an operating costs
4. Detailed analysis of required capital improvements
5. Station area planning for each proposed rail stop location
6. Projection of ridership levels
7. Development of a business plan
8. Assessment of the economic impacts
9. Assessment of environmental impacts

A brief description of the key findings of this study is provided below.

3.1 PROJECT DEFINITION

The proposed project is to introduce a new passenger rail service between Baton Rouge and New Orleans. The project consists of improving an existing rail corridor to allow passenger train speeds of 79 mph or higher by 2013. The corridor is approximately 80 miles long and utilizes tracks owned by three entities: Kansas City Southern Railway (KCS), Canadian National Railway (CN), and the New Orleans Building Corporation (NOBC). The proposed route is shown in Figure 3-1 on the following page.

Figure 3-1: Baton Rouge - New Orleans Route



Source: Baton Rouge – New Orleans Intercity Passenger Rail Study, Dec. 2010

Table 3-1: Baton Rouge - New Orleans Route Ownership

North End of Segment	South End of Segment	Segment Name	Owner	Operating Railroads	Length (miles)
Baton Rouge MP 788.1	Frellsen Jct. MP 855.7	New Orleans Subdivision	Kansas City Southern	KCS	67.5
Frellsen Jct. MP443.5	Orleans Jct. MP 444.2	Baton Rouge Subdivision	Canadian National	CN, KCS	0.7
Orleans Jct. MP 900.8	Southport Jct. MP 908.6	McComb Subdivision	Canadian National	CN, KCS, Amtrak	7.8
Southport Jct. MP 3.7	NOUPT MP 0.0	New Orleans Union Passenger Terminal	New Orleans Building Commission	Amtrak	3.7
CORRIDOR TOTALS					79.7

Source: Baton Rouge – New Orleans Intercity Passenger Rail Study, December2010

3.2 CAPITAL IMPROVEMENTS

The BKI/HDR study includes an extensive analysis of capital improvements in the corridor that are necessary to allow for the operation of the proposed passenger rail service. The capital costs identified in the study are summarized in Table 3-2.

Major capital projects identified in the BKI/HDR study include:

1. Track upgrades: adding new capacity, raising track to provide more sub-base and ballast, replacing ties, straightening curves
2. Bridges: rebuilding all 53 structures in the corridor to allow for higher speed operations
3. Signal system: Upgrading to Centralized Train Control (CTC) and Positive Train Control (PTC)
4. Grade crossings: Upgrading crossing protection including four-quadrant gates at most public crossings
5. Three signature Improvements:
   - Construction of a new 2-mile long bridge across the Bonnet Carré Spillway
   - Realignment of track and installation of new switches and signal systems at East Bridge Junction
   - Addition of second main track into NOUPT

Table 3-2: Recommended Capital Investments (BKI/HDR Study)

Major Cost Item	Estimated Cost ($ Millions 2009 Dollars)					
	KCS	CN	East Bridge Junction	NOUPT	Corridor	TOTAL
Site & Track Work	$107.2	$24.9	$4.0	$6.0		$152.1
Structures	$129.7					$129.7
Signals	$45.8	$25.7	$2.9			$74.4
Engineering & Management	$19.9	$5.5	$0.8			$26.2
Rolling Stock					$57.9	$57.9
Stations					$7.5	$7.5
TOTAL	$302.6	$66.1	$7.7	$6.0	$65.4	$447.8

Source: Baton Rouge – New Orleans Intercity Passenger Rail Study, Dec. 2010

3.3 PROPOSED STATIONS

The BKI/HDR study proposes a total of seven stops for the Baton Rouge – New Orleans Intercity Rail Service. The study recommends specific locations for each of these stations and provides information on how the area around the station could be developed in order to take advantages of the economic activity created by the rail service. The proposed location of these stations is as follows:

1. **Baton Rouge Terminal Station**: New facility located at 1500 Main St., Baton Rouge
2. **Baton Rouge Suburban Station:** New facility located south of I-10/Bluebonnet Rd. Interchange near the Mall of Louisiana in East Baton Rouge Parish
3. **Gonzales Town Center:** New facility located on E. Cornerview St. between S. Irma Blvd. and N. Edenborne St., Gonzales (Ascension Parish)
4. **LaPlace:** New facility located in southwest quadrant of US 61/ US 51 intersection, west of Main St. LaPlace (St. John the Baptist Parish)
5. **Kenner Suburban Station:** New facility on Kenner Ave. between George St. and Duncan St. in Kenner, just south of Louis Armstrong International Airport (Jefferson Parish)
6. **New Orleans:** New Orleans Union Passenger Terminal (NOUPT). Existing Amtrak/Greyhound station located at 1001 Loyola Avenue, New Orleans

3.4 GRADE CROSSINGS

The BKI/HDR Study identifies a total of 124 at-grade railroad/highway grade crossings on the study corridor. The distribution of the grade crossings is shown in Table 3-3.

Table 3-3: At-Grade Crossings

Railroad Owner	Public Vehicle	Private Vehicle	Pedestrian	TOTAL
Canadian National	11	2	4	17
Kansas City Southern	90	17	0	107
TOTAL	101	19	4	124

Source: Baton Rouge – New Orleans Intercity Passenger Rail Study, December. 2010

The BKI/HDR study recommends upgrading the protection on all of these crossings and the costs of these upgrades are included in the overall capital cost estimate. The study does not recommend any grade separations or closures. The recommended grade crossing improvements are summarized in Table 3-4 on the following page.

Table 3-4: Proposed Grade Crossing Warning Devices

Type of Warning Devices	Existing Conditions			Proposed Conditions		
	KCS	CN	TOTAL	KCS	CN	TOTAL
2 Quadrant Gates	42	9	51	4	4	8
No Protection	25	2	27	0	0	0
Crossbucks	19	6	25	0	0	0
Flashing Lights	18	0	18	13	2	15
Stop Signs	3	0	3	0	0	0
4 Quadrant Gates	0	0	0	90	11	101
TOTAL	107	17	124	107	17	124

Source: Baton Rouge – New Orleans Intercity Passenger Rail Study, December 2010

3.5 OPERATING PLAN

The operating goal identified in the BKI/HDR study is to provide a safe, reliable and comfortable ride for patrons traveling between the state's two largest cities. The vision is to commence the 79 mph maximum allowable speed (MAS) service with four round trips per day, two in the morning peak hours and two in the afternoon peak hours. The study proposed to expand service as warranted to six round trips, and then eight, with commensurate increases in train speeds to 90 mph MAS and 110 mph MAS, respectively.

The initial travel time between Baton Rouge and New Orleans with a 79 mph MAS will be 1 hour and twenty-four minutes, which will make the service very competitive with the automobile. To facilitate increased ridership and provide a more efficient transportation system, local public transit authorities will provide feeder service from their local areas to/from the train stations, providing seamless origin to destination connectivity along the corridor.

The Baton Rouge – New Orleans corridor is envisioned as a segment of the much larger Gulf Coast High-Speed Rail (GCHSR) Corridor, which stretches from Houston to New Orleans to Atlanta, with a spur from New Orleans to Mobile, a total of 1,025 miles. As this larger corridor develops in the coming decades, passenger traffic in the Baton Rouge – New Orleans corridor will increase with a mixture of services and equipment. Some trains will be high-speed through-trains to Houston with no stops between Baton Rouge and New Orleans, while others will be "locals" which will continue to make the intermediate stops. The initial Baton Rouge – New Orleans service is considered a crucial first step in the development of the larger GCHSR Corridor.

Three phases of service implementation are envisioned:

1. Initial Service (2013):
   - Four round trips per day weekdays
   - Three round trips per day weekends
   - Maximum speed 79 mph
   - End-to-end travel time: 1 Hour 24 minutes
   - All trains stop at all seven stations (2 terminal and 5 intermediate stations)
   - One-way fare: $10.00
2. Phase 2 Service (2018):
   - Six round trips per day weekdays
   - Four round trips per day weekends
   - Maximum speed 90 mph
   - End-to-end travel time: 1 Hour 11 minutes
   - All trains stop at all seven stations (2 terminal and 5 intermediate stations)
   - One-way fare: $11.50
3. Phase 3 Service (2023):
   - Eight round trips per day weekdays
   - Four round trips per day weekends
   - Maximum speed 110 mph
   - End-to-end travel time: 1 Hour 13 minutes
   - All trains stop at all seven stations (2 terminal and 5 intermediate stations)
   - One-way fare: $13.00

3.6 OPERATING EXPENSES

The BKI/HDR study projects annual Operating and Maintenance (O&M) costs and annual revenues for each of the service phases. The annual revenues are projected from the estimated annual ridership using the estimated average fare per rider. Ridership projections were developed for both the opening year (2013) and the long-term forecast year (2038). The analysis indicates that ridership in the opening year would be approximately 39,000 boardings per month (460,000 per year) and 135,000 per month for the forecast year, 2038 (1,500,000 per year). More than 88 percent of the ridership would be work-related trips. Ridership is expected to increase over time as:

- the reliability of the service is established,
- the frequency of service (number of round trips) increases,
- congestion on I-10 increases,
- population in the corridor increases, and
- the price of gasoline increases.

The projected operating costs, ridership and revenue developed in the BKI/HDR study are shown in Table 3-5.

Table 3-5: Project Operating Costs, Ridership and Revenues

Service Phase	Annual O&M Cost	Annual Ridership	Annual Revenue	Annual Deficit
Startup (2013) 4 R/T 79 mph	$18.5	461,000	$3.9	$15.6
Phase 2 (2018) 6 R/T 90 mph	$23.3	644,200	$6.3	$17.0
Phase 3 (2023) 8 R/T 110 mph	$26.2	886,400	$9.9	$16.3

Source: Baton Rouge – New Orleans Intercity Passenger Rail Study, December 2010

4 LOUISIANA INTRASTATE RAIL COMPACT ACT

Act 858, passed in the 2010 Legislative session (RS 48:2170 et seq.), authorizes the creation of a Louisiana Intrastate Rail Compact with the goals of developing and improving an efficient, safe and well-maintained system of rail and other transit ways. The Act creates the mechanism whereby two or more parishes or municipalities can form a quasi–governmental entity that could identify and generate alternative sources of revenue for financing improvements to the state's transportation system. The boundaries of the Compact would be coextensive with the territorial boundaries of each respective municipality who becomes a member of the Compact. The appointees should have interest and knowledge about the rail project, and understanding of transportation issues and funding. Their role is to represent the leadership of each respective municipality.

The Rail Compact will serve as the governing body responsible for all aspects of implementing and operating the intercity rail project. Initially this responsibility includes creating bylaws, hiring staff, identifying funding and financing opportunities, identifying best practices, studying comparable commuter rail systems, initiating detailed station area planning and coordinating with the various public entities involved with the project such as DOTD, MPOs, RTAs and chambers of commerce. The Compact will be charged with thinking strategically about the opportunities to align public, private and non-profit resources to reap the benefits of development near stations. The Compact will also have the authority to negotiate with a rail operator such as Amtrak and negotiate with the freight operators to share track usage.

The Board of the Compact will consist of at least five directors serving one-year terms. Municipalities and parishes can appoint more than two members as long as each member of compact has same number of appointees.

Following the enactment of Act 858 in 2010, Mayor-President Kip Holden of Baton Rouge and Mayor Mitch Landrieu of New Orleans committed to finding a way to get passenger rail service restored between the two cities. On May 26, 2010, both mayors signed an agreement to work cooperatively to promote economic development and cultural activities in their cities, including restoring the rail service.

In the months following the enactment of Act 858, the non-profit organization CPEX worked closely with political leadership in each of the parishes along the corridor to ensure appointments were made to the Louisiana Intrastate Rail Compact.

The initial membership includes:

Ascension Parish appointed four members on January 24, 2013:

- Terri Casso, Ascension Parish Council Member, District 8
- Travis Turner, Ascension Parish Council Member, District 3
- Joe Waguespack, Entrepreneur and Business Owner
- Ryland Percy, Attorney, Percy, Lanoux, Mumphrey & Martin Attorneys at Law

The City of New Orleans appointed four members on April 20, 2012:

- Andy Kopplin, First Deputy Mayor & Chief Administrative Officer
- Cedric Grant, Deputy Mayor of Facilities, Infrastructure, & Community Development
- Kristen Gisleson Palmer, Council Member, Chair of Transportation Committee
- John Renne, University of New Orleans

The City-Parish Baton Rouge/East Baton Rouge Parish appointed four representatives on October 10, 2012:

- Joel Boe', Council Member, District 9
- John Price, Assistant Chief Administrative Officer
- Cheri Ausberry, Capital One Bank
- Connie Lewis, Gulf Coast BIDCO

The Louisiana Designee from Southern Rail Commission was also appointed:

- Michael Jackson, Former Louisiana State Representative, District 61

On October 4, 2012 Jefferson Parish President John F. Young, Jr. issued an executive order established a General Advisory Board to explore the creation of a Rail Compact with surrounding parishes and municipalities. Members of this board are:

- Jim Hudson, Executive Vice-President, Iberia Bank
- Hon. Elton Lagasse, Jefferson Parish Council Chairman
- Jennifer Van Vrancken, Jefferson Parish Deputy Chief Operating Officer
- Kazem Alikhani, Jefferson Parish Director of Public Works
- Mark Drewes, Jefferson Parish Director of Engineering
- Deborah Cunningham Foshee, Jefferson Parish Attorney

5 CURRENT PROJECTS

There are two projects currently underway that are addressing rail capacity at key locations in New Orleans. These projects are designed to address major bottlenecks that restrict traffic flows and cause delays for both passenger and freight trains. The solutions that are being developed for the East Belt Junction as part of the New Orleans Gateway Study have the potential to provide sufficient capacity to accommodate future Baton Rouge – New Orleans passenger trains. The Phase II New Orleans Union Passenger Terminal Infrastructure Improvements will add a second track into the station and will add a significant amount of capacity for current and future passenger service. These two efforts are summarized below.

In addition the Louisiana DOTD is currently developing a State Rail Plan which will establish the overall vision for both freight and passenger rail development in the state and will provide specific investment strategies for implementation of recommended improvements.

5.1 NEW ORLEANS GATEWAY

The "New Orleans Rail Gateway" (NORG) is an interconnected set of railroads that stretches from Avondale and via the Huey P. Long Bridge extends through the City of New Orleans. It is the fourth largest rail gateway in the country and is a key link in the national transportation system. The system provides a vital link in the east/west distribution of freight rail traffic and allows access to Mexico and Canada. It services the Port of South Louisiana and the Port of New Orleans. It also services six of the seven national Class 1 railroads and Amtrak. The existing NORG rail infrastructure is a bottleneck that restricts the flow of freight and passenger trains into New Orleans. The NORG rail infrastructure within Jefferson and Orleans parishes needs to be upgraded to efficiently handle today's traffic volumes and support economic growth.

In 2002, the DOTD completed the *New Orleans Rail Gateway & Regional Operational Analysis*. The goal of this study was to develop an implementable Action Plan to improve the region's competitive position in the transportation marketplace so that it will support existing and future economic activity, and associated goods movement needs while minimizing community impacts and improving the overall intermodal transportation system operations in the region and nation. This study proposed an immediate-term operational improvement program to reduce transit times and increase capacity in the Gateway. The analysis indicated that more efficient operation of the existing rail plant, with relatively minimal improvements, could provide the needed capacity to handle existing and future traffic over the 10-to 20-year planning horizon.

An engineering/environmental study of the NORG is underway to identify various rail and roadway improvements that will reduce vehicle congestion, improve emergency evacuation, improve vehicle and pedestrian safety, and correct rail and roadway physical and operational deficiencies. This study is a public-private partnership between DOTD, the New Orleans Regional Planning Commission and six Class 1 railroads represented by the Association of American Railroads.

As part of this study, an Environmental Impact Statement (EIS) will be prepared to evaluate the beneficial and adverse effects of the proposed improvements on the social, economic and physical environment and identify measures to avoid, minimize, and mitigate adverse community and environmental impacts. The NORG improvements will improve the quality of life for residents, increase regional competitiveness and promote economic growth. In addition,

the railroads stand to benefit from more efficient operation and added capacity for future growth.

Improvements are being evaluated in three sections:

1. Western Section includes the existing railroad network from Live Oak Blvd. and across the Huey P. Long Bridge to East Bridge Junction (EBJ)
2. Central Section stretches from EBJ to the Almonaster Bridge. Improvements will focus along three belt routes:
   - The Back Belt of the current Gateway begins at the EBJ, continues through Old Metairie and Orleans Parish, and ends at the Almonaster Bridge
   - The Middle Belt begins at the EBJ, proceeds through Hollygrove, turns north along I-10 and ends at the East City Junction (ECJ) in Navarre where it rejoins the Back Belt and continues to the Almonaster Bridge
   - The Front Belt begins at the Huey P. Long Bridge, continues along the east bank of the Mississippi River, through the City of New Orleans, turns north following the Industrial Canal and ends at the Almonaster Bridge
3. East Section includes the rail line from Almonaster Bridge to the Industrial Parkway, at the eastern study limit

Alternatives being studied include a No-Build Alternative and several Build Alternatives. The No-Build Alternative represents the highway and rail system as it currently exists or would exist after maintenance and minor improvements are performed. It serves as the baseline for comparing the Build Alternatives. To minimize community impacts, the Build Alternatives will focus on rail and roadway improvements following existing rail corridors.

Figure 5-1: New Orleans Rail Gateway Study Area

Source: The Right Track. New Orleans Rail Gateway Program Newsletter. June 2012

5.2 NEW ORLEANS UNION PASSENGER TERMINAL INFRASTRUCTURE IMPROVEMENTS, PHASE II

The New Orleans Regional Planning Commission (RPC) entered into a Cooperative Agreement with the Federal Railroad Administration (FRA) in September 2012 to execute environmental review and engineering for the Union Passenger Terminal infrastructure (UPT) on behalf of the City of New Orleans. The Phase II Statement of Work continues planning and design efforts from a Phase I conceptual design to advance plans to Final Design. The project is supported by an appropriation to the RPC through FRA Next Generation High-Speed Rail Program. The general objective is to finalize track design and related infrastructure based on Phase I concepts and subsequent conceptual designs by Amtrak, to improve efficiency within the terminal for expansion of passenger rail services in the future. A design update of passenger platforms to meet Americans with Disabilities Act requirements is also included. Drainage and roadway infrastructure within the track footprint is also included.

The RPC is currently (March 2013) soliciting proposals to hire a consultant to complete the final engineering for these projects. The consultant will take all previous engineering work (that is presently at various stages of maturity) into final design and will submit final engineering plans that will be reviewed, approved, stamped and signed by a Louisiana Professional Engineer.

PHASE II PROJECT WORK TASKS:

1. Project Work Plan (to be completed by the RPC)
2. Completion of Environmental Review (to be completed by the RPC)
3. Amtrak Yard improvements
    - Task 3a: Coach Yard Track (Track 1) and Car Wash Lead
    - Task 3b: Coach Yard Tracks (Tracks 3, 4 and 5)
    - Task 3c: Calliope Lead
    - Task 3d: Coach Yard Security and Utilities
4. UPT Lead Track and Clara Interlocking improvements
5. UPT Platform**,** Tracks and Utilities Improvements
6. Mainline Track improvements
    - Task 6a: Carrollton Junction
    - Task 6b: North Wye
    - Task 6c: UPT Mainline Track
    - Task 6d: Amtrak Yard Bypass

RPC completed conceptual designs in 2009 for certain improvements recommended in Phase I. Amtrak subsequently, through staff and consulting services, completed conceptual/preliminary engineering in 2010 for certain improvements recommended in Phase I. Tasks 3-6 are in various stages of engineering development. The selected consultant will be responsible for completing preliminary engineering where necessary and advancing all tasks (Tasks 3-6) through final plan preparation.

5.3 LOUISIANA STATE RAIL PLAN

The Louisiana DOTD is currently in the process of developing new Rail Plan for the state. This plan will update and replace the previous State Rail Plan, which was completed in 2003. The State Rail Plan is being developed to federal requirements put in place by the Passenger Rail Investment and Improvement Act of 2008 (PRIIA). PRIIA includes the requirement that any rail projects for which federal assistance is sought must be noted in a State Rail Plan.

The plan will articulate a passenger and freight rail vision of the state that is ground in what the state's stakeholders need and want from their rail network. The Louisiana plan will include profiles of both the freight and passenger rail systems in this state and will identify passenger rail initiatives, including high speed proposals. The plan will specify long-term rail investment strategies and will include a program of rail improvements.

The DOTD initiated the State Rail Pan work in 2012 and held a series of public outreach meetings in October of that year. It is expected that the rail plan will completed during the summer of 2013.

6 FEDERAL PROGRAMS FOR FREIGHT AND PASSENGER RAIL DEVELOPMENT

Historically, states have relied on a variety of relatively small federal and state funding programs to develop its state passenger and freight rail systems. With the passage of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) and the American Recovery and Reinvestment Act of 2009 (ARRA), the federal funding picture has changed – especially for passenger rail development. PRIIA provides a multi-year capital funding framework which emphasizes the role of states in U.S. passenger rail development. In 2009, ARRA subsequently provided $8 billion in federal capital funding for state sponsored high speed and intercity passenger rail projects and $1.5 billion for the Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program, which can fund freight and passenger rail as well as other modal projects. The Transportation authorization bill enacted in 2012, known as Moving Ahead for Progress in the 21st Century Act (MAP-21), does not include a specific rail chapter, but it does provide a variety of funding programs that can potentially be used to support the development of rail transportation.

6.1 MOVING AHEAD FOR PROGRESS IN THE 21ST CENUTRY ACT

On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21). Funding surface transportation programs at over $105 billion for fiscal years (FY) 2013 and 2014, MAP-21 is the first transportation authorization enacted since 2005. MAP-21 represents a milestone for the U.S. economy – it provides needed funds and, more importantly, it transforms the policy and programmatic framework for investments to guide the growth and development of the country's vital transportation infrastructure.

MAP-21 creates a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery. MAP-21 authorizes $82 billion in Federal funding for FYs 2013 and 2014 for road, bridge, bicycling, and walking improvements. In addition, MAP-21 enhances innovative financing and encourages private sector investment through a substantial increase in funding for the Transportation Infrastructure Finance and Innovation Act (TIFIA) program. It also includes a number of provisions designed to improve freight movement in support of national goals.

MAP-21 builds on and refines many of the highway, transit, bike, and pedestrian programs and policies established in 1991. While it does not have a rail section and does not include any new funding programs specifically for rail, passenger rail projects may be eligible for funding if certain conditions are met to match the requirements of several MAP-21 programs.. MAP-21 only provide authorizations for two years, and work has already begun in Congress to re-authorize PRIIA (which expires in October 2013) and combine in with a new transportation authorization bill when MAP-21 expires in June of 2014.

This section highlights the major features of the federal funding programs incorporated in MAP-21. It also describes other federal funding programs available for freight and passenger rail projects.

FHWA SECTION 130 RAILWAY - HIGHWAY CROSSINGS PROGRAM

MAP-21 continues and enhances the Federal Highway Administration (FHWA) Section 130 Crossings Program, which provides grants for safety improvements to reduce the number of fatalities, injuries, and crashes at public grade crossings. This includes: separation or protection of grades at crossings; the reconstruction of existing railroad grade crossing structures; and the relocation of highways or rail lines to eliminate grade crossings.

Funds from the FHWA Section 130 Program can be used for freight and passenger projects which improve the safety of at-grade crossings. This may include a variety of methods such as installation of warning devices, elimination of at-grade crossings by grade separation or consolidation, and closing of crossings. Work may also include replacement of crossing surfaces, improvement of road approaches, installation of new gates/flashers, and installation of other safety signal equipment. Funding may also be used for elimination of crossing hazards should a state choose to use the funds for this purpose. For example, any repair, construction, or reconstruction of roads and bridges affected by a project would be eligible.

Federal funds for grade-crossing safety improvements are available at a 90 percent federal share, with the remaining 10 percent to be paid by state and/or local authorities and/or the railroad. The federal share may amount to 100 percent for the following projects: signing; pavement markings; active warning devices; the elimination of hazards; and crossing closures. The decision on whether to allow 100 percent federal funding rests with the individual states.

Activities funded under this program are also eligible for funding under the broader Highway Safety Improvement Program (HSIP). The Surface Transportation Program (STP) also includes eligibility for funding of railway-highway crossings projects.

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM

MAP-21 continues the Congestion Mitigation and Air Quality Improvement Program (CMAQ), which provides a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) as well as former nonattainment areas that are now in compliance (maintenance areas). States with no nonattainment or maintenance areas may use their CMAQ funds for any CMAQ- or STP-eligible project.

CMAQ funding may be used for freight and passenger projects which accomplish the program's air quality goals. Eligible activities include projects that shift traffic demand to nonpeak hours or other transportation modes and support for transit operating expenses. The federal cost share is typically 80 percent, although 100 percent funding is also available under certain circumstances.

FHWA SURFACE TRANSPORTATION PROGRAM

The FHWA Surface Transportation Program (STP) (MAP-21 Sec. 1108; Title 23 USC Section 133) provides flexible funding for projects that may be used by states and localities for projects to preserve and improve the conditions and performance on any federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

FHWA TRAFFIC MITIGATION FUNDING

FHWA Traffic Mitigation project funding is available to federally-eligible highway projects to address congestion resulting from construction activities in a given highway corridor under the Work Zone Safety and Mobility Rule (23 CFR 630 Subpart J). Where cost-effective, as documented in a project Transportation Management Plan (TMP), new or enhanced intercity passenger rail service can be considered as a traffic congestion mitigation measure. Federal highway funding can then be used to subsidize all or part of the passenger rail operating costs during the life of the construction project. This funding option is most applicable to major multi-year highway improvement projects on high-volume interstate highways where intercity rail service operates in parallel to the highway corridor. The federal cost share can be either 80 or 90 percent with the higher figure dependent on whether the rail project is associated with mitigating congestion on an interstate highway.

TRANSPORTATION ALTERNATIVES PROGRAM

MAP-21 establishes the new Transportation Alternatives Program (TAP) to provide for a variety of alternative transportation projects, including many that were previously eligible activities under separately funded programs. The TAP replaces the funding from pre-MAP-21 programs including Transportation Enhancements, Recreational Trails, Safe Routes to School, and several other discretionary programs, wrapping them into a single funding source.

The purpose of this program is to fund projects which allow communities to strengthen the local economy, improve the quality of life, enhance the travel experience, and protect the environment. Transportation Enhancement Program funds can be used for preservation and rehabilitation of historic transportation facilities, and conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users. The federal grant share is generally not less than 80 percent.

TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION ACT

MAP-21 continues the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program, which provides Federal credit assistance to eligible surface transportation projects, including highway, transit, intercity passenger rail, some types of freight rail, and intermodal freight transfer facilities. The program is designed to fill market gaps and leverage substantial private co-investment by providing projects with supplemental or subordinate debt. Eligible projects include:

- Intercity passenger bus or rail facilities and vehicles, including those owned by Amtrak
- Public freight rail projects
- Private freight rail projects that provide public benefit for highway users by way of direct highway-rail freight interchange (a refinement of the SAFETEA-LU eligibility criterion)
- Intermodal freight transfer facilities
- Projects providing access to, or improving the service of, the freight rail projects and transfer facilities described above
- Surface transportation infrastructure modifications necessary to facilitate direct intermodal interchange, transfer and access into and out of a port

The TIFIA credit program may provide to states, localities, or other public authorities, as well as private entities undertaking projects sponsored by public authorities, three types of financial assistance:

- Secured loans are direct federal loans to project sponsors offering flexible repayment terms and providing combined construction and permanent financing of capital costs
- Loan guarantees provide full-faith-and-credit guarantees by the federal government to institutional investors, such as pension funds, that make loans for projects
- Lines of credit are contingent sources of funding in the form of federal loans that may be drawn upon to supplement project revenues, if needed, during the first 10 years of project operations.

MAP-21 also newly authorizes "master credit agreements," under which DOT may make a contingent commitment of future TIFIA assistance (subject to the availability of future funding) for a program of projects secured by a common revenue pledge.

Similar to the RRIF program above, TIFIA is not a funding source but rather a method of financing projects through assisted borrowing. In the case of passenger projects, TIFIA financing is only workable where investment grade revenue and operating cost forecasts show the project has the potential to provide a substantial revenue stream after a significant public investment is typically made in infrastructure and/or equipment. Projects receiving TIFIA credit assistance must obtain an investment grade rating from at least one nationally recognized credit rating agency.

The TIFIA program has been significantly expanded under MAP-21. SAFETEA-LU authorized $122 million per year for TIFIA. MAP-21 authorizes $1.75 billion in budget authority for the TIFIA program ($750 million in FY13 and $1 billion in FY14). Since each dollar of budget authority can leverage approximately $10 in lending capacity, it is expected that the U.S. Department of Transportation will be able to offer an estimated $17 billion in TIFIA credit assistance based on the MAP-21 authorized funding level.

6.2 PASSENGER RAIL INVESTMENT AND IMPROVEMENT ACT OF 2008 (PRIIA)

In October 2008, Congress passed the Passenger Rail Investment and Improvement Act (PRIIA). This legislation reauthorizes funding for Amtrak, and in addition, provides a new statutory framework for a federal/state partnership to fund and develop U.S. high-speed and intercity passenger service using 80 percent federal and 20 percent state capital grants. The PRIIA legislation authorizes $3.4 billion in capital grants over five years to states, groups of states, interstate compacts, public agencies, and in some cases Amtrak.

Congressional action is required each year to appropriate the amounts authorized. Section 301 of the Act provides grants for Intercity Passenger Rail Service Capital Assistance. Section 501 provides capital grants for High Speed Rail Corridor Development for federally designated corridors with planned speeds of 110 mph or greater. Section 302 Congestion Grants are focused on relieving rail congestion bottlenecks.

6.3 AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (ARRA) AND TRANSPORTATION INVESTMENT GENERATING ECONOMIC RECOVERY (TIGER)

In February 2009, Congress passed the American Recovery and Reinvestment Act (ARRA), which appropriated $8 billion in 100 percent federal funding providing "capital assistance for

high speed corridors and intercity passenger service." This program is based on the statutory framework provided by PRIIA and focused funding on state sponsored projects.

ARRA also provided $1.5 billion in 100 percent flexible multi-modal funding under the TIGER Discretionary Grant Program. Another $600 million in 80 percent federal funding was appropriated in 2010 for the TIGER II Discretionary Grant Program.

The U.S. Department of Transportation was authorized to award another $526.9 million in TIGER Discretionary Grants pursuant to the Appropriations Act 2011 (Pub. L. 112-010, April 15, 2011). This appropriation is similar, but not identical, to the appropriation for the TIGER program authorized and implemented pursuant to ARRA and the National Infrastructure Investments or TIGER II program under the FY 2010 Appropriations Act. The deadline for submission of applications was October 31, 2011.

Most recently, Congress has appropriated another $500 million in 2012 TIGER Grant funds. In its Notice of Funding Availability (NOFA) dated January 31, 2012, the Federal Railroad Administration (FRA) has made available up to $100 million of these funds for high speed and intercity passenger rail projects. The TIGER program has proven to be very popular with the states, but there were no provisions to continue this funding in MAP-21.

6.4 FRA HIGH SPEED AND INTERCITY PASSENGER RAIL (HSIPR)

In developing guidance for ARRA grants as well as grants offered under subsequent PRIIA appropriations, a structure for the FRA's High Speed and Intercity Passenger Rail (HSIPR) Program has evolved. The current structure is best reflected in the most recent NOFAs for FY 2010 appropriations for 80/20 percent federal/state grants under three program areas:

- *Service Development Program Grants* issued in the Federal Register on July 1, 2010;
- *Individual Project Grants*, also issued on July 1, 2010; and,
- *Planning Grants* issued in the Federal Register on April 1, 2010.

Under the FY 2010 appropriation for these programs, $2.1 billion was provided for Service Development Program Grants, $245 million was provided for Individual Projects and $50 million was provided for planning grants. The basic features of each program are outlined below. No new appropriations were provided for HSIPR in FY 2011 or 2012. It is anticipated that any future rail funding appropriations will be distributed to the states following the HSIPR procedures established by FRA.

SERVICE DEVELOPMENT PROGRAM GRANTS

Investment in Service Development Programs (SDP) is "the long-term interest" of the new FRA HSIPR Program. The FRA requires the development of an SDP before funding for final design and construction can be granted. SDP grants focus on developing new high speed or intercity passenger services or substantially upgrading existing services. A SDP grant provides an 80 percent federal/20 percent state basis and in-kind contributions are allowable with FRA approval. An SDP grant application will typically contain sets of inter-related projects which constitute the entirety or a distinct phase (or geographic section) of a long-range SDP. These projects will collectively produce benefits greater than the sum of each individual project and will generally address, in a comprehensive manner, the construction and acquisition of infrastructure, equipment, stations, and facilities necessary to operate high speed and intercity passenger service.

Major SDPs are unique because the award instrument will be a "Letter of Intent" for the cost of the entire program, containing milestones, grant conditions and other requirements agreed upon by FRA and the grantee, which must be fulfilled prior to any disbursement of funds. Funding will be obligated through cooperative agreements and disbursed to grantees as the agreed upon milestones are achieved. The award instrument for the Standard SDP is a traditional "cooperative agreement" with funding made available to grantees on a reimbursable basis. Major SDPs will typically require a two-tiered NEPA approach: utilizing a Tier 1 EIS to address broad service issues (Service NEPA document); followed by a Tier 2 EIS, Environmental Assessment (EA), or Categorical Exclusion (CE) to address site-specific project environmental review requirements To be eligible for a Major SDP Grant, an applicant must have completed and submitted a NEPA document satisfying FRA's Service NEPA requirement with the application. A project's preliminary engineering, site-specific NEPA, final design, and construction activities are eligible for funding.

INDIVIDUAL PROJECT GRANTS

Individual Project Grants are intended to assist applicants with the capital costs of improving existing high speed or intercity passenger rail service. Individual Project Grants are provided on an 80 percent federal /20 percent state basis and in-kind contributions are allowable with FRA approval. Awards are for projects which involve final design and construction, or projects already having completed site-specific NEPA documentation; or completion of project NEPA and preliminary engineering documentation. Completion of the grant activities should result in all of the documentation necessary for the project to move into the FD/construction stage. The intent is to fund discrete individual projects which result in operation or other tangible improvements (e.g., station rehabilitation) benefiting one or more existing high speed or intercity passenger services.

All individual projects must be addressed in a SDP, State Rail Plan, or similar planning document. Final design and construction projects must have project NEPA documentation completed as well as PE. Grants for PE/NEPA work must be developed sufficiently to support immediate commencement of FD. There is no requirement for a "tiered" NEPA approach. All individual project grants must have operational independence upon implementation; the project will provide measurable benefits with no additional investment.

PLANNING GRANTS

There are two types of eligible planning projects under HSIPR: (1) Passenger Rail Corridor Service Development Plans (SDP) and (2) State Rail Plans. Grants are provided on an 80/20 percent federal/state basis and in-kind contributions are allowable with FRA approval.

Passenger Rail Corridor Investment Plans must include both SDPs and Corridor-Wide Environmental Documentation meeting Tier I service NEPA requirements. If an applicant has completed one of these documents, FRA must have accepted the document to receive a grant to complete the remaining component(s).

SDPs must include: a corridor development program rationale; service plan; capital investment need assessment; financial forecast; public benefits assessment; and program management approach. Corridor-Wide Environmental Documents must satisfy FRA service NEPA requirements. FRA has defined service NEPA as at least a programmatic/Tier 1 environmental review (using tiered reviews and documents), or alternatively, a project environmental review addressing broader questions and likely environmental effects for the entire corridor. Simple corridor programs can be addressed with a project NEPA approach while more complex programs will require a tiered approach.

State Rail Plans must meet PRIIA requirements and specific requirements included in the notice of funding availability. These include:

- State multimodal goals addressing the role of rail
- Description of the existing rail system and its performance
- Discussion of the existing state rail program and analysis of the economic and environmental effects of rail
- Discussion of existing rail proposals
- Vision for rail transportation
- 5- and 20- year service and investment program for passenger and freight rail with an assessment of public and private benefits
- Description of public and stakeholder participation as well as coordination with other transportation programs

6.5 IRS TAX EXEMPT PRIVATE ACTIVITY BONDS

Private Activity Bonds (PABs) are federally tax-exempt bonds used to finance the activities of private firms. Congress introduced private activity bonding eligibility for transportation projects through the amendment of Section 142 of the Internal Revenue Code. SAFETEA-LU added PAB eligibility for highway and freight transfer facilities (including highway-rail transfer). Mass transit projects and high speed rail facilities (over 150 mph) were already eligible for PABs, up to a $15 billion limit for transportation-related PABs.

State and local governmental authorities must issue the bonds and the authorities traditionally serving as conduits for bond issuance include Development Authorities and Downtown Development Authorities, among others. Qualified projects include "any surface transportation project which receives Federal assistance under Title 23, United States Code. This includes rail facilities and vehicles as long as these projects are also receiving TIFIA credit assistance. This requirement brings TIFIA and PABs together on surface transportation projects to encourage more private equity investment to transportation.

An application for funding allocation is required on an annual basis and is subject to the federal cap on PABs established for each state. Requirements to be included in the application include proposed date of bond issuance, financing/development team information, borrower information, project description, project schedule, financial structure, and a description of Title 23/49 funding received by the project. If a project receives an allocation and the schedule agreed upon in the application is not met, the allocation may be withdrawn.

6.6 FHWA GRANT ANTICIPATION REVENUE VEHICLE BONDS

Grant Anticipation Revenue Vehicle (GARVEE) bonds can be issued by states under the guidelines in Section 122 of Title 23 of the United States Code. These bonds can be used for transportation projects with no stated limitations on transportation mode. GARVEE bonds may only be used for projects receiving federal funding and the project details must be approved by the FHWA. States repay the funds using anticipated federal funds. While FHWA must approve the project for federal funding, they do not approve the financing method. A state or local government must notify FHWA they will be using GARVEE bonds.

GARVEE bonds are useful when it is desirable to bring a project to construction quicker than otherwise would be possible. Inflation, increased congestion, and lost economic development

benefits associated with delay provide offsets to the additional interest costs of debt financing. Grant Anticipation Bonds are typically intended to meet short term funding needs, usually less than one year to maturity, but sometimes as long as two to three years.

The PRIIA "Letter of Intent" provisions of the FRA HSIPR Program can provide a basis for documenting to investors the availability and commitment of future federal grant funding. These bonds are not guaranteed by the federal government and the states do not guarantee the federal government will provide the expected financing. The state's share of the bond is backed by the state and it may elect to either carry high interest rates or use other sources of revenue as security on the federal portion of the bonds.

TECHNICAL MEMORANDUM #2

BATON ROUGE – NEW ORLEANS
INTERCITY RAIL FEASIBILITY STUDY

STAKEHOLDER OUTREACH APPROACH

FINAL REPORT • APRIL 2013

Prepared for:

Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes

Capital Region Planning Commission

Baton Rouge Area Foundation

Prepared by:
HNTB Corporation

State and Federal Project Numbers:
H.010052 and H.010053

The preparation of this report has been financed in part through grants from United States Federal Highway Administration in accordance with Grant Agreement Numbers H.010052 and H.010053 and a grant from the Baton Rouge Area Foundation.

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1. INTRODUCTION

The Scope of Work for the Baton Rouge to New Orleans Intercity Rail Feasibility Study describes an extensive outreach program designed to share information and gain the support of key stakeholders for the proposed rail service. The purpose of this outreach is to gain additional input to support the refinement of the rail service plan and to develop a framework for consensus on a regional vision for the service and a strategy for implementation. The HNTB Team will conduct meetings with elected officials and other key stakeholders identified in collaboration with Project Management Committee to gain a further understanding of the various visions for growth in the region and the role rail transportation can play to support those visions. The outreach will be accomplished through a series of meetings with key groups and individuals in the region. The HNTB Team conducting these meetings will be led by Project Manager Alan Tobias and supported by Bryan Jones, General John Basilica and representatives of sub-consultants Manning Architects and Saizan and Associates.

The format and approach used for these stakeholder meetings will be tailored to the organizations. In some instances these meetings may be part of a regularly scheduled meeting of the organization where this study is one of several items on the meeting agenda. In these meetings a brief formal presentation on the study will be given followed by a discussion period focused on issues and concerns and strategies for implementation. Other meetings will be specifically scheduled to discuss the proposed rail service and will be held with one or two individuals or with small groups representing one or more stakeholder organizations. These meetings will include a brief report on the study and will then focus on detailed discussions on issues and strategies. In some cases it should be sufficient to hold stakeholder meetings via a conference call. This is an appropriate response for public agencies that potentially will have some indirect involvement in service implementation and operations such as local transit operators, and for contacts with railroads whose key contacts are located outside of Louisiana.

2. PROJECT MANAGEMENT COMMITTEE

As described in **Task 1: Project Development and Outreach** of the Project Scope, a Project Management Committee (PMC) will be established to provide oversight of the study process and to play a key role identifying and recruiting key rail service stakeholders and supporters. The HNTB Team will meet with the PMC at least five times at critical points in the study process to discuss the study approach, findings and recommendations and provide guidance on key decisions that need to be made during the study process.

The PMC will include representatives of the following:

1. New Orleans Regional Planning Commission (NORPC)
2. Capital Region Planning Commission (CRPC)
3. Baton Rouge Area Foundation (BRAF)

Preliminary discussions have been held with representatives of NORPC and BRAF about the status of the study and strategies for outreach. CRPC involvement has been limited due to a change in the organization's management. It is expected that once a new Director is appointed for CRPC they will become fully engaged in this and the first formal meeting of the PMC will be scheduled.

3. IDENTIFICATION OF KEY STAKEHOLDER GROUPS

Task 1: Project Development and Outreach of the project scope identifies two levels of stakeholders: existing broad-based organizations that draw membership from across the region and specific stakeholder groups that represent key elements of the community. The HNTB team will set up meetings with individuals and groups in a way that maximizes the coverage of key stakeholders. Meetings will be set up with the following organizations specifically mentioned in the scope:

1. Broad-based organizations:
    a. CPEX CONNECT Coalition
    b. Greater New Orleans Foundation
    c. Transport for NOLA
    d. Chambers of Commerce
2. Specific stakeholder groups:
    a. PMC members
    b. municipal, parish and state elected officials
    c. major employers
    d. community organizations
    e. other individuals and organizations with a stake in the region's development

The scope also states that for **Task 2: Station Area Planning and Economic Development** the HNTB team will conduct "early coordination" with the following organizations:

1. East Baton Rouge Redevelopment Authority
2. New Orleans Redevelopment Authority
3. New Orleans Building Corporation
4. Transit providers (RTA and CATS)
5. Louis Armstrong International Airport
6. Baton Rouge Metropolitan Airport

The scope for **Task 3: Institutional Issues** calls for holding initial meetings with each affected railroad, including:

1. Kansas City Southern (KCS)
2. Canadian National (CN)
3. New Orleans Union Passenger Terminal (NOUPT)
4. National Railroad Passenger Corporation (Amtrak)

4. SCHEDULING AND PRIORITIZATION OF MEETINGS

The HNTB Team, in consultation with the PMC, will prioritize this extensive list of stakeholders and begin scheduling meetings with key organizations and individuals. While most of these meetings should be held in person, some of them can be done over the phone. HNTB will set up a series of six to ten meetings over a single week in late April or Early May, 2013 which will be led by Project Manager Alan Tobias. Additional teleconference meetings will be scheduled during April and May 2013. The highest priority stakeholders that will be scheduled for in-person meetings during this time period include:

1. Parish/Municipal Governments:
    a. City of Baton Rouge/East Baton Rouge Parish
    b. City of New Orleans
    c. Jefferson Parish
    d. Ascension Parish
    e. Louis Armstrong International Airport
2. Business and Community Organizations:
    a. New Orleans Chamber of Commerce
    b. Baton Rouge Area Chamber
    c. Greater New Orleans Foundation
    d. CPEX CONNECT
    e. East Baton Rouge Redevelopment Authority
    f. New Orleans Redevelopment Authority
    g. New Orleans Building Corporation
3. Other key organizations/individuals
    a. Key elected state officials
    b. Major employers

When the meetings with jurisdictional leaders are set up, we will suggest that the jurisdiction's appointed members of the Intrastate Rail Compact also be invited. It is expected that the HNTB will attend a future Compact meeting to present information on the status of our study. This will not occur until after the Compact has its initial organization meeting. It is expected that the HNTB team will attend the Compact's second meeting, which may occur during the summer of 2013.

If necessary a second round of stakeholder meetings will be scheduled for late May and early June, 2013.

It is recommended that initial contact with the following stakeholders be conducted via conference call meetings. Based on these initial calls it may be determined that a follow-up in-person meeting is needed for one or more of these organizations.

1. Transit Providers
    a. RTA
    b. CATS

2. Railroads
    a. Kansas City Southern (KCS)
    b. Canadian National (CN)
    c. New Orleans Union Passenger Terminal (NOUPT)
    d. National Railroad Passenger Corporation (Amtrak)
3. Baton Rouge Metropolitan Airport

5. ADDITIONAL STAKEHOLDER MEETINGS

It is anticipated that as we meet with this initial list of stakeholders, other key individuals and organizations will be identified as stakeholders and additional meetings may be warranted. The HNTB will document any suggestions received concerning additional stakeholders and these will be discussed with the PMC to determine whether additional meetings should be scheduled.

TECHNICAL MEMORANDUM #3

BATON ROUGE – NEW ORLEANS
INTERCITY RAIL FEASIBILITY STUDY

FUNDING AND FINANCING OPTIONS

FINAL REPORT • SEPTEMBER 2013

Prepared for:

Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes

Capital Region Planning Commission

Baton Rouge Area Foundation

Prepared by:
HNTB Corporation

State and Federal Project Numbers:
H.010052 and H.010053

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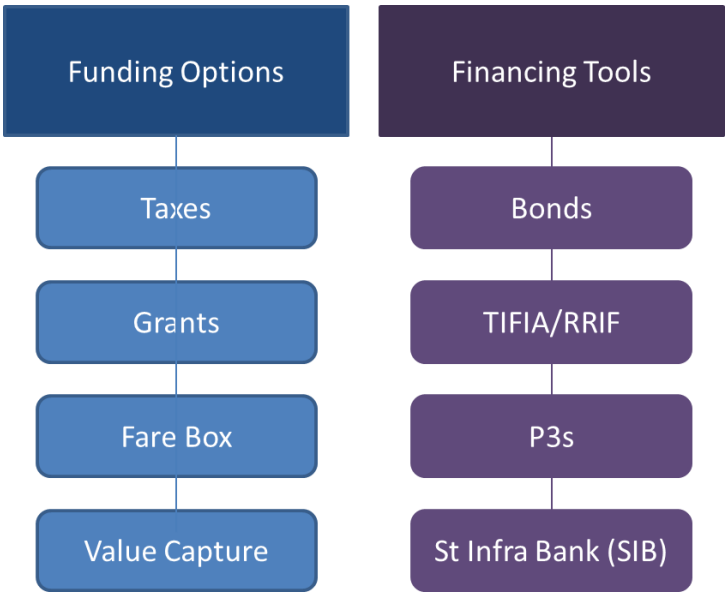
1. RAIL FUNDING AND FINANCING OPTIONS

While funding of any new transportation project is challenging, the passenger rail sector has many established options to contribute funding to the overall delivery plan. The identification of upfront funding sources as well as dedicated on-going revenue streams is critical in assessing a project's viability and feasibility. The starting point for this feasibility analysis is to identify the multitude of funding and financing options available for the Baton Rouge – New Orleans Intercity Rail Project so transportation officials, policy makers and stakeholders can develop a tailored plan as the project progresses. This section will evaluate the following topics:

- Funding Options
- Financing Tools
- Applicability for the Project
- Case Studies
- High-level financial assessment (if applicable)

It is important to understand the distinction between funding sources and financing techniques. Funding broadly refers to a source of money or revenue stream while financing is a tool to deliver the identified funding source upfront during project development. Financing can have many different forms (debt is the most common), but in each case they are a means to capture the upfront value of the given revenue stream and apply the proceeds to fund construction and equipment. The following table identifies the major categories of funding and financing and the subsequent sections will describe the programs in greater detail.

Figure 1: Funding and Financing Options



The following sections will introduce each of the funding and financings options, provide preliminary commentary on the benefits and considerations of each and illustrate high-level financing scenarios to provide order-of-magnitude relevancy.

1.1 FUNDING OPTIONS

Transit funding for a project typically requires multiple funding sources and is accomplished through multiple partnerships of key public agencies and private sector participants. This is especially true for projects that do not have a dedicated tax revenue stream to fund their specific development and operating

costs. In most cases, a transit project will have several funding sources to help fund both the initial project development and also the long-term operations. Since most transit agencies operate at a deficit (project-specific revenues cannot pay the annual operations costs) it is even more critical for transit projects to find ongoing revenue streams capable of ensuring the long-term payment and feasibility of operations.

The upfront funding component is typically made up of a combination of one-time grants or public equity contributions and supplemented with a financing of ongoing revenues. Ongoing funding commitments from dedicated tax revenue streams, pledged local/state funds and fare box revenues amongst others need to demonstrate the ability to cover all ongoing Operations & Maintenance (O&M) costs.

1.1.1 TAX SOURCES

The generation of local revenues to support the upfront and ongoing costs is required of rail projects and taxes are the most common source to fund rail projects. Tax sources are typically stable and can be very broad based. The common form of tax sources are listed below:

- Sales taxes
- General Fund (property and/or income taxes)
- Motor fuel and vehicle registration (if legally permissible)

Other governmental sources could also be applied, such as land sales or MPO funding.

1.1.2 GRANT FUNDING

Historically, states have relied on a variety of relatively small federal and state funding programs to develop its state passenger and freight rail systems. With the passage of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) and the American Recovery and Reinvestment Act of 2009 (ARRA), the federal funding picture has changed – especially for passenger rail development. PRIIA provides a multi-year capital funding framework which emphasizes the role of states in U.S. passenger rail development. In 2009, ARRA subsequently provided $8 billion in federal capital funding for state sponsored high speed and intercity passenger rail projects and $1.5 billion for the Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program, which can fund freight and passenger rail as well as other modal projects. The Transportation authorization bill enacted in 2012, known as Moving Ahead for Progress in the 21st Century Act (MAP-21), does not include a specific rail chapter, but it does provide a variety of funding programs that can potentially be used to support the development of rail transportation. While many federal programs are in place, uncertainty remains with respect to how Congress decides to appropriate money for each program and the direction of the next transportation authorization bill.

Federal Funding Sources

- FHWA Section 130 Crossings Program provides grants for safety improvements to reduce the number of fatalities, injuries, and crashes at public grade crossings.
- Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides a flexible funding source for freight and passenger projects which accomplish the program's air quality goals.
- FHWA Surface Transportation Program (STP) provides flexible funding for projects that may be used by states and localities for projects to preserve and improve the conditions and performance of transportation assets, including transit capital projects and intercity bus terminals.
- FHWA Traffic Mitigation project funding is available where cost-effective, as documented in a project Transportation Management Plan (TMP), new or enhanced intercity passenger rail service can be considered as a traffic congestion mitigation measure.
- Passenger Rail Investment and Improvement Act (PRIIA) reauthorized funding for Amtrak, and in addition, provided a new statutory framework for a federal/state partnership to fund and develop U.S. high-speed and intercity passenger service. Congressional action is required each year to appropriate the amounts authorized.

- USDOT manages the TIGER Discretionary Grant Program subject to annual congressional appropriations. In coordination with FRA, these funds can be awarded for high speed and intercity passenger rail projects.
- FRA's High Speed and Intercity Passenger Rail (HSIPR) Program can offer grants if the program is funded in future appropriations. Service Development Programs (SDP) grants can also be awarded for projects in "the long-term interest" of the new HSIPR Program for funding of final design and construction. Planning Grants for SDP's and State Rail Plans are also available.

State and Local Sources

- State of Louisiana Capital Outlay or General Fund allocation

1.1.3 FARE BOX REVENUES

Fare Box revenues represent the direct user fees that riders of the rail system pay to utilize the service. User fees are not a tax and the user receives an immediate and direct benefit of the transportation asset in return for the fare. Fare levels are typically not set to recover the full operations cost of the asset and is instead priced to attract ridership. Since fare box revenues are not sufficient to cover operating costs, other revenue sources are required to fill the operating subsidy. Historically, fare box revenues are utilized to offset operating costs and are not pledged to repay debt.

1.1.4 VALUE CAPTURE OPTIONS

Value capture is an emerging tool used in infrastructure funding and finance as a way to harness the benefits created by rail development. Value capture techniques can take a variety of forms and include business or special assessment districts, tax increment financing, development impact fees, negotiated exactions, joint development, land value tax, air rights development, and others.

Numerous variations on the implementation of value capture techniques exist but most rely on extracting the value from a new "district" along the corridor or around the stations themselves. Public entities can assess impact fees, negotiate extractions or have the landowners in a special district vote to assess themselves a fee to support the development.

1.2 FINANCING TOOLS

Once the project's funding and revenue potential has been analyzed, the next step is to translate these sources into upfront financing proceeds. The ultimate financing plan will likely utilize multiple types of debt and equity products to optimize the project's revenues and produce the upfront proceeds to deliver the project. Municipal tax-exempt debt secured by tax revenues, user fees, TIFs or development fees is typically the most used method but federal loan programs and public-private-partnerships (P3s) are providing financing enhancements and benefits. Innovative federal programs such as RRIF loans, TIFIA loans and Private Activity Bonds can also provide significant value. While localities or other municipal entities might find it difficult to directly provide revenues to a project, they can be important partners by providing credit support to a financing by offering a back-up revenue pledge or operational assistance. The main financing tools are described in the following sections.

1.2.1 BONDS

Debt issuance in the form of capital market bonding is the most common financing tool. State and municipal entities have the benefit of issuing tax-exempt bonds for a wide array of projects. However, bonds can only be issued if they are supported by a revenue stream capable of satisfying rating agency and investors' expectations on debt repayment. The most likely bond types are listed below.

- Sales tax bonds
- General obligation bonds (full faith and credit of a government)
- Revenue bonds (specific pledge of project revenues or other source)

- Tax Increment Financing (TIF financing based on pledging the incremental sales or property taxes generated in a district benefitting from the rail project)
- Grant Anticipation Notes and Grant Anticipation Revenue Vehicles (GANs and GARVEEs are issued against a pledged federal grant or funding source)
- Private Activity Bonds (PABs are tax-exempt bonds issued by a private developer as part of a P3)

1.2.2 TIFIA/RRIF

The Transportation Infrastructure Finance and Innovation Act (TIFIA) and Railroad Rehabilitation and Improvement Financing (RRIF) are similar federal credit assistance programs that allow eligible projects to receive flexible and low-cost loans. Qualified projects must submit applications and compete for loan awards, but each program is currently adequately funded to provide loans. Both loan projects have a final term of 35 years and the interest rate is based on the 30-year Treasury rate.

1.2.3 PUBLIC-PRIVATE PARTNERSHIP

Public-Private Partnership (P3) project delivery plays an important role in the development of rail projects abroad as well as in the U.S. P3s can provide value to public owners by transferring risk and minimizing public subsidies, while the private equity component of a P3 financing can provide a critical funding boost or potentially serve as a local match for federal funding. The Availability Payment structure of a Design-Build-Finance-Operate-Maintain (DBFOM) contract typically makes the most sense for a P3 rail project and can be structured in a variety of ways to fit the project. In an Availability Payment structure, the public owner pledges a broad revenue stream (typically based on tax receipts) to make annual payments over a 20-35 year period to reimburse the private partner for financing the upfront capital expenditures and operating the rail service. P3s can accelerate project delivery and rely on industry best-practices to drive implementation. The risk transfer benefit of a P3 is particularly attractive in new rail endeavors where the public sector has not yet had an opportunity to gain the requisite technology and operations experience. Our work will analyze the opportunities for private sector participation along the corridor and identify ways to attract or encourage its implementation.

1.2.4 STATE INFRASTRUCTURE BANK

Many states utilize a State Infrastructure Bank (SIB) to help finance projects. SIBs are usually capitalized at the state level and offer low-cost loans for key projects. SIBs can allow projects that do not typically qualify for bonds an additional financing option, can work in tandem with bonding programs and can offer credit assistance (in the form of reserve or liquidity funds) to enhance a financing. Since SIBs are a governmental entity and do not have the same goals as debt investors, SIBs can act as a patient lender and strategically invest in economic development or priority projects.

1.3 PROJECT APPLICABILITY

While there are a variety of funding and financing sources available for rail projects, many options are not optimal or feasible for a specific project. The matrix below provides preliminary commentary on potential benefits/considerations of the main categories.

Table 1: Applicability of Funding Source

Category	Comment
Sales Tax	Challenging, given relatively high sales taxes in participating parishes
Motor Fuel and Vehicle	Not legislatively permissible for transit
Federal Grants	Most federal grant programs do not currently have funding; next transportation authorization bill could fund certain programs
Value Capture	Would be most applicable for the new stations in less urban environments, such as Gonzalez and Laplace

1.4 CASE STUDIES

To come

1.5 INTRODUCTORY FINANCIAL SCENARIOS

While the project needs more definition and further refinement of assumptions, a preliminary analysis to show relative level-of-effort funding levels and financing scenarios are presented in this section to place the project in a broad context.

Potential upfront capital cost: $200 million
Amount covered by grants: $100 million
Amount covered by financing: $100 million

Annual O&M costs: $10 million
Annual financing costs: $[7] million
Total annual revenue: $[17] million

2. STATE SALES AND USE TAX REVENUES

The State of Louisiana has a 4% state sales tax rate is composed of 3.97% general sales tax and .03% Louisiana Tourism Promotion District sales tax. The tax is levied on retail sales of tangible personal property, goods used or stored for use in Louisiana, leases and rentals of tangible personal property, and sales of certain services. The Louisiana Department of Revenue records the amount of taxes collected each year by Parish. Table 19 below shows the FY 2012 (July 1, 2011 – June 30, 2012) sales and use tax revenues for the parishes which are part of the Baton Rouge – New Orleans Rail Corridor.

Table 2: FY 2012 Sales & Use Tax Revenues from Corridor Parishes

Parish	Total Sales & Use Tax Revenues	Revenue Per Capita	Statewide Per Capita Rank	Revenue per 0.25% SalesTax	Revenue per 0.50% Sales Tax	Revenue per 1.00% SalesTax
East Baton Rouge	$212,351,798	$481	8	$13,271,987	$26,543,975	$53,087,950
Ascension	$56,494,797	$514	7	$3,530,925	$7,061,850	$14,123,699
St. James	$15,931,946	$731	1	$995,747	$1,991,493	$3,982,987
St. John the Baptist	$17,251,662	$381	15	$1,078,229	$2,156,458	$4,312,916
St. Charles	$30,396,658	$579	4	$1,899,791	$3,799,582	$7,599,165
Jefferson	$189,600,350	$438	10	$11,850,022	$23,700,044	$47,400,088
Orleans	$141,381,024	$392	14	$8,836,314	$17,672,628	$35,345,256
CORRIDOR TOTAL	**$663,408,235**			**$41,463,015**	**$82,926,029**	**$165,852,059**

Source: 2011/2012 Annual Tax Collection Report. Louisiana Department of Revenue.

3. PARISH SALES TAX RATES

3.1 EAST BATON ROUGE PARISH

The sales tax rates for East Baton Rouge Parish vary depending on the school district. The total local sales tax rate ranges from 5.00% to 5.50% as shown in Table 2 below.

Table 3: East Baton Rouge Sales Tax Rates

Jurisdiction Name	School Board	Police Jury	City/ Town	Sewer & Street	Educational Facilities Improvement	Combined Local Rate	State Rate	Total Rate
Baton Rouge	1.00%	-	2.00%	1.00%	1.00%	5.00%	4.00%	9.00%
Parish of EBR in EBR School District	1.00%	2.00%	-	1.00%	1.00%	5.00%	4.00%	9.00%
Parish of EBR in Zachary School District	1.00%	2.00%	-	1.00%	1.00%	5.00%	4.00%	9.00%
Baker & Baker School District	2.00%	-	2.50%	1.00%	-	5.50%	4.00%	9.50%
Baker & EBRP School District	1.00%	-	2.50%	1.00%	1.00%	5.50%	4.00%	9.50%
Zachary & Zachary School District	1.00%	-	2.00%	1.00%	1.00%	5.00%	4.00%	9.00%
Central & Central School District	2.50%	-	2.00%	1.00%	-	5.50%	4.00%	9.50%
Parish of EBR in Central School District	2.50%	2.00%	-	1.00%	-	5.50%	4.00%	9.50%

Source: Louisiana Association of Tax Administrators website: www.loata.com

3.2 ASCENSION PARISH

Local sales tax rates vary in Ascension Parish. As shown in Table 3, most parts of the Parish have a 4.50% rate, with the exception of Donaldsonville, which has a 5.00% rate and the Tanger Mall Development District which has a rate of 5.50%

Table 4: Ascension Parish Sales Tax Rates Effective 7/1/2012

Jurisdiction Name	Combined Local Rate	State Rate	Total Rate
East Ascension within Gonzales or Sorrento	4.50%	4.00%	8.50%
East Ascension outside Gonzales or Sorrento	4.50%	4.00%	8.50%
West Ascension within Donaldsonville	5.00%	4.00%	9.00%
West Ascension outside Donaldsonville	4.50%	4.00%	8.50%
Tanger Mall Development District	5.50%	4.00%	9.50%

Source: Louisiana Association of Tax Administrators website: www.loata.com

3.3 ST. JAMES PARISH

Table 5: St. James Parish Sales Tax Rates

Jurisdiction Name	School Board	Jurisdiction	Combined Local Rate	State Rate	Total Rate
Balance of Parish	2.50%	1.00%	3.50%	4.00%	7.50%
Town of Gramercy	2.50%	1.00%	3.50%	4.00%	7.50%
Town of Lutcher	2.50%	1.00%	3.50%	4.00%	7.50%

Source: Louisiana Association of Tax Administrators website: www.loata.com

3.4 ST. JOHN THE BAPTIST

The local sales tax rate in St. John the Baptist Parish, as shown in Table 5, is 4.75%.

Table 6: St. John the Baptist Parish Sales Tax Rates

Jurisdiction Name	School Board	Parish Council	Law Enforcement	Combined Local Rate	State Rate	Total Rate
Parishwide	2.25%	2.25%	0.25%	4.75%	4.00%	8.75%

Source: Louisiana Association of Tax Administrators website: www.loata.com

3.5 ST. CHARLES PARISH

The local sales tax rate in St. Charles Parish, as shown in Table 6, is 5.00%.

Table 7: St. Charles Parish Sales Tax Rates

Jurisdiction Name	School Board	Parish Council	Combined Local Rate	State Rate	Total Rate
Parishwide	3.00%	2.00%	5.00%	4.00%	9.00%

Source: Louisiana Association of Tax Administrators website: www.loata.com

3.6 JEFFERSON PARISH

Jefferson Parish has a 4.75% sales tax rate on general sales and a 3.50% rate on food and drug sales, as shown in Table 7.

Table 8: Jefferson Parish Sales Tax Rates

Jurisdiction Name	School Board	Law Enforcement District	City/Town	Combined Local Rate	State Rate	Total Rate
Parish-wide – General Sales	2.00%	0.25%	2.50%	4.75%	4.00%	8.75%
Parish-wide - Food & Drug Sales	2.00%	0.25%	1.25%	3.50%	4.00%	7.50%

Source: Louisiana Association of Tax Administrators website: www.loata.com

In addition to the sales tax levied on the furnishing of rooms by hotels, motels, and tourist camps, an occupancy tax of 3.75% is imposed on the paid occupancy of hotel/motel rooms located in the Parish of Jefferson. An additional 2.00% levy is imposed on the sale at retail and/or rental of tangible personal property originating within the New Orleans Airport Sales Tax District.

3.7 ORLEANS PARISH

Orleans Parish imposes a 5.00% sales tax rate on general sales and a 4.50% rate on food and drug sales, as shown in Table 8.

Table 9: Orleans Parish Sales Tax Rates

Jurisdiction Name	School Board	Regional Transit Authority (RTS)	City/ Town	Combined Local Rate	State Rate	Total Rate
Parishwide - General Sales	1.50%	1.00%	2.50%	5.00%	4.00%	9.00%
Parishwide - Food & Drug Sales	1.50%	0.50%	2.50%	4.50%	4.00%	8.50%

Source: Louisiana Association of Tax Administrators website: www.loata.com

4. PARISH PROPERTY TAX RATES

4.1 EAST BATON ROUGE PARISH

Table 10: East Baton Rouge Parish Millage Rates

GOVERNMENT AGENCY/PURPOSE	MILLAGE
Parish	3.440
Mosquito Abatement District	1.410
Emergency Medical Services	3.130
Parish Library	10.780
BREC Maintenance & Operations	14.038
Special Law Enforcement	4.360
Additional Special Law Enforcement 2	3.730
Additional Special Law Enforcement 3	6.900
Assessor's Salary & Expense Fund	1.340
TOTAL PARISH TAX	**49.128**

Source: Parish of East Baton Rouge Office of the Assessor. http://www.ebrpa.org/PageDisplay.asp?p1=3905

Table 11: East Baton Rouge Parish School Taxes

GOVERNMENT AGENCY/PURPOSE	MILLAGE
Constitutional Schools	5.250
Special - School Maintenance	1.040
Additional Aid To Public Schools	6.500
Additional Teachers	2.780
School – Employees' Salaries & Benefits	1.860
School – Employees' Salaries & Benefits 2	7.140
School – Employees' Salaries & Benefits 3	7.190
School - Replacing Reduced Payments	4.980
Special – Employees' Salaries & Benefits	5.990
Special - Support ADAPP	0.720
TOTAL EAST BATON ROUGE SCHOOL MILLAGE	**43.450**

Source: Parish of East Baton Rouge Office of the Assessor. http://www.ebrpa.org/PageDisplay.asp?p1=3905

Table 12: Baton Rouge City Millage Rates

GOVERNMENT AGENCY/PURPOSE	MILLAGE
General Fund	6.220
Three-Platoon Police System	0.900
B. R. Municipal Fire Salaries & Benefit	6.000
TOTAL BATON ROUGE CITY TAX	**13.120**

Source: Parish of East Baton Rouge Office of the Assessor.
http://www.ebrpa.org/PageDisplay.asp?p1=3905

Table 13: East Baton Rouge Parish - Other Taxing Authorities

GOVERNMENT AGENCY/PURPOSE	MILLAGE
Zachary Fire Dist. # 1	9.000
St. George Fire Dist. #2	14.000
Brownsfield Fire Dist. #3	25.000
Central Fire Dist. #4	15.000
Eastside Fire Dist. #5	22.500
Hooper Road Fire Dist. #6	40.000
Chaneyville Fire District #7	20.000
Pride Fire District No. #8	10.000
Alsen Fire District #9	15.000
Baker School Millage	43.200
Central School Millage	60.400
Zachary School Millage	79.200
City Of Baker	6.030
City Of Zachary	3.170
Consolidated Road Lighting Dist. 1	3.840
Comite Diversion Canal	2.520
Downtown Development Dist.	10.000
Pontchartrain Levee Dist.	3.470
Br Capital Area Transit System	10.600
Baker Capital Area Transit System	10.600

Source: Parish of East Baton Rouge Office of the Assessor.
http://www.ebrpa.org/PageDisplay.asp?p1=3905

Table 14: Estimated Revenue from CATS Millage

Jurisdiction	Item	Rate
Baton Rouge	Millage	10.6
	Estimated Annual Revenue	$16,663,200
	Average Cost/Household/Year	$166.68
	Average House Value	$157,100
Baker	Millage	10.6
	Estimated Annual Revenue	$636,000
	Average Cost/Household/Year	$116.68
	Average House Value	$110,074

Source: Capital Area Transit System

4.2 ASCENSION PARISH

Jurisdiction	Millage
Parish-wide	107.0

4.3 ST. JAMES PARISH

Table 15: St. James Parish 2012 Local Millage Rate

Jurisdiction	Millage
Parish-wide	110.0

4.4 ST. JOHN THE BAPTIST PARISH

Table 16: St. John the Baptist Parish 2012 Local Millage Rates

Jurisdiction	Millage
West Bank	117.98
East Bank	117.57

Source: St. John the Baptist Parish Sheriff's Office website: http://www.stjohnsheriff.org/filez/Millages_2012.pdf

4.5 ST. CHARLES PARISH

Table 17: St. Charles Parish 2011 Local Millage Rate

Jurisdiction	Millage
West Bank	113.92
East Bank	113.51

Source: St. Charles Parish website: http://www.stcharlesgov.net/index.aspx?page=82

4.6 JEFFERSON PARISH

The millage for Jefferson Parish Property tax ranges from 82.58 to 117.02 based on the ward and city. For example, the millage in Kenner is 66.96 for the Parish and 17.51 for the City for a total of 83.79. Grand Isle has the highest millage with a rate of 105.15 for the Parish and 11.87 for the City for a total of 117.02.

Table 18: Jefferson Parish Property Tax Millage Rates

Ward	Parish	City	Total
10 – City of Gretna	64.54	48.71	113.25
20 – Timberlane	87.18	28.11	115.29
20 – Terrytown & Bellemead	104.92		104.92
30 – Harvey – East of Tunnel	112.52		112.52
40 – Harvey – West of Tunnel - Woodmere	115.59		115.59
41 – West Jefferson Hospital Area	115.59		115.59
42 – Barataria Blvd. – Ames Area	115.59		115.59
43 – Ames No. 2 – Ames Area	115.59		115.59
44 – Westwego	64.54	23.93	88.47
45 – Nine Mile Point	115.20		115.20
50 – Bridge City – Avondale – Waggaman	115.20		115.20
60 – Lafitte - Barataria	108.37		109.37
61 – Grand Isle	105.15	11.87	117.02
70 – Airline to River Rd. – Up to Harahan	112.48		112.48
81 – Old Metairie – S. of Metairie Rd.	112.48		112.48
82 – Airline Hwy/Lake – 17th/Kenner Ave.	112.48		112.48
91 – River Ridge	107.48		107.48
92 - Kenner	66.28	17.51	83.79
93 - Harahan	66.96	15.62	82.58

Jefferson Parish Assessors Office Website: http://www.jpassessor.com/Millage/

4.7 ORLEANS PARISH

Table 19: Orleans Parish 2012 Millage Rates

GOVERNMENT AGENCY/PURPOSE	MILLAGE
City of New Orleans, Fire and Police	6.40
City of New Orleans, General Fund	15.10
City of New Orleans, Public Library	3.14
Board of Liquidation	25.50
Sewer and Water Board	16.43
Audubon Institute, Zoo	0.32
Audubon Institute, Aquarium	2.99
School Board	43.60
Levee Board, Orleans East Bank District	11.67
Levee Board, Algiers District	12.76
Law Enforcement District	2.90
Economic Development	1.82
Parkway and Recreation Department	3.00
Capital Improvement	1.82
Street and Traffic Control	1.90
Police and Fire	10.47
TOTAL EAST BANK, ORLEANS PARISH	**147.06**
TOTAL WEST BANK, ORLEANS PARISH	**148.15**

5. PETROLEUM PRODUCTS TAX

The State of Louisiana levies a tax on gasoline fuels used or consumed in the state and on diesel and special fuels used to propel vehicles on Louisiana roads. The current tax rate, 20¢ per gallon for gasoline and diesel fuels, became effective January 1, 1990.

The Louisiana Department of Revenue only reports the statewide totals for the fuel taxes collected. The most current figures available are from the 2011/2012 Fiscal Year (July 1, 2011 through June 30, 2012).[1]

The Louisiana State University Center for Energy Studies (CES) has developed a methodology for estimating the taxes collected at the local level[2]. To estimate taxes generated at the local (parish) level, CES uses the Geographic Area Series of the Retail Trade component of the Economic Census, the most recent of which is 2007. This census includes a parish-by-parish sampling of motor fuel sales. Some errors do exist; for example, the data are based on gross sales and not volume; thus, regional fuel price variations within the state are not taken into account. The percentage of fuel taxes collected in each parish was calculated, and then this percentage was applied to the total motor fuel tax revenue collected for the 2011/s012 Fiscal Year. Estimates of the fuel sales and taxes generated are shown in Table 18 below.

Table 20: Motor Fuels Sales Tax Revenues in Corridor Parishes

Parish	2007 Motor Fuels Sales	2007 Motor Fuels Sales %	Estimated Tax Generated	1¢/Gallon Generates
East Baton Rouge	$655,879,000	8.02%	$46,286,837	$2,314,342
Ascension	$195,031,000	2.39%	$13,763,770	$688,189
St. James	$53,579,000	0.66%	$3,781,189	$189,059
St. John the Baptist	$128,470,000	1.57%	$9,066,413	$453,321
St. Charles	$112,455,000	1.38%	$7,936,199	$396,810
Jefferson	$723,916,000	8.86%	$51,088,359	$2,554,418
Orleans	$287,639,000	3.52%	$20,299,323	$1,014,966
TOTAL	**$2,156,969,000**	**26.38%**	**$152,222,089**	**$7,611,104**

Source: HNTB

[1] 2011/2012 Annual Tax Collection Report. Louisiana Department of Revenue. http://www.revenue.louisiana.gov/forms/publications/LDR_Annual_Report(11%2012).pdf

[2] http://www.enrg.lsu.edu/energydata/past/motorfueltaxes

TECHNICAL MEMORANDUM #4

BATON ROUGE – NEW ORLEANS
INTERCITY RAIL FEASIBILITY STUDY

CAPITAL AND OPERATING PLAN

FINAL REPORT • FEBRUARY 2014

Prepared for:

Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes

Capital Region Planning Commission

Baton Rouge Area Foundation

Prepared by:
HNTB Corporation

State and Federal Project Numbers:
H.010052 and H.010053

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TABLES

1. INTRODUCTION

HNTB Corporation, along with team members Manning Architects and Saizan and Associates is conducting a feasibility study of implementing passenger rail service between Baton Rouge and New Orleans. The main product of this study will be a strategic business plan that will define a realistic process for implementing passenger rail service. This feasibility study does not include a detailed technical analysis of the corridor; rather, the HNTB team is relying on the extensive analysis that has been done on the corridor, especially the Baton Rouge – New Orleans Intercity Passenger Rail Service Development Plan prepared by Burk-Kleinpeter, Inc. (BKI)[1] for the Southern High Speed Rail Commission in 2010.

This rail feasibility study recommends an incremental approach to implementing service. The 2010 Service Development Plan presents a capital and operating plan for high speed service. The improvements identified in this report are designed to support eight round trips per day with trains operating at a maximum speed of 110 mph. The total cost of these improvements is more than $500 million in 2013 dollars. The HNTB team is recommending that service be limited to speeds of 79 mph and that the start-up service level be two round trips per day. Once the service is implemented and ridership levels grow, then additional frequencies can be implemented. By following this incremental approach, HNTB has identified numerous capital improvements that can be avoided or scaled back and we have estimated the cost for implementing start-up service to be approximately $250 million. These revised costs are described in detail in Section 2 of this report.

One of the major concerns expressed about the service plans proposed in the 2010 Service Development Plan was the amount of subsidy that would be needed annually to support operations. Revenues generated from passenger fares help to pay for the cost of operating the service, but intercity passenger rail service generally is not self-supporting. While there may be opportunities to obtain federal grants and loans for the capital improvements, the operating subsidies will be the responsibility of the state and the localities being served. The BKI study estimated an annual subsidy requirement of $14.5 million for the initial service of four round trips per day. This subsidy would grow to $17 million when the full eight round trips per day service is implemented. For the limited initial service of two round trips per day recommended in this study, the HNTB team has estimated an annual operating subsidy requirement (total operating expenses less operating revenues) of $6.7 million. More details on how this estimate was developed are provided in Section 3 of this document.

[1] Baton Rouge – New Orleans Intercity Passenger Rail Service Development Plan. Southern High Speed Rail Commission. Prepared by Burk-Kleinpeter, Inc. in association with HDR Engineering, Inc. December 2010.

2. CAPITAL COSTS

The purpose of this Capital and Operating Plan is to identify which of the civil site, track, roadway, signal and structures capital improvements identified in 2010 Service Development Plan are essential for the implementation of a limited start-up passenger service. The focus of this Rail Feasibility Study has shifted to initially providing limited service of two round trips per day with trains operating at a maximum speed of 79 mph. This study recommends the location of the Baton Rouge Downtown terminal station be moved approximately one mile to the south, shortening the route and eliminating the need for significant bridge and track improvements in the section of the corridor north of the new station.

This report uses a variety of approaches to estimate the capital costs of the recommended modified capital cost proposal. For several categories of costs, including structures, and subgrade stabilization and drainage structures, the 2010 Service Development Plan provides a detailed breakdown of the cost estimates, including unit costs, number of units, engineering overhead and contingency rates. For other categories of costs, including track and signals, a narrative describing the elements included in the cost estimates is provided, but the HNTB team was unable to obtain the cost details for these components. For those capital elements where the detailed cost estimates from the BKI study are available, HNTB summed the costs for those items that it retained in the modified capital program. The total revised costs were then adjusted to 2013 dollars using the Engineering News Record (ENR) Construction Cost Index. For those capital elements where the detailed breakdown of the BKI cost estimates was not available, HNTB used the report narrative to determine number of units (miles of track, number of turnouts, etc.) along with 2013 unit costs from our internal database.

The Baton Rouge to New Orleans rail corridor is 78.7 miles long and traverses tracks owned by three different railroads, as shown in **Table 1** below. Track schematics showing the existing conditions of the corridor and the proposed improvements are included in Appendix A.

Table 1: Rail Line Segments

North End of Segment	South End of Segment	Owner	Segment Name	Operating Railroads	Length (miles)
Baton Rouge MP 789.1	Frellsen Jct. MP 855.7	Kansas City Southern	New Orleans Subdivision	KCS	66.5
Frellsen Jct. MP 443.5	Orleans Jct. MP 444.2	Canadian National	Baton Rouge Subdivision	CN, KCS	0.7
Orleans Jct. MP 900.8	Southport Jct. MP 908.6	Canadian National	McComb Subdivision	CN, KCS, Amtrak	7.8
Southport Jct. MP 3.7	NOUPT MP 0.0	New Orleans Building Corporation	New Orleans Union Passenger Terminal	Amtrak	3.7
TOTAL					**78.7**

2.1 SITE & TRACK WORK

2.1.1 KANSAS CITY SOUTHERN (KCS) SEGMENT

The 2010 Service Development Plan recommends extending the length of all existing sidings in the KCS segment of the corridor to allow for holding of 9,000 foot long freight trains and to extend industrial leads to allow for switching to occur off of the main line. Under these

recommendations, approximately 27.4 miles of second track would be added, which is about 34% of the total corridor length. The report also proposes to double track the entire CN and Amtrak segments of the corridor between Frellsen Junction and NOUPT. Under these proposed improvements, the KCS Baton Rouge sub would have four 9,000 foot long sidings (Essen, Gonzales, Barmen and Frellsen). In addition, switching leads would be extended in four locations, East Baton Rouge (0.9 miles), McElroy (two industry tracks each extended 0.7 miles), Gramercy (8.0 miles) and Norco (2.2 miles).

The modified capital improvement plan includes the replacement of 50% of the ties and resurfacing of all mainline and siding tracks to allow for an upgrade to Class IV track which will accommodate passenger train speeds up to 79 mph. A Centralized Traffic Control (CTC) signal system will be installed on the entire KCS corridor and all hand thrown (HT) turnouts will be replaced with Power Operated (PO) turnouts. On the extended sidings, the #11 turnouts will be replaced with #15 turnouts which will allow for passenger trains to move through them at 30 mph.

For the proposed initial service level of 79 mph maximum speed and 2 round trips per day several of the sidings recommended in the 2010 Service Development Plan will not be needed. Below are the sidings that have been removed from our initial capital improvement plan and a brief description of why each is not needed:

- Baton Rouge Yard Lead
    - The Baton Rouge station is now proposed to be at Government St., passenger trains will not need to utilize the yard to the north.
    - Removing this improvement reduces the subgrade stabilization and 4 bridge locations (2 Mainline and 2 Sidings).
- Essen Siding Extension
    - This siding is in close proximity to the proposed Baton Rouge Suburban Station location and proposals to move this station closer to Essen Lane would put it on the existing double track section.
    - Essen Lane is a major six lane road that crosses the KCS tracks in the middle of this siding. Plans are in place to add an additional lane in each direction. This siding cannot be used as a storage track or a location where a train can be parked for a meet or pass because the train would block this crossing for an unacceptable length of time.
- McElroy Siding Extension
    - The Barmen Siding is approximately 1 mile to the north and can be used to move industrial switching operations off the mainline to allow for passenger trains to pass.

The Gramercy siding will be extended to 8 miles long as proposed in the 2010 Service Development Plan and will include intermediate crossovers to provide flexibility for KCS to serve industrial customers in this area. A new 9,000 foot long side will be built in the vicinity of Siegen Lane in East Baton Rouge to allow trains entering the Baton Rouge Terminal area to meet and pass without blocking the Essen Lane grade crossing.

The proposed improvements to the KCS segment of the corridor and their associated costs are shown in Table 2.

Table 2: Proposed KCS Track Improvements (2013 Dollars)

Item	Units	# of Units	Unit Cost	Total
50% Wood Tie Replacement[1]				
Mainline	Miles	66.5	$200,000	$13,300,000
Sidings	Miles	11.0	200,000	$2,200,000
Track Surfacing[1]				
Mainline	Miles	66.50	$30,000	$2,000,000
Sidings	Miles	11.00	$30,000	$330,000
Sidings[1]				
Siegen Lane New	Miles	1.70	$1,100,000	1,870,000
Gonzales Extension	Miles	.65	$1,100,000	710,000
Gramercy Extension	Miles	7.40	$1,100,000	8,140,000
Norco Extension	Miles	2.20	$1,100,000	2,420,000
Frellsen Extension	Miles	.80	$1,100,000	$910,000
Turnouts[1]				
Sidings –Replace #11 HT w/ #15 PO	Each	10	$350,000	3,500,000
Industry – Replace #11HT w/ #11 PO	Each	10	$270,000	2,700,000
New #15 PO	Each	14	$240,000	$3,360,000
Universal Interlocking	Each	1	$1,500,000	$1,500,000
Remove #11 HT w/ track replacement	Each	3	$30,000	$90,000
Subgrade Stabilization[2]				
Mainline	Each	1	$7,090,000	$7,090,000
Gonzales	Each	1	$740,000	$740,000
Gramercy	Each	1	$5,580,00	$5,580,000
Norco	Each	1	$3,390,000	$3,390,000
Frellsen	Each	1	$630,000	$630,000
TOTAL				**$58,960,000**

[1]Cost estimates based on HNTB database of 2013 unit costs

[2]Cost estimates from BKI/HDR study, Inflated to 2013 Dollars.

2.1.2 CANADIAN NATIONAL (CN) SEGMENT

The 2010 Service Development Plan proposes to double track the entire 8.5 miles of the CN Railway over which the Baton Rouge service would operate. Much of this route segment already has two tracks, and much of the work would involve realigning track and installing crossovers in order to minimize conflicts between passenger trains and freight trains, particularly with the freight movements associated with Mays Yard.

For the purposes of this study, we have assumed the full cost of the CN track improvements identified in the 2010 Service Development Plan and used the ENR Construction Cost Factors to adjust to 2013 dollars. The revised CN costs are show in Table 3 below.

Table 3: CN Track Improvement Cost Estimate

Item	2010 Estimate	2013 Dollars
CN Track Improvements	$34,871,980	$37,980,000

2.1.3 EAST BRIDGE JUNCTION

East Bridge Junction (EBJ) is a major interlocking connecting the KCS, CN, UP, BNSF, CSX, NS and NOPB railways located just east of Mays Yard. The 2010 Service Development Plan included the cost of re-configuring this junction to allow increased speed for east-west freight movements and allow for the addition of passenger trains while reducing the levels of congestion.

For the purposes of this study, we have assumed the full cost of the track improvements at East Bridge Junction identified in the 2010 Service Development Plan and used the ENR Build Cost Factors to adjust to 2013 dollars. The revised CN costs are show in Table 4.

A capacity analysis conducted by CN as part of the 2010 Service Development Plan indicated that a flyover would be required at East Bridge Junction to separate the passenger trains from the freight trains at this congested location. The FRA recommended that rather than building a flyover, the junction could be reconfigured to increase the capacity and throughput.

The FRA-recommended improvements (and not the passenger train flyover) were included in the list of recommended improvements in the 2010 Service Development Plan. The FRA and the Louisiana Department of Transportation and Development (DOTD) are conducting The New Orleans Rail Gateway Environmental Impact Study (EIS) to identify rail and roadway improvements to improve rail traffic flow in the region. The recommendations made in this study could have a big impact on East Bridge Junction. CN has indicated that they will need to conduct additional capacity analyses of their line to determine what improvements are needed to support passenger service.

Table 4: East Bridge Junction Track Improvements

Item	2010 Estimate	2013 Dollars
East Bridge Junction Track Improvements	$3,858,988	$4,310,000

2.1.4 AMTRAK ROUTE SEGMENT

The tracks leading into New Orleans Union Passenger Terminal are owned by the City of New Orleans and operated by Amtrak through an agreement between Amtrak and the New Orleans Building Corporation. The 2010 Service Development Plan includes double tracking the entire 3.7 mile Amtrak segment and making other upgrades to improve operations at the New Orleans Passenger Terminal.

For the purposes of this study, we have assumed the full cost of the Amtrak (NOBC) track improvements identified in the 2010 Service Development Plan and used the ENR Build Cost Factors to adjust to 2013 dollars. The revised Amtrak segment costs are show in Table 5.

Table 5: Amtrak Track Improvements

Item	2010 Estimate	2013 Dollars
Amtrak (NOBC) Track Improvements	$6,000,000	$6,540,000

2.2 AT-GRADE CROSSINGS

The BKI report identifies 124 at-grade crossings in the corridor. 107 of these crossings are on KCS segment and 17 crossings on the CN. 90 of the KCS crossings are public vehicle crossings and 17 are private crossings. On the CN segment there are 11 public vehicle crossings, 4 pedestrian crossings and 2 private vehicle crossings. There are no grade crossings on the Amtrak corridor segment. Slightly less than half of these crossings (42 on KCS, 5 vehicle and 4 pedestrian crossings on CN) are currently protected with 2 quadrant gates. The 2010 Service Development Plan includes the cost of upgrading all public and private crossings to four quadrant gates. This is excessive for an initial service and not mandated by any federal requirements.

For the proposed 79 mph service it is proposed to upgrade all public crossings so that they have two quadrant gates and flashing lights. It is also proposed that no upgrades take place at private crossings. These crossings are extremely low volume and the owner has already entered into an agreement with the railroad regarding the requirements of the crossing protection. For those grade crossing locations that already have 2 quadrant gates in place, the signal approaches will be modified to allow for adequate advance warning time for trains traveling at speeds up to 79 mph. The grade crossing improvement costs are shown in Table 6.

Table 6: Public Grade Crossing Warning Devices

Type of Warning Devices	Existing Crossings			Unit Cost to Convert to 2 Quad Gates	KCS Total	CN Total
	KCS	CN	Total			
Conventional Gates-2 Quadrants	42	5	47	$10,000	$420,000	$90,000
No Protection	8	0	8	$300,000	$2,400,000	$0
Crossbucks	19	6	25	$300,000	$5,700,000	$1,800,000
Flashing Lights	18	0	18	$75,000	$1,350,000	$0
Stop Signs	3	0	3	$300,000	$900,000	$0
TOTAL	**90**	**15**	**103**		**$10,770,000**	**$1,890,000**

2.3 TOTAL SITE AND TRACK WORK COSTS

The "Site and Track Work" cost component incorporated in the BKI study includes the following elements:

- Track work, including:
  - Track and tie replacement and resurfacing
  - Siding extensions
  - Turnouts
  - Substructure improvements
- Grade crossing improvements

A summary of these costs, broken down by railroad, is shown in Table 7.

Table 7: Total Site and Track Work Costs

Cost Item	KCS	CN	East Bridge Junction	Amtrak	Total
Track	$58,960,000	$37,980,000	$4,310,000	$6,540,000	$107,790,000
Grade Crossings	$10,770,000	$1,850,000	$0	$0	$12,620,000
TOTAL	$69,730,000	$39,830,000	$4,310,000	$6,540,000	$120,410,000

2.4 STRUCTURES

All of the bridge structures on the Baton Rouge to New Orleans passenger rail corridor are on the KCS segment of the route. As part of the Baton Rouge – New Orleans Intercity Passenger Rail Service Development Plan BKI hired Design Nine, Inc. to conduct a full assessment of all of the bridges and other structures on the KCS segment of the Corridor. Nearly all of the bridges on this section of the corridor are open deck timber structures. In order to achieve the 110 mph design operating speeds, Design Nine recommended replacing all timber bridges with ballasted deck concrete and steel structures. The Design Nine report also recommended replacing all of the drainage structures on the corridor. The total cost for replacing all of the existing timber bridges on the KCS segment and building new bridges as needed on the siding extensions is estimated to cost $129.70 million ($141.30 million in 2013 dollars). The replacement of the longest bridge on the corridor, the 9,687' (1.8 miles) long Bonnet Carré Spillway Bridge is estimated to cost $57.01 million ($62.10 million in 2013 dollars). This is the largest single project of all of the improvements proposed for the rail corridor, and it represents more than half of the total bridge replacement costs identified for the Baton Rouge to New Orleans Corridor.

The 2010 Service Development Plan calls for the replacement of all open-deck timber structures with concrete and steel ballasted-deck bridges to support high speed passenger rail operations. All of these bridges are on the KCS portion of the corridor. The BKI study includes costs for replacing 64 bridges at 53 locations on the KCS and the construction of 12 new bridges on siding extensions, for a total of 76 bridges.

Many of the bridges identified for replacement in the 2010 Service Development Plan are in locations where passenger trains could never achieve 79 mph maximum speeds due to station stops, curvature, passing sidings and other physical and operations restrictions. In addition, several new bridges included as part of the Baton Rouge Yard Lead, Essen Siding and Barmen Siding extensions will not be needed because those extensions are not included in this modified initial service capital investment plan. As shown in Table 8, there are 22 bridges included in the 2010 Service Development Plan that are not needed to support the revised service plan:

- 6 bridges are to the north of the proposed Baton Rouge Terminal station and will not be used by passenger trains in revenue service
- 10 bridges are within two miles of proposed stations and passenger trains will not be operating at maximum speeds at these locations
- 5 bridges are on sidings are not being extended so new structures are not needed
- 1 bridge is on an existing siding where speeds will not exceed 30 mph

In addition HNTB believes many of the remaining bridges on the KCS line are adequate for passenger train operations. While repairs and upgrades may be necessary for many of these bridges, wholesale replacement is not required. The Design Nine report identifies many deficiencies to these bridges, including such items as bad piles, stringers, caps and ties, the bridges are all structurally sound and able to support the long heavy freight trains that operate on the line today.

A budget prepared by KCS in 2006[2] provided estimated costs for upgrading the bridges on the New Orleans Subdivision for passenger service. This budget recommends complete rebuilding of only 2 bridges, and it identifies 5 bridges that need no work at all. The cost for repairing the Bonnet Carré Spillway Bridge is shown as $5.7 million. The cost of repairing the remaining 45 bridges averages approximately $80,000 per bridge. While the condition of these bridges has changed and the cost of repairs has increased since 2006, a similar approach to repairing most bridges and replacing only when necessary can result in a significantly smaller initial capital investment.

In order to accommodate the siding extensions that are being recommended for this initial capital investment, 8 new siding bridges will need to be constructed. The locations and costs of these bridges are shown in Table 9. For the purposes of this capital cost estimate, HNTB has proposed to budget for the replacement of approximately 20% (12 bridges) of the 56 bridges on the KCS line. For the remaining 44 bridges a repair budget of $220,000 per bridge has been included.

[2] "KCS Revised Proposal 02-24-06.xls." Provided by the Louisiana Department of Transportation and Development.

Table 8: Bridges Identified in 2010 Service Development Plan that do not Need to be Rebuilt or Replaced

No.	Bridge Number	Cost	Reason for Exclusion
1M	788.2	$298,725	West of terminal station @ Government St. (MP 789.2)
1Y	788.2	$193,200	West of terminal station @ Government St. (MP 789.2)
2M	788.3	$1,021,855	West of terminal station @ Government St. (MP 789.2)
2Y	788.3	$911,552	West of terminal station @ Government St. (MP 789.2)
3M	788.4	$1,389,292	West of terminal station @ Government St. (MP 789.2)
3Y	788.4	$1,238,292	West of terminal station @ Government St. (MP 789.2)
4M	790.0	$499,553	Within 2 miles of station @ Government St. (MP 789.2)
5M	791.3	$991,993	Within 2 miles of station @ Government St. (MP 789.2)
7S	795.2	$2,356,636	Essen Siding not extended
8M	796.0	$1,292,041	Within 2 miles of E. Baton Rouge Station
8S	796.0	$1,103,781	Essen Siding not extended
13M	809.0	$795,753	Within 2 miles of Gonzales Station @ Cornerview St. (811.0)
13S	809.0	$748,976	Siding within 2 miles of Gonzales Station @ Cornerview St. (811.0)
14M	809.4	$794,546	Within 2 miles of Gonzales Station @ Cornerview St. (811.0)
14S	809.4	$701,883	Siding within 2 miles of Gonzales Station @ Cornerview St. (811.0)
15M	810.4	$1,751,106	Within 2 miles of Gonzales Station @ Cornerview St. (811.0)
15S	810.4	$1,680,179	Siding within 2 miles of Gonzales Station @ Cornerview St. (811.0)
16M	811.4	$1,023,204	Within 2 miles of Gonzales Station @ Cornerview St. (811.0)
20S	817.4	$767,198	Barmen Siding will not be extended
21S	818.7	$816,485	Barmen Siding will not be extended
23S	820.9	$1,071,488	McElroy Siding will not be extended
30S	828.4	$362,250	On existing Gramercy Siding where speeds will never exceed 30 mph
TOTAL		$21,809,988	
$2013 TOTAL		$23,760,00	

NOTE: M – Main Line Track S – Siding Track Y – Yard Track

Additional cost reductions may be achieved by determining the construction cost of each bridge and applying a smaller percentage for the final design of all bridges. It should be assumed that several of the bridges are going to be of similar design and typical drawings can be developed rather than creating individual designs for each structure. Exceptions would need to be made for longer bridges.

Table 9 below provides a summary of the structure costs for the entire Baton Rouge to New Orleans Passenger rail corridor.

Table 9: Revised Structures Costs

Structure	#	2010 Cost Each	2010 Total Cost	2013 Dollars
Bonnet Carré Bridge	1	$57,011,572	$57,011,572	$62,100,000
New Siding Bridges				
Gonzales MP809.2	1	$748,976	$748,976	$820,000
Gramercy MP 828.9	1	$410,550	$410,550	$450,000
Gramercy MP 829.3	1	$772,700	$772,700	$840,000
Gramercy MP 829.4	1	$687,283	$687,283	$750,000
Gramercy MP 836.4	1	$425,040	$425,040	$460,000
Norco MP 848.6	1	$599,466	$599,466	$650,000
Norco MP 849.3	1	$774,774	$774,774	$840,000
Norco MP 849.8	1	$649,304	$649,304	$710,000
Bridge Replacements	12	$685,000	$8,220,000	$9,000,000
Repairs to Bridges	44	$200,000	$8,800,000	9,680,000
TOTAL BRIDGES	**65**		**$79,099,665**	**$86,300,000**
Drainage Structures		$1,348,538	$1,348,538	$1,500,000
TOTAL STRUCTURES			**$80,448,203**	**$87,800,000**

2.5 SIGNAL IMPROVEMENTS

In addition to improvements of track and structures, the signal systems that control the operation of trains on the railroads over which the proposed service will run will need to be upgraded. Each of the three railroad operators in this corridor has its own signal and control systems that are controlled from centralized dispatch centers.

Section 104 of the Rail Safety Improvement Act of 2008[3] mandates the implementation of a Positive Train Control (PTC) on Class I railroad main lines (i.e., lines with over 5 million gross tons annually) over which any poisonous- or toxic-by-inhalation (PIH/TIH) hazardous materials are transported; and on any railroad's main lines over which regularly scheduled passenger intercity or commuter operations are conducted. One of the key requirements for a PTC system is interoperability to ensure that trains can operate seamlessly and safely as they move from one railroad to another. The Rail Safety Improvement Act requires for PTC systems to be in place on all required railroad segments by December 31, 2015. The railroads have expressed concerns about their ability to meet this deadline, and have requested an extension to provide additional time to overcome some technical challenges.

All three railroads which are part of this passenger corridor have submitted a Positive Train Control Implementation Plan (PTCIP) to the Federal Railroad Administration. In these plans, the three railroads indicate that the entire proposed passenger rail corridor will be equipped with interoperable PTC systems.

[3] Public Law 110-432 (Oct. 16, 2008)

Because the entire Baton Rouge to New Orleans corridor is under a mandate for PTC installation based on current traffic, costs for PTC are not included in these revised capital estimates. It is anticipated that PTC systems will be in place on the corridor before any passenger service is initiated. Note that the costs for grade crossing improvements identified in Section 1.2 include the costs of installing and upgrading the approaches and other control features of the crossing gates.

2.5.1 KANSAS CITY SOUTHERN SEGMENT SIGNAL COSTS

The Kansas City Southern Railway New Orleans Subdivision is controlled by an Automatic Block Signal System (ABS). Train movements are authorized by Direct Traffic Control through voice communication with the train dispatcher, normally via radio, from the KCS dispatching office in Kansas City, MO.

The KCS PTCIP[4] includes plans to install a PTC system on New Orleans Subdivision because it meets the PIH/TIH hazardous materials threshold. KCS will install the Vital Electronic Train Management System (V-ETMS) developed by Wabtec Railway Electronics as an overlay to the existing ABS system. V-ETMS is designed to be interoperable among the various railroads and the functional requirements have been developed in compliance with standards defined through the Interoperable Train Control industry effort. V-ETMS is a locomotive-centric, vital train control system designed to be overlaid on existing methods of operation and provide increased levels of operational safety through enforcement of a train's authorized operating limits, including protection against train-to train collisions, derailments due to overspeed, unauthorized incursion into work zones, and operation through main track switches in improper position. Because KCS is mandated to install a PTC system on this corridor by December 2015 even without passenger train operations, we are assuming this system will be in place prior to the implementation of any passenger service and that the full cost of the PTC system will be covered by the railroad. However, we have assumed a Centralized Traffic Control (CTC) system will be required for the implementation of passenger rail service, and the cost of installing this type of signal and control system is included in these revised cost estimates.

The installation of a CTC system will require modifications to KCS's central dispatch control center in Kansas City, MO. The cost of these modifications is estimated to be $50,000 per interlocking, but this cost may be reduced once the PTC system for the corridor is in place.

In addition to the installation of the CTC system, an additional set of End of Siding signals will be needed for the new Siegen Lane siding, and signaling will be required for the additional universal crossover included in the Gramercy siding extension

The total estimated cost for signal improvements on the KCS portion of the Baton Rouge to New Orleans Passenger Rail Corridor is shown in Table 10 below.

Table 10: Kansas City Southern Corridor Segment Signal Costs

Signal Component	Quantity	2013 Unit Cost	Total
Signals	38	250,000	$9,500,000
End of Sidings	16	750,000	$12,000,000
Universal Interlocking	2	1,500,000	$3,000,000
Control Center Modifications	15	$50,000	$750,000
Segment Total:			**$ 25,250,000**

[4] Positive Train Control Implementation Plan. The Kansas City Southern Railway Company. April 16, 2010. Public Copy Version 1.11.

2.5.2 CANADIAN NATIONAL SEGMENT SIGNAL COSTS

The CN segments proposed to be used for the passenger service are controlled by a CTC system operated from the CN operations office in Homewood, IL. The CN PTC Implementation Plan[5] includes the installation of PTC on both the McComb and Baton Rouge Subdivisions. Both subdivisions host trains carrying PIH/TIH and the McComb Subdivision is utilized by Amtrak's City of New Orleans and the Sunset Limited passenger trains. CN is also planning to utilize the V-ETMS system to provide PTC functionality on these subdivisions.

The CN and Amtrak have requested a waiver from the PTC requirements for the 4.2 mile section of the CN McComb subdivision between Mays Yard and Southport Junction. CN does not have the level of PIH/TIH freight traffic on this segment to warrant PTC installation, so PTC is required only for the passenger operations. The cost of installing a PTC system on this segment is included in this estimate.

The CN signal upgrades are associated with the reconstruction of the East Bridge Junction (EBJ) Interlocking. The 2010 Service Development Plan includes an estimate for the installation of new signals to control the re-constructed EBJ Interlocking. Those costs of have adjusted to 2013 dollars for inclusion in this estimate. The total estimated signal improvement costs for the CN segment of the corridor are shown in Table 11.

Table 11: Canadian National Corridor Segment Signal Costs

Signal Component	Quantity	2013 Unit Cost	Total
EBJ Interlocking	1	3,050,000	3,050,000
PTC Installation	4.2 miles	$175,000	735,000
Control Center Modifications	1	50,000	50,000
Segment Totals:			**3,835,000**

2.5.3 AMTRAK SEGMENT SIGNAL COSTS

The Amtrak PTC Implementation Plan[6] states that a V-ETMS system will be installed on their line between NOUPT and the CN connection at Southport Junction. Amtrak has chosen to use V-ETMS to ensure interoperability with the railroads (including CN) over which passenger trains currently operate on into and out of New Orleans.

Because there is a CTC system already in place for the Amtrak segment, no additional improvements will be needed to the signal system to accommodate additional passenger trains coming from Baton Rouge.

2.5.4 TOTAL SIGNAL COSTS

Table 12 summarizes the signal costs for the entire Baton Rouge to New Orleans passenger rail corridor.

[5] Positive Train Control Implementation Plan. Canadian National Railway. April 16, 2010. Public (Redacted) Version.

[6] National Railroad Passenger Corporation (Amtrak). PTC Implementation Plan. July 16, 2010. Revision 2.0.

Table 12: Total Signal Costs

Item	Total
Kansas City Southern	$25,250,000
Canadian National	$3,8350,000
Amtrak	$0
TOTAL	**$29,350,000**

2.6 SUMMARY OF REVISED CAPITAL COSTS

Based on the cost estimates discussed above, the HNTB has assembled a revised estimate of the costs for the capital improvements needed to support the initial level of service operation. These costs are shown in Table 13. All of these costs are shown in current year (2013) dollars. This table includes a corridor cost of $1.5 million per station for the six new stations that will need to be constructed on the corridor. This cost estimate is for the construction of a basic station facility that includes a platform, shelter and parking. Additional enhancements, such as the construction of a signature terminal station in Baton Rouge, would require additional funds. The estimates do not include the cost of procuring train equipment. HNTB has assumed that the trainsets necessary to operate the initial level of service will be leased from Amtrak, and the cost of that least is included in the annual operating expenses described in Section 3.

Table 13: Total Estimated Capital Costs

Major Cost Item	Estimated Cost ($ Millions 2013 Dollars)					
	KCS	CN	East Bridge Junction	NOUPT	Corridor	TOTAL
Site & Track Work	$58.96	$37.98	$4.31	$6.54	$0.0	$107.79
Grade Crossings	$10.77	$1.85	$0.0	$0.0	$0.0	$12.62
Structures	$87.80	$0.0	$0.0	$0.0	$0.0	$87.80
Signals	$25.25	$3.83	$0.0	$0.0	$0.0	$29.08
Engineering & Management	$12.79	$3.06	$0.30	$0.00	$0.0	$16.15
Rolling Stock	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Stations	$0.00	$0.00	$0.00	$0.00	$9.00	$9.00
TOTAL	$195.57	$46.72	$4.61	$6.54	$9.00	$262.44

3. OPERATING COSTS AND REVENUES

3.1 PROPOSED OPERATIONS

For the purpose of developing an operating cost estimate for the proposed initial level of service, the HNTB team is assuming that the National Railroad Passenger Corporation (Amtrak) will be the operator of the service in this corridor. While there has been interest expressed in using a third party private rail operator to provide service, Amtrak has a clear advantage because it has statutory right of access to freight railroads' right-of-ways. Under the Railroad Passenger Service Act of 1970[7] Amtrak is guaranteed this access and is only required to pay for the incremental costs associated with their use of freight railroad tracks. Any other operator, whether private or public, must negotiate and then compensate the owning freight railroads at an unrestrained agreed upon market rate for access. This generally results in much higher operating costs for passenger services not operated by Amtrak. The freight railroads are also generally opposed to having operators other than Amtrak on their lines. Liability becomes a huge issue for the railroads with a third party operator. This issue of selecting the operator will need to be addressed in more detail as the region moves towards implementation of service in the corridor.

Section 209 of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA)[8] requires Amtrak to work with its state partners to establish a consistent cost-sharing methodology across all corridor routes of less than 750 miles in order to ensure fair and equitable treatment of all states. In collaboration with a State Working Group, Amtrak developed an Agreed Methodology which groups costs into a wide range of categories (e.g., maintenance of way, equipment maintenance, general and administrative, and capital).The methodology links direct costs and other costs closely connected to train operations (for example, train crew labor costs, which are generally associated with operation of a specific route) to trains operating on particular routes. For operating costs that are not attributable solely to a particular route, the Agreed Methodology allocates a proportionate share of these costs to all associated routes based on factors that reasonably reflect relative use.

This study recommends an initial level of service for the Baton Rouge to New Orleans corridor of two round trips per day, 365 days per year. Under this proposal one morning and one evening trip would be provided in each direction. Maximum speeds would be 79 mph and the average speed would be in the 50 to 55 mph range. The difference between the maximum and average speeds results from station stops and other locations along the route where speeds are restricted. Trains would initially consist of a locomotive and three passenger cars, with a total capacity of approximately 240 seats. The trains would operate in a "push-pull" mode, with a cab control car, or perhaps a second locomotive, at the end so they could switch directions at the end of each trip.

A Train Performance Calculator (TPC) was used to determine the unconstrained running times for the corridor service. With the improvements described above in place, the maximum operating speed for passenger trains can be increased to 79 mph on the majority of the route. The maximum passenger speeds by segment are shown in Table 14.

The TPC run calculated an unconstrained running time for trains making 5 intermediate stops (Baton Rouge Suburban, Gonzales, LaPlace, Kenner and Jefferson Parish) of 1 hour and 24 minutes. Typically when schedules are developed an additional 7% - 10% of "pad" time is added to allow for recovery from any delays experienced on the route. Including this pad time, the projected end-to-end travel time is 1 hour and 35 minutes. A sample schedule based on this running time is shown in Table 15 below.

[7] Railroad Passenger Service Act of 1970. P.L. 91-518.

[8] Passenger Rail Investment and Improvement Act of 2008. P.L. 110-432, Div. B, Title II, § 209, codified at 49 U.S.C. § 24101.

Table 14: Passenger Train Operating Speeds

Railroad	Start Milepost	Location	End Milepost	Location	Distance	Maximum Passenger Speed
KCS	789.1	Baton Rouge Downtown Station	796.5	East of Bluebonnet Rd.	7.4	45 mph
KCS	796.5	South of Bluebonnet Rd.	809.9	Gonzales	13.4	79 mph
KS	809.9	Gonzales	811.9	Gonzales	2.0	45 mph
KCS	811.9	Gonzales	855.7	Frellson Junction	43.8	79 mph
CN	443.5	Frellson Junction	442.2	Orleans Junction	.7	45 mph
CN	900.8	Orleans Junction	908.6	Southport Junction	7.8	45 mph
NOPB/ Amtrak	3.7	Southport Junction	0.0	New Orleans Union Terminal	3.7	40 mph

Table 15: Sample Schedule

Southbound	101	103		Northbound	102	104
LV Baton Rouge	7:00 AM	5:00 PM		LV New Orleans	7:00 AM	5:00 PM
Baton Rouge Suburban	7:09 AM	5:09 PM		Jefferson Parish	7:15 AM	5:15 PM
Gonzales	7:25 AM	5:25 PM		Kenner	7:25 AM	5:25 PM
LaPlace	7:45 AM	5:45 PM		LaPlace	7:40 AM	5:40 PM
Kenner	8:00 AM	6:00 PM		Gonzales	8:00 AM	6:00 PM
Jefferson Parish	8:15 AM	6:15 PM		Baton Rouge Suburban	8:18 AM	6:18 PM
AR New Orleans	8:35 AM	6:35 PM		AR Baton Rouge	8:35 AM	6:35 PM

Based on this operating scenario, the HNTB Team has calculated the key operating statistics for the initial level of service. These are shown in Table 16 below.

Table 16: Key Initial Service Operating Statistics

Operating Statistic	Total Annual	Calculations
Annual Train Miles	113,800	78 miles/trip x 4 trips/day x 365 days
Total Car Miles	341,660	3 cars/train x 113,800 annual train miles
Train Hours	2,920	2 hours/trip x 4 trips/day x 365 days
Ridership	210,000	240 seats/train x 60% Load Factor x 4 trips/day x 365 days
Total Passenger Miles	13,140,000	219,000 passengers x 60 mile avg. trip length

3.2 OPERATING COSTS

The total annual operating expenses for the proposed initial start-up passenger rail service in the Baton Rouge to New Orleans corridor are shown in Table 17. These cost estimates were developed using an HNTB costing model based on the Amtrak Performance Tracking (APT) system that was created to comply with the requirements of Section 209 of PRIIA.

Table 17: Estimated Start-Up Annual Operating Expenses

Cost Category	Total Costs
Host Railroad Payments	$779,000
Maintenance of Equipment	$1,765,000
Operations	$1,982,000
Fuel	$567,000
Sales & Marketing	$393,000
Stations – Shared (NOUPT)	$118,000
Administration	$1,364,000
Insurance	$150,000
Lease of Equipment	$1,595,000
Police and Security	$169,000
TOTAL	$8,882,000

3.3 RIDERSHIP AND REVENUE PROJECTIONS

The BKI study used the Federal Transit Administration's Aggregate Rail Ridership Forecasting Model to develop ridership estimates for the corridor. This model is focused on identifying potential journey to work trips within the service area. Non-work trips such as shopping, health care, airport access and special events were estimated using a wide range of modal share assumptions. More the 90% of the 461,000 annual trips estimated for the initial service of 4 round trips per day were projected to be work trips.

While additional analysis of potential ridership was not part of the scope for this current study, the HNTB Team has reviewed the estimates made in the previous study. We believe that the projections of riders for non-work trips is very low and does not fully take into account the potential ridership that could be generated from a wide array of major events which occur in the corridor annually. New Orleans hosts numerous major festivals and activities, such as Mardi Gras, NFL and NBA sporting events and the Jazz Festival, which attract a large number of visitors from the surrounding region. The state government functions and events at Louisiana State University will attract visitors to the northern terminus of the corridor. Many of these visitors would use rail for their travel if a viable service were in place.

Since we are not performing demand modeling as part of this study, HNTB has used a simple supply analysis to project ridership. We have assumed that on average, 60% of the seats made available will be filled by paying customers. This number is conservative and compares favorably

with the ridership projections conducted as part of the BKI study (the ridership levels projected represent an occupancy rate of approximately 65%) and the experience of other similar passenger rail services. The projected ridership generates revenue in the form of the fare paid for each trip taken. The HNTB team has assumed the same average fare utilized in the BKI study ($10 per trip) to calculate total annual revenues. These revenues will offset the operating costs of the service and reduce the level of public subsidy that is needed. Ridership and revenue assumptions used in this study are show in Table 18.

Table 18: Annual Projected Ridership, Revenues and Operating Subsidy

Item	Annual Total
Annual Ridership	210,000
Operating Expense (from Table 14)	$8,882,000
Annual Revenue @ $10 per Trip	$2,100,000
Net Annual Operating Subsidy	$6,772,000

Appendix A

Track Schematics